Trust Clinical Policy for Checking Blood Components/Products prior to Administration

Document Control:

For Use In:	Norfolk and Norwich University Hospitals (NNUH)		
	All Clinical areas		
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V13	November 2023	Transfusion Specialist Nurse	3 yearly review of document. Transfer of document to new Trust Procedural Document template.

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:
Hospital Transfusion Team on behalf of the Hospital Transfusion Committee
Practice Development and Education Department
Directorate of Anaesthetics

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to Norfolk and Norwich University Hospitals; please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

Contents Page

1. Introduction

1.1. Rationale

The greatest risk to the patient from blood transfusion is receiving the wrong blood component. The resulting reaction may be fatal. The majority of errors are due to incorrect patient or component identification by the staff commencing the transfusion.

The final identity check must be done next to the patient by matching the blood component pack with the patient's name band.

On order to make this process safer and for the Trust to meet statutory obligations under the Blood Safety and Quality Regulations (2005), the Trust implemented the Electronic Blood Tracking System. The system is used to manage stocks and the 'cold chain' of issued blood components. It is used to ensure that the right blood us transfused to the right patient and that this information is recorded electronically. The system makes transfusion safer when it is used in conjunction with proper procedures.

- All patients must have a name band attached with a 2D barcode which can be scanned.
- All blood components should be collected using a Pick Up slip created from this 2D barcoded name band by a handheld PDA.
- All blood components should be administered using the handheld PDA and the 2D barcoded name band on the patient.

The bedside check is the last opportunity to ensure correct patient and component and also to check the condition of the unit.

1.2. Objective

- Ensure patient safety when receiving a blood transfusion.
- Ensure compliance with legally required standards for recording the administration of blood components.
- Ensure that patients are correctly identified at all points within the transfusion process.
- To outline the training requirements for all clinical staff involved in the administration of blood transfusions.
- To support staff during episodes of IT downtime.

1.3. Scope

Policy applies to the transfusion of all blood components administered within the Norfolk & Norwich University Hospital NHS Foundation Trust.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
EBTS	Electronic Blood Tracking System
EPMA	Electronic Prescribing and Medicines Administration

FFP	Fresh Frozen Plasma
HTC	Hospital Transfusion Committee
HTT	Hospital Transfusion Team
LIMS	Laboratory Information Management System
ODP	Operating Department Practitioner

2. Responsibilities

This policy applies to all Clinical members of staff involved in the checking and administration of blood transfusions.

3. Processes to be followed

3.1. Administration

Only Anaesthetists, Registered Nurses, Registered Midwifes, Registered ODP's and Trust employed Paramedics who have completed the appropriate training may check or administer blood components.

A suitable administration set must be used to administer all blood compotents

3.2. Procedure for checking

3.2.1. Pre transfusion checks

Before collecting the blood, the suitably trained healthcare professional must check the patient's condition, including the requirement for any other medications, the presence of a printed name band and a valid prescription.

The checking procedure Must be carried out for each individual blood component transfused.

The single qualified member of staff for patients over the age of 16 or two qualified members of staff for paediatric and neonatal patients must:

- Manually check all documentation at the beginning of the process. Check full patient ID, Surname, forename, hospital number and DoB is identical on the compatibility label attached to the unit by the lab and the supplementary prescription chart/EPMA.
- Check that the unit number on the integral label of the component is identical to the compatibility label attached by the laboratory.
- Check that the ABO and D blood group on the integral label of the component is compatible with the ABO and D blood group of the compatibility label attached by the laboratory. If unsure contact the transfusion laboratory on ext 2905/2906 to confirm suitability.
- Always take note of any warning labels attached to the compatibility label by the laboratory.
- Check the expiry date of the component has not passed.
- Visually check the unit to ensure that there is no evidence of clots, discolouration or leakage of the unit.

- Check that if there are any special requirements recorded on the supplementary prescription/EPMA such as irradiation, that these are complied with on the integral blood component label.

The final checking must be done beside the patient and be uninterrupted from start to finish.

At the bedside;
The single qualified member of staff or two qualified members of staff for paediatric and neonatal patients must take the blood component, the supplementary prescription/EPMA, and the handheld PDA to the patient.
They must check that the patient's full name, date of birth and hospital number (or Major Incident Number) are identical on the patient's name band, the prescription, and the compatibility label attached to the blood component.

3.2.2. Beginning Transfusions on EBTS

The handheld PDA must be used for the administration of all blood components (Red Blood Cells, FFP, Platelets and Cryoprecipitate) issued to a named patient.

Select Begin Transfusion and follow the on screen instructions

- Scan your identification (the barcode on your Trust Proximity card)
- Scan patient identification (name band on the patient)
- Verbally confirm patient's ID by asking them their name and date of birth.
- Scan the compatibility label
- Confirm the patient ID details on the compatibility label are identical to the patient's name band
- Scan Blood Unit Number (G number)
- Scan blood unit product code
- Confirm Blood Unit on screen. Compare compatibility i.e. the G number on the integral NHSBT label and the G number on the compatibility label are the same.
- Prompt will ask if there are more units to hang now. This refers to if there is another unit that will be commenced immediately.
- Complete all reminders. These reminders are a list of the checks that have been performed manually at the beginning of the checking process.
    - The manual check of all documentation
    - Checking that the ABO and D blood groups on the integral label of the component are compatible with the ABO and D blood group of the patient.
    - Checking that the expiry date of the component has not passed.
    - Visual check of the unit to ensure that there is no evidence of clots, discolouration or leakage in the unit.
    - Check that there are no special requirements recorded on the prescription chart such as irradiation and if there are requirements documented are these complied with on the unit to be transfused.

  The PDA will not allow the administration process to continue if the blood component identification does not match the patient identification exactly.
  If any differences are identified do not continue but contact the blood transfusion laboratory for further advise.

- Once all checks have been completed select next.
- The begin of the unit will now be recorded on EBTS and the administration set can now be inserted into the blood component.
- The administration set must be changed between the transfusion of different blood components or after 12 hours.

The most important part of the final check prior to administration is the verbal and name band check against the blood component at the patient's side.

3.2.3. Ending transfusions on EBTS

Take the handheld PDA to the bedside and follow the on screen instructions. At the following screens

- Transfusion Reactions: 'No Reactions' will be used for the majority of transfusions. If a Transfusion is suspected, then the Trust Guideline for the Management of Reactions to Blood and Blood Products (Trust docs ID 1281) should be followed.
- Transfusion complete: select the appropriate fate. If the patient received the volume prescribed the transfusion should be recorded as Transfused. If the patient did not receive the total transfusion it should be recorded as Part Transfused and the reason for the transfusion being stopped should be recorded in the patient's medical records along with the volume they received.

3.3.1 Checking of emergency blood

In a very urgent situation if blood is required before a blood group can be confirmed, Emergency group O red blood cells and/or group AB plasma (FFP) will be provided. This has not been tested for the patient and will not have the patients details on the label.
The Electronic Blood Tracking System cannot be used to complete the pre administration checks; these will need to be done manually by two suitably qualified member of staff, who should check:

- The unit is labelled for emergency use and has no specific patient details.
- Check that the ABO and D blood groups on the integral label of the component is the same as the ABO and D blood group on the compatibility label attached by the laboratory.
- Check that the unit number on the integral label of the component is identical to the compatibility label attached by the laboratory.
- Check that the expiry date of the component has not passed.
- Visually check the unit to ensure that there is no evidence of clots, discolouration or leakage of the unit.

3.3.2 Recording the emergency transfusion

The laboratory will issue a compatibility form with each group O unit, this must be completed and filed in the patient's medical records.
Each unit will also have an 'Emergency O Negative Blood' form issued (see Appendix 2). This must be completed and returned to the blood transfusion laboratory for the traceability records.

