St. Patrick's Hospital (Cork) Ltd.
Marymount Hospice,
Wellington Road,
Cork.

Blood Transfusion Policy

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Disclaimer: The information contained within this policy is accurate and up-to-date at date of approval.

TITLE: Blood Transfusion Policy

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1.0 Aim of Policy

1.1 This policy acts to support the Irish Blood Transfusion Service in continuing the monitoring of the blood's journey regardless of whether the unit of blood is used or discarded. Every step of the blood's journey is to be checked and monitored and documented in order to prevent a Serious Adverse Transfusion Reaction or Event and therefore, to prevent risk to the patient. (National Blood Users Group 2004).

1.2 The following procedures are intended to outline specifically the exact steps involved when blood components are administered to all patients in St Patrick's Hospital (Cork) Ltd. All procedures must be used in accordance with the Blood Transfusion Policy. All staff undertaking these procedures should have read and understood the contents of this policy.

1.3 The purpose of this document is to ensure that all staff involved with blood transfusion procedures, within St Patrick's Hospital (Cork) Ltd, receives information regarding current best practice and guidelines. Adherence to this document will ensure that an appropriate blood component is administered to the correct patient and will minimise the risk of blood transfusion errors.

2.0 Scope of Policy

2.1 This policy applies to all staff working within St. Patrick's Hospital (Cork) Ltd. and who have an involvement in any aspect of the blood transfusion process. All staff must work within their own Scope of Professional Practice in accordance with guidelines from Professional Bodies.

2.2 Only staff who has undergone appropriate training may undertake these procedures. Staff who do not feel competent to undertake these procedures or have not attended blood transfusion training within the last two years, must seek advice from their line-manager, and abstain from involvement in transfusion practice until those needs are addressed. However, if a staff member feels competent to undertake the procedure and works within their scope of practice, they may continue with the procedure and undertake training at the earliest opportunity.

3.0 Definitions and Abbreviations

- **20fg Canula** – pink cannula
- **22fg Canula** – blue cannula
- **Accident –** injury or damage sustained by staff or patient directly related to the blood transfusion process.
- A**uthorised Staff** – A Registered Medical Officer who has undergone appropriate training within St. Patrick's Hospital (Cork) within the last two years.
- **Biochemistry Specimen** – This is a specimen of blood collected into a 4ml red topped EDTA bottle (reference number 454071 Z Serum Sep Clot Activator).
- **Biohazard bag- secondary packaging:** White sealable plastic bag, labelled Cork University Hospital, Diagnostic specimens. Reference 12743
- **Blood Component** - A therapeutic constituent of human blood (red cells, white cells, platelets, plasma, cryoprecipitate) (McClelland 2007 p73).

- **Blood Culture Specimen** - This is a specimen of blood collected into an anaerobic 25ml bottle (reference BD Bactec Plus + Anaerobic) and an aerobic 25ml bottle (reference BD Bactec Plus + Aerobic).
- **Blood Sample Bottle**: A 10ml Pink topped bottle (reference number K3E) with no anticoagulant added to it.
- **Blood Transfusion Care Pathway:** The documentation completed by all members of the multi-disciplinary team regarding a patient's blood transfusion.
- **Blood Transfusion Prescription Chart (part of the Blood Transfusion Care Pathway)**: A specific blood transfusion prescription for the purpose of prescribing blood components.(See Appendix 1)
- **Coagulation Specimen** – This is a specimen of blood collected into a 3ml blue topped EDTA bottle (reference number 454349 9NC Coagulation Sodium Citrate 3.2%).
- **Compatibility Sheet** – green coloured document which arrives with blood. (See appendix 2)
- **Clinell disinfectant wipes** – a wipe saturated with chlorhexidine, gluconate BP 2% and isopropyl alcohol 70%
- **CNM:** Clinical Nurse Manager.
- **CUH** – Cork University Hospital.
- **DON/RM –** Director of Nursing/Risk Manager
- **ECF** – Extra Cellular Fluid.
- **FBC Specimen** – This is a specimen of blood collected into a 3ml purple topped EDTA bottle (reference number 454041 K3E EDTA).
- **Giving Set** – Infusomat Space Line, containing integral filter 200microns (Ref No: 8270066SP).
- **Group and Screen Specimen** – This is a specimen of blood collected into a 10ml pink topped EDTA bottle (reference number K3E) with no anticoagulant added.
- **Haemovigilance** – A set of organised procedures relating to serious adverse or unexpected events or reactions in donors or recipients, and the epidemiological follow up of donors.
- **IMB** - Irish Medicines Board, Dublin.
- **Incident** – Any untoward occurrence regarding blood transfusion that does not fit into other categories of reporting.
- **IV Cannula Bung –** A device used to seal off an IV cannula prior to use. (Combi-stoppers B-braun ref; 4495152)
- **JVP** – Jugular Venous Pressure.
- **Log Book –** blood administration record kept at the Ward Clerk's desk containing all the patient demographics and unit numbers of any blood unit administered or returned/disposed of from MRTC.
- **MRTC** – The Munster Region Transfusion Centre, St Finbarr's Hospital, Cork.
- **MUH** – Mercy University Hospital.
- **Near-miss** – Any event which, if undetected could result in the determination of a wrong blood group, or issue, collection or administration of an incorrect, inappropriate or unsuitable component, but which was recognised before transfusion. (Taylor et al 2007)
- **NHO** - National Haemovigilance Office, Dublin.
- **Non-Compliance** – Failure to adhere to policy/procedure which may result in an error or adverse event.
- **Patient Information sheet**: Printed document explaining; blood transfusion process, duration and risks. (See Appendix 3)
- **Patient's Wrist Identification Band** – A Bracelet style wrist label that every patient is given on admission, stating the Patient's name, Date of birth and Medical Records Number. This is not removable and the details should be checked prior to a blood transfusion.
- **P.P.E**. – Personal Protective Equipment. Gloves, apron, mask etc.
- **PD/H Nurse -** Practice Development/Haemovigilance Nurse based in St Patrick's Hospital.
- **Request docket** – A form detailing patient's identification. This is generated from a receipt style book. (See Appendix 4)

- **Request Form 'BT 7'**: Request for Blood Grouping and Compatibility which is issued by The Munster Regional Transfusion Centre at St Finbarr's Hospital. (See appendix 5)
- **Sample Events Number** – A unique number assigned to each cross match sample, which is shown on the blood component matched to it for the suitability of each particular patient.
- **Sealed box** – brown cardboard box sealed by tape, provided by MRTC
- **Serious Adverse Transfusion Reaction or Event** - Any untoward occurrence or unintended response associated with the storage and distribution of blood or blood components that might lead to death or life-threatening, disabling or incapacitating conditions which results in or prolongs hospitalisation or morbidity. (Adapted from McClelland 2007 p73)
- **SOP –** Standard Operating Procedure.
- **TACO** – Transfusion Associated Circulatory Overload.
- **Transport box- third layer packaging**: "SPECI-PAK"/or Diagnostic specimen container box. Code Number: UN 3373.
- **Valid/Informed Consent:** Permission obtained from patient following provision of unbiased information about all relevant aspects of a medical procedure. Adapted from: http://www.dohc.ie/public/information/legal_matters_and_health/consent_to_medicaland_surgical_procedures.html last accessed 29.04.08)
- **Variance Sheet –** A section on the blood transfusion Care Pathway which allows staff to document occurrences of 'variance' from the prescribed care.
- **VENI-GARD SP** – IV cannula dressing (ref; 710_2730)

4.0 Responsibilities

4.1 The Chair of the Blood Transfusion Committee shall be responsible for ensuring members of the committee are informed of quarterly meeting dates and venues and changes to documentation or practice and maintain records of the minutes from each of these meetings. It is the responsibility of each member of the Blood Transfusion Committee to attend a meeting at least three times per calendar year.

4.2 The DON shall be responsible for informing committee members of incidents pertaining to risk management within seven days of occurrence, and a timely convening of the committee will take place to discuss such incidents.

4.3 The procedure for obtaining a blood sample should be undertaken by a Registered Medical Practitioner. Where possible, the same Doctor who discussed the potential Blood Transfusion to the patient should also undertake the cross match procedure. Where this is not possible, another Registered Medical Officer may undertake this procedure.

4.4 The transportation process should be undertaken by a Hospital Bus Driver. The request for transport may be made by the Registered Medical Practitioner, Registered Nurse or Ward Clerk as appropriate. It remains the responsibility of the Doctor to ensure the task was completed as requested. The Hospital Bus Driver will ensure that blood is collected and returned to this Hospital within a reasonable time, and will ensure that the transportation box is not exposed to harm or damage during its transit.

4.5 The Medical Officer, who requests the blood component, must ensure that IV access is obtained in readiness for the transfusion.

4.6 It is the responsibility of all staff involved in blood transfusion procedures to ensure they attend a training session for Blood Transfusion every two years. If the training becomes overdue, the employee will bring this matter to the attention of their Physician/Ward Manager and abstain from any aspect of the Blood Transfusion Process until an update had been

attended. However, if a person feels competent and works within their scope of practice, they may continue with the procedures, until training is undertaken.

4.7 It is the responsibility of all staff working within the transfusion process, to ensure they monitor and maintain all documentation regarding the transfusion. All staff involved in the transfusion process must ensure that they attend the mandatory training every two years.

4.8 The Practice Development/Haemovigilance Nurse will ensure that Notification of a Transfusion Reaction is filed where appropriate, with the National Haemovigilance Office, Dublin.

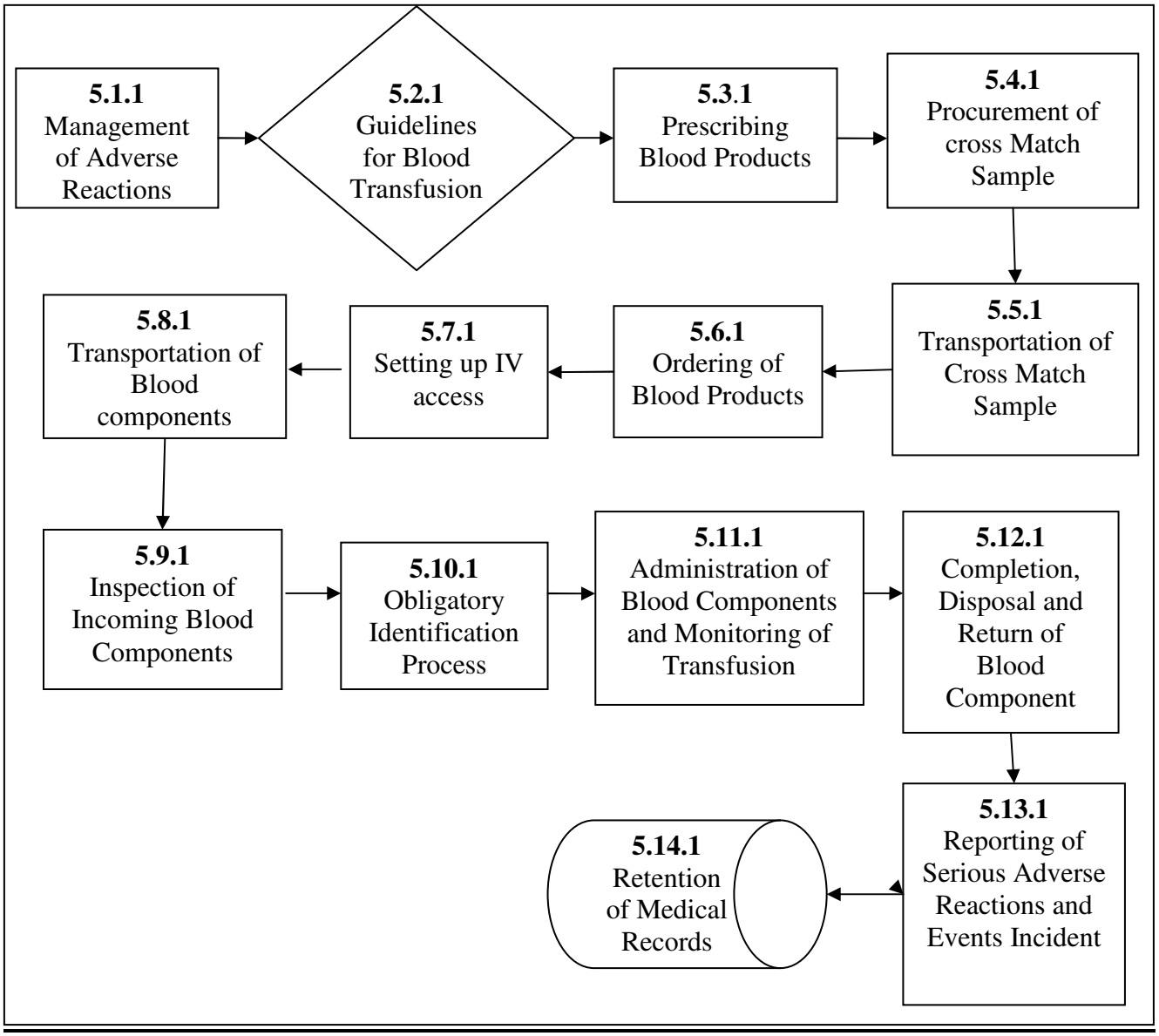
4.9 The responsibility of reporting reactions and events will rest with the Doctor and Nurse responsible for the patient at the time of transfusion. Both teams will ensure a report of the incident is made as soon as possible to the Director of Nursing/Risk Manager.

4.10 The PD/H Nurse will have responsibility for initiating the audit and evaluation of this policy. Each ward will be asked to elect a representative who will assist in conducting audits and collecting data for evaluation.

4.11 The PD/H Nurse or a ward based nominated Staff Nurse will have the day to day responsibility of undertaking this role. In their absence however, this role will be undertaken by either a Ward Manager or Ward Clerk.

4.12 Primary responsibility for the retention of medical records lies with the medical records officer under the supervision of the head of administration. All staff with access to patient files have responsibility to ensure that all blood transfusion procedures are fully documented and recorded in the patients files in the first instance.

5.0 Guidelines and Procedures for Blood Transfusion



5.1 Management of Suspected Serious Adverse Reactions and Events

Pain	Skin	Sensation
Loin Pain Pain at venepuncture site Back Pain Chest Pain Abdominal Pain	Facial flushing Itching Jaundice Rash Sweating Oozing from wound or venepuncture sites Hives	Apprehension or feeling something wrong Anxiety Chills Fever Light-headedness Weakness
Gastrointestinal	**Urinary**	**Observations**
Nausea Vomiting	Haematuria Reduced Urinary Output	Hypotension or Systolic BP ↓ of ≥30 mm/Hg
		Hypertension or Systolic BP ↑ of ≥ 30mm/Hg
		Tachycardia of ≥ 120 or ↑ of ≥ 30 beats/min
		Fever: temp ↑ of >1.5 ^{o}C
		Tachypnoea

Table 1. Signs and Symptoms of Transfusion Reactions

5.1.1 Upon observation of any symptoms or signs, which may indicate an adverse transfusion reaction (see table 1 above), nursing staff must immediately **Stop the transfusion.**

5.1.2 The Medical Officer must be contacted as a matter of **Urgency** to review and treat the patient.

5.1.3 The patient must urgently have vital signs and pulse-oximetry recorded.

5.1.4 The IV cannula must be left in situ.

5.1.5 If the patient's oxygen saturations are < 93%, supplemental oxygen must be started at a volume that maintains oxygen saturation levels > 93%. If the patient has a history of COPD, keep oxygen saturation above 92%, if there is a known history of type 2 respiratory failure, maintain oxygen saturations >88%, using the minimum volume of oxygen that will ensure this.

5.1.6 If the patient's heart rate or blood pressure are abnormal the emergency resuscitation equipment, anaphylaxis kit and a nebulizer should be brought to the patient's bedside so that they are readily available when the Medical Officer arrives. This kit should at a minimum include: a litre bag of 0.9% Saline, Adrenaline, IV Chlorpheniramine, IV Hydrocortisone, IV Frusemide and Salbutamol nebules.

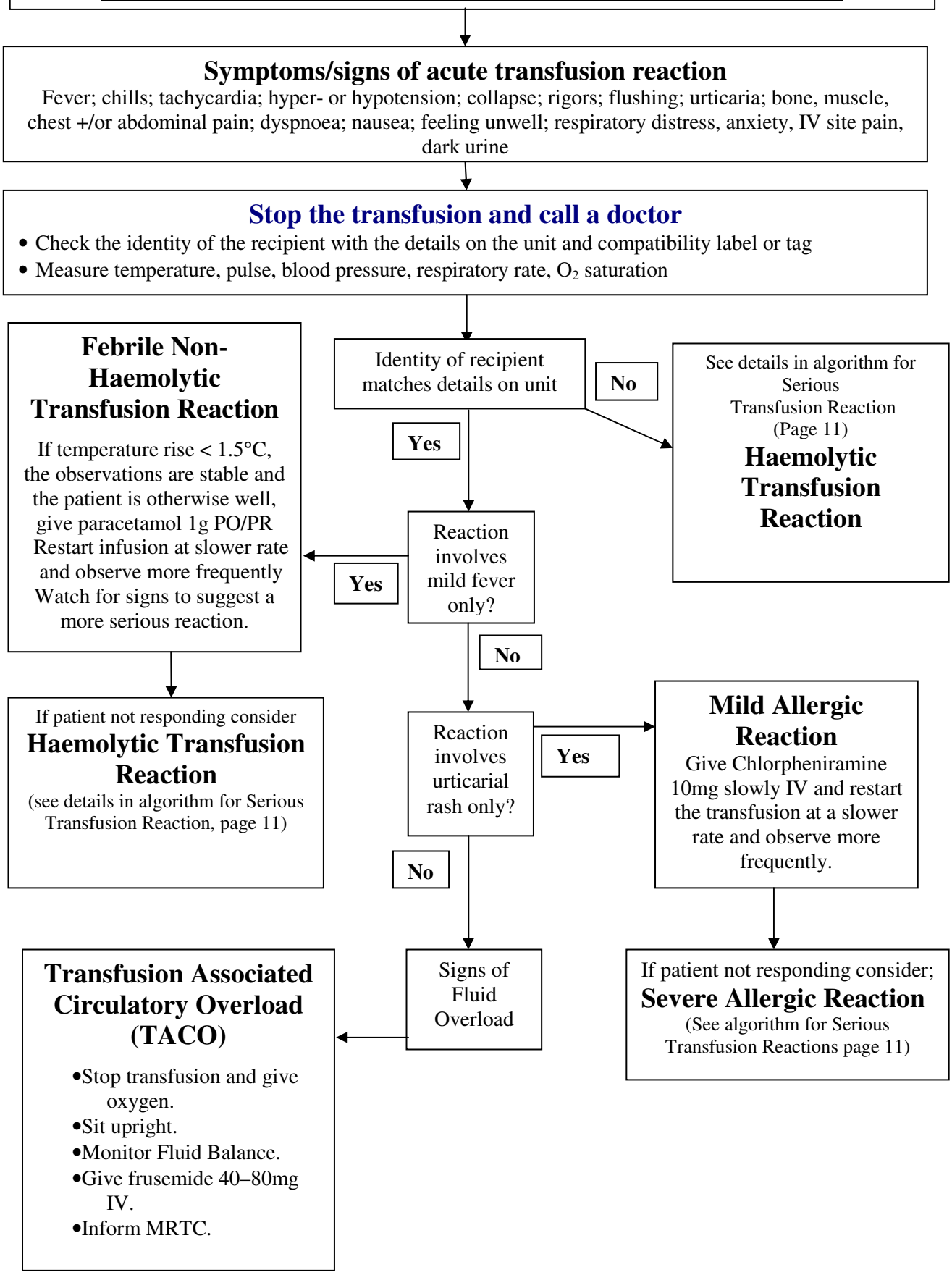
5.1.7 Nursing staff (and one other member of staff) must check that the identity of the recipient matches the details on the blood component bag, compatibility label or tag and inform the doctor if there is a mismatch.

5.1.8 Nursing Staff should seal blood component bags with coupler and place into a sterile bag and seal this. This should then be sent to the MRTC.

5.1.9 Nursing Staff should obtain a urine sample from the first void of urine after the onset of the suspected transfusion reaction, and perform (dipstix) urinalysis on it looking for evidence of blood. A urine sample should be sent to CUH if there is evidence of blood, or if it is a serious transfusion reaction.

5.1.10 Nursing Staff should closely monitor and record the patient's fluid intake and output using a fluid balance chart.

5.1.11 Management of MILD Transfusion Reactions Algorithm



(For more detailed information of specific reactions see Appendix 6, p40)

5.1.12 Management of SERIOUS Transfusion Reaction Algorithm

Symptoms/signs of acute transfusion reaction

Fever; chills; tachycardia; hyper- or hypotension; collapse; rigors; flushing; urticaria; bone, muscle, chest +/or abdominal pain; dyspnoea; nausea; feeling unwell; respiratory distress, anxiety, IV site pain, dark urine

Stop the transfusion and call a doctor

- Check the identity of the recipient with the details on the unit and compatibility label or tag
- Measure temperature, pulse, blood pressure, respiratory rate, O_2 saturation

Identity of recipient matches details on unit?

No

ABO incompatibility

- Stop transfusion
- Take down unit and giving set.
- Return unit to blood bank.
- Commence IV saline solution.
- Inform MRTC.
- Monitor urine output/catheterize.
- Maintain urine output at >1.5ml/kg/hr.
- Give frusemide if urine output falls/absent

Yes

Severe allergic reaction

Yes

Severe allergic reaction/ Anaphylaxis

Tachycardia, Dyspnoea, Bronchospasm, Cough, Angioedema, Abdominal Pain, Hypotension

- Stop transfusion.
- Take down unit and giving set.
- Start IV Saline infusion.
- Commence O_2
- Give chlorpheniramine 10mg slow IV and 100mg hydrocortisone IV
- Give salbutamol nebuliser
- If severe hypotension, give adrenaline (0.5ml to 1ml of 1 in 1000 **intramuscular**)*.Repeat after 5 mins if no improvement
- If not improving arrange urgent transfer to an acute hospital
- Inform MRTC
- Return unit to blood bank plus all other used/unused units

No

Other haemolytic reaction/bacterial contamination

Yes

Haemolytic Reaction or Bacterial Contamination.

- Stop transfusion, remove unit and giving set
- Start IV saline using new giving set
- Urgent resuscitation with IV fluids and treat as per ABO incompatibility
- Give broad spectrum antibiotic if suspected bacterial contamination.
- Inform MRTC

No

Acute dyspnoea with no signs of fluid overload

Transfusion Related Acute Lung Injury (TRALI)

- Clinical features of Acute LVF with fever and chills
- Discontinue transfusion
- Give 100% oxygen
- Treat as Acute Respiratory Distress Syndrome
- Inform MRTC

(For more detailed information of specific reactions see Appendix 6, p40)

5.2 Guidelines for Transfusion

Cross-matching and Administration of Red Blood Cells:

5.2.1 All routine/non-emergency cross-matching should take place within routine hours. (See Table 2).

5.2.2 Times of Routine/ Non-emergency Cross-matching:
Blood samples, received by 09.00 hrs Monday to Friday at MRTC, are cross-matched by 11.30 hrs.
Blood samples, received by 13.00 hrs Monday to Friday at MRTC, are cross-matched by 15.30 hrs.

5.2.3 Non-routine/ Emergency Cross-matching:
Requests for cross-matching outside the above hours, Monday to Friday or at weekends, incurs additional cost. The additional cost is greater at weekends than out of hours Monday to Friday (See Table 2 below). Staff must ensure that Routine Cross-Matching takes place unless urgently needed. The reason for requesting Emergency or out of hour's cross matching must be clearly documented in the Care Pathway and signed by the requesting Doctor.

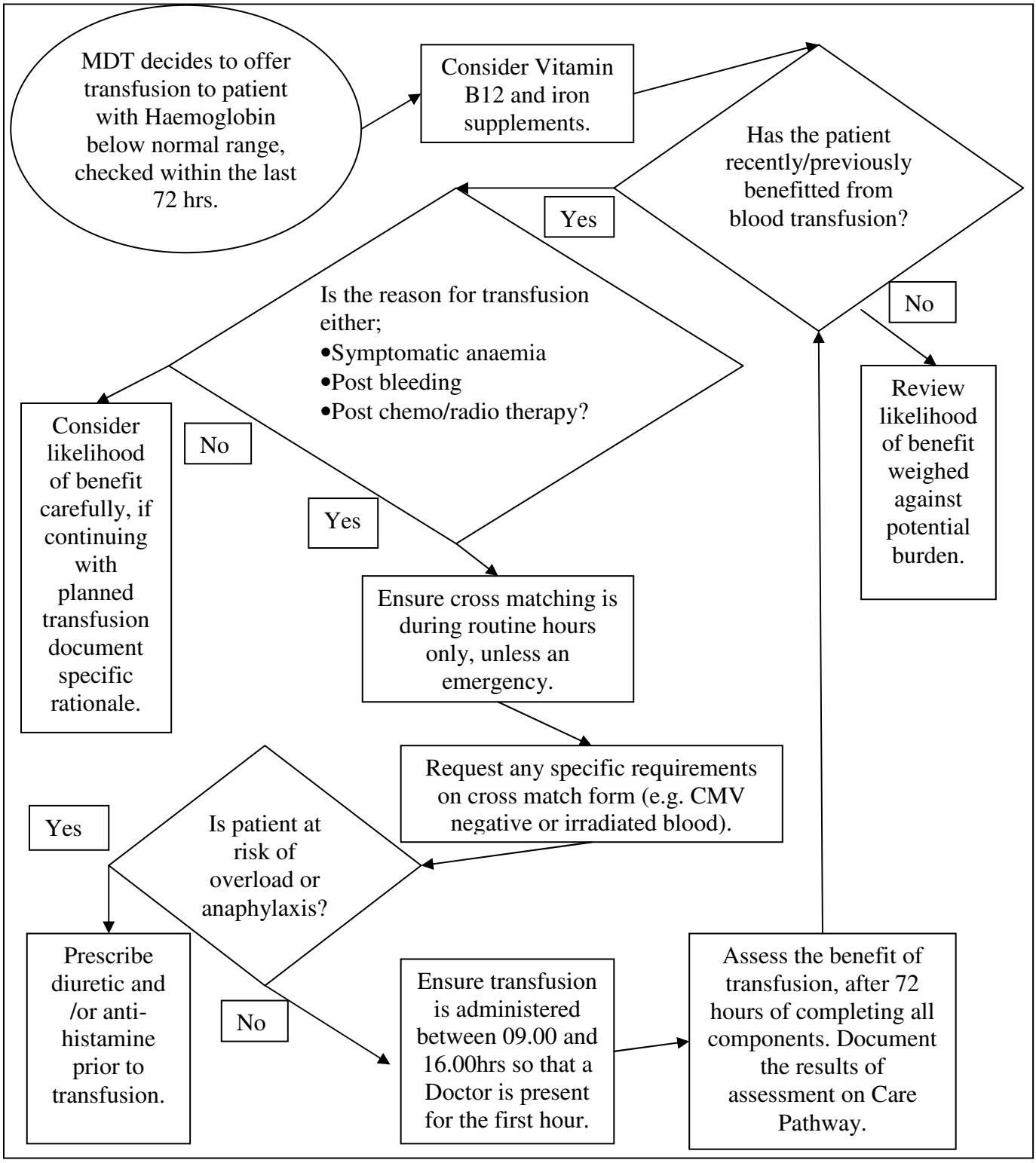
'Routine Cross Match'	**Before 09.00** – ready by 11.30 hrs **Between 09.00 and 13.00 hrs** - ready by 15.00 hrs
'**Emergency Cross Match'** (Incurs extra costs)	EMG 1= Outside Mon- Fri 09.00-13.00 hrs EMG 2 = Weekends

Table 2. Routine and Emergency Cross matching charges.

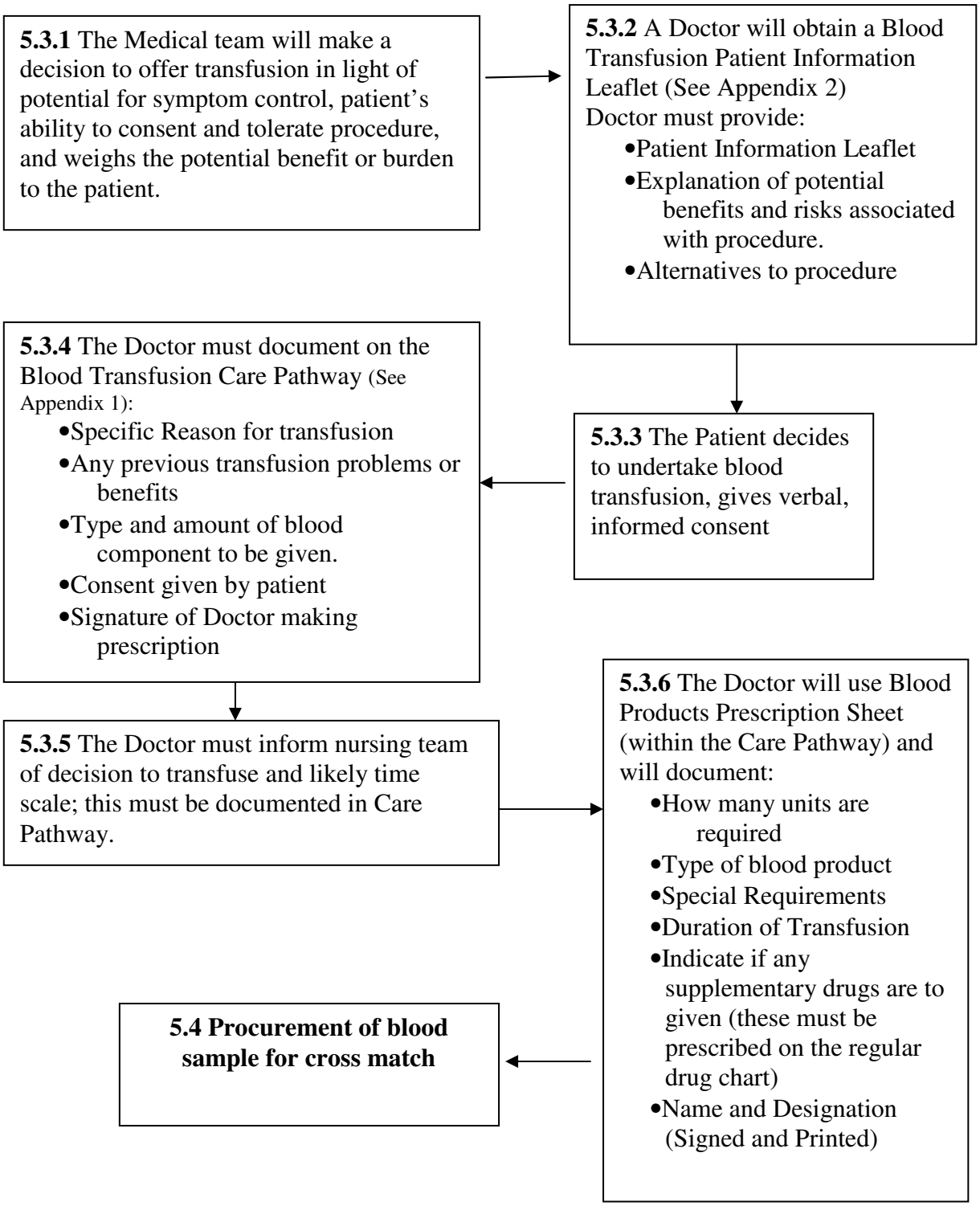
5.2.4 Gender Specific Normal Haemoglobin Range:

Male 14-18 g/dl
Female 12-16 g/dl (Cork University Hospital Range 2008)

5.2.5 Guidelines for Transfusion Algorithm



5.3 Procedure for Prescribing Blood Components



5.4 Procedure for the Procurement of Cross Match Sample

5.4.1 The Nurse will ensure that a wrist identification band is placed onto the patient. In Palliative care this will be done on admission and in Care of the Elderly settings will be prior to transfusion. All wrist bands should contain the following details:
Full name, date of birth, MRN and gender.

