

**KING'S LYNN & WISBECH NHS TRUST AND WEST NORFOLK
PRIMARY CARE TRUST**

**POLICY FOR THE ADMINISTRATION OF BLOOD AND BLOOD
COMPONENTS AND THE MANAGEMENT OF TRANSFUSED PATIENTS
IN THE COMMUNITY**

Failure to follow protocol during all parts of the transfusion chain have been shown to contribute to up to 70% of errors reported to the Serious Hazards of Transfusion (SHOT) confidential enquiry annually since 1998.

**ADHERING TO PROTOCOL PREVENTS ERROR AND SAVES
LIVES.**

1. THE REQUEST FORM

1.1 Identification [addressograph labels may be used]

The form **MUST** include:

♦ **HOSPITAL NUMBER**

[Community numbers will **NOT** be accepted this is because the lab computer **MUST** only use **one** number to ID the patient]

- ♦ First name
- ♦ Surname
- ♦ Date of birth

NB Gender of patient is helpful

1.2 Information

To aid the transfusion laboratory the request form should contain:

- ♦ Location of the patient [i.e. community or Swaffham Cottage Hospital or Tapping House Hospice]
- ♦ Atypical antibodies [if known - if not known write "unaware"]
- ♦ Diagnosis and the reason for the request [anaemia or low Hb are not considered adequate information]
- ♦ Blood group [ABO and Rhesus D] [if known]
- ♦ Any previous transfusions [particularly noting any reactions]
- ♦ Consultant in charge

1.3 The request

The request form should contain the following information.

The type of blood product required (i.e. red cells, platelets)

The number of units required

The date and time required

Any special requirements [e.g. cmv negative, irradiated etc.,]

2. TAKING THE SAMPLE OF BLOOD

2.1.1 Staff authorised to take blood samples from patients

Registered nurses, midwives & RSCN's]	who have
Health Care Assistants]	received
		training &
		assessment

2.1.2 Patient identification

Positive identification of the patient is essential and is based on:-

Questioning the patient by asking them their surname, first name and date of birth [all patients]

2.2 Venepuncture

The blood should be taken into a 7ml EDTA/purple top tube

2.3 Sample labelling

2.3.1 The sample must be labelled by hand immediately **AFTER** taking the blood by the person taking the blood sample.

2.3.2 Sample tubes must **NOT** be pre-labelled.

2.3.3 Addressograph labels must **NEVER** be used to label transfusion samples.

2.3.4 The samples tube **MUST** be labelled with:

Hospital number - essential (even in the community)
Surname
First name
Date of birth
Date sample taken

INADEQUATELY/INCORRECTLY LABELLED SAMPLES
WILL BE DISCARDED WITHOUT EXCEPTION AND
REGARDLESS OF CIRCUMSTANCE

**3. COLLECTING BLOOD FROM THE BLOOD BANK (for transfusion at Swaffham Cottage Hospital or in the patient's home).
(For collections for Tapping House Hospice please see Appendix II)**

3.1 Staff who may remove blood from the blood bank

Trained nurses]	who have
Auxiliary Nurses]	received
		training
		within the
		past 2 years

3.2 Staff who may collect blood handed over by biomedical scientists (for Swaffham Cottage Hospital only.)

Authorised volunteers who have received training.

3.3 Patient identification

Staff member removing blood from the blood bank should use the yellow cross-match form.

NB If the yellow cross-match form cannot be found in the blood bank the staff member should go into the transfusion lab to discuss this with the BMS [Biomedical Scientist] and to ask for one to be printed.

The cross-match form should be kept either attached to the patient's community nursing notes or to the blood transfusion prescription during transfusion.

3.4 Before you remove the blood from the blood bank:

3.4.1 The units should be placed in a blood cool box with a new ice insert [available in the transfusion lab] and are safe to use for **5 hours only**. Transfer box labels are available from the BMS. The label [below] should be completed in the lab by the member of staff collecting the blood.

3.4.2 Blood not used should be returned to the blood bank **within** this time and documented according to protocol [see page 11 of this protocol]

Blood for Home Transfusion

Removed from Blood Bank:.....

Blood must be transfused with 5 hours of removal from the blood bank, and must be positively identified with the patient.

[see back of pink prescription sheet]

Tel 01553 613 782 should any problems arise.

3.5. Removing the unit of blood from the blood bank.

The procedure **MUST** be followed to minimise risks to the patients.

3.5.1 Look in the blood bank for the patient's blood. This will be in the appropriate compartment i.e. community.

3.5.2 Check the hospital number, name and date of birth on the luggage label attached to the unit of blood or platelets against that on the cross-match form.

3.5.3 Look carefully at the Blood Transfusion Centre label on the unit and check the following against the details on the yellow x-match form:

blood group

unit number

expiry date

special requirements eg cmv negative or irradiated [these will usually be for neonates, paediatric patients or haematology patients only]

3.6. Documenting the removal of a unit of blood from the blood bank.

3.6.1 check in the register for the patient's name and hospital number.

3.6.2 check the details on the blood transfusion centre label once more against the details in the register.

3.6.3 if the details are correct, enter the **time and date** of taking the blood from the bank and sign in the appropriate columns, remembering to **PRINT** your name under your signature.

4. PREScription OF BLOOD AND BLOOD COMPONENTS.

4.1. Staff who may prescribe blood:

- Hospital consultants who consider patients to be suitable for home/community transfusion.
and/or
- Staff grade/Specialist Registrars working with them whom
 - a] have attended blood transfusion training in the past 2 years
and/or
 - b] are willing/able to take responsibility for the patient should they become unwell.

NB. It is the responsibility of the referring hospital consultant to agree to community transfusion and stay in overall charge of the prescription and care of their patient.

4.2. Prescribing blood

4.2.1 Blood and blood components **MUST** be prescribed on a pink blood prescription sheet [B12 - available from the Queen Elizabeth hospital] by the doctor in overall charge of the case.

4.2.2 The prescription sheet **MUST** contain the patient identification details including:

Hospital number

First name

Surname

Date of birth

4.2.3 The prescription must specify:

- ♦ The blood or components to be transfused (eg. red cells)
- ♦ Special requirements e.g. irradiated products, CMV seronegative products as required
- ♦ The number of units to be given
- ♦ The duration of the transfusion [usually two hours for blood and 30 mins for adult therapeutic dose of platelets].
- ♦ The reason for transfusion - being more specific than 'anaemic' e.g. breathless, symptoms of anaemia etc.,
- ♦ Any special instructions eg medication required before or during the transfusion, which must be prescribed separately on a hospital drug chart

4.2.4 If the patient is to be transfused at home all drugs must be dispensed and sent to the blood bank to be included with the blood transfusion eg Furosemide (previously known as Frusemide).

5. PATIENT INFORMATION

- 5.1 The prescription of blood for a patient should be treated as any other drug prescription. Although formal written consent is NOT required, patients should be informed of the reason for transfusion, its likely benefits and risks, and should have the right to refuse it. An information leaflet detailing the above and other information including safety advice **MUST** be given to the patient.

6. CHECKING BLOOD AND BLOOD COMPONENTS FOR ADMINISTRATION

The final check is a vital step in preventing transfusion error.

6.1. Staff who may check blood:

- | | | |
|------------------------------------|---|--------------------------|
| ♦ Registered nurses/midwives/RSCNs |] | Who have |
| ♦ Registered doctors |] | received training in the |
| ♦ Paramedics |] | past 2 years. |

6.2. Checking the unit

6.2.1 At least one person see B1 above] must check the blood or blood component **with the patient**

6.2.2 Positively [verbally] check the identity of the patient [e.g. first name, surname, date of birth or address].

6.2.3 The patient details on the yellow compatibility report should exactly match those that the patient gives out.

6.2.4 Check the actual bag details [not the 'luggage label'] against the yellow compatibility report for:

Group
Expiry date
Unique unit number

**NB This number is 14 digits long and may include an * or a +.
These symbols should also be documented.**

6.2.5 Any discrepancies in the patient details and those on the blood bag or the yellow compatibility report should be reported to the blood bank staff on **01553 613782** immediately.

6.2.6 The unit of blood should be checked for compliance with any special requirements [eg irradiation] as on the prescription.

6.2.7 The unit should be inspected for clots or discolouration. Any units which give cause for concern should be returned to the blood bank immediately.

6.2.8 The details of the unit should be documented on the prescription sheet and staff should sign the prescription sheet clearly.

7. EQUIPMENT TO BE USED IN CONJUNCTION WITH BLOOD TRANSFUSION

7.1 Intravenous access devices.

7.1.1 Peripheral access.

There is no maximum or minimum size of cannula.

The size chosen should reflect:

- the size of the vein
- the speed at which the blood is to be given [eg is it an emergency ?]
- the number of units to be given [in adults larger bore cannulae such as pink or green tend to last longer]

7.1.2 Tunnelled central catheters including Port-a-caths.

Most lines are designed to take blood transfusion. In multi lumen lines it is often the red lumen which is most suited to blood and other viscous fluids. These lines should be accessed using the aseptic techniques documented in haematology/oncology protocol F1.

NB: Blood or any other product MUST NOT be given through a line in use for total parental nutrition. Alternative intravenous access should be sought.

7.1.3 Short term central lines may be used for blood transfusion. These should also be accessed using aseptic technique.

7.2. Giving sets.

7.2.1 Blood and blood components should only be transfused through a sterile giving set designed for the purpose.

7.2.2 Platelets and FFP should also be transfused using blood giving sets.

7.2.3 PLATELETS MUST NOT BE TRANSFUSED THROUGH A GIVING SET THAT HAS BEEN USED FOR BLOOD.

7.2.4 It is good practice to only use blood giving sets for blood and its components.

If switching to clear fluids a new giving set must be used.

DEXTROSE SOLUTIONS AND BLOOD ARE NOT COMPATIBLE

7.2.5 Priming the giving set should be done as per manufacturers instructions.

- ◆ Switch off the roller clamp.
- ◆ Insert the giving set spike into the port of the blood bag - the giving set should be pointing up towards the ceiling out of the bag.
- ◆ Undo the roller clamp and squeeze blood until it has filled the bottom chamber and half filled the top chamber.
- ◆ Turn off the clamp.
- ◆ Hang the bag on a drip pole and run the blood to the end of the line.

7.2.6 There is **no need** to pre prime the giving set with saline, it prevents correct priming with blood.

7.2.7 The giving set should be changed every 2 units in routine transfusions.

7.2.8 Blood should **NEVER** be warmed using improvisations such as radiators, bowls of warm water or microwave ovens.

8. CARE AND MONITORING

8.1. Staff responsible

8.1.1 The following staff may be responsible for monitoring transfused patients:

Registered nurses or midwives] Who have received
Enrolled nurses] training
Senior healthcare assistants]
Registered doctors]
Paramedic staff]
(at Swaffham Cottage Hospital)	

8.2. Observations

8.2.1 A set of baseline observations [temperature, pulse, BP] should be taken **IMMEDIATELY** before commencing the transfusion and documented on the prescription sheet.

8.2.2 The transfusion of pyrexial patients is at the discretion of the medical team who should be consulted via the hospital switchboard **01553 613613**. Pyrexia is not always a reason to delay a transfusion.

8.2.3 Major transfusion reactions are most likely to occur within the first 15 minutes. A set of observations [T, P and BP] must be done 15 minutes into each unit and the results documented on the prescription sheet.

8.2.4 Visual observation of the patient is often the best way to assess patients during transfusion, as a change in behaviour or condition of the patient may be observed before a change in T, P or BP.

8.2.5 Other observations of temperature, pulse and blood pressure need only be taken if the patient becomes unwell or shows signs of transfusion reactions.

9. MANAGING AND REPORTING ADVERSE EVENTS IN TRANSFUSION

9.1. Recognising a transfusion reaction (see appendix 1)

9.1.1 All nurses and doctors should be aware of types and signs of transfusion reactions [see appendix] and what to do if a reaction to blood is suspected.

9.1.2 A transfusion reaction should be suspected if the patient complains of:

- ♦ chest pain
- ♦ abdominal discomfort
- ♦ flushing [rash]
- ♦ high fever
- ♦ shortness of breath
- ♦ hypotension
- ♦ anxiety and 'feelings of doom'
- ♦ back pain
- ♦ restlessness
- ♦ palpitations

9.1.3 If an acute reaction is suspected:

- ♦ Stop the transfusion immediately and flush the IV access device with saline
- ♦ Recheck the unit (to make sure it is the correct unit).
- ♦ Call :
 - a] 999 and get the patient to hospital
 - AND**
 - b] The doctor or team taking responsibility for the transfusion.