3.3.3 Ending an emergency transfusion

Although the EBTS cannot be used to 'Begin' the unit, it can be used to 'End' it. Take the handheld PDA to the bedside and follow the on screen instructions. At the following screens

- Transfusion Reactions: 'No Reactions' will be used for the majority of transfusions. If a Transfusion is suspected, then the Trust Guideline for the Management of Reactions to Blood and Blood Products (Trust docs ID 1281) should be followed.
- Transfusion complete: select the appropriate fate. If the patient received the volume prescribed the transfusion should be recorded as Transfused. If the patient did not receive the total transfusion it should be recorded as Part Transfused and the reason for the transfusion being stopped should be recorded in the patient's medical records along with the volume they received.

4. Training & Competencies

All staff who check or administer blood components must have undertaken formal training.

Mandatory training must be completed two yearly. This can be done either via completion of the appropriate elearning package on ESR or by attending a departmental session provided by the Transfusion Practitioner team.
The elearning packages available are

234 Blood Transfusion (Satellite Blood Bank)

234 Blood Transfusion – Anaesthetists & Registered Nursing Staff
234 Blood Transfusion – Midwives
234 Blood Transfusion – NICU
234 Blood Transfusion - Paediatrics

In addition, staff must also complete the national elearning programme every 3 years which should be accessed via ESR
The elearning programmes available are
234 NHSBT Blood Transfusion for Midwives and Junior Medical Staff eLearning
234 NHSBT Blood Transfusion for Registered Nursing staff eLearning

Staff who administer blood components must complete the Competency for Registered Staff in the Administration of a Blood Transfusion (Trust Docs ID 13904).

Trust employed Paramedics must have received additional initial training specific to their role provided by the Transfusion Specialist Nurse.

This training will be recorded on the staff members Electronic Service Record by the NNUH Training Department.

Only after completion of appropriate training will staff be given a barcode which will allow access to the EBTS. EBTS training is provided by the Transfusion Practitioner team or by designated EBTS cascade trainers.
If the barcode is not used for 9 months, staff will be notified and will be required to attend EBTS training to update within 3 months. Barcodes will be deactivated after a year of inactivity.

5. Related Documents

Trust Policy for the Collection and Return of Blood Components/Products from the Norfolk and Norwich University Hospital Transfusion Laboratory (Trust docs ID 1077)

Trust Policy for Monitoring the Patient during Blood Component Transfusion (Trust docs ID 1086)

Trust Guideline for the Management of Reactions to Blood and Blood Products (Trust docs ID 1281)

Assessment of Competence for: Registered Staff Administering Blood Transfusions (Trust docs ID 13904)

Trust Policy for Identification of Patients (Trust docs ID 1604)

6. References

Blood Safety and Quality Regulations Statutory Instrument, 2005 No50, HMSO www.legislation.gov.uk/uk/uksi/2005/50/introduction/made (accessed 20th Nov 2023)

Murphy, M. & Roberts, D. (Eds) (2017) Practical Transfusion Medicine; 5th edition; Oxford; Wiley Blackwell

Norfolk, D. (Ed) (2013) Handbook of Transfusion Medicine; 5th edition; Norwich; TSO

Robinson, S. et al (2018), The administration of blood components: A British Society for Haematology Guideline. Transfusion Med, 28: 3-21

7. Monitoring Compliance

Compliance with the process will be monitored through the following:

Key elements	Process for Monitoring	By Whom (Individual / group /committee)	Responsible Governance Committee /dept	Frequency of monitoring
All blood components must have traceability meeting the BSQR 2005	Units not begun or ended with will identified from the EBTS records and a Datix report recorded.	Designated department Datix investigator	Divisional Governance teams.	Continuously
All blood components must have traceability meeting the BSQR 2005	All transfusion related Datix reports will be discussed.	HTT	HTC	Monthly
All adverse events and reactions should be reported and reviewed.	Datix incident reporting system and EBTS alerts	Transfusion Practitioner Team	HTT/HTC	Continuously
All adverse events and reactions meeting the published definitions will be reported to SABRE/SHOT as appropriate	All SABRE/SHOT reports are reported to the HTT/HTC	Designated reporters	HTT/HTC	Continously

The audit results are to be discussed at relevant governance meetings and by the Hospital Transfusion Team who will review the results and recommendations for further action. Then sent to the Hospital Transfusion Committee who will ensure that the actions and recommendations are suitable and sufficient.