5.4.2 The Doctor and a second member of staff approach the patient with equipment prepared in a tray, sharps bin, vacuum collection tube(s) – ***with details left blank.***

5.4.3 The patient will be asked; "Please state your full name and date of birth".

5.4.4 This information should be checked against the patient's wrist identification band and the entry in the patient's notes from the ward round documenting the reason for the transfusion.

The correct details may then be entered onto the sample bottle(s) & BT7 Request Form (See Appendix 5) at the bedside and include; gender, blood component required, number of units required, date time and location where required, indications for request, diagnosis, special requirements, previous transfusions and reactions.

5.4.5 The Doctor will explain and discuss the blood sampling procedure with the patient and invite any questions the patient may have.

5.4.6 The Doctor will;

- Cleanse hands
- Palpate and select suitable vein
- Apply tourniquet
- Cleanse hands
- Apply gloves and appropriate P.P.E.
- Insert appropriate needle and vacuum collection device
- Collect 10mls blood using a pink topped bottle with no anticoagulant.
- Release the tourniquet
- Remove the needle and place directly into sharps bin
- Apply gentle pressure and apply swab or adhesive dressing
- Remove gloves and cleanse hands

5.4.7 Remaining at the bedside, the **Doctor** will hand write identification details on all sample bottles. Printed addressograph labels are **not permitted** and will be returned by Blood Bank. The Doctor must complete the appropriate section on the Care Pathway to show this procedure has been completed.

5.5 'Transportation of Blood sample to Blood Bank'

5.5 Transportation of Cross Match Sample to Transfusion Centre

5.5.1 Doctor must decide whether sample is an emergency or routine (See section 5.2):

'Routine Cross Match'	Sent before 9 a.m – ready by 11.30 Sent between 9 a.m and 1 O'clock – ready by 3.30
'**Emergency Cross Match'** (Incurs extra costs)	EMG 1= Outside Mon- Fri 9 – 1 EMG2 = Weekends

Requests for Emergency Cross match must be documented in the Care Pathway with the rationale for this.

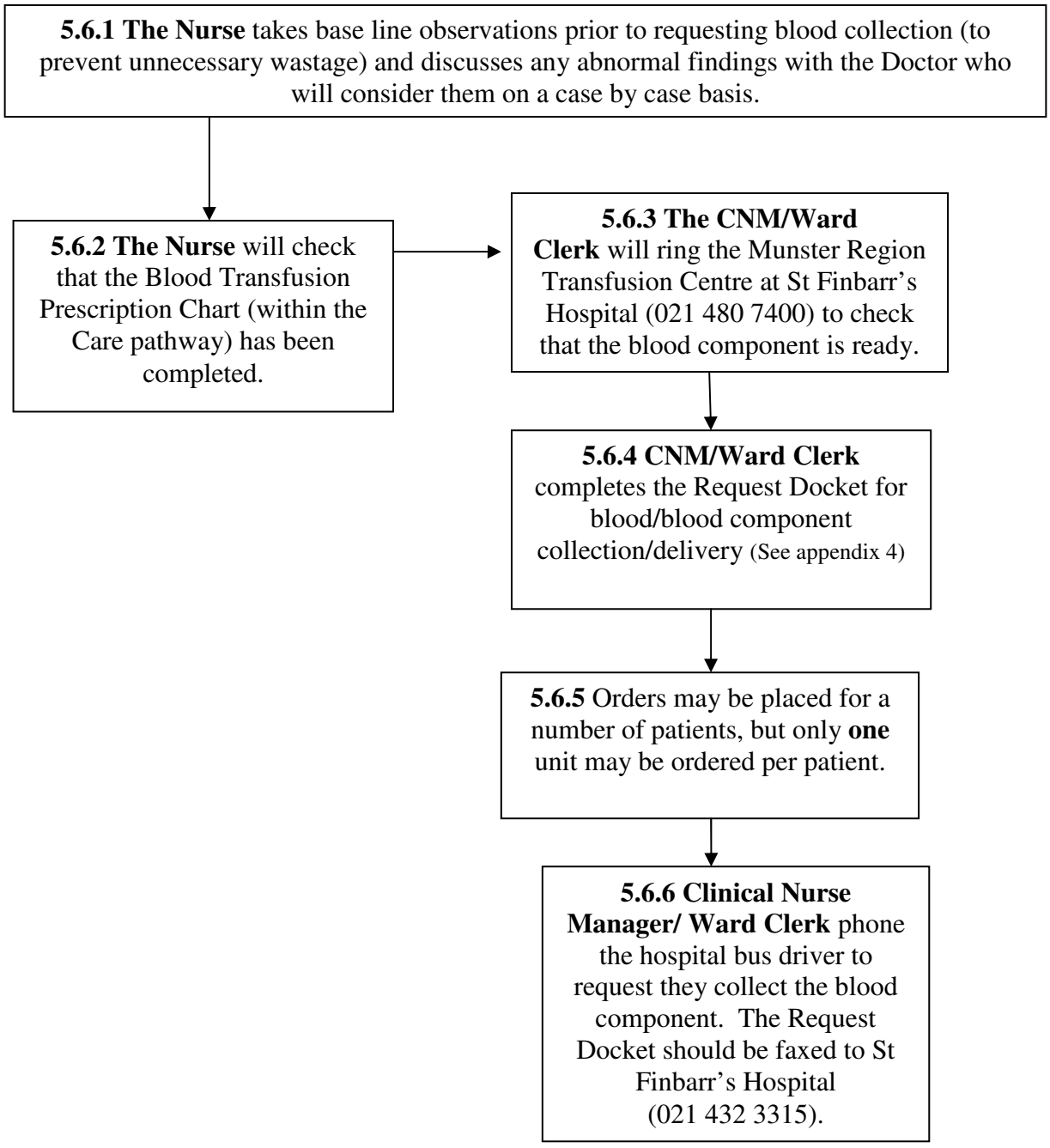
5.5.2 Doctor places Blood Sample Bottle and Request Form into a Biohazard bag which is then sealed.

5.5.3 The transport bag is then placed in the Transport box.

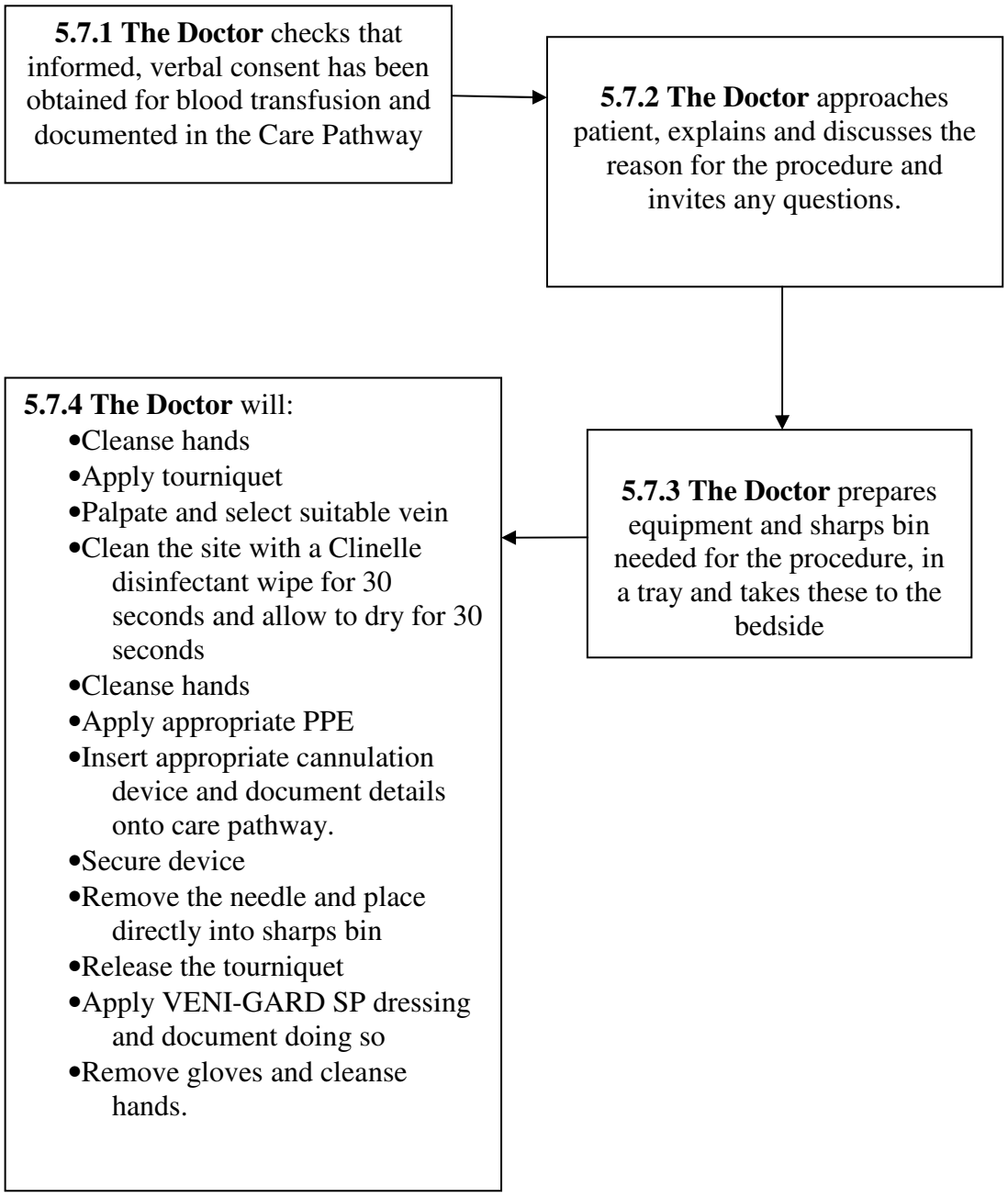
5.5.4 Doctor leaves transportation box at the ward reception and informs Ward Clerk or CNM that it is ready for delivery to Munster Region Transfusion Centre at St Finbarr's Hospital.

5.5.5 Ward Clerk or CNM phones Hospital Bus Driver (via reception) to arrange for collection of sample and delivery to Munster Region Transfusion Centre

