1 Introduction

The National Comparative Audits (NCA) of bedside transfusion practice shows that patients continue to be placed at risk of avoidable complications of transfusion through misidentification and inadequate patient monitoring.

SHOT (2014) indicated 13 cases of incorrect blood component transfused relating to prescription and administration of blood products.

Guidelines for the Administration of Blood Components (BCSH 2009) highlight Patient Identification, Documentation and Communication as 3 key principles which underpin every stage of the blood administration process.

2 Policy Scope

This policy is intended for all trust staff who are involved in the administration of the following blood products within the trust: Red Blood cells (RBC), Platelet components (PLT), granulocytes (WBC, GRAN), Fresh Frozen Plasma (FFP), Octoplas (OCT), and Cryoprecipitate (CRYO) and batch products Beriplex (PCC), Albumin (HAS) and Anti-D.

This policy applies to all patients who require transfusion of blood products either as an emergency or as a planned procedure within the Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH).

3 Aim of Policy

The aim of the policy is to provide guidance on the requirements and responsibilities of staff when administering blood and blood products.

4 Duties (Roles and responsibilities)

4.1 Chief Executive and Trust Board

The Chief Executive and Trust Board have responsibility for the safety and welfare of all trust patients, visitors and staff. This includes overall responsibility for ensuring effective corporate governance within the organisation.
4.2 **Hospital Transfusion Committee (HTC)**

The Trust Hospital Transfusion Committee meets Quarterly and reports via the Chair of the Committee to the Trust Medical Director who reports to the Trust Board, this group is responsible for:

- Promoting safe and appropriate blood transfusion practice through local protocols based on national guidelines.
- Audit the practice of blood transfusion against the NHS Trust policy and national guidelines, focusing on critical points for patient safety and the appropriate use of blood.
- Lead multi-professional audit of the use of blood within the NHS Trust, focusing on specialties where demand is high, including medical as well as surgical specialties, and the use of platelets, plasma, and other blood components as well as red cells.
- Provide feedback on audit of transfusion practice and the use of blood to all NHS Trust staff involved in blood transfusion.
- Regularly review and take appropriate action regarding data on blood stock management, wastage and blood utilisation provided by the Blood Stocks Management Scheme (BSMS) and other sources.
- Develop and implement a strategy for the education and training for all clinical, laboratory and support staff involved in blood transfusion.
- Promote patient education and information on blood transfusion including the risks of transfusion, blood avoidance strategies and the need to be correctly identified at all stages in the transfusion process.
- Consult with local patient representative groups where appropriate.
- Modify and improve blood transfusion protocols and clinical practice based on new guidance and evidence.
- Be a focus for local contingency planning and management of blood shortages.
- Contribute to the development of clinical governance.

4.3 **Hospital Transfusion Team (HTT)**

The Trust Hospital Transfusion Team meets monthly and reports to the Trust Hospital Transfusion Committee. This group is responsible for developing strategy for and monitoring compliance with policy including:

- Implement the HTC’s objectives.
- Promote and provide advice and support to clinical teams on the safe and appropriate use of blood.
- Promote patient information and education on blood transfusion safety and use of alternatives.
- Actively promote the implementation of good transfusion practice.
• Be a source for training all NHS Trust staff involved in the process of blood transfusion.
• Produce an annual report including its achievements, action plan and resource requirements for consideration by senior management at board level through the HTC and the Trust’s clinical governance and risk management arrangements.

4.4 Consultant Lead in Blood Transfusion

The Consultant Lead in Blood Transfusion has responsibility for the clinical blood transfusion policies and procedures and will provide clinical direction to the Trust ensuring:
• Promotion of best practice through local protocols.
• Promote education and training.
• Participate in HTC, HTT and Regional Transfusion committees.

4.5 Transfusion Manager

The Transfusion Manager has responsibility for the scientific policies and procedures and maintenance of the Blood Transfusion Section. They report to Departmental Laboratory Management on the functioning and effectiveness of the blood transfusion section and works with the Consultant Lead. They are responsible for:
• Ensuring Transfusion complies with national standards and legislation.
• Promote best practice through local protocols.
• Provide scientific lead and direction.
• Carry out research and development in the field of Blood transfusion.
• Provide advice on the use of blood/blood products.
• Provide advice on the interpretation of scientific tests.
• Participate in HTC, HTT and Regional Transfusion committees.

