Procedure		NHS Worcestershire Acute Hospitals NHS Trust

Obtaining a pre-transfusion sample using BloodTrack and requesting of blood components

Department / Service:	Blood Transfusion, Pathology
Originator:	Lead Transfusion Practitioner, Laura Walters
Accountable Director:	Consultant Haematologist, Transfusion Lead, Sangam Hebballi
Approved by:	TTC and ISAG
Date of Approval:	26th June 2024
Review Date: **This is the most current document and should be used until a revised version is in place**	26th June 2027
Target Organisation(s)	Worcestershire Acute Hospitals NHS Trust
Target Departments	Across the Trust
Target staff categories	All staff involved in blood collection process

Plan Overview:

This procedure covers how to obtain 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.

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
June 25	Update to include new BloodTrack system	ISAG/TTC

Contents page:

1. Introduction

This policy covers how to take a pre-transfusion sample using BloodTrack Tx. The key tasks include understanding the minimum requirements to be completed on the blood transfusion request form, confirming the patient's identity using BloodTrack TX and labelling the blood sample correctly.

Misidentification at phlebotomy may lead to fatal ABO-incompatible blood transfusion, 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 4 key components to taking samples for transfusion, these are; Patient identification, confirmation, 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, date of birth and NHS number).

Samples should **never** be pre-labelled. They must always be labelled immediately after the blood sample is obtained, whilst still at the patient side.

This procedure applies to **all** patients who 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 registered health care professional before the sample is obtained. An addressograph label is acceptable on the request form. The request form needs to capture if the patient has special requirements, if the registered professional is not sure, they should contact the doctor to discuss.

The minimum patient identification details are:

- Surname
- First name
- Date of Birth
- NHS number

In the event of an unknown patient being admitted via A&E, 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.
- Once patient information becomes available, Blood bank **must** be informed.

The request form should also indicate:

- The clinical details and reason for transfusion
- The patient's Consultant
- Any relevant transfusion history: e.g. prior transfusion reactions, known antibodies
- Location of where the transfusion is being carried out e.g. ward name or clinical area
- For component requests, the quantity, date and time required must be given
- Any additional special requirements: e.g. whether irradiated or CMV negative components 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. Please see the blood transfusion policy appendix 4 for further information on special requirements.
- The name and contact details of the person completing request form

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

For infants

The maternal details must also be included on the request form.

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 coomb 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 of 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 a historic sample indicating the blood group is available, only one further sample should be obtained.

- If no blood group is available on the system, two samples should be obtained by two separate people at two separate times (two phlebotomy episodes)
- The two samples MUST not be taken at the same time

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

Due to external regulations 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 the form or the sample are allowed one the sample has been sent to blood bank.

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

The sample MUST have the BloodTrack Tx generated label applied to the blood sample bottle. No other label is acceptable.

The transfusion request form **must** have the correct patient details on, and **must** match the patient details on the sample. These identifiers are:

- Patient's First Name
- Patient's Surname
- Patient's Date of Birth
- Patient's NHS Number
- Date and time taken

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 in all cases except for major haemorrhage activation. The type of component/ product required must be clearly indicated along with the volume required in units, mls or IU.

Electronic cross-matching is available for patients who do not have antibodies or a history of transfusion reactions.

5. Sample validity:

- Patients' who **have not** been transfused or pregnant within the last 3 months, the sample is valid for 7 days.
- Patients who **have** been transfused or pregnant within the last 3 months, the sample will be valid for 72 hours (3 days).
- Patients with antibodies require samples 48 hours prior to transfusion in order to allow for manual cross match to be performed

If a valid sample has been processed and the patient has no antibodies, blood can be provided within 5-10 minutes of request via electronic issue.

If the patient's blood contains an antibody, 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 screen and a cross match is required. The processing of this can take 50 minutes **or more** depending on the availability of compatible blood and whether the sample needs referring on to NHSBT.

It is possible to "convert" a previous Group and Screen sample to a request for transfusion, providing 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 minimum identifiers
- Requester's name 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 on-call haematology registrar for approval.

6. Timing of Requests

The blood bank laboratories at 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 accompanied by a telephone call to blood bank staff, to inform them of an incoming urgent sample.

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 specific 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 for each subsequent transfusion.