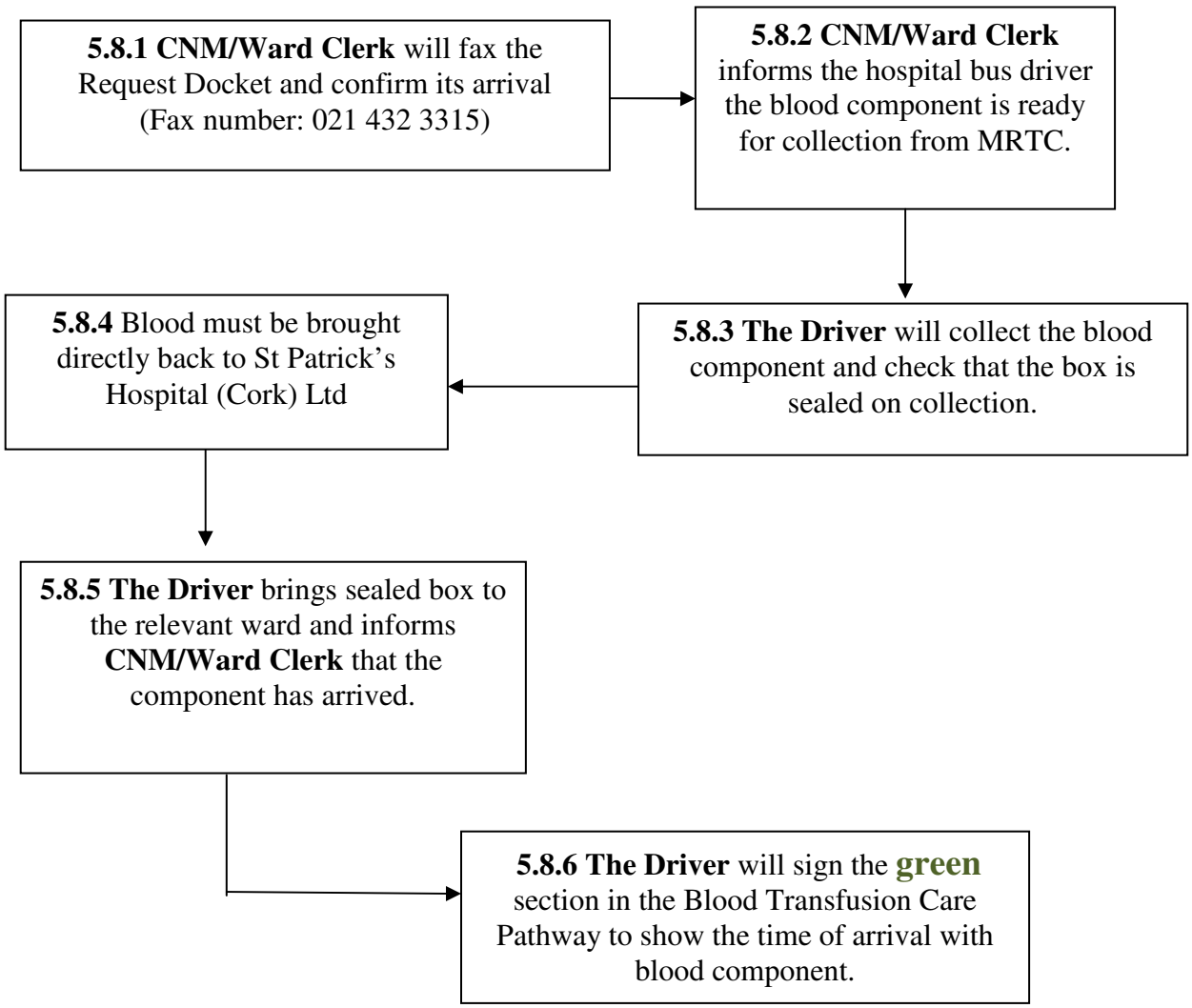
5.6 Ordering Blood Components



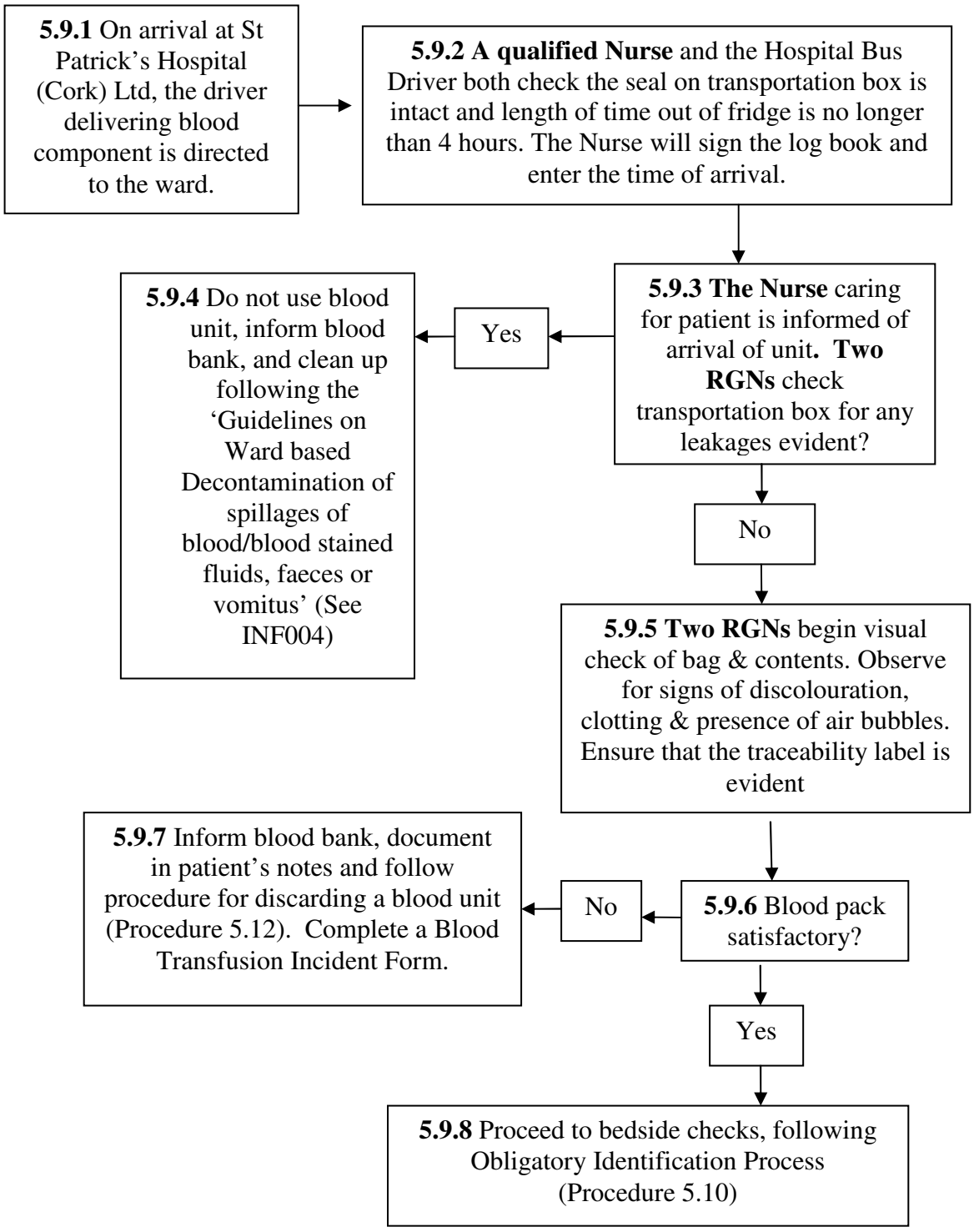
5.7 Setting up IV Access



5.8 Transportation of Blood Components to St. Patrick's Hospital (Cork) Ltd.



5.9 Incoming Inspection of Blood Component



5.10 Obligatory Identification Process

5.10.1 The Nurse will gather;

- Blood Prescription chart (see appendix 1)
- Compatibility sheet (see appendix 2)
- Patient's medical records
- Blood component,

and take them to the patient's bedside.

5.10.2 Two Registered nurses to carry out obligatory identification process, uninterrupted and aloud at the patient's bedside. (A Doctor may also undertake this procedure with a Nurse. Students are **not** permitted to undertake this procedure).

5.10.3 One **Nurse** will ask the patient to state their name and Date of Birth. Where the patient is incoherent, confused or their first language is not English, two Identification bands should be in place (wrist and ankle) (NBUG 2004)

5.10.4 Check details are identical on:

- Blood Prescription chart (see appendix 1)
- Compatibility sheet (see appendix 2)
- The Patient's wrist Identification band
- Compatibility label (sticker on blood component)
- Patient's medical records

5.10.6 All information should be identical. If there are any discrepancies the unit must not be transfused and must be returned to MRTC.

5.10.5 Are the ABO and Rh D Group and sample events number are the same on:

- Compatibility label? (sticker on blood component)
- The compatibility sheet? (See appendix 2)
- Traceability Label? (See appendix 10)
- Refer to compatibility table if unsure (See appendix 7)

5.10.7 Check for any special requirements of the blood unit on:

- Compatibility label? (sticker on blood component)
- The compatibility sheet? (See appendix 2)
- Blood Prescription chart (see appendix 1)

5.10.8 The following details are entered into the 'Ward Log Book' (see appendix 8):

The Date, Patient's name & address Date of Birth, MRN, Unit Number, Blood Group, Sample Event Number and Both Nurses Signatures.

5.10.9 The Blood Transfusion Prescription Sheet and the **pink** label are completed and checked by both staff independently, one after the other. (See appendix 10)

The Pink label is to be peeled off and placed onto the Care Pathway.

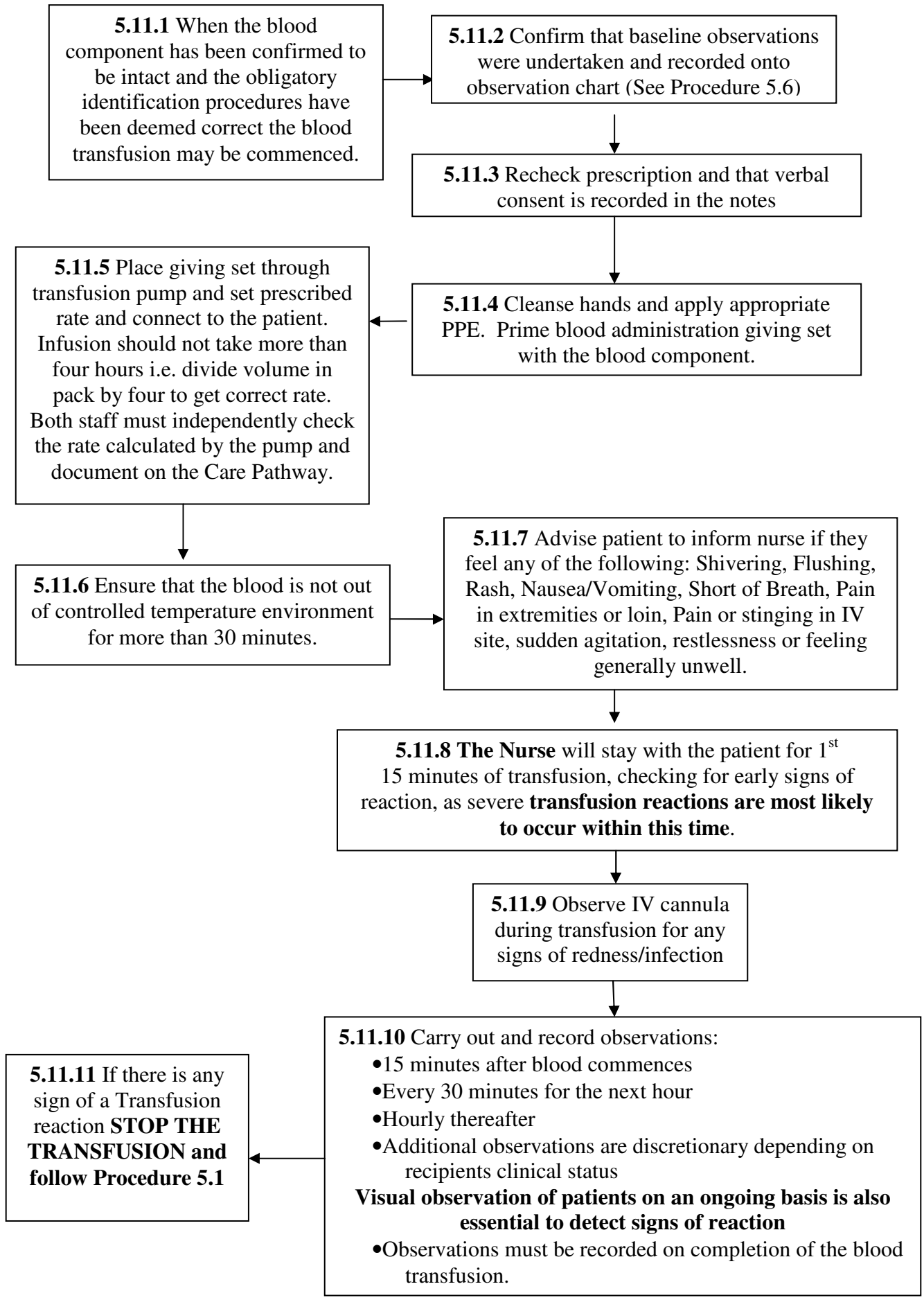
5.10.10 Once transfusion has commenced, the **blue** label must be signed and placed in designated box at the ward clerk's desk, on commencement of transfusion. RGN to sign receipt book (See appendix 9) and inform CNM/Ward Clerk of blue label deposit.

5.10.11

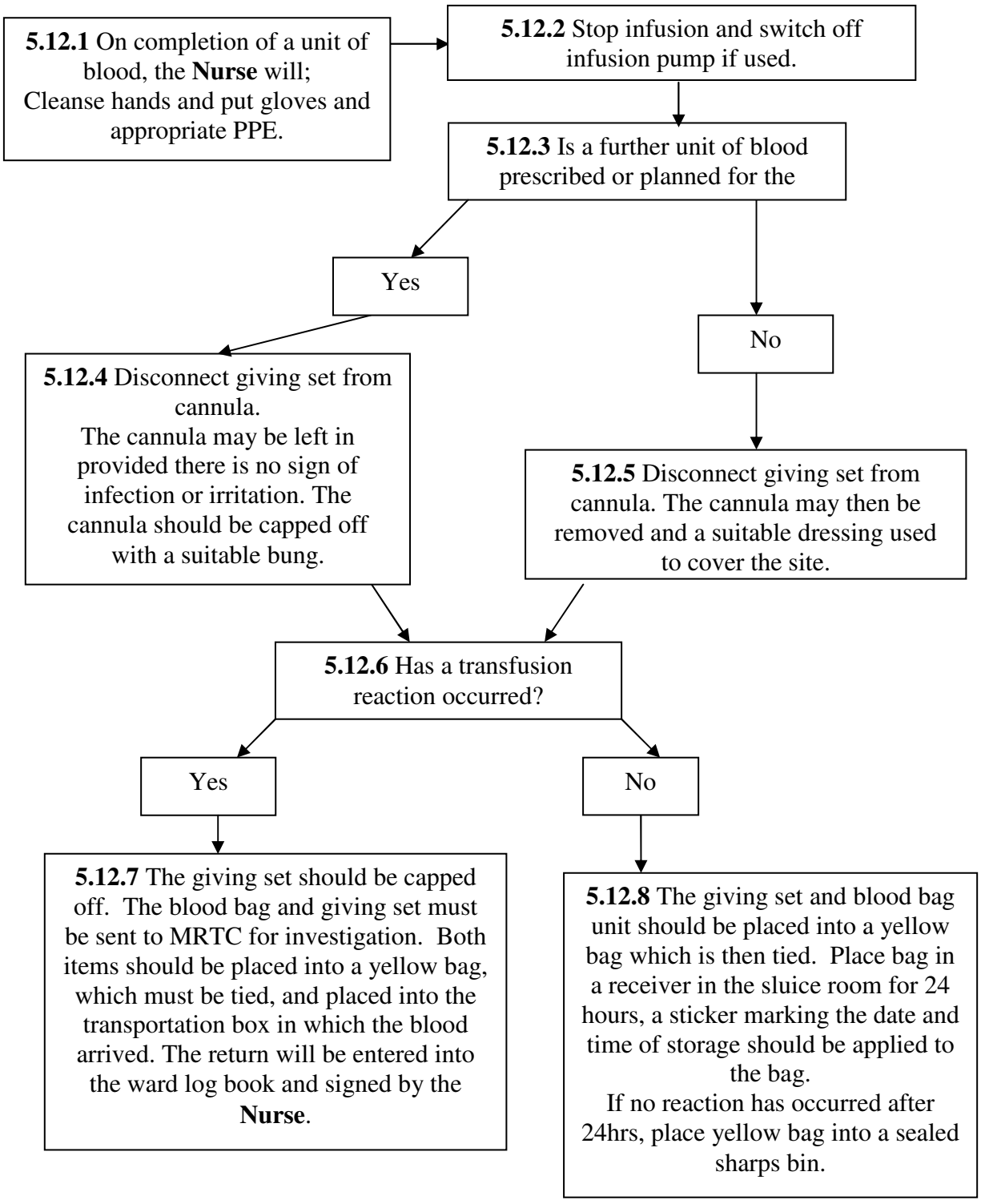
- Ward Clerk/CNM will request Hospital Driver to collect Blue label and then sign the receipt book.
- The driver will collect the label and receipt book, and sign the receipt book.
- On delivery of label to blood bank, blood bank staff will sign receipt book to acknowledge safe delivery.

