Western Health and Social Care Trust

Blood Administration for Community Patients Policy

July 2008

Policy Title:	**Blood Administration for Community Patients Policy**
Policy Reference Number:	**PrimCare08/15**
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Responsible Officer:	**Assistant Director of Nursing for Governance, Quality & Performance**

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1.0 *Introduction*

This policy details Trust requirements in relation to blood transfusion in the community

1. The contents of this policy reflect guidance published in the Handbook of Transfusion Medicine (1999); Northern Ireland Blood Transfusion Service (NIBTS) policy documents; NI Regional Transfusion Policy (2005) & NHS Framework for the Safe Delivery of Transfusion Services away from the acute setting (2004).
2. It is the responsibility of relevant staff to familiarise themselves and adhere to the contents of this policy.

2.0 *Definition*

1. Intravenous (IV) Blood transfusion.
   A transfusion consisting of the administration of blood or blood products to correct or treat a clinical abnormality.

3.0 *Criteria for Practice*

A registered nurse working within the Intermediate Care (Rapid Response Nursing) Team who has attended a 3 day IV Course and has been deemed competent via clinical assessment for administering IV Therapy or undergoing assessment and is being supervised by a competent practitioner. The nurse inserting devices and /or providing infusion therapy should be deemed competent in all aspects of infusion therapy and have a validated certification of competency levels prior to administration of blood in the patient's own home.

4.0 *Multi-Professional Roles Within Intravenous Blood Transfusion Therapy In The Home Setting*

Medical Staff Responsibilities

1. The patient must have a diagnosed cause for anaemia, which has been documented in medical notes both within the GP Practice and hospital records.
2. The medical staff will have informed the patient about the need for transfusion, including the benefits and potential risks, their right to refuse the blood transfusion and alternatives to blood transfusion. This should include giving the patient the "Receiving a Blood Transfusion" information leaflet (NBS, 2004). An entry will be made in case notes, describing indication for use of blood product, a record that risks and benefits were explained to the patient, the date, the number and product to be used. There should also be an update recorded whether or not it achieved the desired effect and the occurrence and management of any adverse effect.

3. IV blood transfusion must be prescribed by Medical Staff either from primary/ secondary care, on a recognised prescription (fluid balance sheet) which must
contain the patient identification details (surname, first name, date of birth,gender, unique identifier).
4. The doctor must write the prescription in legible writing including the blood product required, the number of units, duration and relevant instructions regarding drugs that may be required (no drugs will be administered via the same IV line as the blood) and any special blood requirements e.g. gamma irradiated, cytomegalovirus (CMV) antibody negative. The date and time transfusion should commence and date and Doctor's signature required on prescription sheet (fluid balance chart) must also be recorded.

Registered Nursing Staff with formal training responsibilities:

1. May be a primary or secondary checker
2. Collect blood from blood bank in a validated blood portering bag
3. Sign blood traceability record
4. Cannulate the patient at home
5. Administer the IV blood transfusion
6. Monitor patient's condition throughout the transfusion.
7. Report any changes or improvement / deterioration to the prescribing physician
8. Record any side effects of transfusion on patient's records.
9. If adverse reaction occurs, will instigate emergency procedure
10. Must carry emergency drug pack of adrenalin and be familiar with Trust protocol and dosing for use of adrenalin in event of emergency.

Biomedical Scientists (BMS) Blood Bank staff responsibilities:

1. Will release the requested blood to the Intermediate Care (Rapid Response Nursing) Team for transfusion in the community
2. Confirm the identity of staff that collects the blood for transfusion and completes the blood traceability form.
3. Ensure that blood will be transported safely in National Blood Service (NBS) validated blood porter bag.
4. Accept return of blood in the event of patient suffering an adverse reaction to the blood transfusion.

5.0 *Patient Selection*

1. Requires maintenance blood transfusions for symptomatic relief for palliative care management or haematological conditions, which will enable the patient to remain at home whilst having ongoing disease management.
2. Must be able to confirm their identity verbally, or if unable to do so, then a relative will be asked to do so.

3. Must have had recent blood transfusion under controlled circumstances either as an in-patient or day patient in hospital and remain on Outpatient review list for Consultant.
4. Must have hand-washing facilities available and a landline telephone.
5. A relative, friend or neighbour must be able to stay with the patient for two hours post transfusion (Information will be provided as to what to do in the event of requiring assistance).