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. Samples taken under the patient's previous name will no longer be valid, and blood cannot be issued under the patient's previous name.

8. Taking the Sample

Only staff qualified in venepuncture may take blood for pre-transfusion testing. Staff must have completed the relevant eLearning and attended and passed the NPSA Framework 1 competency assessment. Upon successfully completing this, staff will be issued with a unique barcode to access the BloodTrack Tx equipment in order to obtain pre-transfusion samples.

1. Staff must have a fully completed request form; this must be completed **before** the sample is obtained

2. Take all equipment required to the patient side, including the BloodTrack Tx PDA, BloodTrack printer and request form

3. Turn on the both the Blood Track printer and PDA

4. Positively identify the patient by asking the patient (or parent) to verbally confirm their name and D.O.B, and compare what they say against their wristband (All wristbands must be printed and include barcode. Check the patient's full name, DOB, and NHS number matches between wristband and request form. **Wristbands must be worn by the patient at all times when obtaining a transfusion sample.**

   Note: If the patient is unable to identify themself, two staff members who are both trained in NPSA 1 should check the request form matches the patient wristband. This should be a 2 nurse independent check.

5. On the PDA, select the *"Collect samples*" tab. The PDA will ask you to scan your unique BloodTrack barcode and enter your pin number

6. Scan the patient's wristband using the PDA.

7. BloodTrack will ask you to confirm the patient's first name, surname, DOB, NHS No, and Sex. Confirm these details against the patient wristband. If all match exactly, select "*proceed*"

Note: if any details do not match BloodTrack will highlight these discrepancies in yellow

8. The PDA will display a checklist, titled “Complete all reminders”. This is a prompt to confirm all patient identity checks have been completed. Tick all boxes to proceed.

9. BloodTrack will then ask you what type of sample you want to collect, e.g. group and screen, crossmatch. Select the required test by ticking the relevant box on screen and then select “*proceed”*

10. The PDA will display the “scan printer” screen. Place the PDA to one side and obtain the patient blood sample. Once the sample is obtained, continue with the PDA. If the screen has switched off, turn it back on, and select the option to “continue transaction”

11. The BloodTrack PDA will then instruct you to scan the printer. Scan the printer and print the sample label as per PDA instructions. Once you have your label printed, select “done”. The PDA will automatically log you out.

    Note: BloodTrack PDA will ask you to rescan the patient wristband after you have taken the patient sample, this is to confirm you have not left the patient’s side

12. Confirm the patient details on the printed label match the patient’s wristband. Firmly apply the label to the patient blood sample bottle whilst you are still at the patient’s side

13. Place the blood sample into the bag attached to the request form and seal whilst still at the bedside

14. Send your sample to blood bank

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:

The laboratory operates a **ZERO** tolerance to sample mislabelling.

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, and any samples with evidence of multiple labels applied will be rejected.

For Cord Samples
Cord samples must be handwritten at the time of taking the sample from the cord.
BloodTrack is not to be used for these samples as the baby does not have a wristband at the point of these samples being obtained.

Once you have obtained the sample you must complete the sample tube immediately with the Baby's name (i.e. Baby Smith), DOB, Ward, Date and time sample was obtained and your signature. Once the baby has been registered with PAS and an NHS number has been assigned, the number needs to be also written on the cord sample tube before sending to the laboratory with mother/birthing parents sample.
Please see policy WAHT-TP-094 for further information on how to obtain cord samples.

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 – contact the laboratory via telephone during core hours or by bleep out of hours to inform them the sample is on its way.

All non-urgent samples should arrive in the laboratory as soon as possible after being taken. Samples arriving more than 24 hours after time of collection 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 stored in Blood Bank for 7 days.

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

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

12. Contingency plan if BloodTrack has down time/PDA not working

If your PDA is not working, please see the PDA help guide and FAQ section on the Blood Transfusion webpage. If the PDA still isn't working after trying recommended help guide and FAQ's, please contact:

Worcester Royal Hospital (WRH)	Monday to Friday 8am till 4pm contact Transfusion Practitioners (TP) on 30633 Out of these hours contact blood bank on 30635 or bleep #848
Alexandra Hospital	Monday to Friday 8am till 4pm contact Transfusion Practitioners (TP) on 30633 Out of these hours contact blood bank on 44719 or bleep #0255
Kidderminster Treatment Centre	Monday to Friday 8am till 4pm contact Transfusion Practitioners (TP) on 30633 Out of these hours contact blood bank at WRH on 30635 or bleep #848

If the PDA is broken, the TP's/Blood Bank have one spare on each site that can swapped with the ward's PDA until it can be fixed. Once the ward PDA is fixed, it will be swapped back to its original allocated clinical area.