8. Appendices

Appendix 1
Manual Reversion for Checking Blood Components

If the EBTS cannot be used, then blood components will need to be checked manually prior to administration.

The transfusion Laboratory will issue blood with handwritten or typed labels

A handwritten or typed Blood Transfusion Compatibility Report will be issued with the blood components.

Two suitability qualified members of staff must check the blood component, the supplementary prescription chart/EPMA and the Blood Transfusion Compatibility Report.

They must check that the patient's full name, date of birth and hospital numbers are ALL identical on the following

- The supplementary prescription chart/EPMA
- The Blood Transfusion Compatibility Report
- The compatibility label on the unit of blood component

They must then check that the ABO and D blood group of the component is compatible with the patient's ABO and D blood group and the unit number of the component is identical on

- The integral label placed on the bag by NHSBT
- The compatibility label attached to the component by the laboratory

They must also check that

- There is no evidence of clots, discolouration or leakage
- The expiry date of the component has not passed
- For all components, if there are any special requirements recorded on the supplementary prescription chart/EPMA, such as irradiation or special antibody status, that this is complied with on the blood component.

Finally, the two suitably trained staff must:

- Ask the patient to state their name and date of birth (unless the patient is unable/incapable of doing so), check that the patient's full name, date of birth and hospital number are all identical on
  - The patient's name band
  - The compatibility label attached to the blood unit
  - The supplementary prescription chart/EPMA

The most important part of the final check prior to administration is the verbal patient identification and wristband check against the blood component at the patient's side.

If any unexpected discrepancies are found, do not commence the unit, but contact the Blood Transfusion Laboratory immediately on ext 2905/2906

Once all checks are complete both members of staff should initial, with the time and date, both the blood transfusion compatibility report and the supplementary prescription chart/EMPA.
The blood transfusion compatibility report should be available throughout the transfusion.
The completion time for each unit should be documented on the supplementary prescription chart if that is what is being used. This is not required if prescribed on EPMA.

A copy of the completed blood transfusion compatibility report should be sent to the transfusion laboratory for the traceability records and the original form should be filed in the patient's medical records.

Transfusion Laboratory staff will have to investigate the final fate of all units transfused during LIMS downtime and update the database accordingly.

Appendix 2

EMERGENCY BLOOD COMPONENT

If a blood component is transfused, the Blood Transfusion Laboratory at the Norfolk & Norwich Hospital **MUST** be informed. You can contact the laboratory on extension 2905/2906.
The information is required so that we may

1. Identify and assign the unit against the patient's transfusion record
2. replace the used unit without delay.

Please complete the information below and return this form to the laboratory via blood transfusion.

Patient name _____ DOB_____

Hospital number _____ Ward/Area _____

Blood pack number _____ Date/time transfused _____

Name of staff member completing form_____

Eastern Pathology Alliance		Title: Emergency component issue form	
Dept/Site : Blood Transfusion, NNUH		Doc Ref: ETN-P-014 App 1	Author M. Pullinger
Revision: 5	Issued: 13/09/2022	Authorised by: C. Harvey	Review interval: 2 years

9. Equality Impact Assessment (EIA)

Type of function or policy	Existing

Division	Medicine	**Department**	Clinical Haematology
Name of person completing form	Alison Rudd	**Date**	04/12/2023

Equality Area	**Potential** **Negative Impact**	**Impact** **Positive Impact**	**Which groups are affected**	**Full Impact Assessment Required YES/NO**
Race	Neutral	N/A	N/A	No
Pregnancy & Maternity	Neutral	N/A	N/A	No
Disability	Neutral	N/A	N/A	No
Religion and beliefs	Neutral	N/A	N/A	No
Sex	Neutral	N/A	N/A	No
Gender reassignment	Neutral	N/A	N/A	No
Sexual Orientation	Neutral	N/A	N/A	No
Age	Neutral	N/A	N/A	No
Marriage & Civil Partnership	Neutral	N/A	N/A	No
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?	No impact			

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.