4.6 Transfusion Practitioners

The Transfusion Practitioner works within the Blood Transfusion Team and are responsible for:
• Providing advice on the use of blood/blood products -Education, training and assessment of clinical and support staff.
• Implementation of evidence based practice and local and national guidelines
• Follow up of incidents and near misses.
• Reporting to SABRE.
• Conduct local and national audit.
• Act as a conduit between the blood transfusion laboratory and clinical areas.
4.7 Transfusion Section Leaders

Section Leaders will work within the Blood Transfusion Team and are responsible for ensuring that all the requirements of this policy are applied within their areas of responsibility. They must identify within their areas of responsibility, the need for processes described in this policy and ensure that they are performed as required. Under the guidance of the Transfusion Manager they will lead and delegate within the transfusion laboratory area. They are also responsible for training, audit, evaluation and the processes to investigate nonconformities with the introduction of corrective actions within reasonable timescales.

4.8 Quality Manager (QM)

The QM is responsible for ensuring that processes conform to and operates within the Quality Management system of Blood Sciences. The Quality Manager is responsible for development and maintenance of the Quality Management system and is responsible for ensuring that the systems for audit, registration and for addressing adverse results and nonconformities are in operation.

4.9 All Staff

It is the responsibility of individual members of staff to ensure that they are conversant with the content of this policy and are appropriately trained and competent to act on the requirements to select and give appropriate products as part of their duties. Staff must comply with the conditions contained within this document and have a duty to indicate any non-conformity to this procedure to their line managers. Staff in training must be supervised by a competent member of staff.

4.10 Authorised Staff

A transfusion of blood or blood products must be checked by the following members of staff:

2 Qualified Nurses / Midwives / Operating Department Practitioners (ODP’s)

Or

1 Qualified Nurse / Midwife / ODP and 1 Doctor

Or

2 Doctors

All staff involved in administration of blood products must have also undertaken yearly mandatory training and 3 yearly competency assessment.
5 Definitions

None specific to this policy.

6 Policy

6.1 Consent

Check that a valid consent has been gained from the patient / carer and is aware of the reasons for transfusion.

Ensure the patient has been given an ‘About Blood Transfusion’ information leaflet outlining the risks and benefits of transfusion. This should be given and documented in notes when the initial Group and Screen sample was taken.

Give the ‘About Blood Transfusion’ leaflet if the patient has not received this and document in notes.

If the patient requires the leaflet in a different language a similar format is available in 18 languages to print off as required from the NHSBT website:

Will I Need A Blood Transfusion?


About Blood Transfusion leaflets in large print format are available by contacting the Transfusion Practitioners.

All patients should be asked if they require any help reading the leaflet.

Patients transfused in an emergency situation should be given this information retrospectively but prior to discharge and made aware they have received a transfusion.

6.2 Pre-collection

Check the patient has a patient identification band in situ in line with Patient Identification Policy.

The patient must have venous access prior to the product being collected. Only in emergency situations should blood be collected prior to venous access being obtained.

Ensure the blood / blood product is prescribed on the fluid balance chart by a medical practitioner or a nurse trained and competent in the authorisation of blood products.

The prescription must include:
- Patient core identifiers (surname, forename, date of birth, MRN)
- Date transfusion required
- Type of blood product
- Volume or number of units with exact number in mls for paediatric transfusions
- Any concomitant drugs, e.g. furosemide
- Signature of prescriber

Record baseline observation up to 60 minutes prior to commencement of transfusion and documented on the NEWS chart this should include:

- Pulse
- Blood Pressure
- Temperature
- Respiratory Rate

6.2.1 Request for Unknown Patients
When patients are admitted to ED and are unidentified the following identifiers will be accepted:

- Surname (MRN)
- Forename (Male, Female or Unknown)
- MRN
- Default Date of Birth

6.2.2 Urgent Requests
If the request for products is urgent the blood transfusion laboratory must be contacted by the requesting ward to express this. Ward staff should then communicate the urgency to portering staff when making the request for collection of the blood products.

6.3 Pre-Administration Checks (must be undertaken at the bedside)

6.3.1 Conscious Patient:
Ask the patient to state name and date of birth and check this matches the name and date of birth on the blood bag tag and patient identification band.
Check MRN on blood bag tag matches MRN on patient identification band.

If any discrepancies contact Blood Bank.

6.3.2 Unconscious Patient:
Check the name, date of birth and MRN on patient identification band match the name, date of birth and MRN on patient identification band.

Ask a relative or carer to confirm name and date of birth if present.
If any discrepancies contact blood bank.

6.3.3 Blood Component Check:
Check the donation number on the blood bag tag matches the donation number on the blood component bag.

Check the expiry date on the blood component bag – unless a specific expiry time is stated the component expires at midnight on the date shown.

Inspect the blood component bag for any signs of leakage or damage. Inspect for unusual colour or clumping.

Check the blood group on the blood bag tag is compatible with the blood group of the blood component.