6.0 *Blood Form and sample*

The collection and labelling of samples for blood group, screen and cross matching should be requested by Medical staff on confirmation that haemoglobin is low according to the Guidelines for Prescription of Red Blood Cells

Request Form

1. No blood can be issued unless legible request form is received and completed in full.
2. Details must include (addressograph label allowed):

- Surname & Forename
- Gender
- Date of Birth
- Unique identifier
- Consultant / GP
- Test required
- Reason for transfusion – specify patient's diagnosis
- Obstetric history
- Transfusion history e.g. known antibodies
- Location of patient
- Product & number of units
- Special requirements e.g. irradiated
- Date & time required
- Add date of request
- Signature

Sample Bottle

1. Use a 6mls pink-topped EDTA bottle
2. Must not be pre-labelled – handwritten details (addressograph label not allowed) – completed at patient's home by the person immediately after taking the sample. A final check must be made with the patient or relative that all details are correct and details should correspond with the patient's armband (which should be applied to the patient during this process of taking the blood for cross-matching) and the label on the sample tube. The details on the sample tube should match those on the request form. The nurse must place an identity bracelet on the patient at time of x-match sample collection
3. Must include:

- Surname & Forename
- Date of Birth
- Gender
- Unique identifier
- Signature of person performing venepuncture
- Date sample drawn

Before drawing the sample

Positive identification of the patient is essential. Patient should be questioned by asking surname, first name, date of birth in the case of patients who are judged capable of giving an accurate, reliable response. The details on the patient's identity wristband should match those on the request form and the answers to the above questions.

When labelling specimens the identity of the patient must be accurately checked by one registered nurse in the community setting accompanied by a recognised co-worker on the team (registered /unregistered/ student nurse with recognised training) as employed by Western Trust. If the patient is unconscious or confused it is essential to confirm the identity and date of birth against patient records in the patient's own home.

N.B. If the patient is category 3 status, hazard labels must be attached to the request form and the sample tube.

7.0 *Collection*

Prior to collection a registered nurse will contact blood bank to ascertain time that blood product will be available

The registered nurse collecting the blood product from the blood bank will have written patient details with them – (which include patient surname, forename, date of birth, unique identifier, location to bring unit and type and number of units)

1. A registered member of nursing staff from the community setting will attend the Altnagelvin Blood Bank with an NBS validated blood porter bag.

2. The prescription for transfusion is the responsibility of the Medical Officer. The blood product to be infused must be written clearly on the appropriate prescription sheet (Fluid Balance Chart) which indicates the patient's surname, first name, date of birth gender and hospital number

3. The BMS will issue the blood product, including the blood transfusion compatibility report form and the blood traceability record to the staff member.

4. The blood product will be placed into the NBS validated blood porter bag (with appropriate cool packs) for transport to the patient's home.

(The registered nurse collecting the blood from the blood bank will sign, date and time the blood traceability record section relating to 'unit removed from blood bank lab by…')

5. Blood components must be kept only in equipment specifically designed for the purpose (e.g. NBS validated blood porter bag) and blood refrigerators must be collected immediately prior to calling at patient's home. The geographical location of the Altnagelvin blood bank to all destinations within the former Foyle Trust ensures that destination time is not greater than thirty minutes distance from door to door. Blood bank at Erne or Omagh hospitals minimise door to door time and therefore blood will be ordered from nearest hospital to patient home address in former Sperrin Lakeland Trust.

8.0 *Preparation of Patient for Blood Transfusion*

N.B. A registered nurse will stay with the patient during the infusion and for 30 mins after completion of transfusion.

1. Blood transfusion should commence within 30 minutes of leaving the laboratory so the patient should be adequately prepared for the transfusion prior to arrival of blood.

2. The blood product should be brought to the patient's home in appropriate NBS validated blood porter bag.

3. The procedure should be explained to the patient.

4. Check if the patient has any
   - Allergies
   - Previous blood transfusions in a controlled environment
   - Has verbally consented to transfusion at home
5. Ensure that the patient is comfortable and all sanitary needs have been met before blood transfusion commences.

6. Prior to the blood transfusion an IV infusion of up to 100mls of 0.9% sodium chloride **must** be commenced that must be prescribed by the doctor.

7. Assemble the blood administration set and prime with normal saline 0.9% solution as prescribed.

8. When infusion has been established and venflon checked, secure position of the venflon and splint if necessary but always ensure that the cannula site is fully visible throughout the blood transfusion.

9. The registered nurse should complete baseline observations of temperature, pulse respiration, blood pressure and skin texture prior to blood transfusion. (These observations should not be done more than 15 minutes prior to commencement of the transfusion)

10. The prescribing Doctor may request diuretic cover prior to first or second unit and this should be given at appropriate stage of transfusion according to prescription.

9.0 *Technical Information*

1. Blood Administration Giving Sets

For blood transfusion the appropriate administration set should be used, that is one containing an in-line blood filter which removes micro aggregates present in the blood. Red cells must be transfused through a sterile blood administration set with an integral screen filter (170 – 200 µm pore size). Use of additional blood filters is not indicated for the majority of transfusions.