If the PDA is broken and you have attempted to liaise with TP's or Blood Bank, or if there is Blood Track down time, you may need to take the sample required by reverting to a manual method:

1. Staff must have a fully completed request form, which must be completed by the appropriate clinician prior to obtaining the sample

2. Take all equipment required including the request form to the patient's side

3. Positively identify the patient by asking the patient (or parent) to verbally confirm their name and D.O.B, and compare what they say against their wristband (All wristbands must be printed). Check the patient's full name, DOB, and NHS number matches between wristband and request form. **Wristbands must be worn by the patient at all times when obtaining a transfusion sample.**

Note: If the patient is unable to identify themself, two staff members who are both trained in NPSA 1 should check the request form matches the patient wristband. This should be a 2 staff independent check.

4. Obtain the patient's blood sample.

5. Once the sample is obtained, remain next to the patient and handwrite the sample tube, including the patient's:
    1. Surname
    2. First name
    3. NHS number
    4. DOB
    5. Ward location
    6. Date of sample
    7. Time of sample

8. Signature of staff member obtaining sample

6. Once you have completed the sample, check the sample, form and wristband all match. You can also get the patient to check this (if able)

7. Pack the blood sample into the bag attached to the request form and seal whilst still at the bedside

8. Complete the sample information section on the blood form with your name, signature, BloodTrack number (can be found on your barcode) and date and time sample obtained. The date and time on the sample bottle and request form must match to avoid the sample being rejected on arrival to the lab.

9. Clearly write on the request form that “PDA broken” so we know why a handwritten sample has been obtained and sent to blood bank

10. Send your sample to blood bank

If these above steps are not followed, or the form and required information is incomplete, the sample will get rejected. Blood bank will continue to operate a zero-tolerance policy for any errors on manually completed samples.

Monitoring Tool
This should include realistic goals, timeframes and measurable outcomes.

How will monitoring be carried out?

Who will monitor compliance with the guideline?

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?**
	These are the 'key' parts of the process that we are relying on to manage risk. We may not be able to monitor every part of the process, but we MUST monitor the key elements, otherwise we won't know whether we are keeping patients, visitors and/or staff safe.	What are we going to do to make sure the key parts of the process we have identified are being followed? (Some techniques to consider are; audits, spot-checks, analysis of incident trends, monitoring of attendance at training.)	Be realistic. Set achievable frequencies. Use terms such as '10 times a year' instead of 'monthly'.	Who is responsible for the check? Is it listed in the 'duties' section of the policy? Is it in the job description?	Who will receive the monitoring results? Where this is a committee the committee's specific responsibility for monitoring the process must be described within its terms of reference.	Use terms such as '10 times a year' instead of 'monthly'.

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
ISAG
TTC

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 Sangam Hebballi

Details of individuals completing this assessment	**Job title** / **e-mail contact** Lead transfusion practitioner / Wah-tr.transfusionpractitioners@nhs.net
Date assessment completed	**02/07/2021**

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title:** **Obtaining a pre-transfusion sample using BloodTrack and requesting of blood components**			
What is the aim, purpose and/or intended outcomes of this Activity?	Safe Transfusion			
Who will be affected by the development & implementation of this activity?	❑ x ❑ ❑	Service User Patient Carers Visitors	x x ❑ ❑	Staff Communities Other _____

Is this:	❑Review of an existing activity X 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)	n/a
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		✓		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Sexual Orientation		✓		
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling **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	Laura Walters
Date signed	26/06/2024
Comments:	None
Signature of person the Leader Person for this activity	Sangam Hebballi
Date signed	26/06/2024
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	
2.	Does the implementation of this document require additional revenue	
3.	Does the implementation of this document require additional manpower	
4.	Does the implementation of this document release any manpower costs through a change in practice	
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	
	Other comments:	

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