Blood Transfusion Sample Collection and Requesting of Blood Components

Department / Service:	Blood Transfusion, Pathology.
Originator:	Gill Godding, Lead Transfusion Practitioner
Accountable Director:	Dr Thomas Skibbe, Consultant Haematologist
Approved by:	Trust Transfusion Committee 9th July 2021, Clinical Governance Group
Date of approval:	24th September 2021
Review date: This is the most up to date document and should be used until a revised version is in place:	29th May 2025
Target Organisation(s)	Worcestershire Acute Hospitals NHS Trust Worcestershire Health & Care Trust
Target Departments	All
Target staff categories	All staff involved in the transfusion process

Introduction

This procedure covers the issue of obtaining a venous blood sample from a patient for transfusion. The key tasks include correctly identifying the patient, completing and understanding the minimum requirements on the blood sample request form and knowing how to correctly label a blood sample.

Misidentification at Blood sampling may lead to fatal ABO-incompatible blood transfusions, especially if the patient has not previously been tested by the transfusion laboratory.

This procedure applies to **all** patients who may require a blood transfusion and covers all specialities.

This guideline is for use by the following staff groups :

All staff involved in the process of obtaining samples for grouping and requesting transfusions.

Key amendments to this guideline

Date	Amendment	Approved by:
June 2018	Minor amendment to the sample acceptance criteria to bring into line with laboratory SOP	Trust Transfusion Committee
July 2019	Minor amendment to sample acceptance criteria for neonates and minor grammatical corrections.	Trust Transfusion Committee
July 2020	Document extended for 6 months whilst review and approval process takes place	Trust Transfusion Committee
February 2021	Document extended for 6 months as per Trust agreement 11/02/2021	Trust agreement
June 2021	Minor amendments to sample validity and A&E identification of an unknown patient. Change of title from Sample Collection and Blood Transfusion requests	Trust Transfusion Committee
29th Nov 24	Document extended for 6 months whilst BloodTrack is rolled out	Laura Walters

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1. Introduction

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Misidentification at Blood sampling may lead to fatal ABO-incompatible blood transfusions, especially if the patient has not previously been tested by the transfusion laboratory.
The process of taking a sample for blood group and antibody screening is described in this procedure.

There are 3 key components to taking samples for transfusion, these are; Patient identification, documentation and communication.

Appropriate identification of the patient is an essential part of delivering a safe transfusion. All patients requiring a transfusion sample must wear an ID band with the 4 key identifiers present (first name, surname, and date of birth and NHS number).

Samples should **never** be pre-labelled. They must always be completed by hand, at the patient's side immediately post venepuncture.

This procedure applies to **all** patients who may require a blood transfusion and covers all specialities.

2. Blood Transfusion Request Form

All areas should have a supply of Transfusion requests forms (WR1718) replacement stock can be obtained from Xerox.

The request form must be completed and signed by a health care professional before the sample is obtained. An addressograph label is acceptable on the request form.

The minimum patient identification details are:

- family name
- first name
- gender
- Date of Birth
- NHS number or unique A&E number if unidentified patient. Blood Bank **must** be informed when additional identification details become available.
- In the event of an unknown patient being admitted via accident and emergency, the patient will be supplied with unique A&E patient demographics. As per the Patient safety alert 2018 - *Safer temporary identification criteria for unknown or unidentified patients* NHS/PSA/RE/2018/008.
- For **names**, a randomly selected first name and surname from the phonetic alphabet is generated. eg Foxtrot Whisky.
- For **temporary numbers**, a unique hospital number is created.
- For **DOB**, the 1st January with an estimated year of birth is generated.

The request form should also indicate:

- The clinical details and reason for transfusion
- The patient's ward and Consultant
- Any relevant transfusion history: e.g. prior transfusion reactions.
- Location of intended procedure for which blood is required
- For component requests the quantity and date required must be given.
- Any additional special requirements: e.g. whether irradiated or CMV negative products are required. If there is uncertainty about whether these special requirements are indicated, please contact the Blood Bank. It is the responsibility of the clinician completing the request form to ensure the special requirements are requested.
- The name and contact details of the person completing request card
- The name, signature and licence number of the sample taker
- Date and time that the sample has been taken

The patient should be asked if they are carrying an antibody information card, or know if they have any antibodies which may delay the provision of blood.

For infants the maternal details must also be included on the request.
For infants less than 4 months of age it is essential to obtain a maternal blood sample for group and antibody screening. This will be used if the maternal sample is found to contain antibodies. A sample is also required from the infant for blood grouping and a direct coombs test (DCT).
If a maternal sample is not available for this age group 2 mls from the infant is required for blood grouping, DCT and crossmatch.
Over 4 months 2-6mls blood is required depending on the age and size of the child.

3. Requests for Blood Components

Red blood cells will only be issued to patients when a current and historical blood group is available.

To ensure safe transfusion practice the laboratory operates a two sample policy.