If any discrepancies or defects contact blood bank.

If all checks correct sign, date and time both sides of the blood bag tag.

6.4 Administration

All blood components should be administered using a blood administration set with an integral mesh filter (170 – 200 micron).

Prime the giving set and connect to the patient following current trust asepsis policy and administer at prescribed rate.

Document on prescription:
- Donation number
- Date and time transfusion commenced
- Initials of staff commencing the transfusion

Platelets should not be transfused through a giving set that has been used for other blood components.

Once the transfusion has commenced the pink label on the blood bag tag should be peeled off and stuck in the patient’s medical notes.

The tear off ‘receipt’ should also be removed and placed in the collection box on ward to be collected by portering staff. This receipt MUST be returned to blood bank within 24 hours.
6.4.1 Transfusion Times for Routine Top Up Transfusions

Red Blood Cells:
- 90 – 120 minutes per unit
- Should be completed within 4 hours of removal from fridge
- Paediatrics 5ml/kg/hr

Fresh Frozen Plasma / Octoplas:
- 30 minutes per unit
- Paediatrics 10 - 20ml/kg/hr

Platelets:
- 30 – 60 minutes per adult therapeutic dose
- Paediatrics 10 - 20ml/kg/hr

Cryoprecipitate:
- 30 – 60 minutes per pool
- Paediatrics 10 – 20ml/kg/hr

6.4.2 Infusion Devices
Only use a blood component administration set incorporating a 170 – 200 micron mesh filter that is compatible with the infusion device.

The pre administration checks should include a check of the device and the device settings.

Staff using the device should be deemed competent in line with the Trust Medical Device Management Policy.

The volume delivered should be monitored regularly throughout the transfusion to ensure the expected volume is delivered at the expected rate.

6.5 Observations

Pulse, blood pressure, temperature and respiratory rate should be taken and recorded on the NEWS / PEWS chart:
- Up to 60 minutes before the start of the transfusion
- 15 minutes after the start of each component
- At the end of the component transfusion

More frequent observations may be required in patients who are unable to complain of symptoms that would raise suspicion of a transfusion reaction.
Transfusion observations must be clearly distinguished from other routine observations.

Regularly visually observe the patient throughout the transfusion episode.

Inform patients / carers about the possible adverse effects of transfusion and to report immediately any potential symptoms:

- Shivering
- Pyrexia
- Rashes
- Flushing
- Shortness of breath
- Pain at transfusion site
- Loin / chest / lumbar pain

If the patient shows any signs or symptoms suggestive of a transfusion reaction take appropriate action as dictated by NEWS / PEWS score and Transfusion Reaction Flowchart which is available on the ward or from blood transfusion.

6.6 Post Administration

Do not flush giving get with fluid either flush cannula or change giving set.

If there is any suspicion of a transfusion reaction the blood component bag should be returned to blood bank with a transfusion reaction investigation form following discussion with blood bank staff.

If the transfusion is uneventful the empty blood component bag and administration set should be discarded in line with the trust clinical waste policy.

Bags can be disposed of immediately in the clinical waste.

6.7 Request for Group & Screen (G&S) and Crossmatch

The samples should be taken and labelled according to the Trust Sample Acceptance And Rejection Policy and patients identified in line with the Trust Patient Identification – Establishment and Confirmation Prior to Investigative Testing and Treatment.

6.8 Error Reporting

Any performance errors should be notified to the Transfusion Practitioners / Blood Transfusion Team and investigated, reported and corrective action taken; which may include Blood Sciences Non-compliance Form, Datix and SABRE, the latter being dependent on severity.
All documentation which is part of the error reporting system should be maintained by the Blood Sciences document control system and retained for a minimum of 15 years.

7 Training

All staff must complete yearly mandatory online training Blood Transfusion - Administration

Staff must also undertake a 3 yearly competency assessment (NPSA, 2006).

A record of all training & competency assessment will be held by the Trust education department.

8 Equality and Diversity

The Trust is committed to ensuring that, as far as is reasonably practicable, the way we provide services to the public and the way we treat our staff reflects their individual needs and does not discriminate against individuals or groups on any grounds. This document has been appropriately assessed.