5.10.12 The 'White' label to be placed into the 'Ward Log Book'.

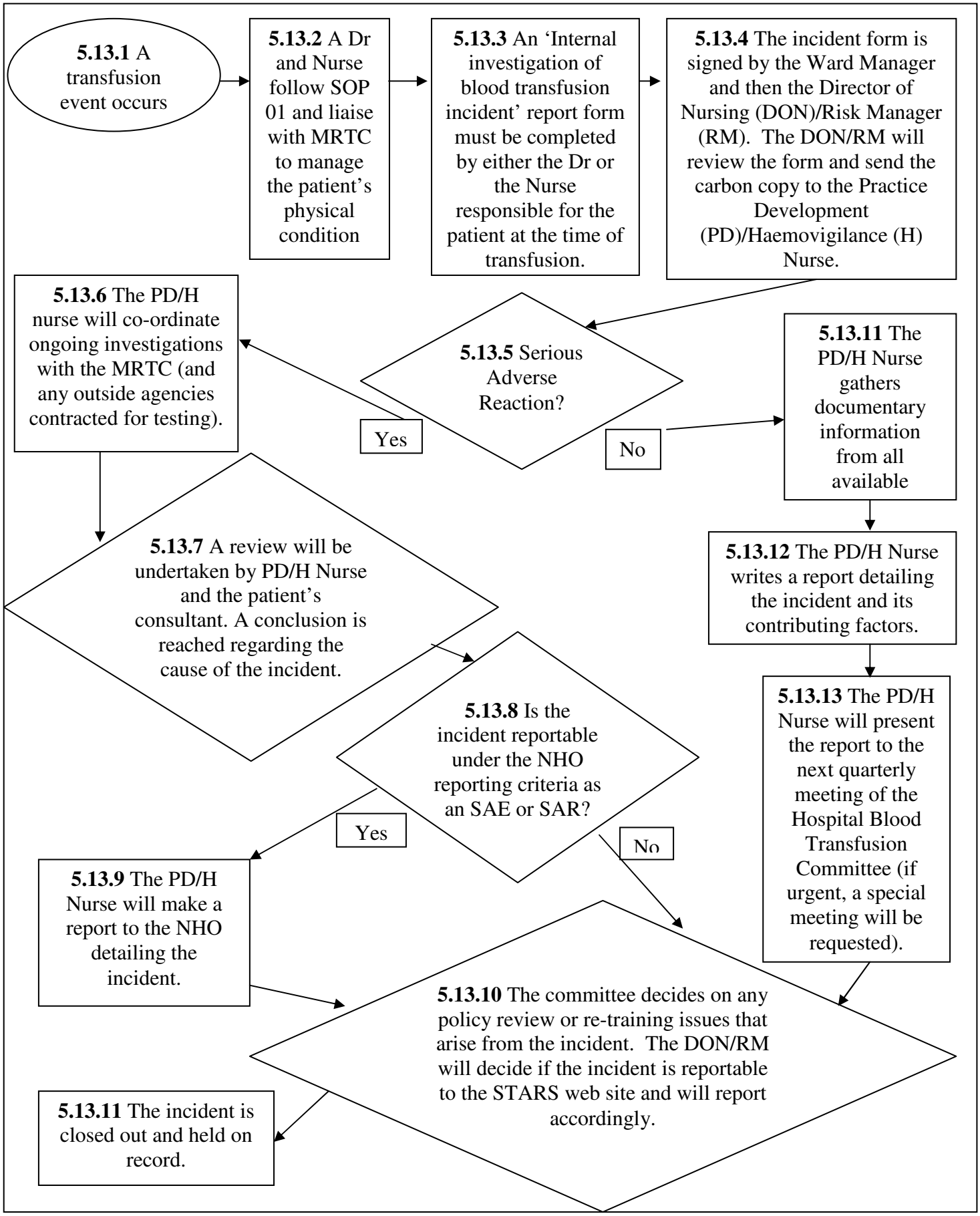
5.11 Administration of Blood Component



5.12 Completion, Disposal and Return of Blood Unit



5.13 Reporting of Serious Adverse Reactions and Events



5.14 Retention of Medical Records

5.14.1 Article 4 Directive 2005/61/EC requires that St. Patrick's Hospital (Cork) Ltd. retains the following data for at least thirty years in appropriate and readable storage medium in order to ensure traceability:

1.Blood Component Supplier Identification.
2.Issued Blood Component Identification.
3.Transfused Recipient Identification.
4.For Blood units not transfused confirmation of subsequent disposition.
5.Date of transfusion or disposition (year/month/day).
6.Lot Number of the component, if relevant.

The above information will be captured by clinical staff at the time of transfusion, and documented in the patient files.

5.14.2 When no longer required at ward level, patient files will be transferred to the Medical Files Section, where they will be retained for a period of at least thirty years. This retention period will apply to all patient files, and not just those of patients who had blood transfusions.

5.14.3 Files will be retained in accordance with the Hospital's general policy on record retention. Currently this is in the form of original documents in hard copy, but alternative storage methods may be considered in the future. No medical records will be destroyed without the approval of the Chief Executive Officer.

6.0 Dissemination

6.1 A colour copy of this policy will be given to the following departments; Assistant Directors of Nursing, Chief Executive's Office, Daycare, Director of Nursing, Education, Homecare Medical Director Palliative Care, Medical Director Elderly Care, Pharmacy, St Anne's, St Camillus, St John's and Marymount wards.

6.2 Any previous versions of Blood Transfusion Policy will be removed from circulation by the Head of Department and given to the Practice Development Nurse. The Head of Department will ensure that all staff are aware of the policy, and that they read, understand and sign the policy.

7.0 Document Control

7.1 To assist in the control of policy/procedure/guideline documents in the Hospital the following safeguards are included:

- All draft copies are to be identified by a watermark with the word draft and the number of the draft.
- Each original will be printed on paper with the Hospital crest printed in colour as a header on top right hand corner of each page, (this paper will be available from Head of Administration).
- All original copies will have the signature of the CEO in blue ink.
- All original copies are to be colour copies. All other copies photocopied for use will be black/white.
- All original copies will be recalled when an updated version is released.

• A request by an outside organisation for a copy of the policy/procedure/guideline can be facilitated.

8.0 Implementation and Education

8.1 All relevant Heads of Departments will be informed of the revisions made to this document since its launch in 2008.

8.2 The PD/H Nurse will provide all ward managers and Consultants with monthly dates for Blood Transfusion Training sessions for staff to attend. All qualified Nurses and Doctors will be required to attend this training every 2 years. Ward Managers will ensure that staff are released from duty to attend training sessions, or will give staff time back in lieu if they attend sessions in their own time. Consultants and Physicians will ensure that new employees attend a session as soon as their rota permits

8.3 The PD/H Nurse will provide training sessions that ensures dissemination of current guidelines and policy. The training sessions may last for up to 1 hour delivered as a Power Point Presentation, and include discussion and handouts.

8.4 The PD/H Nurse will maintain a record of all staff who have attended sessions and will periodically give this information to Ward Managers, and Physicians in order to keep mandatory training records up to date.

9.0 Resource Implications

9.1 No new resource implications.

10.0 Evaluation and Audit

10.1 An Audit of approximately 25% of blood transfusion episodes will be undertaken recording all details of documentation, cross-matching and administration procedures.

10.2 The PD/H Nurse and a ward representative will undertake Audits within on an ongoing basis, and will feed information from the audit back to the Blood Transfusion Committee and the Chief Executive Officer.

10.3 The P D/H Nurse will examine any documentation returned from blood bank due to non-conformance or error, and occurrences of emergency sample testing,

10.4 An Audit of the Ward Log Book will take place recording all details of documentation, including signatures and record of time blood unit received. The ward based Docket Book will be reviewed for completion of details.

10.5 The PD/H Nurse will undertake an annual audit to ascertain the number of reactions or events, and near miss events. Serious transfusion reactions or events will be reported to the National Haemovigilance Office (NHO) as they occur and on an annual basis.

11.0 Revision History

Date	Version Number	Revisions made
2000	1	New Policy
2008	2	New Policy
2009	3	Minor formatting and some procedural changes made.

12.0 References

AML/BB (2006) Minimum Requirements for Blood Bank Compliance with Article 14 (Traceability) and Article 15 (Notification of Serious Adverse Reactions and Events of EU Directive 2002/98/EC, published by Irish Medicines Board. Dublin.

Directive 2002/98/EC Setting standards of quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components and amending EU directive 2001/83/EC.

Grey A and Illingworth J (2005) Right Patient, Right blood, Right time. Royal College of Nursing, London.

ICNA – Infection Control Nurses Association 2003, Protective Clothing Principals and Guidelines, pub by Infection Control Nurses Association, London.

J Mallett and L Dougherty The Royal Marsden Hospital, Manual of Clinical Nursing Procedures 5th Edition (2000) Edited by published by Blackwell Publishing, Oxford

McClelland DBL, Ed (2007) *Handbook of Transfusion Medicine 4th Edition* Pub. The Stationery Office, Norwich.

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Standards of Care and Audit Tools – For Community Hospitals and Residential Care Units in the Cork Kerry Region. Pub NMPDU

Taylor C, Cohen H and Stainsby D et al (2007) Serious Hazards of Transfusion Annual Report 2006 (published 2007) ISBN 0 9532 789 9 9.

The National Blood Users Group (2004) Guidelines for the Administration of Blood and Blood Components, Dublin, Department of Health and children

The Royal Marsden Hospital, Manual of Clinical Nursing Procedures 5th Edition (2000) Edited by J Mallett and L Dougherty published by Blackwell Publishing, Oxford

13.0 Appendices

Page Number

Appendix 1: Blood Transfusion Care Pathway

Patient's Name …….....….Date of Birth ……...….MRN.....

St Patrick's Hospital (Cork) Ltd

Blood Transfusion Care Pathway

Patients full name:	**(Stick Pink Traceability Label over this section)** **Donation No:** **Component:** **Signature 1 :** **Date Given:** **Signature 2:** **Time Given:** --- **(Stick Pink Traceability Label over this section)** **Donation No:** **Component:** **Signature 1 :** **Date Given:** **Signature 2:** **Time Given:** --- **(Stick Pink Traceability Label over this section)** **Donation No:** **Component:** **Signature 1 :** **Date Given:** **Signature 2:** **Time Given:**
Date of birth:	
MRN:	
Gender:	

Sign if applicable when each section is completed, n/a if not applicable and give rationale. Indicate with a 'V' if variance from care pathway and document.

DOCTOR'S SECTION		**Print name/signature, designation and date**
1	Ensure that the patient has a wrist band with the following identification details: - Full name - Date of birth - MRN - Gender (This should be in place prior to x-match sampling to minimise labelling error).	
2	**Labelling of the X-match sample must take place at the bedside by the Dr. And a second member of staff who knows the patient well.** The identification details must be checked on the wristband, request form and **verbally** with the patient. Date X-matched: Time of Cross match: ..... **Emergency / Routine** (Please circle) Date / Location of Most Recent Transfusion: Perceived Symptom Benefit of last transfusion? No /Yes..... Specify any history of transfusion reaction: ..... Specify if any special requirements needed:	
3	**Rationale for transfusion**: ..... Dyspnoea Fatigue Other: ..... |----------| |----------| |----------| 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 (Please circle symptom on the scale 1 = mild 10 = severe) Date of most recent FBC results:..... Hb: Platelets: WCC:	
4	Benefits and risks explained to the patient/next of kin ☐ Verbal consent obtained ☐ Patient information leaflet provided ☐	

Patient's Name …….....….Date of Birth ……....….MRN.....

DOCTOR'S SECTION		Print name/signature, designation and date
5	Planned date(s) and time of transfusion: Blood products prescribed on 'Prescription and Observation Chart' ☐ Nursing staff informed of planned date ☐ Number of units planned for this transfusion ☐	
5a	Has the patient been cannulated? ☐ What type of cannula used? ..... Vena- Guard dressing applied to secure cannula? ☐	

DOCTOR'S SECTION **To be completed 72 hrs post transfusion** **(Please ask GP, Homecare or Public Health Nurse to obtain and pass on this information if patient has been discharged)**		
6	Has there been significant improvement in the Patient's condition? Yes/No (Please rate the symptoms on the scale 1= mild 10= severe) Dyspnoea ‖----------| Fatigue |----------| Other: 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10	
7	Date FBC re-checked..... If not re-checked please state reason on variance sheet (p5): Hb: ..... Platelets: ..... WCC:	

Nurses Section – **Pre Transfusion Care Pathway**		Unit 1	Unit 2	Unit 3	Print name/signature, designation and date
	Date:				
9	Record **baseline observations** Report any abnormal readings to doctor prior to blood being collected and record in patient's notes and on variance sheet.				
10	Ensure that the **Blood Transfusion Prescription** chart is completed.				
11	Ensure that cannulation is complete and appropriately secured. Continue to monitor cannulation site hourly during the transfusion and record on observation chart.				

- Maximum time in transport box is **8 hours** from despatch time on transfer record.(This does not include 4 hours hanging time)
- Transfusion must be started within **30 minutes** of removal from transport box.
- If blood has not started transfusion within these time limits it should be immediately returned to blood bank with notification.
- Transfusion must be completed within **4 hours**. If not it should be discontinued and the doctor informed.

Delivery Staff		Unit 1	Unit 2	Unit 3
	... **Date:**			
	Name of Driver (Company name if Taxi driver):			
	Signature of Driver:			
12	Blood is sealed and transported box provided by Blood Bank?			

Nurses Section – Pre Transfusion Care Pathway		**Full name, Signature Designation And date**		
		Unit 1	Unit 2	Unit 3
13	Box is sealed on receipt and in good condition			
14	Record the time of removal of blood from transport box into the ward log book			
15	The following checks must be performed at the bedside, **independently**, by two registered nurses (or a Dr and an RGN) Check the patient **identification details** (i.e. full name, DOB, MRN and gender) are identical on: • The patient's wrist band • The compatibility label on the blood pack • Blood compatibility report (green form) • The Blood Transfusion prescription chart • The patient's medical records **Record patient details into the ward log book**			
16	Check that these details are **verified verbally** by the patient; ask them to state their name and date of birth (if their condition allows). This is an essential check.			
17	Check the **ABO/Rh group, sample events sheet** and **donation number** details against: • The IBTS blood pack label (on the reverse of the blood bag) • The compatibility label on the blood pack • The compatibility report (green form) sent with blood pack			
18	Check **expiry** date			
19	Check the condition of the blood pack. Observe for any signs of clotting or contamination.			
20	Check whether any special requirements have been made on the prescription chart (e.g. CMV –ve). If so do the details on the blood pack match these requirements?			
If any details do not match do not proceed. Notify blood bank and inform medical staff.				
21	Check that any transfusion related medication (e.g. diuretics) are prescribed on the **drug card** and are administered appropriately.			
22	Calculate drip rate and record on prescription and observation chart, or set to infuse through an infusion pump.			
	Drip rate formula: Drops per ml (on giving set packaging) X volume to be infused (in ml's) Divide by length of infusion (number of hours) Divide by 60 to get drops per minute	Rate:	Rate:	Rate:
23	Both nurse's must sign and enter time onto ***Pink*** traceability sicker which is then placed onto designated box (Page 1)			
24	Commence Transfusion			
25	Stay with the patient for the first 15 minutes of transfusion and observe the patient closely for signs of transfusion reactions. Encourage the patient to report any feelings of discomfort or unease.			
26	Monitor and Record observations as per Standard Operating Procedure number 12			
27	Sign/date/time the ***Blue*** Traceability Label to verify that the transfusion has begun and was administered to the correct patient			

		Unit 1	Unit 2	Unit 3
28	• Place Blue label into the designated post-box behind nurse's desk • Inform Ward Clerk of deposit in box and request for delivery to Blood Bank, within 48hours of transfusion.			
29	Place ***White*** sticker onto a 'Unit History Sheet' (in the red transfusion folder at nurse's desk).			
Post Transfusion Care Plan	**Date:**	Unit 1	Unit 2	Unit 3
30	Record Post Transfusion Observations			
31	On completion of 1st unit remove and discard giving set appropriately. On completion of all units remove cannula and apply pressure to site.			
32	Dispose of used blood bags and giving sets in sharps bins.			

References

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National Patient Safety Agency (2006) Safer Practice Notice 14: Right Patient, Right Blood. Pub. Chief Medical Officers National Blood Transfusion Committee – Serious Hazards of Transfusion (SHOT).

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National Haemovigilance Office (2004) National Haemovigilance Office Report. Dublin, National Haemovigilance Office

- www.transfusionguidelines.org.uk (last accessed 08.01.08)

Patient's Name …….....…Date of Birth ……....….MRN.....

Variance Sheet

(all staff to use this sheet if part of the prescribed care is not /cannot be followed and give reasons why)

Date	Unit (1^{st},2^{nd} or 3^{rd})	Variance	**Print name/signature, designation and date**

St Patrick's Blood Transfusion Prescription and Observation Chart	Patient's Name:	Date of Birth:
	MRN:	Gender:

Doctor (Prescriber) to complete:

Date(s) to be Given	Type of blood component	Special Requirement (Please circle)	Duration of Transfusion	Are there any drugs required? (see drug chart)	Prescriber printed name/ signature
		E.g. Irregular Antibodies CMV negative Irradiated Other:		Yes/No	
		E.g. Irregular Antibodies CMV negative Irradiated Other:		Yes/No	
		E.g. Irregular Antibodies CMV negative Irradiated Other:		Yes/No	

Nurse (Administrator) to Complete

Date Given	Patient Blood Group	Donor Blood Group	Expiry Date	Given By Printed signature/name	Checked by Printed signature/name	Calculated rate (drops per minute)	Start time	Finish time	Volume infused (in mls)	Blue traceability label posted?

Observation Chart

Pre Transfusion observations	15 minute observations	30 minute observations	1 hour observations	2 hour observations	3 hour observations	Post Transfusion observations
Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check□: Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:
			If Temp. increases by >1.5°C or patient shows signs of a transfusion reaction, STOP THE TRANSFUSION IMMEDIATELY and inform the Doctor, follow procedures in the Blood Transfusion Policy			

Observation Chart (for the 2nd unit if required)						
Pre Transfusion observations	15 minute observations	30 minute observations	1 hour observations	2 hour observations	3 hour observations	Post Transfusion observations
Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check□: Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:
			If Temp. increases by >1.5°C or patient shows signs of a transfusion reaction, STOP THE TRANSFUSION IMMEDIATELY and inform the Doctor, follow procedures in the Blood Transfusion Policy			

Observation Chart (for the 2nd unit if required)						
Pre Transfusion observations	15 minute observations	30 minute observations	1 hour observations	2 hour observations	3 hour observations	Post Transfusion observations
Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check□: Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: Cannula Check: □ Signature:	Time: Temp: Pulse: B.P.: Resps: Oxygen Sats: Cannula Check: □ Signature:
			If Temp. increases by >1.5°C or patient shows signs of a transfusion reaction, STOP THE TRANSFUSION IMMEDIATELY and inform the Doctor, follow procedures in the Blood Transfusion Policy			

Appendix 2: Compatibility Sheet (green form)

Irish Blood Transfusion Service
Diagnostics | Compatibility Laboratory

Irish Blood Transfusion Service
Seirbhís Fuilaistriúcháin na hÉireann

Munster Regional Transfusion Centre At: St. Finbarr's Hospital, Douglas Road, Cork
Tel: 021 4807400 Fax: 021 4323315 www.giveblood.ie

Specimen Labelled

Surname:
First Name:
Date of Birth:
Sex:
Address:

Hospital MRN No:
Hospital:
Ward:
Hosp Lab Ref.:
Physician:

IBTS Patient ID: 0051099

A0051099A

Request Form Discrepancies

IBTS Event No.:
Date on Sample:
Date of Receipt
Time of Receipt
Type of Sample:

Test Results:

ABO/RH Blood Group: O RhD Positive
Blood Group Comment:
Antibody Screen IAT: Negative
Antibody Screen Enz:
Known Antibodies:
Known Phenotype: K-
Polyspecific DAT: Positive(1+)
Monospecific DAT: IgG(1+) C3b,C3d-Not-Tested Control-Neg C3d-Neg
Antibodies Identified:
Auto-Immune Antibodies:

In the Event of Transfusion the following Transfusion Protocol applies:

Compatibility Test Results:

Donation No.	Component	BloodGroup	Result	Reserved
2200481	04333 FRCC	O +	Compatible	X
1167154	04333 FRCC	O +	Compatible	X

Reviewed By: / Date: 23/06/09 Time:10:41

Appendix 3: Patient Information Leaflet
INTRODUCTION

During the course of your hospital stay you may require a transfusion of blood or a blood component, such as red cells.
Should you require such a transfusion the medical staff will discuss this with you before prescribing it.

If you require a blood transfusion a blood sample will be taken from you and labelled carefully by the doctor at your bedside and sent to the laboratory. You will be required to wear your wrist identification band when receiving blood. Your blood will be tested to check your blood group and cross-matched to find a suitable donor for you.

What is blood?

Blood constantly circulates around your body and is made up of red cells, white cells, platelets and plasma.
Red cells contain haemoglobin, which carries oxygen from your lungs to all the cells in your body. Your haemoglobin level is generally known as your "blood count".
When your blood count is low, this is known as anaemia and you may feel tired and look pale. White cells are the cells in the body that help you fight infection.

Platelets are cells that help prevent bleeding.

Plasma is a straw coloured fluid without the cells and composed mainly of water, salts and minerals.

Where does a blood unit come from?

Your blood sample will be sent to the laboratory in St. Finbarr's Hospital where it will be cross-matched with blood donated from a blood donor. The blood donor undergoes a screening process prior to each donation. The Munster Centre of the Blood Transfusion Services based in St. Finbarr's Hospital provides Blood components transfused to patients in this hospital.

What happens during a transfusion?

Once a decision has been made that you require a blood transfusion, the doctor discusses this decision with you and obtains your consent. Please feel free to ask any questions you like in relation to your blood transfusion.
The doctor inserts a small plastic tube (called a cannula) into a vein in your hand or arm and secures it with a clear dressing. Initially, a clear solution of Normal Saline (sterile salts and water) may be commenced while waiting for your blood to arrive.

Your temperature, pulse and blood pressure will be checked routinely. Initially every 15 minutes and then increasing to half hourly and then hourly. The nurse will remain with you for the first 15 minutes and will be nearby if you require any assistance whilst having the transfusion.

The transfusion of each unit takes 4-5 hours. Should you at any time feel unwell, shivery, feverish or complain of pain, let the nurse know immediately.

What happens after the transfusion?

When the unit is complete the nurse disposes of the empty blood bag. You may require a second or third unit which may be commenced as soon as the first unit is transfused or it may be given the next day.

If you do not require any more blood the tube in your hand is removed. Some patients require a diuretic (water tablet) after the unit of blood
The doctor takes a blood sample a few days later to recheck your blood count

What are the risks?

The vast majority of patients receiving blood will have no adverse outcome. 1-2 out of every 100 may have a slight rise in temperature during or slightly after a blood transfusion. Other reactions like an allergy may occur. The doctor will discuss these in more detail with you.

It is hoped that this leaflet answers your questions about transfusion. If you have any further queries, the medical and nursing staff will be happy to provide further information.

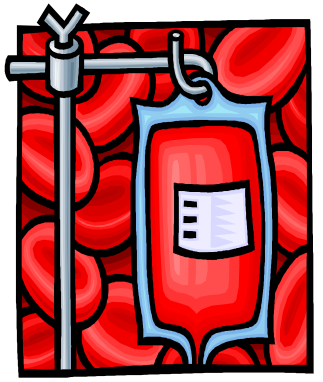
What are the alternatives to blood transfusions?

Although there are other alternatives to blood transfusions such as iron tablets or injections, there may be considerable delays of some weeks to achieve the desired benefit.

The above will have been considered by your Doctor in coming to the decision to transfuse blood

BLOOD TRANSFUSION

Information Leaflet
For Patients



Appendix 4: Request Docket

ST. PATRICK'S HOSPITAL (CORK) LTD. / MARYMOUNT HOSPICE
WELLINGTON ROAD, CORK.
Telephone (021) 4501201 Fax (021) 4501619 Email: info@stpatricksmarymount.ie

Founded 1870

Request document for Blood/Blood component collection/delivery

Book No. 1400

Patient's name: _____

Address: _____

_____

_____

Hospital No: _____ Date of birth: _____

Ward: _____ Consultant: _____

Blood/blood component type: _____

No. of units required: _____

Requested for delivery by: _____ Date: _____

Time of arrival at St. Patrick's Hospital/Marymount Hospice: _____ a.m./p.m.

Taxi driver: _____

Initial check by Staff Nurse/Ward Sister: _____

Appendix 5: BT7 Request Form

BT 7 **Blood Group and Compatability Request Form**

Irish Blood Transfusion Service MRTC Tel: 021-4807400 Fax: 021-4323315 NBC Tel: 01-4322800 Fax: 01-4322930
BT.7 Ver 2 15/12/08

BLOOD GROUP AND COMPATIBILITY REQUEST FORM
(SEE SAMPLE AND FORM REQUIREMENTS ON BACK OF FORM)

Irish Blood Transfusion Service
Seirbhís Fuilaistriúcháin na hÉireann

Lab Event No.

Surname: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

First Name: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Maiden Name: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

D.O.B.: __/__/____ (Day Month Year) Male: ❑ Female: ❑

Address: ______________________________

Hosp. No.: _|_|_|_|_|_|_|_|_|_|_|_|_|_|

Previous Address: ______________________________

Ethnic Origin: ______________

HOSPITAL: ______________ WARD: ______________ CONSULTANT ______________

TRANSFUSION HISTORY

CLINICAL CONDITION / REASON FOR TRANSFUSION: ______________

Blood Group (if known): ______________

Transfusion Reactions: Yes: ❑ No: ❑

Received Transplant: Yes: ❑ No: ❑

Is patient pregnant? Yes: ❑ No: ❑

EDD: __/__/__ Gravida: ________ Para: ________

Known Antibodies: ______________

Previous Transfusion: Yes: ❑ No: ❑ Hb: ________

If yes to any give details: ______________

Anti-D Ig given in the past 6 months: Yes: ❑ No: ❑

If yes, Date given: __/__/__

TEST REQUESTS

Group and Antibody Screen: ❑ Group and Crossmatch: ❑

No. of Units Required: ______________

Red Cells ❑ Platelets ❑ Frozen Plasma ❑ Cryo ❑

Other Tests: ______________

CMV Negative: Yes ❑ No ❑ **Irradiated:** Yes ❑ No ❑

Please Treat as an Emergency: Yes: ❑ **No:** ❑
Signed: ______________
(Treated as Routine if instruction is unsigned)
IBTS MUST BE PHONED IF REQUEST IS URGENT

Other Product Type: ______________ Reason: ________ Date Required: __/__/__ Time: ________

Prescribers Signature: ______________ Bleep No: ________

Declaration Specimen Taken By: ______________ (Print Name) Time: ______ Date: __/__/__

I have checked that patient details are correct on form and specimen: Signed: ______________

IBTS LABORATORY USE ONLY

Specimen Labelled

Surname: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

First Name: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

D.O.B.: __/__/____

Hosp. No.: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Data Check: ______________ Date: __/__/__

Labelling Verification Check: ____/____ Date: __/__/__

File and History Check: ______________ Date: __/__/__

Sample type: EDTA ❑ Clotted ❑ Other: ________

Date on Sample: __/__/____ Time: ________

Blood Group of Patient	
Typed Blood	
Transfusion Instructions	

Telephone Amendment 1:

Amended request: ______________

Change requested by: ______________

Call received by: ________ Date: __/__/__ Time: ______

Date and time required: Date: __/__/__ Time: ______

Telephone Amendment 2:

Amended request: ______________

Change requested by: ______________

Call received by: ________ Date: __/__/__ Time: ______

Date and time required: Date: __/__/__ Time: ______

COMPATIBLE UNITS

Unit No.	Grp	Unit No.	Grp	Unit No.	Grp

CMV NEG ❑ Yes **IRRADIATED** ❑ Yes

Appendix 6: Acute Complications of Transfusion.

Problem	Symptoms and signs	Cause	Timing of onset and frequency	Management and outcome
Acute Intravascular haemolysis of transfused red cells	•Apprehension •Agitation •Flushing •Nausea •Pain at venepuncture site •Pain in abdomen, flank or chest •Fever, chills, tachycardia •Collapse •Hypotension •Generalised oozing form wounds or venepuncture sites •Dark Urine •Generally unwell	ABO incompatible transfusion, e.g. Group A blood to Group O recipient Usually occurs due to: Simple clerical error, Taking pre-transfusion sample from the wrong patient Failure of the bedside checking procedure All resulting in transfusing blood to the wrong patient	Often during the first few mls of transfusion ABO incompatible transfusion occurs in 1:50,000 to 80,000 units transfused Death from mis-transfusion 1:2.6 million Mortality due to DIC and Acute renal failure	•Discontinue transfusion and change administration set but leave cannula insitu •Commence IV Saline infusion •Monitor urine output/catheterize •Take blood samples for repeat group and cross match, DCT, FBC, Coagulation studies and biochemistry to include bilirubin. Urinalysis for haemoglobinuria and urobilinogen. •In the event of fever take blood culture from both patient and blood pack to exclude other sources of infection •Do not transfuse any further units from this cross match •Inform I.B.T.S. immediately. Return unit and administration set intact to I.B.T.S. Maintain BP. Maintain Urine output at >100mls/hr. Give frusemide if output falls. Treat any DIC with appropriate blood components. •Transfuse compatible red cells •Seek expert hematological/medical advice
Urticaria	•Pruritus and rash	More likely to occur with transfusions of platelets or plasma	Frequency 1-3% of transfusions The less severe urticarial reactions can sometimes be delayed for up to 2-3 hours after the start of transfusion	•Give Chlorpheniramine 10mg IV slowly •Restart the transfusion at a slower rate and observe more closely **Prevention:** Give Chlorpheniramine 10mg IV or 8mg po before transfusing patient with recurrent urticarial reactions

Problem	Symptoms and signs	Cause	Timing of onset and frequency	Management and Outcome
Severe allergic reaction	•Pruritus •Rash •Tachypnoea •Cough •Wheezing •Malaise •Angioedema	The cause of these reactions is not fully understood. In some cases reactions to plasma proteins has been implicated. Increasingly importance of inflammatory cytokines released from platelets during storage, and to a lesser extent since the introduction of leucodepletion, from white cells, are being recognized as a cause of allergic transfusion reactions	The shorter the time from starting the transfusion to the development of symptoms, the more severe the reaction is likely to be	•Stop the transfusion •Call for medical help •Commence oxygen •Give chlorphenitramine10mg slowly IV •Give hydrocortisone 100-200mg IV •If respiratory symptoms or history of asthma give salbutamol nebulizer
Anaphylaxis	•Laryngeal oedema, inspiratory stridor •Wheeze •Cyanosis •Substernal/abdominal pain •Tachycardia •Hypotension •Shock •Loss of consciousness	Often the cause is unknown Occasionally patients will have severe IgA deficiency (<0.05mgms/dl) with anti-IgA antibodies	Anaphylaxis is very rare 1:47,000	•Give adrenaline 1:1000 solution 0.5mls (500mcgs) IM •Repeat once if not improving or if patient deteriorates after the initial treatment especially if consciousness impaired due to hypotension •Give Chlorpheniramine 10mg slowly IV •Give hydrocortisone 100-200mg IV •Give salbutamol nebulizer •Send sample for IgA level •Seek specialist haematology advise prior to future transfusions

