This document is an aide memoire and not designed to be a training document. Individuals not trained in transfusion should not be performing transfusion related tasks.

- Blood transfusions help improve and save lives
- Transfusions can result in reactions in recipients and errors along any of the steps in blood transfusion can result in significant patient impact
- It is important that all staff involved in blood transfusions are familiar with the processes, risks and benefits and those involved in administration must be trained, competent, regulated and registered healthcare professionals

The nine steps in transfusion and key points to remember

1. REQUEST
2. SAMPLE TAKING
3. SAMPLE RECEIPT
4. TESTING
5. COMPONENT SELECTION
6. COMPONENT LABELLING
7. COMPONENT COLLECTION
8. PRESCRIPTION
9. ADMINISTRATION

Blood transfusion is a complex multistep process involving several different healthcare professionals

Correct patient identification is crucial, both at the time of blood sampling and at the time of transfusion

Staff need to be vigilant and verify every step they perform in the process. An example of a transfusion checklist can be found here: https://www.shotuk.org/wp-content/uploads/myimages/Safe-Transfusion-Practice-Transfusion-Checklist-July-2020.pdf

Transfusion errors can result in major harm or patient death

Updated June 2021
Pre-transfusion sampling and administration essentials

**Pre-transfusion blood sampling and transfusion request**

1. Blood sample labelling must be full and correct and must comply with the minimum labelling criteria.

2. Labelling errors result in sample rejection. This causes delays and result in transfusion errors.

3. Remember: Positive Patient Identification – It is essential that patients must be asked to state their name and DOB. Also check authorised transfusion documentation and the compatibility label against wristband.

4. A minimum of two group and screen blood samples are required in the laboratory, consisting of one historic group and one current valid confirm group.

5. Inform transfusion laboratory regarding the urgency of transfusion along with component required and any specific requirements.

**Essentials for labelling blood samples:** Use 4 identifiers - First name, surname, date of birth and unique identification number. In Wales, need address as well.

**Pre-transfusion checks - these checks must be undertaken at the patient’s bedside**

- Check the patient is consented and the blood component has been prescribed.
- Check the component to be transfused is the right one and for the right patient. Where 2 person checking is in place, this must be a double independent check by 2 trained clinical staff – always check local policy.
- Ensure positive patient identification - It is essential that patients must be asked to state their name and DOB. Also check authorised transfusion documentation and the compatibility label against wristband.
- Check the unit – donation number of the unit against the compatibility label, specific requirements and unit integrity - expiry date and visual check.

**Selection and use of administration sets**

- Use CE-marked blood transfusion set (170-200μm integral mesh filter). The administration set should be changed at least every 12 h (or according to the manufacturer's instructions).
- Peripheral IV, central IV or intraosseous access suitable for blood transfusions.
- Confirm rate of transfusion.
- Note that the giving set must be changed between red cell and platelet transfusions.
- All devices/equipment must be certified for use with blood components and used in accordance with manufacturer’s instructions.

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The Royal College of Pathologists
Pathology: the science behind the cure

National Blood Transfusion Committee

SHOT - Serious Hazards of Transfusion
Administration
Pre-Administration checklist must be completed for all patients in line with DoH CAS alert CEM/CMO/2017/005. A risk assessment for transfusion-associated circulatory overload should be completed where possible. Record administration in the patient’s notes and prescription chart—details about the component, donation number, date, time, signature in real time.

Patient Monitoring 1/2
The patient must be kept under close observation throughout the transfusion. Observations (check local policy): minimum requirements include Pulse, Temp, BP and RR and should be done up to 1 hour before the transfusion, 15 mins after commencement and within 1 hour after completion.

Patient Monitoring 2/2
Additional (SaO2, urine output and fluid balance) and increased frequency of observations may be required according to the patient’s condition e.g. risk of transfusion-associated circulatory overload (TACO) identified. Early recognition and prompt management of transfusion reactions is vital to ensure patient safety.

Traceability and audit trail
Ensuring 100% traceability is a legal requirement and confirmation of the administration should be provided to the laboratory by the clinical team with details of date and time recorded in the patient’s clinical notes.
Management of transfusion reactions

- Transfusion reactions can occur very soon after the start of transfusion, during the transfusion or several hours later
- Some are life-threatening, others are minor
- Signs and symptoms may include fever, breathlessness, hypotension, itching, stridor, facial swelling, a feeling of doom
- Be particularly alert for transfusion-associated circulatory overload (increased risk with age and underlying diseases)

**Immediate Actions**
- ✓ Inform medical staff immediately
- ✓ Stop the transfusion but maintain venous access
- ✓ Assess and maintain airway, breathing and circulation
- ✓ Treat the symptoms
- ✓ Confirm patient identification and compatibility of component

**Additional Actions:**
- ✓ Monitor patient observations: Check temperature, pulse & respiration, blood pressure, urine output, Oxygen saturations.
- ✓ Review & monitor fluid balance
- ✓ Retain component bag & administration set
- ✓ Inform your transfusion practitioner and/or transfusion laboratory
- ✓ Document in patient notes
- ✓ Report as an incident
- ✓ Escalate to senior clinical team as needed and get additional help promptly

**Investigations in severe reactions**
- Full Blood Count (FBC)
- Coagulation Screen (including fibrinogen)
- Urea and Electrolytes
- Repeat Group and Screen and DAT

**Others (to consider depending on symptoms and reaction type)**
Liver function tests (including bilirubin), LDH, haptoglobin, blood cultures for the patient, urine test for presence of haemoglobin, blood glucose, blood gases and Chest X-Ray.

Send the blood bag and giving set sealed back to the transfusion laboratory for further investigations. For management of transfusion reactions, see the flowchart at the end of this document and follow local protocols.
Group O D-negative red cells are in short supply and their use should be prioritised based on gender and age. Group O D positive red cells can be used in cases of D negative adult males or women >50 years old with no known anti-D antibodies having major haemorrhage and requiring a significant number of units (>8 units). Ensure that the patient does not have any history of anti-D and is not on any chronic transfusion programme. Further details can be found in the ‘NBTC appropriate use of group O D negative red cells 2019’ guidance that can be accessed from this link: https://www.transfusionguidelines.org/uk-transfusion-committees/national-blood-transfusion-committee/responses-and-recommendations
Preventing patient misidentification

**DO’s**

✓ DO read all related local policies
✓ DO identify the patient as soon as they are admitted by asking the patient to state their full name and date of birth and other demographic details
✓ DO always place a wristband on the patient’s wrist as soon as you have established their identity and explain the need to wear this
✓ DO regularly check the wristband details are legible. If not, replace it
✓ DO access communication support services as outlined in policy
✓ **DO ask the patient for their full name and date of birth at every intervention**
✓ **DO check the details against the wristband before carrying out any procedure or administration of medicines or blood**
✓ DO label any specimens after they have been taken before leaving the bedside, with the details from the identification wristband

**DON’Ts**

× DON’T read the patient details and ask them to confirm them
× DON’T accept a patient pointing to a name above the bed
× DON’T rely on friends or family members for communication as there is a risk that this may not be accurate
× DON’T label sample tubes and bottles before taking the specimen
× DON’T take samples from more than one person at a time, ensure one patient, one sample, one request at any one time
× DON’T label samples/check medications or blood away from the bedside. Remember the patient’s identity is the most important part of the checking procedure
× DON’T print off spare addressograph labels or use them for patient identification
× DON’T label samples for someone else
× DON’T expect phlebotomists to take samples when there is no wristband on the patient