2. Cannulation

There is no minimum or maximum size of cannula for transfusion. Standard intravenous cannulas are suitable for blood component infusion. The size of the cannula chosen should depend on the size of the vein and the speed at which the blood is to be transfused.

Patients who have central catheters for venous access will have blood administered through this route of administration in accordance with Trust policy on care of Hickman Lines or Picc Lines.

3. Solutions suitable for flushing blood administration sets

Up to 100 mls of sodium chloride (0.9%) may be infused prior to blood transfusion to provide evidence of safe venous access as prescribed by the medical staff. The Visual Infusion Phlebitis (VIP) Score (Table 1) must be accurately recorded prior to commencement of saline flush, on completion of saline flush and fifteen minutes following commencement of blood into vein. If in any doubt, the venflon should be replaced prior to further blood transfusion to avoid the risk of extravasation of site. If the patient complains that the infusion site is painful, then replace infusion site as before.
N.B. Glucose solutions must never be administered immediately before or after a unit of blood is given as this may cause formation of aggregates.

4. Additives

Drugs must not be added to blood component pack under any circumstance. It is generally advised that an infusion line that is being used for blood should not be used to administer any drug.

5. Temperature

Blood should not be routinely warmed. Blood must only be warmed using a specifically designed commercial device with a visible

thermometer and an audible warning alarm. Blood should only be warmed in massive or rapid transfusions, when a patient has cold agglutinins or when a patient is hypothermic. Patients requiring this service will not be suitable for home transfusion.

10.0 *Checking of Blood*

1. The surname, first name and date of birth and unique identifier number are checked verbally with the patient. Ensure that these details are the same on the patient's wristband . The patient's surname, first name, gender, date of birth, unique identifier must be checked and found to be identical on the patient's armband, with the prescription (fluid balance sheet), and with the nursing records that are available within the home. In the event that the patient is unable to confirm their identity and date of birth due to illness, confusion, or disability, a relative will be asked to confirm the patient's surname, first name and date of birth.

2. The compatibility label attached to the blood pack and the blood transfusion compatibility report form will be checked by the registered nurse and secondary checker, independently, in patient's home. Confirmation that the patient's surname, first name, gender, DOB, unique identifier number, ABO blood group and RhesusD factor and unit number on the blood pack must be checked and found to be identical on the blood transfusion compatibility report form is essential.

3. The unit of blood will also have an expiry date that needs to be checked.

4. The unit of blood should be checked for any signs of discolouration or haemolysis; platelets should be checked for discolouration; all packs should be checked for leaks.

   Both checkers should sign the compatibility label attached to the blood pack and the blood compatibility report form and the prescription sheet (fluid balance chart) to confirm that no discrepancies have been noted.

5. If no discrepancies are found, then the primary checker should erect the blood for transfusion when the saline flush has been completed and within 30 minutes of receiving the blood product from the blood bank.

N.B. ***If any discrepancies are found during the above checking procedure, the blood product must not be transfused. The blood bank must be informed and the unit and the blood transfusion compatibility report form returned to the blood bank. The registered nurse will take a blood sample from the patient for a new group and screen sample containing the patient's correct details.***

6. The registered nurse should record the date and time of commencement of blood transfusion on the patient's blood observation sheet and the Blood Traceability Record and the prescription chart (fluid balance chart). The unit number must be recorded on the prescription (fluid balance chart) and the blood transfusion compatibility report form.

7. The transfusion rate should be prescribed by the doctor. Transfusions will be administered through the validated volumetric pump with service history record maintained in main office. The pumps are serviced through the local Altnagelvin Hospital engineers.

8. The blood transfusion compatibility report form must be filed in the patient's notes as a permanent record of the blood transfusion when the blood transfusion is complete. The Blood Traceability Record should be returned promptly to the Altnagelvin Blood Bank.

11.0 *Observation*

1. Visual observation of the patient is often the best way of assessing patients during blood transfusion. The patient will have one to one supervision when undergoing blood transfusion in own home. If a patient in a nursing home requires a blood transfusion with other nurses present it will remain the responsibility of the Rapid Response Nurse to remain with the patient and continue ongoing supervision and observation of the blood transfusion.

2. Vital signs (temperature, pulse, respirations and blood pressure) will be monitored and recorded before the start of each unit of blood product component and at the end of each transfusion episode.

3. Vital signs should be monitored fifteen minutes after the start of each unit of blood and then hourly throughout the transfusion episode.