- If they have a historic sample indicating the blood group only 1 further sample should be obtained.
- If no group is on the system 2 samples should be obtained by 2 separate people at 2 separate times
- The two samples should not be taken at the same time

The only exception to this rule is for Neonates (under 6 weeks).

Due to external regulation the transfusion laboratory is required to have a zero tolerance policy for mislabeled transfusion samples.

4. Sample acceptance criteria for Blood Group / Antibody Screening

NO Amendments or Additions to form or sample are allowed by the staff member who took the sample.

Patients who require Red Cells should receive Group O Blood until an acceptable sample/request has been received.

The sample MUST have:

- First name
- Surname
- Date of birth
- NHS Number
- Date taken
- Time taken
- Signature of person taking the sample

The request form MUST have:

Patient details on request form MUST match the Patient details on the sample:

- First Name
- Surname
- Date of Birth
- NHS Number
- Gender
- Location
- Sample taken by
- Date and time taken
- Licence Number in the form Year Month / Unique Number (GMC numbers are not acceptable)

The time taken MUST be present on either the sample or the request form, if present on the sample it can be transcribed onto the form. This is the only addition allowed to the request form.

If two samples arrive at the same time or very close together and are clearly taken by the same person, one of them will be rejected.

Any objections to the laboratory acceptance criteria will be referred to a senior member of laboratory staff, Transfusion Practitioner or Consultant Haematologist on call.

The request for blood components or products must be made on a transfusion request form for everything except major haemorrhage activation. The type of component/ product must be clearly indicated along with the volume required in units, mls or IU.

Electronic cross-matching is available for patients who have **no** antibodies or history of transfusion reactions.

5. Sample validity:

- In patients' who have not been transfused or pregnant in last 3 months, the sample is valid for 7 days.
- Patients who have been transfused or pregnant within the last 3 months, then a sample will still be required within 72 hours.
- Patients with antibodies require samples within 72 hours to allow for manual cross match to be performed

A valid sample along with a historic sample (from any date) is required. Blood can be provided within 5-10 minutes of request via this method.

If an antibody is present this will delay the provision of compatible blood. The transfusion laboratory will liaise with appropriate staff regarding logistics of blood supply. In these circumstances a group and cross match is required. This can take 50 minutes **or more** depending on the availability of compatible blood.

It is possible to "convert" a previous "Group and Screen" sample to a request for transfusion, provided that the sample is still valid.

The initial request can be done by telephone, but this must be followed by a completed request form. Verbal requests will not be released until the form is received in the Blood Bank.

The Blood Bank staff will keep a record of the individual making the telephone request and the person receiving it. The following information will be required:

- Patient identification.
- Identity of person making the request and their contact details.
- Type and volume of components/ products required and any special requirements.
- Reason for transfusion
- Time and date products required

The laboratory staff will review the requests against best practise guidance and any inappropriate requests will be referred to the haematology registrar for approval.

6. Timing of Requests

The Blood Bank laboratories at the Worcester and Alexandra hospital sites provide a 24-hour emergency service. In order to be able to respond promptly to a genuine emergency it is important that routine requests are handled in a controlled manner.

Requests for planned transfusions should be sent during routine laboratory hours (08.00-20.00).

Urgent cross-match requests should always be made directly to Blood Bank staff by telephone.

Urgently requested fully cross-matched blood will normally be available within 45 minutes of receipt of a blood sample in the laboratory, 30 minutes if there is already a "Group and Screen" sample and 5-10 minutes if the patient is eligible for electronic cross-match or group homologous units are required.

7. Sample Requirements

The blood should be taken in pink-topped 6ml EDTA vacutainer (Patients over the age of 4 months are treated serologically as adults and therefore a sample >2ml is required in a 6ml EDTA vacutainer).

A 1ml sample is acceptable for infants aged < 4 months, accompanied by a maternal sample for the first transfusion. If the mother has antibodies at the time of delivery then a maternal sample will be required on each occasion.

If a patient's name changes (e.g. a neonate), a repeat sample with the correct new details MUST be sent to the Blood Bank before any blood can be issued for the patient.

8. Taking the Sample

Only staff qualified in venepuncture may take blood. The staff member must have a valid "License to Practice" number.

- Only one patient at a time should be bled and must be positively identified by asking the patient to state their full name and date of birth (where possible) and by checking the details on the patient identification band.
- Check that the details on the patient's identification band match those on the blood transfusion request form.
- Ensure that the NHS number on the form matches the ID band
- The request form should be completed before the sample is obtained because it is part of the positive patient identification bedside check.

Outpatients:

- In outpatient situations (e.g. pre-assessment clinic) where a patient does not have an Identity band, three methods of identification must be established e.g. full name, date of birth and address. The NHS Number must be established from patient notes or NHS Card.