9.2. Reporting a suspected transfusion reaction.

9.2.1 The transfusion laboratory should be informed of the suspected reaction as soon as possible on (01553) 613782.

- 9.2.2 The unit of blood or blood component taken down should be sent back to the blood bank for further tests with any other bags of blood [or its components] given to the patient in the previous 24 hours.
- 9.2.3 Adverse events should be reported to the hospital transfusion committee and any serious adverse events should also be reported to the Serious Hazards of Transfusion Confidential enquiry group [*SHOT*] via the Hospital transfusion Team on 01553 613 299

10. DOCUMENTATION OF TRANSFUSIONS

10.1.1 An entry should be made in the medical and/or nursing notes - documenting the reason for transfusion and including the pre-transfusion haemoglobin.

101.2 Any adverse events should be documented in the medical notes, and the actions taken clearly stated.

10.1.3 The following **MUST** be filed in the HOSPITAL notes to enable the unit to be traced in future years if required.

NB: Send all documentation to the Transfusion Secretary based in the Path Lab at the hospital

the prescription sheet

the yellow compatibility report

any observations taken at the time

11 RETURNING BLOOD TO THE BLOOD BANK.

- 11.1** If the blood is returned to the blood bank within 5 hours of its withdrawal and has been stored in an insulated ice box for all this time it can be put back into the blood bank into the slot from where it was removed and the return time clearly documented in the register and signed.
- 11.2** If the blood has been out of the blood bank for more than 20 minutes no box or 5 hours in an insulated ice box before being administered, it may not be returned to the original slot but must be returned to the "dangerous blood" section of the blood bank and the return clearly documented in the register and signed. Please also inform the blood bank. [The reason for this is that safe blood storage is dependent on temperature and if the temperature is allowed to rise bacterial growth can occur.]

12 TRAINING

- 12.1 All individuals participating in any part of the transfusion process must attend training at least bi-annually.
- 12.2 Training will be provided by the Acute Services Trust Transfusion Team.
- 12.3 Training may be arranged by the PCT via the transfusion team secretary at the Queen Elizabeth hospital on 01553-613299.

References:

1. *British Committee for Standards in Haematology, Blood Transfusion Task Force [1999] The administration of blood and blood components and the management of transfusion patients. Transfusion Medicine 9 227-238*
2. *SHOT [2004] Annual Report 2003, Manchester, SHOT*
3. *Atterbury C & Wilkinson J [2000] Blood Transfusion. Nursing Standard 14, 34, 47-52*

Appendix II

Collecting blood from the blood bank (Tapping House Hospice)

NB Blood will be delivered to Tapping House Hospice via the pathology collection and delivery system. The blood will be checked out of the blood bank by a qualified Biomedical Scientist the procedure for which is subject of an internal standing operating procedure which is available on request.

The blood will be delivered to Tapping House Hospice the day before the required date of transfusion.

Section 1. Receiving blood from the delivery staff

- 1.1 Blood must be accepted by a trained nurse who has received training within the past 2 years.
- 1.2 The blood must immediately be stored in the blood fridge.
- 1.3 The hospital number, name and date of birth on the luggage label attached to the unit of blood should be checked against exiting documentation at Tapping House to ensure that the correct units have been delivered.

Look carefully at the blood transfusion centre label on the unit and check the following details on the yellow crossmatch form-:

- ◆ Blood group
- ◆ Unit number
- ◆ Expiry date
- ◆ Special requirements eg. CMV negative or irradiated (these will usually be only for Haematology patients).

Section 2. Documenting the removal of a unit of blood from the blood bank.

- ◆ check in the register for the patient's name and hospital number.
- ◆ check the details on the blood transfusion centre label once more against the details in the register.
- ◆ if the details are correct, enter the **time and date** of taking the blood from the bank and sign in the appropriate columns, remembering to **PRINT** your name under your signature.

Section 3 See section 9 of the main protocol

In addition the large white blood bank register form must also be sent back to the transfusion secretary based in the path lab for future tracing of the unit.