4. During the transfusion, the nurse should also observe for:-
   - Shivering or rigors
   - Urine – quantity or presence of haematuria
   - Presence of pain in the arm / chest / renal angle
   - Development of jaundice or urticaria
   - Dyspnoea
   - Rash
   - Flushing,
   - Headache
   - Anxiety/restlessness
   - Feeling of impending doom

4. Vital signs related to transfusion should be recorded separately on Blood Transfusion Observation Sheet and clearly dated to enable information to be retrieved later if necessary.

5. A unit of blood should be infused within four hours after removal from controlled temperature storage.

6. After transfusion the packs should be spigotted and retained for at least 48 hours in the appropriate sealed plastic bag in the Intermediate Care (Rapid Response) Team's sluice room, then disposed of in Burn Bin for incineration.

N.B. In the event of infusion being stopped for any reason other than transfusion reaction, the blood administration set remains attached to the blood product bag. It is removed from the patient and placed in a sealed plastic bag and put into a separate yellow burn bin labelled blood product waste and stored as before for at least 48 hours before sealing lid and disposal of bin.

12.0 *Transfusion Reaction*

1. Any abnormalities observed should be reported to the Team Leader.
2. If a transfusion reaction is suspected, because the patient complains of symptoms or there are changes in observations, the patient's vital signs must be recorded, temperature, pulse and blood pressure.
3. A member of medical staff must be contacted immediately.
4. The infusion must be stopped immediately and the blood administration set must be changed and venous access maintained using 0.9% sodium chloride running slowly (to keep the line open) will be commenced awaiting contact from medical staff.
5. Further management depends on the type and severity of reaction.

If a severe reaction is suspected out of hospital:

- The transfusion should be stopped and urgent medical advice sought by calling for Emergency Ambulance 999 to transfer the patient to hospital.
- The nurse will prepare the adrenalin syringe or epipen for administration if patient's condition deteriorates rapidly whilst awaiting the emergency services.
- The blood administration set should be changed whilst awaiting the ambulance
- Venous access should be maintained giving normal saline running slowly to keep the vein open
- The reaction should be reported immediately to the hospital Blood Bank

- The laboratory will request the return of the blood remaining in the bag and the blood administration set and further blood samples will be required from the patient.
- Nursing observations should be carried out at regular intervals.
- The volume and colour of any urine passed should be recorded.

Blood samples should be sent as soon as possible, these include:

- Clotted sample for transfusion reaction investigation.
- EDTA sample for Full blood count.
- EDTA sample for group & screen
- Citrate sample for coagulation screen.
- Clotted sample for urea and electrolytes.
- Blood cultures
- A sample of urine should be collected in a universal container and sent to the biochemistry laboratory for measurement of haemoglobinuria

Care should be exercised by medical nursing and paramedic staff to avoid needlestick injury to themselves and others by safe disposal of sharps in a suitable container.

13.0 *Documentation*

The patient's nursing notes should record – Date, Start and finish time, Type of Infusion, Volume transfused and rate at which the solution has been infused and the occurrence and management of any adverse effect.

File in patient's notes: The prescription on the Fluid Balance Sheet.
The blood observation sheet
The blood transfusion compatibility report sheet

Return to Blood Bank: Blood Traceability Record

This policy has been written on the establishment of the Intermediate Care (Rapid Response Nursing) Team who aim to manage acute care in the community in an effort to relieve pressure on hospital beds. It will be necessary to review this policy to maintain due regard for developments in CREST Guidelines on Blood transfusion and with Northern Ireland Regional Transfusion Committee Guidelines.
Maeve Brown
Rapid Response Co-ordinator
Dated : April 2005
Reviewed Date : November 2006 in co-operation with Mary P.McNicholl at Altnagelvin Hospital and presented to Blood transfusion committee for approval.

Revised : November 2007 for approval of newly established Western Health and Social Care Trust policy committee

Review: July 2010

Table 1 Visual Infusion Phlebitis Score (VIP)

Intermediate Care (Rapid Response Nursing) Team

Iv Site appears healthy	0	No signs of phlebitis Observe cannula
One of the following is evident • Slight pain near IV site • Slight redness near IV site	1	Possibly first signs of phlebitis Observe cannula
Two of the following are evident • Pain at IV site • Erythema • Swelling	2	Early stage of phlebitis Resite Cannula
All of the following signs are evident:Pain along path of cannula • Erythema • Induration	3	Medium stages of phlebitis Resite Cannula Consider treatment
All of the following signs are evident and extensive: • Pain along path of cannula • Erythema • Induration • Palpable venous cord	4	Advanced stages of phlebitis or the start of thrombophlebitis Resite cannula Consider treatment
All of the following signs are evident and extensive: • Pain along path of cannula • Erythema • Induration • Palpable venous cord • Pyrexia	5	Advanced stages of thrombophlebitis Initiate Treatment Resite Cannula

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