RDH site specific

PROCESS 2

REQUESTING BLOOD COMPONENTS

1) GENERAL CONSIDERATIONS

The SHOT (Serious Hazards of Transfusion) scheme has repeatedly reported errors in authorisation, sampling or requesting procedures, resulting in incorrect blood components being transfused. It is essential that the correct protocol is followed in all circumstances to help eliminate these errors.

For all patients, consideration must be given to the use of transfusion alternatives in the treatment of anaemia before the decision to transfuse donor blood is made.

A patient becomes anaemic when their Haemoglobin (Hb) falls below the normal range; therefore, investigation and appropriate management should be commenced as soon as the anaemia is discovered rather than waiting until they become symptomatic.

Medical staff should, where possible, obtain blood samples to investigate the cause of anaemia prior to transfusion, as results from samples obtained afterwards will not aid the diagnosis.

2) COMMUNICATING WITH THE PATIENT/CONSENT FOR BLOOD TRANSFUSION

It is an accepted principle that a patient should give valid consent before receiving medical treatment, and this includes when they receive a transfusion of blood and blood components.

Patients who have a been given a blood transfusion and were not able to give informed and valid consent prior to the transfusion are informed of the transfusion prior to discharge and provided with relevant paper or electronic information.

All patients who have received a transfusion have details of the transfusion (type[s] of component), together with any adverse events associated with the transfusion, included in their hospital discharge summary to ensure both the patient and their family doctor are aware.

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Important points to discuss when consenting patient for blood transfusion:

- the reason for the transfusion
- the benefits of the transfusion

Red cells:

Relieve symptoms of anaemia
Prevent complications of anaemia (tissue ischaemia, organ damage);
Earlier mobilisation/quicker recovery after illness or surgery

Platelets/plasma:

Stop or prevent bleeding etc.

- the risks of transfusion – both short- and long-term risks (and including any additional risks pertinent to long term multi-transfused patients): RISKS and actual or potential consequences:
  - Wrong blood/wrong patient
  - Febrile non-haemolytic reaction
  - Allergic reaction
  - Pulmonary complications:
  - Transfusion-Associated Circulatory Overload (TACO)
  - Transfusion-Related Acute Lung Injury (TRALI)
  - Haemolytic Transfusion Reaction - acute or delayed
  - Transfusion Transmitted Infection - bacterial, viral, other
  - Antibody formation
  - Iron overload
  - Other complications
- any transfusion needs specific to them
- any alternatives that are available, and how they might reduce their need for a transfusion:

Red cells:

Iron therapy (oral/IV);

Other haematinic replacement (B12, folate); Erythropoietin;

Cell salvage (surgery)

Plasma:

Factor concentrates if applicable

Platelets:

Tranexamic acid

- the possible consequences of refusing a blood transfusion
- the transfusion process
- that they are no longer eligible to donate blood
- that they are encouraged to ask questions

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Although it is not a legal requirement in the UK to obtain written consent for a transfusion, the Doctor should discuss treatment options with the patient before reaching a decision to authorise any blood component. An entry of this discussion and the reason for transfusion should be made on the Blood Transfusion Prescription and Record Card by the blood authoriser.

Patient information leaflet is available from the Transfusion Practitioners or from Blood Issue Fridge Room and should be used to guide the consent process.

If a patient has received donor blood, it is essential that the patient is aware of this, as it will affect the patient's eligibility to donate blood in the future. It is the responsibility of the Consultant under whose care the patient is, or a member of his or her team, to inform the patient of any transfusion they have received whilst confused, under anesthetic or strong analgesia.

3) PATIENTS REFUSING TRANSFUSION

Any competent adult is entitled to consent to surgical or other interventions, but to specifically exclude certain additional procedures such as a blood transfusion. The patient should be fully informed, and understand the potential consequences of the refusal; this must be documented using this checklist found in the **Trust Policy and Procedures for Managing Requests for Exclusion from Treatment with Blood Components/Products**

4) THE PRESCRIPTION (AUTHORISATION)

Blood components must only be authorised by medical staff or a non-medical practitioner who has completed the Non-Medical Authorisation of Blood Components training program to be able to authorise blood components, as specified in the policy for Non-Medical Authorisation of Blood Components for Transfusion.