- Within Accident and Emergency Departments, an unconscious/unknown patient will have been issued with unique A & E phonetic alphabet name, approximate DOB and unique number for use with blood/blood product transfusions, which will be shown on their Identity band.
  THIS IS THE ONLY SITUATION WHEREBY AN A&E NUMBER MAY BE USED. This number may continue to be used after transfer to a ward if no formal identification has been made.

A sample must not be taken from an arm with an infusion in progress as the fluid in the infusion can cause an extraneous result.

Please follow the Venepuncture guidelines for obtaining blood samples:

Once obtained the sample label **must** be **hand-written** immediately **after** taking the sample, in the presence of the patient by the person who takes the sample.
The sample label must be signed by the individual taking the blood sample and contain the same patient identification information as the request form.

The laboratory operates a **ZERO** tolerance to sample mislabelling and will reject any samples that do not meet the minimum sample acceptance criteria or are illegible.

Sample tubes should not be pre-labelled as his significantly increases the risk of identification errors and is unsafe clinical practice.
Addressograph labels **must not** be used to label samples for blood transfusion.

For Neonatal samples, due to the size of the sample tubes and the information required, a sticky label may be handwritten as per sample acceptance criteria above and affixed to the sample tube. The completion of the label **must be done at the patient's bedside** after the sample has been taken.

9. Procedure If Patient Misidentification Occurs

In the event of the patient's identity band showing incorrect patient details the following action must be taken:

- Remove incorrect wristband and retain for investigation.
- Identify the patient and apply a correct and verified patient identity band.
- Check patient has not received incorrect drug/treatment.

Complete an online incident form; each patient misidentification must be investigated to determine the cause and reasonable action taken to reduce the likelihood of reoccurrence.

10. Delivery of the sample to the Laboratory

All urgent samples should be hand delivered to the laboratory – informing the laboratory by bleep or telephone that the sample is on its way.

All none urgent samples should arrive in the laboratory as soon as possible after it has been taken. Samples arriving more than 24 hours old will be rejected.

11. Sample Results

Group and Screen samples are tested for the ABO blood group antigens, the presence of the Rh D antigen and for the presence of clinically significant red cell antibodies. They are kept in Blood Bank for 7 days.

Other tests performed by the laboratory include screening for immunoglobulins, complement, cold agglutinins, antibody titres and kleihauer tests.

The results will be available to view on ICE order comms.

Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	• Sample acceptance criteria • The decision to transfuse • Patient information and consent • Appropriate prescribing of blood • The request for transfusion and sample collection	An Audit will be completed to establish if the key parts of the process are being followed	yearly	Transfusion practitioners	Trust Transfusion committee	Yearly

References

Norfolk, D. (2013) Handbook of Transfusion Medicine: 5th Edition. TSO Sheffield

Contribution List

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation
Consultant Haematologist
Consultant Urgent care
Consultant Specialised medicine
Consultants Women's and Children's
Consultant SCSD
Consultant Surgery
Blood Bank Manager
Community IV team lead
Private Hospital lead
Deputy Chief Nurse
Transfusion practitioner

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Trust Transfusion Committee
Clinical Governance Group

Supporting Document 1 - Equality Impact Assessment Tool

. To be completed by the key document author and included as an appendix to key document when submitted to the appropriate committee for consideration and approval.

Please complete assessment form on next page;

NHS
Worcestershire
Acute Hospitals
NHS Trust

Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	✓	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	**Dr Thomas Skibbe**

Details of individuals completing this assessment	**Name**	**Job title**	**e-mail contact**
	Gill Godding	**Lead transfusion practitioner**	**gilliangodding@nhs.net**
Date assessment completed	**13/07/21**		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title: Sample collection and Blood Transfusion requests**			
What is the aim, purpose and/or intended outcomes of this Activity?	Safe transfusion practice			
Who will be affected by the development & implementation of this activity?	❑ ✓ ❑ ❑	Service User Patient Carers Visitors	✓ ✓ ❑ ❑	Staff Communities Other _____
Is this:	✓ Review of an existing activity			

	❑ New activity ❑ Planning to withdraw or reduce a service, activity or presence?
What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.	NHS BT British Society for haematology guidelines Blood safety and Quality regulations NPSA safer practice notice No:14 MHRA Serious hazards of transfusion Serious adverse blood reactions and events
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	
Summary of relevant findings	

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale**. Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age		✓		This policy will have neutral impact on all equality groups.
Disability		✓		
Gender Reassignment		✓		
Marriage & Civil Partnerships		✓		
Pregnancy & Maternity		✓		
Race including Traveling Communities		✓		
Religion & Belief		✓		
Sex		✓		
Sexual Orientation		✓		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)		✓		
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)		✓		

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
	none	.		
How will you monitor these actions?				
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)				

Section 5 - Please read and agree to the following Equality Statement

1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation

1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.

1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carer's etc, and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	Gill Godding
Date signed	13/07/21
Comments:	
Signature of person the Leader Person for this activity	Thomas Skibbe
Date signed	13/07/21
Comments:	none

Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	**Yes/No**
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	None

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval.