

**HACKETTSTOWN REGIONAL MEDICAL CENTER
NURSING POLICY MANUAL**

TRANSFUSION OF BLOOD PRODUCTS

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Effective Date: 12/27/1990
Cross Referenced: 8620.240b
Reviewed Date: 9/08, 10/10

Policy No: 8620.069a
Origin: Division of Nursing
Authority: Chief Nursing Officer &
Laboratory Medical Director

Revised Date: 7/31/15, 10/1/15

Page: 1 of 6

SCOPE

Providers, Nurses, laboratory personnel and unlicensed nursing personnel in areas where blood products are prepared and can be administered.

PURPOSE

To outline the procedure for the administration of blood and blood products and the management of the patient during the transfusion therapy.

DEFINITIONS

Emergency Blood Release Form- a form used if any blood product is released from the Blood Bank before all pre-transfusion testing is completed.

Pre transfusion Medications- any medication ordered to be given prior to the initiation of blood is given 30 minutes prior.

Post transfusion Medications- any medication ordered to be given after to the completion of blood is given 30 minutes post completion.

Blood Issue Request Form- form that is completed by the RN who is going to administering the blood product, verifying the presence of an order and blood product that is being requested. Request form must be completed before going to the lab to pick up blood, and must accompany the staff member that is retrieving the product from the blood bank.

POLICY

- I. Consent is obtained prior to administration of blood product, see HRMC Consent Policy AD 36B.
- II. Any trained staff can pick up blood from the blood bank.
- III. Prior to the initiation of a blood product and at the patient bedside, a verification of blood components and patient identification must be done by RN who will be administering the product along with another RN, LPN or physician.
- IV. 0.9% normal saline is the only IV fluid blood is to be administered with; Dextrose solution should never be used because calcium content renders it incompatible with blood.
- V. The blood component tubing/filter can be used up to 4 hours for the same blood product. Therefore if hanging more than one unit of the same blood product and it is to be completed in less than 4 hours, more than one unit can be transfused using one set up.
- VI. Once the unit of blood is released from the blood bank, the unit MUST be initiated within a 30 minute timeframe. (If unable to initiate the transfusion within the appropriate timeframe, the unit MUST be returned to the blood bank with the Crossmatch Tag within the 30 minute timeframe.)

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Page: 2 of 6

- VII. Transfusion of blood/blood products may not exceed four (4) hours because of the danger for bacterial growth.
- VIII. A blood warmer is recommended when a patient has a nonspecific cold antibody (cold agglutinin) and/or during rapid/massive transfusion given within a 24 hour period. A physician order is required if a blood warmer is recommended for use.

PROCEDURE –

A. Procedure for Administration of Packed Cells, Plasma and Platelets

PRE-Transfusion Process

1. Obtain the following equipment when preparing for blood product administration
 - a. Blood Product
 - b. Blood Administration Set (Y) or Blood Y Type Pump Set
 - c. Volumetric Pump
 - d. Patent I.V. 18g or 20g preferred
 - e. Blood Issue Request Form
 - f. 0.9% Normal saline 250 cc bag
 - g. Blood warmer if ordered or recommended from Blood Bank based upon cross match
2. Check patient's EMR for the blood product administration order. Note a type and crossmatch is required for transfusion of Packed Red Blood Cells (PRBC). A type and screen is required for transfusion of plasma and Platelets. Both are valid for 3 days before a repeat is required for transfusion.
3. Verify that a consent form signed by the physician or nurse practitioner is in the EMR
4. Document order and consent confirmation in the EMR, blood transfusion band.
5. Obtain intravenous access; recommend an 18 or 20 gauge catheter if not already present and available for blood administration usage. For difficult insertions, blood products can be infused using a 22 gauge cannula.
6. Once blood is ready, obtain pre-transfusion vital signs and enter into the EMR, blood transfusion band. The patient's current vital signs include BP, Pulse and Temperature. Recommend vital signs not to exceed more than 30 minutes prior to picking up blood. Chart order verification and consent also if not already done.
7. Notify the physician if vital signs are unstable and/or patient has a temperature prior to proceeding with steps.
8. Prime Y type blood administration set tubing with 0.9% normal saline (250cc).
9. Complete blood transfusion request form.