NBTC indication codes for transfusion should be used to guide decision to transfuse where possible.

A clear reason/NBTC indication code for the transfusion must be given when requesting blood for transfusion. Time/date when transfusion is required together with the urgency must also be given.

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All blood components must be authorised on the Blood Transfusion Prescription & Record Card

The authorisation must be fully legible, and it should specify:

- The type of blood component
- The date on which the component is to be administered
- The duration of the infusion/transfusion rate
- Whether or not any special blood requirements are necessary
- It must be signed and dated by the authoriser
- TACO risk assessment must be completed

For medically stable non-bleeding patients, units of red blood cells should be prescribed one unit at a time and the patient reviewed after each unit to prevent over-transfusion. This includes clinical assessment and Hb level.

The use of diuretics in conjunction with a transfusion is at the discretion of the clinician but should be considered in order to prevent Transfusion Associated Circulatory Overload (TACO).

Every patient receiving a blood transfusion should have a TACO checklist performed which can be found in the Blood Transfusion Authorisation and Record card:

Patient TACO Risk Assessment UNIT 1	Yes	No
Is the patient (adult) <50Kg?		
Does the patient have any diagnosis of 'heart failure'?		
Is the patient on a regular diuretic?		
Does the patient have severe anaemia?		
Is the patient known to have pulmonary oedema?		
Does the patient have respiratory symptoms of undiagnosed cause?		
Is the fluid balance clinically significantly positive?		
Has the patient received intravenous fluids in the previous 24 hours?		
Is there any peripheral oedema?		
Does the patient have hypoalbuminemia?		
Does the patient have significant renal impairment?		
If Risks Identified	Yes	No
Review the need for transfusion (do the benefits outweigh the risks)?		
Can the transfusion be safely deferred?		
If proceeding with transfusion: Assign Actions		
Body weight dosing for red cells		
Transfuse a single unit (red cells) and review symptoms		
Measure fluid balance		
Prophylactic diuretic prescribed		
Monitor vital signs closely		
Name	Role	
Date	Time	
Signature		

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5) COMPLETING THE BLOOD BANK REQUEST FORM

The Blood Bank request form must include the following information about the patient:

- Surname/family name
- First name(s)
- Date of birth
- Hospital number
- Location
- Consultant

An addressograph label can be used on the request form.

<u>In the event of not being able to identify a patient:</u>

The request form should indicate this by:

- Surname: Unknown
- Forename: Male/Female
- Unique number: (Hospital number, A&E number or major incident number
- Date of Birth (A&E only): 1/1/ year (current year minus 110 years ie 2013 in 1903)

<u>Patients with incomplete details:</u>

The known details MUST be allocated to a new hospital number obtained from Admissions.

Once a patient's identity is confirmed, if a previous hospital record exists, Blood Bank MUST be informed of this, and a new sample be taken bearing the patient identifiers on the pre-existing notes. The Blood Bank request form accompanying the sample must have both hospital numbers clearly indicated to enable the laboratory to fully merge the records. All subsequent issues of blood components will use the pre-existing hospital number.

The patient will need to continue to wear the wristband bearing the new temporary hospital number whilst the only blood components available are those issued with the new temporary hospital number. This wristband must be removed if blood is no longer required or once blood components have been issued with the pre-existing hospital number.