Problem	Symptoms and Signs	Causes	Timing of onset and frequency	Management and Outcomes
Bacterial contamination of component	•Rigors •Fever •Tachycardia •Circulatory collapse	Bacterial contamination of blood components most frequently occurs with platelets. Serratia, Staphylococci, Bacillus cereus are the most commonly implicated organisms RCC is less often contaminated with pyschrophilic organisms e.g. Yersinia, Pseudomonas	Usually during first 100mls of transfusion of the contaminated pack **Platelets:** Transfusion transmitted bacterial infection: 1:80,000-100,000 platelet therapeutic doses. Death: 1:270,000-300,000 doses **RCC:** Infection 1.3-5 million units, Death: 1.8-13million units	•If suspected start broad spectrum IV antibiotics immediately, with IV fluids and O_2 •Stop transfusion and return sealed bag and giving set to I.B.T.S. •Take blood cultures from the patient and the pack •Repeat Group and cross match, DCT, FBC, Coagulation screen, biochemistry •Monitor urine output •Seek haematology advice
Transfusion Associated Circulatory Overload	•Acute Left ventricular failure •Dyspnoea •Orthopnoea •Cyanosis •Tachycardia •Hypertension •Raised JVP •Pulmonary Oedema	When too much fluid for the patient is transfused, or the transfusion is too rapid. Risk factors include: infant, adults over 60, Patients with reduced cardiac reserve or chronic anaemia	During or within several hours of transfusion. Incidence 1:3,000-14,000 units transfused, but may be under reported or under diagnosed. May affect up to 1% of transfusions in the elderly	•Stop transfusion •Give O_2 and IV Frusemide 40-80mg •Put patient sitting upright •Closely monitor fluid balance •CXR **Prevention:** Transfuse at risk patients slowly with a prophylactic diuretic and observe closely, restrict to 1 unit RCC during daytime hours if possible
Transfusion related acute lung injury	•Acute respiratory distress •Fever, Chills •Hypotension •Bilateral pulmonary oedema •Transient hypertension may occur	WBC antibodies in donor plasma (usually from multiparous women) interact with recipients leucocytes, causing complement activation and WBC sequestration in the lungs.	Symptoms typically begin within 1-2 hours of transfusion and are usually present by 4-6 hours. Onset after 12 hours is unlikely to be TRALI. Incidence 1:5,000 units transfused	•May be life threatening •Stop transfusion, maintain airway, give O_2 •CXR •Manage as for acute respiratory distress syndrome •May need ventilation If suspected take sample for HLA typing and liase with I.B.T.S.

Problem	Symptoms and Signs	Causes	Timing of onset and frequency	Management and Outcomes
Delayed Haemolysis of transfused red cells	•Unexplained fall in haemoglobin •Rising LFT's •Jaundice •Dark Urine	Patient has IgG antibodies to red cell antigens, such as Rhesus, Kidd, Kell or Duffy because of pregnancies or transfusions The antibodies are undetectable in the cross match but further transfusion causes a secondary immune response resulting in delayed haemolysis.	Usually 5-10 days or longer after the transfusion Approximately 1 in 500 RCC transfusions	•Persisting anaemia may require transfusion of suitable antigen negative blood •The risk of renal decompensation should be reduced by adequate rehydration. Where renal decompensation has occurred this should be managed appropriately. •The hospital transfusion laboratory patient's records should be amended to include the presence of red cell antibodies. In the future, irrespective of whether the antibody is subsequently detected on antibody screen, antigen negative blood only, should be used for that patient.
Iron Overload	•Chronically transfused patients, especially those with haemoglobinopathies have progressive and continuous accumulation of iron, which may lead to cardiac and liver damage	One unit of RCC contains 250mg of iron Patients receiving multiple transfusions are at risk	After several years of frequent transfusions	•Seek specialist Haematological advice **Prevention:** Use Desferioxamine to increase iron excretion in patients likely to be at risk.
Post transfusion purpura(PTP)	•Thrombocytopenia is often associated with bleeding and poor response to platelet transfusion	Immune mediated thrombocytopenia usually occurs in parous women. Antibodies against human platelet antigens (HPA) are detectable in the patient's serum, usually anti-HPA-1a	Rare 5-12 days post transfusion	•Thrombocytopenia is usually associated with bleeding •Seek expert haematological advice. The treatment of choice is high dose IV immunoglobulin (IVIG). •Total dose of IVIG is 2g/kg over 2 or 5 days •Platelet transfusion may be needed in bleeding patients **Prevention:** There is a low incidence of recurrence, but patients with a documented history of PTP should receive HPA-1 negative red cell and platelet concentrates for future transfusions if possible.

Problem	Symptoms and Signs	Causes	Timing of onset and frequency	Management and Outcomes
Transfusion Associated Graft vs Host Disease (TA-GvHD)	•Progression of fever and rash •Raised LFT's •Diarrhoea •Pancytopenia	Transfused donor T cells can engraft and initiate GvHD in the recipient who is often immunodeficient e.g. bone marrow allograft recipient, Hodgkin's disease. Because of the haplotype, sharing blood from relatives can induce GvHD in immunocompetent recipients. Confirmed by skin/bone biopsy appearances and /or the presence of circulating donor lymphocytes.	Rare Occurs 1-6 weeks post transfusion Usually fatal	•Usually fatal •Seek specialist advice **Prevention:** Gamma irradiation of cellular components for susceptible recipients
Post transfusion viral infection	•Symptoms depend on virus •Often silent	Viral infection in donor not detected by donor screening and testing	Depends on virus: weeks to months or years after transfusion. Residual risk of viral transmission with tested blood is very low and estimated at: HIV-1:4 million per units transfused HCV-1:4 million per units transfused HBV-1:200,000 per units transfused	•Seek specialist medical advice •All cases of suspected transfusion transmitted infection should be reported to the I.B.T.S. for investigation •If donated blood is excluded, other sources of acquisition should be considered

Appendix 7: ABO Compatibility Tables

Red blood cell compatibility table

Recipient	Donor							
	O–	O+	A–	A+	B–	B+	AB–	AB+
O–	✓							
O+	✓	✓						
A–	✓		✓					
A+	✓	✓	✓	✓				
B–	✓				✓			
B+	✓	✓			✓	✓		
AB–	✓		✓		✓		✓	
AB+	✓	✓	✓	✓	✓	✓	✓	✓

Table note
1. Assumes absence of atypical antibodies that would cause an incompatibility between donor and recipient blood, as is usual for blood selected by cross matching.

Plasma compatibility table

Recipient	Donor			
	O	A	B	AB
O	✓	✓	✓	✓
A		✓		✓
B			✓	✓
AB				✓

Table note
1. Assumes absence of strong atypical antibodies in donor plasma

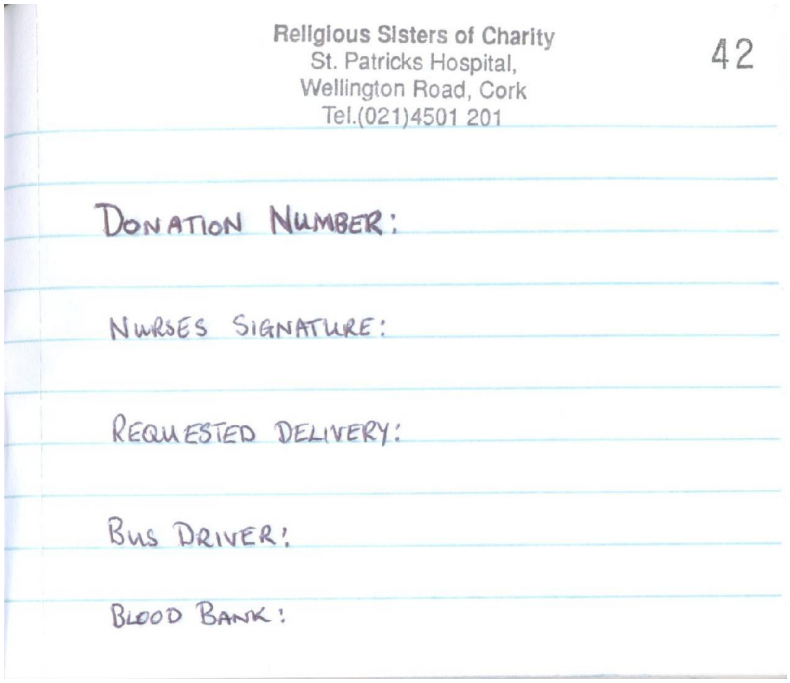
Appendix 8: Ward Log Book

Date of Transfusion
Time blood removed from transport box
Time blood connected to patient
Time Infusion completed
Administrator's signature (Sign & PRINT)
Sign:
PRINT:
Was this unit recalled?
Yes **No**
Reason:
Was this Unit returned?
Yes **No**
Reason:
Was this unit discarded?
Yes **No**
Reason:

Unit History Sticker

(Place White sticker in this box)

Appendix 9: Receipt for Blue Traceability Label



Religious Sisters of Charity
St. Patricks Hospital,
Wellington Road, Cork
Tel.(021)4501 201

42

DONATION NUMBER:

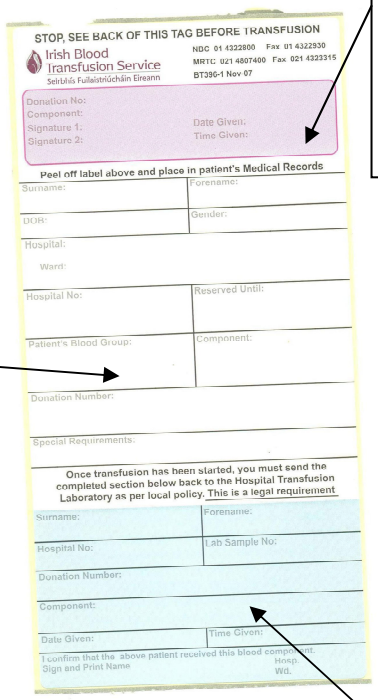
NURSES SIGNATURE:

REQUESTED DELIVERY:

BUS DRIVER:

BLOOD BANK:

Appendix 10: Blood Pack Labelling ('Bag and Tag')



STOP, SEE BACK OF THIS TAG BEFORE TRANSFUSION

Irish Blood Transfusion Service
Seirbhís Fuilaistriúcháin Éireann

NDC 01 4322800 Fax 01 4322930
MRTC 021 4807400 Fax 021 4323315
BT396-1 Nov 07

Donation No:
Component:
Signature 1:
Signature 2:
Date Given:
Time Given:

Peel off label above and place in patient's Medical Records

Surname:
Forename:
DOB:
Gender:
Hospital:
Ward:
Hospital No:
Reserved Until:
Patient's Blood Group:
Component:
Donation Number:
Special Requirements:

Once transfusion has been started, you must send the completed section below back to the Hospital Transfusion Laboratory as per local policy. This is a legal requirement

Surname:
Forename:
Hospital No:
Lab Sample No:
Donation Number:
Component:
Date Given:
Time Given:
I confirm that the above patient received this blood component.
Sign and Print Name
Hosp
Wd.

Pink Section must be completed by two nurses independently, one after the other.

White section to be placed onto a Unit History Sheet in the 'Ward Log Book' – not to be returned to Blood Bank.

Blue section is a **legal document** and must be placed in the designated box at the nurse's desk. Arrange for prompt return to blood bank after commencement of transfusion.

Appendix 11: Blood Transfusion Incident Form

Founded by the Sisters of Charity

St. Patrick's Hospital (Cork) Ltd.

Marymount Hospice

Form No.:
Ext. Ref. No.:

Haemovigilance No:

BLOOD COMPONENT TRANSFUSION
Incident / Accident / Near Miss/ Event/ Reaction or Non-Compliance Report

(NOTE: not to be used for drug incidents) **Please use block letters when completing this form**

PATIENT'S DETAILS:

Name: _____ **MRN:** _____ **Male** ☐ **Female** ☐

Address: _____

_____

_____

DOB: ____/____/____
DD MM YYYY

In case of incident involving a member of staff:
EMPLOYEE'S NAME:_____
JOB TITLE:_____

Date of event _____ (DD MM YYYY) **Time** _____ (Use 24-Hour Clock) **Ward/Dept** _____

Reported by _____ (*DOCTOR*) _____ (*NURSE*) **Location** *(e.g. Rm. 3)* _____

Reported to: _____ (*Name & Job Title to be entered*) **Other** *(e.g. Car park)*_____

1. *BLOOD COMPONENT GIVEN TO THE WRONG PATIENT* ☐
2. *BLOOD COMPONENT INFUSED AT THE INCORRECT RATE* ☐
3. *INCORRECT OR NO PRESCRIPTION FOR BLOOD COMPONENT* ☐
4. *BLOOD WASTAGE* ☐
5. *BLOOD COMPONENT INCORRECTLY STORED* ☐
6. *OMISSION OF BLOOD COMPONENT* ☐
7. *ADVERSE REACTION TO BLOOD COMPONENT* ☐
8. *FAILURE OF TRANSPORTATION/COLLECTION SYSTEM* ☐
9. *INCORRECT BLOOD COMPONENT GIVEN* ☐
10. *BLOOD COMPONENT TO PATIENT LIKELY TO REFUSE* ☐
11. *COMPONENT RECALL* ☐
12. *OTHER* ☐

Description of the Event (*FACT not opinion*) _____

_____

Action Taken: _____

_____

Outcome for Patient:_____

Patient or Next of Kin Notified: Yes ☐ No ☐ **Details:** _____ **Time:** _____

Was the Doctor informed: Yes ☐ No ☐ **Name *(of Dr.)*:** _____ **Time** _____
(Use 24-Hour Clock)

Form Completed by: (1) _____ **Date:**_____ **(2)** _____ **Date:**_____
(Name & Job Title to be entered) *(Name & Job Title to be entered)*

Director of Nursing/Risk Management informed Yes ☐ No ☐ **Date:** ____/____/____

Consultant informed Yes ☐ No ☐ **Date:** ____/____/____

FOR OFFICE USE ONLY

Insurance Company informed Yes ☐ No ☐ **Date:** ____/____/____ (DD MM YYYY) _____

C.I.S. STARSWeb updated Yes ☐ No ☐ **Submission Date:** ____/____/____ (DD MM YYYY) _____

FINAL APPROVAL
Signed by: **Date:** ____/____/____
DD MM YYYY

Please tick one of the following; **Incident** ☐ **Near Miss** ☐
White copy to Director of Nursing *Yellow copy to Haemovigilance Officer*

Appendix 12: Audit Tool (Documentation)

