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Norfolk and Norwich University Hospitals
NHS Foundation Trust

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

A clinical policy recommended

For use in:	All clinical areas
By:	Consultant and Trainee Anaesthetists, Registered Nurses / Midwives, Registered Operating Department Practitioners (ODPs), Paramedics employed by the Trust
For:	Patients requiring blood component transfusion and Patients requiring blood product transfusion
Division responsible for document:	Corporate
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Assessed and approved by:	Clinical Guidelines Assessment Panel (CGAP) Chair 30/09/2020 Professional Protocols, Policies & Guidelines Committee (PPPG))
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If Yes – does the strategy/policy deviate from the recommendations of NICE? If so, why?	N/A

Trust Policy for Checking Blood Components/Products prior to Administration

This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

The Trust's guidelines are made publicly available as part of the collective endeavour to continuously improve the quality of healthcare through sharing medical experience and knowledge. The Trust accepts no responsibility for any misunderstanding or misapplication of this document.

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

Version and Document Control:

Version Number	Date of Update	Change Description	Author
12	21/10/2020	Section on double checking added	Deborah Asher, Janet Pring and Alison Rudd

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

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.

In order to make this process safer and for the Trust to meet statutory obligations under the Blood Safety and Quality Regulations (2005), the Trust has purchased a blood tracking system. The system will be used to manage stocks and the 'cold chain' of issued blood components. It will be used to ensure that the right blood is transfused to the right patient and that this information is recorded electronically. The system will make transfusion to patients safer if 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 must be collected using a collection slip created from this 2D barcoded name band via a handheld PDA.
- All blood components must be administered by using a handheld PDA and the 2D barcoded name band on the patient.

The bedside check is the last opportunity to ensure correct patient and component / product identification and also to check the appearance of the component / product and its expiry date.

In order to meet statutory obligations every blood component must be traceable to its final fate i.e.

- All blood components MUST be 'Ended' using the handheld PDA

Broad recommendations

- All staff who check or administer blood components must have undertaken formal training. This involves initial induction, a two yearly mandatory training update and competency assessment in line with national recommendations. Paramedics must have received initial training specific to their role.
- Before collecting the blood, the suitably qualified healthcare professional must check the patient's condition, including the requirement for other drugs, the presence of a legible name band and the prescription.
- The final checking must be done beside the patient and be uninterrupted from start to finish.
- Prior to administration of blood components there must be a double check: the suitably qualified healthcare professional must check the patient's name band, the supplementary prescription chart/EPMA, and the compatibility label on the unit of blood to confirm the rate of transfusion and any special requirements for the blood components. They must check the ABO group of the patient and donor, the expiry of the blood and visually check the unit is in good condition. Then using the handheld PDA, the second check of the patient identification against the blood component is completed and the checklist of all the manual checks evidenced.
- If the handheld PDA is not used, then two suitably qualified healthcare professional must carry out the checks (see appendix 1)
- The handheld PDA must be used for the administration of blood components e.g. red cells, fresh frozen plasma (FFP), platelets and cryoprecipitate.
- The administration of batched blood products will be performed manually e.g. anti-D, Prothrombin Complex Concentrate (Beriplex) and anti-haemophiliac factors.
- All patients must have their unique identity confirmed by name, date of birth and hospital number as shown on PAS and printed on the patient's 2D barcoded name band.
- The blood component / product must be positively confirmed as that intended for the patient.
- The blood component / product must be checked as suitable for transfusion i.e. within expiry date and of 'normal' appearance.
- Unidentified patients must be identified by a unique emergency number on their name band e.g. Major Incident Number.
- All blood components must be 'ended' on the handheld PDA.

<u>Administration</u>

- The patient has patent Intravenous (IV) access and a suitable IV line.
- The patient has an accessible hospital name band bearing the patient's full name, hospital number, and date of birth as shown on PAS. The band should be in good condition such that the 2D barcode can be scanned.

During a Major Incident, unknown patients should be identified by a unique Major

Incident number.

- All patients who will be having a general anaesthetic **MUST** have two name bands, on differing limbs e.g. Arm and leg.
- The blood component prescription must be clearly written or recorded on EPMA and signed by a suitably trained healthcare professional.
- Any drugs required before or during transfusion e.g. Furosemide or Chlorphenamine must be given as prescribed.
- The rate of transfusion is appropriate, the rates for adults are:
    - 100–150mLs/hr or over 2 or 3 hours for non-emergency red cell transfusions.
    - A more rapid rate may be used where it has been agreed for a specific patient group.
    - 20-30 minutes for platelets.
    - 30-40 minutes for each unit of Fresh Frozen Plasma (FFP).
- The patient's condition does not require further medical review before transfusion.

Any omissions or discrepancies should be remedied by appropriate staff before blood components are collected.

Blood components / products must be collected according to Trust Policy for the Collection and Return of Blood Components from the Norfolk and Norwich University Hospital Transfusion Laboratory Blood Fridges and Incubator, Satellite Blood Fridges Trustdocs ID No: 1077.

Any unit of blood removed from a monitored blood fridge should commence transfusion within thirty minutes. If not used it must be returned to the monitored blood fridge within thirty minutes of removal. A transfusion should be completed within 4 hours of removal from a monitored blood fridge.

Platelets and thawed frozen components should be used immediately on arrival in the clinical area. FFP may be used up to 24 hours after thawing, in some specific situations, this may be extended to 120 hours if stored at 2-6^{o}C following thawing. If not used components should be returned to the Blood Transfusion Laboratory where they will be discarded

If a unit of blood is damaged, for any reason, and wasted prior to commencing transfusion the laboratory must be informed to ensure accurate donor to patient record keeping. Return to the lab for disposal if practical

If blood has been out of the storage fridge for more than 30 minutes and the transfusion is not going to be completed within 4 hours, it should be returned to the Blood Transfusion Laboratory for disposal.

Procedure for Checking

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

The single, qualified member of staff 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 on the compatibility label attached by the laboratory. If unsure ring the laboratory on 2905/2906 to confirm suitability
- Also take note of any warning labels attached to the compatibility label 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 in the unit.
- Check that if there are any special requirements recorded on the supplementary prescription chart/EPMA such as irradiation, these are complied with on the integral blood component label.

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 chart/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) is ALL identical on the following:

- The patient's name band.
- The supplementary prescription chart/EPMA.
- The compatibility label on the unit of blood.

If so, **switch on the handheld PDA**. Select 'Transfuse' and **follow the on screen instructions:**

- Begin Transfusion.
- Scan Your Identification (using the barcode on your name badge).
- Scan Patient Identification.
- Verbally Confirm Patient ID by asking the patient their name and date of birth

(unless unable/incapable of doing so, in which case the Trust policy for patient identification must be followed Trustdocs Id 1604

- Scan Compatibility Label.
- Confirm the Compatibility of the Label with that of the Patient Name Band
- Scan Blood Unit ID.
- Scan Blood 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.
- Select Yes or No for more units to hang now:
    - If Yes, repeat the process
    - If No:
- Complete all reminders. These reminders are a list of the checks that you performed manually at the beginning of the process, unaided by the PDA and a reminder to perform 15-minute observations.
    - The manual check of all documentation.
    - Checking that the ABO and D blood group on the integral label of the component was compatible with the ABO and D blood group on the compatibility label attached by the laboratory.
    - Checking that the expiry date of the component had not passed.
    - Visually checking the unit to ensure that there was no evidence of clots, discolouration or leakage in the unit.
    - Checking that if there were any special requirements recorded on the prescription chart, such as irradiation, that these were complied with on the integral blood component label.
- The reminders are:
    - Visual confirmation of compatibility?
    - Patient's Blood Group checked?
    - Donor Blood Group checked?
    - Expiry date checked?
    - Visual appearance of unit checked?
    - Special requirements checked?
    - Please remember 15 minute observations

The PDA will NOT allow you to continue the process of blood administration if the blood component identification does not match the patient identification exactly. Do NOT continue but contact blood transfusion.

Once all checks have been completed tick the reminders, select 'next' and hang the unit.

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.

If any unexpected discrepancies are found, do not commence the unit, but inform the Blood Transfusion Laboratory immediately on ext 2905/2906 or Bleep 0670 out of hours if the telephone is not being answered.

Recording the transfusion correctly.

Using the handheld PDA will make an electronic record of all transactions.

Beginning a transfusion:

- Sign the supplementary prescription chart/EPMA and complete the start time.

Ending a Transfusion:

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

- Note Transfusion Reactions: 'No Reactions' will be used for the majority of transfusions.
- Transfusion Complete? Select the appropriate 'fate' – 'Transfused' in the majority of cases.
- Complete the supplementary prescription chart by recording the end time. There is no need to add an end time on EPMA.

For further information please refer to the Trust Policy for Monitoring the Patient during Blood and Blood Component Transfusion (Trustdocs ID No: 1086.

Procedure for Checking Emergency Blood

In a very urgent situation if blood is required before a blood group can be confirmed, Emergency O red cells and/or AB Plasma will be provided. This has not been tested for the patient and will have no patient details on the label.

The Electronic Blood Tracking System cannot be used to do the pre-administration checks; these will need to be done manually by two qualified members 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 group 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, discoloration or leakage in the unit.

Recording the transfusion correctly

Although the Electronic Blood Tracking System cannot be used to 'Begin' the unit, it can be used to 'End' it.

Ending a Transfusion

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

- Note Transfusion Reactions: 'No Reactions' will be used for the majority of transfusions.
- Transfusion Complete? Select the appropriate 'fate' – 'Transfused' in the majority of cases.

The lab will issue a compatibility form with each O D Negative unit, this must be completed and filed in patient's notes.

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 lab for their traceability records.

Clinical Audit Standards

To ensure that this policy is compliant with the above standards, the following monitoring processes will be undertaken:

- No of units begun and not ended.
- No of units started at >30 minutes after collection.
- No of units given by an unidentified person.

The audit results will be sent to the Consultant Haematologist who will review the results and make recommendations for further action.

Summary of development and consultation process undertaken before registration and dissemination

This policy was drafted by the authors listed above on behalf of the Hospital Transfusion Committee, which has agreed the final content.

During its development it was circulated for comment to Practice Development and Education Department; Directorate of Anaesthetics; the ADN for Surgery and Lead Matron All comments made have been addressed and incorporated where necessary in the document.

This version endorsed by: Hospital Transfusion Committee and approved by the Professional Protocols, Policies Guidelines Committee.

Distribution list / dissemination method

All Wards / Departments Trust Intranet
School of Nursing and Midwifery Practice Development and Education Department

References

Blood Safety and Quality Regulations Statutory Instrument, 2005 No50 HMSO. www.legislation.gov.uk/uk/uksi/2005/50/introduction/made

Trust Policy for the Collection and Return of Blood Components from the Norfolk and Norwich University Hospital Transfusion Laboratory Blood Fridges and Incubator, Satellite Blood Fridges (B2/ CA1026 v11) - update Trustdocs ID No: 1077

Trust Policy for Monitoring the Patient during Blood and Blood Component Transfusion (B3v11) Trustdocs ID No: 1086

Trust Policy for Identification of Patients Trust Docs ID: 1604

Source documents

BSH. Guideline on the Administration of Blood Components. Nov 2017.
Murphy, M Pamphilon, D. Practical transfusion medicine, fifth edition 2017 Blackwell Publishing

Norfolk ,D, Handbook of Transfusion Medicine, fifth edition, 2013,TSO
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Retention and Storage of Pathological Records and Specimens 5th Edition April 2015.
Serious Hazards of Transfusion Annual Reports 1996 -2019. www.shotuk.org

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 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 number are ALL identical on the following:

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

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

- The integral label placed on the bag by NHSBT and
- The compatibility label attached to the component / product 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 label.

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 ALL of the following:
    - The patient's name band
    - The compatibility label attached to the blood pack
    - The supplementary prescription chart/EPMA

The most important part of the final check prior to administration is the verbal 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 or bleep 0670 out of hours if the phone is not being answered.

- 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/EPMA.
- The blood transfusion compatibility report should be available throughout the transfusion and then filed in the patient's notes on completion.
- The completion time for each unit should be documented on the supplementary prescription chart, if that is what is being used, there is no need to document the end time on EPMA.
- A copy of the completed form should be sent to the transfusion laboratory for their traceability records.

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

Appendix 2

Eastern Pathology Alliance NHS

EMERGENCY O NEGATIVE BLOOD

If this unit of blood is transfused, the Blood Transfusion Laboratory at the Norfolk & Norwich Hospital **MUST** be informed. You can contact the laboratory on extension 2905/2906 or via bleep 0670. The information is required so that we may

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

Please enter the information below and return this form to the laboratory.

Patient name _____

Date of birth *(dd/mm/yyyy)*_____

Hospital number _____ Ward _____

Blood pack number _____ Date transfused *(dd/mm/yyyy)* _____

Time transfused *(24 hour clock)* _____

Name of staff member completing form_____

Eastern Pathology Alliance		Title: Emergency O RhD negative blood issue form	
Dept/Site : Blood Transfusion, NNUH		Doc Ref: ETN-P-014 App 1	Author: S. Ellis
Revision: 4	Issued: 11.02.2017	Authorised by: D. Asher	Review interval: 2 years