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The following information MUST be provided on every blood request form:

- The clinical indication for transfusion, including the surgical procedure if the patient is going to theatre or diagnosis
- Any recent or previous transfusions
- Obstetric history and/or whether or not the patient is pregnant.
- For cord, foetal, infant or paternal sample, the maternal details must also be on the form
- Any previously identified antibodies (if known)
- Any special requirements, e.g. Irradiated

For crossmatch requests also include:

- Number and type of components required
- Urgency
- Time and date of proposed transfusion
- Special requirements

The requester MUST sign a handwritten form and print their name and bleep number. The person taking the blood must record the date/time the sample was taken.
Handwritten and electronic requests can be used for Group & Screen samples and crossmatch.

6) TIMING OF SAMPLES

Transfusion or pregnancy may stimulate the production of unexpected antibodies either through a primary or secondary immune response. The timing of samples selected for cross matching or antibody screening must take account of this. To ensure that the specimen used for compatibility testing is representative of a patient's current immune status, serological studies should be performed using blood collected no more than 3 days in advance of the actual transfusion when the patient has been transfused or pregnant within the preceding 3 months, or when such information is uncertain or unavailable.

Patient transfused or pregnant:	**Sample to be taken not more than:**
<3 months ago	72 hours before transfusion
>3 months ago	7 days before transfusion

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- ***Deviation from the 3-day rule to 7 days is given to women who are undergoing Elective Caesarean Section (ELCS) who have no clinically significant antibodies.***

- Patients who are being repeatedly transfused do not need daily samples. These patients should be screened for the development of irregular antibodies every 72 hours.
- Pregnant women who are for elective caesarean section should have samples taken no longer than 7 days prior to surgery. Ideally samples should be taken immediately before transfusion.

7) SECOND SAMPLES AND ELECTRONIC ISSUE OF BLOOD

Except in an emergency, Blood Bank will not issue blood without having received 2 samples for a 'Group and Screen' on a patient. This is for optimal patient safety. A single sample may be sufficient if Blood Bank already has a blood group on record from a previous attendance.

If two samples need to be taken, they must be taken at least 10-15 minutes apart, ideally by two different practitioners. If two members of staff are not available, the same person can take both samples, ensuring two different phlebotomy occasions and two separate positive patient identifications are performed to minimise the risk of error and patient harm.
For patients from whom a second sample has been received, electronic issue of red cells may be possible. There are strict guidelines about which patients are eligible for electronic issue (BCSH, 06.12.2012), including that they have no irregular antibodies and have not received a stem cell transplant or a recent solid organ transplant.

For patients who have attended a pre-operative assessment clinic where a 'Group and Screen' sample has been taken, a second sample should be sent within 7 days prior to surgery. This ensures that the current antibody status of the patient is available at the time of the operation and enables blood to be provided 'on demand' (within 5-15 minutes) should the patient bleed during surgery, thus avoiding the need to request blood to be available in the theatre blood fridge.

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8) COMMUNICATING WITH BLOOD BANK

Core hours (when the communication must be made by telephone).
Blood Bank ext.: 88532 or 88533

Outside core hours bleep 3090

For all planned transfusions the request for grouping, antibody screening and cross matching should be made 24-48 hours before the transfusion as special investigations and arrangements may be necessary. Check the latest Group and Screen report to confirm that the patient has not developed any irregular antibodies, as this will delay provision of blood.

If the blood is required urgently or after the group and screen has been taken, the hospital Blood Bank must be telephoned:

- To ask for blood components
- To check whether a further sample is required
- To notify Blood Bank that a sample is being sent by the most rapid method available.

The phone call may be made by a registered practitioner, but the name of the requesting doctor MUST be given to Blood Bank as this must be recorded in the laboratory.

The decision whether to use the Emergency group O, uncrossmatched group O or cross-matched blood is a clinical one. The Biomedical Scientist working in the laboratory needs to be informed how urgent the need for blood is so that the clinician and Biomedical Scientist can agree on the most appropriate blood being provided for the patient.

Blood Bank will inform the clinical area that the component is ready.

For FFP and cryoprecipitate (components which need to be thawed) Blood bank will tell the clinical area when they can expect the units to be ready for collection - usually 20-30 minutes from request.