			Care Pathway Documentation			
	% completed	**Standard Number**	**Pink Identity label details**			
1.			Is the Pink Identity label present on the Care Pathway?	Yes ☐	No ☐	Comment:
2.			Is the pink identity label on the Care Pathway signed by:	The person administering the blood? Yes ☐ No ☐	The nurse who second checked the blood? Yes ☐ No ☐	
3.			Is the signature legible?	The person administering the blood? Yes ☐ No ☐	The nurse who second checked the blood? Yes ☐ No ☐	
4.			Is the signature printed?	The person administering the blood? Yes ☐ No ☐	The nurse who second checked the blood? Yes ☐ No ☐	
5.			Is the signature written in black ink?	The person administering the blood? Yes ☐ No ☐	The nurse who second checked the blood? Yes ☐ No ☐	
6.			Is the date recorded on the label?	Yes ☐	No ☐	Comment:
7.			Is the component type recorded on the label?	Yes ☐	No ☐	Comment:
8.			Is the time recorded on the label?	Yes ☐	No ☐	Comment:
			Page 1 of 6 Patient Information Details			
9.			Is the patient's First name written clearly?	Yes ☐	No ☐	Comment:
10.			Is the patient's surname written clearly?	Yes ☐	No ☐	Comment:
11.			Is the patient's date of birth written clearly?	Yes ☐	No ☐	Comment:
12			Is the patient's MRN written clearly?	Yes ☐	No ☐	Comment:

		Standard Number					
13			Is the patient's gender written clearly?		Yes □	No □	Comment:
14		1	Is box 1. signed? Yes □ No □	Full name? Yes □ No □	Signature? Yes □ No □	Designation? Yes □ No □	Date? Yes □ No □
15		2	Is date of cross match completed?		Yes □	No □ Is this documented on the variance sheet? Yes □ No □	Comment:
16		2	Is time of cross match completed?		Yes □	No □ Is this documented on the variance sheet? Yes □ No □	Comment:
17		2	Is the cross match an emergency?		Yes □ Is the reason for the emergency documented in the patient's notes? Yes□ (state reason) ..... No □	No □	Comment:

		Standard Number					
18		2	Is the date/location of most recent transfusion completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
19		2	Is the perceived benefit of last transfusion completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
20		2	Is the transfusion reaction history completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
21		2	Are any special requirements completed?		Yes ☐ Please detail request..	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
22		2	Is box 2. signed? Yes ☐ No ☐	Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐
23		3	Is the reason for transfusion clearly documented on the Care Pathway?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:

		Standard Number				
24		3	If yes, is the reason: a). Symptoms thought to be secondary to anaemia and debilitating enough to warrant transfusion.	Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
		3	b). An acute severe bleed.	Yes ☐	No ☐	Comment:
		3	c). Required before or after a specific treatment (e.g. chemotherapy, radiotherapy).	Yes ☐	No ☐	Comment:
25		3	Other:			
26		3	Are the symptoms rated?	Yes ☐ Please give symptom and score	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
27		3	Date of most recent FBC completed?	Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
28		3	Is box 3. signed? Yes ☐ No ☐ Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐
29		4	Benefits and risks explained completed?	Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:

		Standard Number					
30		4	Verbal consent obtained, recorded?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
31		4	Patient information leaflet provided completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
32		4	Is box 4. signed? Yes ☐ No ☐	Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐
33		5	Planned date and time of transfusion completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
34		5	Blood products prescribed completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
35		5	Nursing staff informed of planned date completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:

		Standard Number					
36		5	Number of units planned completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
37		5	Is box 5. signed? Yes ☐ No ☐	Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐
			Page 2 of 6				
38		6	Has there been improvement in symptoms completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
39		6	Are the symptoms rated?		Yes ☐ Please give symptom and score.....	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
40		6	Is box 6. signed? Yes ☐ No ☐	Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐
41		7	Date FBC re-checked completed?		Yes ☐	No ☐ Is this documented on the variance sheet? Yes ☐ No ☐	Comment:
42		7	Is box 7. signed? Yes ☐ No ☐	Full name? Yes ☐ No ☐	Signature? Yes ☐ No ☐	Designation? Yes ☐ No ☐	Date? Yes ☐ No ☐

Nurses section – Pre transfusion Care Pathway						
		Standard Number				
43		9	Are the unit dates completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
44		9	Are the base line observation **signatures** completed	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
45		10	Is the blood transfusion prescription check signed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
46		11	Is the cannulation check signed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
			Delivery staff section			
47		12	Are the unit dates completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
48		12	Is the transport/taxi company name completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
49		12	Is the name legible?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
50		12	Is the signature legible?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
51		12	Blood transported in the box provided completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐

		Standard Number				
	Page 3 of 6					
	Nurses section - Pre transfusion care pathway					
52		13	Box is sealed and in good condition completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
53		14	Is the time recorded into ward log book completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
54		15	Are the identification checks completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
55		16	Is the identification verified verbally by patient completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
56		17	Are the ABO Rh group checks completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
57		18	Expiry date check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
58		19	Condition of blood pack check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
59		20	Special requirements check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
60		21	Drug chart check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
61		22	Transfusion rate check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐

		Standard Number				
62		23	'Pink' sticker completion reminder completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
63		25	Stay with patient for 15 mins completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
64		27	Blue traceability label check completed?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
65		30	Discard giving set and store empty blood bag for 24hours complete?	Unit 1 Yes ☐ No ☐	Unit 2 Yes ☐ No ☐	Unit 3 Yes ☐ No ☐
			Variance sheet page 5 of 6			
66			Are all entries dated?	☐ Yes –....out of ....entries are dated	No ☐ .....out of .....entries are not dated.	
67			Are all units numbered?	☐ Yes –....out of ....entries are numbered	No ☐ .....out of .....entries are not numbered	
68			Are all variances clear to read?	☐ Yes –....out of ....entries are clear	No ☐ .....out of .....entries are not clear	
69			Are all entries signed?	☐ Yes –....out of ....entries are signed	No ☐ .....out of .....entries are not signed.	
70			Are all signatures printed?	☐ Yes –....out of ....entries are printed	No ☐ .....out of .....entries are not printed	
71			Are all designations recorded?	☐ Yes –....out of ....entries are recorded	No ☐ .....out of .....entries are not recorded	
72			Are all entries written in black ink?	☐ Yes –....out of ....entries are in black ink	No ☐ .....out of .....entries are not in black ink	
73			Is the patient's full name recorded?	Yes ☐	No ☐	Comment:
74			Is the patient's date of birth recorded?	Yes ☐	No ☐	Comment:

		Standard Number					
75			Is the patient's MRN recorded?	Yes ☐		No ☐	Comment:
76			Is the patient's gender recorded?	Yes ☐		No ☐	Comment:
77			Are all 'dates to be given' completed?	☐ Yes ....out of ....entries completed		No ☐ .....out of .....entries are not completed	
78			Are all 'types of blood component' completed?	☐ Yes ....out of ....entries completed		No ☐ .....out of .....entries are not completed	
79			Are any special requirements requested?	Yes ☐		No ☐	Comment:
80			Are the special requirements also on page 1 of 6?	Yes ☐		No ☐	Comment:
81			Is the duration of transfusion completed?	Yes ☐		No ☐	Comment:
82			Are any additional drugs required completed?	Yes ☐		No ☐	Comment:
83			Is the Prescriber's name signed?	Yes ☐		No ☐	Comment:
84			Is the Prescriber's name printed?	Yes ☐		No ☐	Comment:
			Administrator's section				
85			Is the date given completed?	Yes ☐	No ☐		Comment:
86			Is the patient's blood group completed?	Yes ☐	No ☐		Comment:
87			Is the donor's blood group completed?	Yes ☐	No ☐		Comment:
88			Is the expiry date completed?	Yes ☐	No ☐		Comment:
89			Is the administrator's name printed?	Yes ☐	No ☐		Comment:
90			Is the administrator's name signed?	Yes ☐	No ☐		Comment:
91			Is the checker's name printed?	Yes ☐	No ☐		Comment:
92			Is the checker's name signed?	Yes ☐	No ☐		Comment:
93			Is the calculated drops per min completed?	Yes ☐	No ☐		Comment:
94			Is the start time recorded?	Yes ☐ What time?	No ☐		Comment:

		Standard Number				
95			Is the finish time recorded?	Yes ☐	No ☐	Comment:
96			Is the volume infused (in mls) recorded?	Yes ☐	No ☐	Comment:
97			Are the Pre transfusion Observations completed?	Yes ☐ What time? ……	No ☐ If no, what is missing?	Comment:
98			Are the 15 minute observations all documented?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:
99			Are the 30 minute observations all documented?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:
100			Are the 1 hour observations all documented?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:
101			Are the 2 hour observations all documented?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:
102			Are the 3 hour observations all documented?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:
103			Are the post transfusion observations all completed?	Yes ☐ What time?.....	No ☐ If no,what is missing?.....	Comment:

Appendix 13: Audit tool (Cross-match observation)

1	Was the documentation pack collected prior to seeing the patient?	Yes☐ by whom (Dr/ Nurse).....	No ☐	Comment:
2	Did a second member of staff go with the Dr to identify the patient?	Yes ☐	No ☐	Comment:
3	Did a member of staff ASK the patient to state their **name**?	Yes ☐	No ☐	Comment:
4	Did a member of staff ASK the patient to state their **date of birth**?	Yes ☐	No ☐	Comment:
5	Did the Dr check the wristband details?	Yes ☐	No ☐	Comment:
6	Did the Second member of staff check the wristband details?	Yes ☐	No ☐	Comment:
7	Did the Dr check the medical notes entry from the ward round (to identify the correct patient for blood Transfusion)	Yes ☐	No ☐	Comment:
8	Did the Second member of staff check the medical notes entry from the ward round (to identify the correct patient for blood Transfusion)	Yes ☐	No ☐	Comment:
9	Did the Dr ask the patient about previous transfusions?	Yes ☐	No ☐	Comment:
10	Did the Dr ask the patient about previous transfusion reactions?	Yes ☐	No ☐	Comment:
11	Was hand hygiene/PPE undertaken prior to palpating the vein?	Yes ☐	No ☐	Comment:
12	Was hand hygiene/PPE undertaken prior to bleeding the patient?	Yes ☐	No ☐	Comment:
13	Was an aseptic technique followed during the venepuncture?	Yes ☐	No ☐	Comment:
14	Was the policy for Prevention and Management of Sharps Injuries (INF004)	Yes ☐	No ☐	Comment:
15	Was the vial label completed at the bedside?	Yes ☐	No ☐	Comment:
16	Was the BT7 Request form completed at the bedside?	Yes ☐	No ☐	Comment:
17	Were any special requests identified at that time	Yes ☐	No ☐	Comment:
18	Did the Dr begin completion of the care pathway at this time?	Yes ☐	No ☐	Comment:

Appendix 14: Audit tool (Administration observation)

1	Is the time blood removed from storage recorded?		Yes☐ where?.....	No ☐	Comment:
2	What time is the blood removed from the storage box?		Time.....		Comment:
3	Is the Patient in:	A single room ☐	A day room ☐	A shared bay ☐	Other:
4	Is the patient conscious?	Yes ☐	No ☐	Comment:	
5	Does the patient speak English?	Yes ☐	No ☐	Comment:	
6	Is the patient wearing an identification wristband		Yes ☐	No ☐ if no, go to question 12	Comment:
7	Does the wrist band contain the patient's Surname?		Yes ☐	No ☐	Comment:
8	Does the wrist band contain the patient's first name?		Yes ☐	No ☐	Comment:
9	Does the wrist band contain the patients gender?		Yes ☐	No ☐	Comment:
10	Does the wrist band contain the patient's date of birth?		Yes ☐	No ☐	Comment:
11	Does the wrist band contain the patient's MRN		Yes ☐	No ☐	Comment:
12	Is the patient asked to state their full name?		Yes ☐	No ☐	Comment:
13	Is the patient asked to state their date of birth?		Yes ☐	No ☐	Comment:
14	If no, did the nurse state the details and ask		Yes ☐	No ☐	Comment:

	the patient to check them?				
15	Is the patient's name checked against the wrist band when said aloud?		Yes ☐	No ☐	Comment:
16	Is the patient's date of birth checked against the wrist band when said aloud?		Yes ☐	No ☐	Comment:
17	If no is the wrist band checked at any stage?		Yes ☐	No ☐	Comment:
18	Are the identification details on the wrist band checked against:	The Blood pack compatibility label Yes ☐ No ☐	The tag details hanging from the blood unit: Yes ☐ No ☐	The prescription chart: Yes ☐ No ☐	The patient's medical records: Yes ☐ No ☐
19	Do all of the details match?		Yes ☐	No ☐	Comment:
20	If no, what action is taken?	Comment:			

21	Are the ABO and Rhesus groups checked on:	The tag hanging from the blood unit? Yes ☐ No ☐	The compatibility label stuck to the blood bag? Yes ☐ No ☐	The Compatibility sheet (green form)? Yes ☐ No ☐	Comment:
22	Do all the details match?		Yes ☐	No ☐	Comment:
23	If no, what action is taken?	Comment:			

24	Is a check made for any special requirements made?	On the blood pack? Yes ☐ No ☐	On the prescription? Yes ☐ No ☐	On the compatibility form (green form)? Yes ☐ No ☐	Comments:

25	If requirements are made, are they met and documented:	On the blood pack? Yes ☐ No ☐	On the prescription? Yes ☐ No ☐	On the compatibility form (green form)? Yes ☐ No ☐	Comments:
26	Is a visual check made of the blood component and its contents?	Check for discolouration? Yes ☐ No ☐	Check for clots? Yes ☐ No ☐	Check for leakage? Yes ☐ No ☐	Comments:
27	Are all the checks made in the presence of the patient?		Yes ☐	No ☐	Comment:
28	Do both nurses check the infusion rate (either manually or through a pump)?		Yes ☐	No ☐	Comment:
29	Do both nurses check the prescription chart?		Yes ☐	No ☐	Comment:
30	Do both nurses check the drug chart (e.g. for diuretics)?		Yes ☐	No ☐	Comment:
31	Is the patient advised to inform staff of any signs of transfusion reactions?		Yes ☐ (List which signs are mentioned).....	No ☐	Comment:
32	What time is the transfusion commenced?		Time:	Time since removed from storage box:	
33	Does the nurse stay with patient for the first 15 minutes?		Yes ☐	No ☐ How long do they stay for?.....	Comment:
34	Is the patient left with advice to inform staff of ANY problems?		Yes ☐	No ☐	Comment:
35	Is the patient left with a nurse call bell they can use?		Yes ☐	No ☐	Comment:
36	Are any signs of a transfusion reaction reported?		Yes ☐ Give details.....	No ☐	Comment:
37	Is this reaction documented in the: care pathway ☐ medical notes ☐ incident form ☐ or not applicable ☐				
38	What day of the week is the transfusion being administered?				

All Persons must date and sign this page after they have read and understood the policy

FOUNDED 1870	**St Patrick's Hospital (Cork) Ltd.**	**Revision No: 1** **Date: 09/09**
	Title: Blood Transfusion Policy GEN001	
	Approved by The Executive Committee	**September 2009**

Date	Print Name	Signature