9 Monitoring Compliance

<table>
<thead>
<tr>
<th>Standard / process / issue</th>
<th>Monitoring and audit</th>
<th>Method</th>
<th>By</th>
<th>Committee</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance against policy</td>
<td>Audit of policy as identified in section 7.</td>
<td>Transfusion Practitioners</td>
<td>Hospital Transfusion Committee</td>
<td></td>
<td>Annually</td>
</tr>
<tr>
<td>Non-Compliance / Clinical Incidents / Complaints</td>
<td>Blood Sciences Non-compliance forms</td>
<td>Blood Transfusion Team</td>
<td>Hospital Transfusion Committee</td>
<td></td>
<td>Fortnightly meeting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blood Sciences Quality Manager</td>
<td>Hospital Transfusion Committee</td>
<td>Included in Annual Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>Mandatory Training / Mandatory Training</td>
<td>As part of policy audit</td>
<td>Transfusion Practitioners</td>
<td>Hospital Transfusion Committee</td>
<td></td>
<td>Annually</td>
</tr>
<tr>
<td>Training Reports for Directorate Monitoring</td>
<td>Education Centre Administrators</td>
<td>TEG</td>
<td></td>
<td></td>
<td>Monthly</td>
</tr>
</tbody>
</table>
10 Consultation and review

The policy is based on BCSH guidelines and has been reviewed by the Hospital Transfusion Team and the Hospital Transfusion Committee. Changes in guidelines, practice and legislation are considered during review and implemented accordingly.

11 Implementation (including raising awareness)

This policy will be communicated to all trust staff who undertake this procedure. The policy will be available on the intranet and will be referred to in mandatory training sessions.

12 References


13 Associated documentation

- Asepsis Policy
- Consent for Examination or Treatment Policy
- Mandatory Training Policy
- Medical Device Management Policy
- Patient Identification Policy
- Patient Identification – Establishment Prior to Investigative Testing and Treatment
- Waste Management Policy
The Newcastle upon Tyne Hospitals NHS Foundation Trust

Equality Analysis Form A

This form must be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

PART 1

1. **Assessment Date:** 11/11/2015

2. **Name of policy / strategy / service:**
   - Administration of Blood Products Procedure

3. **Name and designation of Author:**
   - Sara Avery, Specialist Nurse (Blood Transfusion)

4. **Names & designations of those involved in the impact analysis screening process:**
   - Sara Avery, Specialist Nurse (Blood Transfusion)

5. **Is this a:**
   - Policy [✓]  Strategy [ ]  Service [ ]
   - **Is this:**
     - New [ ]  Revised [✓]
   - **Who is affected**
     - Employees [✓]  Service Users [ ]  Wider Community [ ]

6. **What are the main aims, objectives of the policy, strategy, or service and the intended outcomes?** *(These can be cut and pasted from your policy)*
   - To provide guidance in line with national guidelines on the requirements and responsibilities of all staff when administering blood products.

7. **Does this policy, strategy, or service have any equality implications?**
   - Yes [ ]  No [✓]

   **If No, state reasons and the information used to make this decision, please refer to paragraph 2.3 of the Equality Analysis Guidance before providing reasons:**
   - Policy applies to all patients who consent to blood transfusion. The transfusion information leaflets are available in different languages from the NHSBT website (hyperlink in policy) and in large format from Transfusion Practitioners enabling all patients to have access to the information.
8. **Summary of evidence related to protected characteristics**

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>Evidence, i.e. What evidence do you have that the Trust is meeting the needs of people in various protected Groups</th>
<th>Does evidence/engagement highlight areas of direct or indirect discrimination? If yes describe steps to be taken to address (by whom, completion date and review date)</th>
<th>Does the evidence highlight any areas to advance opportunities or foster good relations. If yes what steps will be taken? (by whom, completion date and review date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race / Ethnic origin (including gypsies and travellers)</td>
<td>Policy relates to all races and ethnic origin</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sex (male/ female)</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Religion and Belief</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Age</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Disability – learning difficulties, physical disability, sensory impairment and mental health. Consider the needs of carers in this section</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Gender Re-assignment</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marriage and Civil Partnership</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Maternity / Pregnancy</td>
<td>None relevant to this policy</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

9. **Are there any gaps in the evidence outlined above? If ‘yes’ how will these be rectified?**

   No

10. **Engagement has taken place with people who have protected characteristics and will continue through the Equality Delivery System and the Equality Diversity and Human Rights Group. Please note you may require further engagement in respect of any significant changes to policies, new developments and or changes to service delivery. In such circumstances please contact the Equality and Diversity Lead or the Involvement and Equalities Officer.**

   Do you require further engagement?  
   Yes [ ]  
   No [ ]
11. Could the policy, strategy or service have a negative impact on human rights? (E.g. the right to respect for private and family life, the right to a fair hearing and the right to education?)

No policy is designed to ensure safe administration of blood products in all groups requiring transfusion

PART 2

Name:
Sara Avery

Date of completion:
04/12/2015

(If any reader of this procedural document identifies a potential discriminatory impact that has not been identified, please refer to the Policy Author identified above, together with any suggestions for action required to avoid/reduce the impact.)