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Page: 3 of 6

10. Two blood products may be requested and administered simultaneously if the patient has two available intravenous lines and it is clinical emergency. The blood bank will issue a validated cooler for those units not started immediately.
11. Pick up the blood product from the Blood Bank and cross check the Blood Bank's transfusion information with the Blood Request Form, the physical unit and the crossmatch tag together with the Blood Bank Technologist.
12. Validate pickup electronically using the ID badge and/or computer log in access code.

Immediate Prior to Initiation

13. Bring the unit of blood to the patient's room. Open the patient's electronic record at the bedside. The transfusing RN verifies with another RN, LPN or MD the following:
 - a. Medical Record, patient name on the patient's ID band , crossmatch slip and the blood container match, have patient state their name if able.
 - b. Blood product and type on the blood product match information on crossmatch slip
 - c. Unit and crossmatch expiration dates on the blood tag have not been exceeded.
 - d. Blood bag ID number matches number on the crossmatch tag
 - e. Inspect blood for clots and leaks
14. Any discrepancy return unit to the Blood Bank and withhold transfusion until discrepancy is clarified.
15. Open the Blood Transfusion Band; create a time column for current time.
16. Place cursor in the Blood Product ID field under the current time. Scan the blood product ID# on the blood product. Scan the label that has the "W" before the number.
17. Document blood verification process and verify correct blood product ID # is present, document estimated volume to be hung in the EMR. (Volume estimate is located on crossmatch tag)
18. Both licensed staff members sign the electronic record for the verification process; this is done before you initiate the spiking of the blood.
19. Invert bag gently, rotate 3-5 time to start blood.
20. Remove the protective cover from the outlet of blood/blood product bag.
21. Remove the covering from the connector of the administration set.
22. Spike the prime y-type tubing with blood product.
23. Hang blood product via volumetric pump or gravity if not using pump set.
24. Clamp the normal saline and prime tubing with blood, then allow the blood to run slowly for the first 15 minutes (@75cc/hr).

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Page: 4 of 6

During the Transfusion

25. Once blood enters the patient that is considered the start time of the transfusion.
26. Open new time column on the blood transfusion band, document start date and time.
27. All documentation of blood transfusion monitoring is done as close to the time of the event as possible.
28. Remain with the patient during the 15 minutes and observe for transfusion reaction. See Blood Transfusion Reaction Procedure 8620.070b for types of reactions, signs and symptoms.
29. Check the patient's vital signs after the first 15 minutes.
30. Document vital signs and response to transfusion during the first 15 minute interval by charting "none" in transfusion reaction section, or explaining what reaction was noted.
31. Educate the patient to notify the nurse if they experience any signs or symptoms of a reaction after the first 15 minutes. Document education.
32. If the patient at any time experiences a transfusion reaction or you suspect a reaction, STOP the blood administration, notify the lab and physician and follow the HRMC Blood Transfusion Reaction Procedure. (8620.070b)
33. If patient is tolerating the transfusion increase the rate to 125cc/hr or as tolerated, in order to complete the transfusion within the 4 hour time limit. Plasma rates may be up for 200cc/hr, at the discretion of the physician and patient condition.

Post Transfusion

34. After the unit is completed, flush the tubing with the normal saline that is connected to the Y-set.
35. Close the clamps on the tubing.
36. Obtain vital signs at the completion of transfusion.
37. Open blood transfusion band of patient's EMR and document the vital signs, stop date/time, whether the product was "completed" or not, amount infused and signs of reaction (transfusion reaction section) in the EMR.
38. Remove the blood product and tubing from the patient's pump and discard into the biohazard waste.
39. Original crossmatch tag is placed in chart.

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Page: 5 of 6

B. Monitoring

1. Vital signs associated with blood transfusion procedure should only be obtained by the RN transfusing the blood product.
2. Vital Signs (blood pressure, pulse, temperature):
 - a. At initiation of the transfusion (pre-pickup of blood)
 - b. After the first 15 minutes of the transfusion.
 - c. At the completion of the transfusion.
3. If you suspect a fluid overload, notify the physician immediately. If the physician is not immediately available, call a Rapid Response and monitor the patient's status.

C. Patient Education

1. Instruct the patient of the rationale for transfusion, anticipated amount of time for completion of transfusion and frequent vital sign monitoring throughout the transfusion.
2. Instruct the patient and family to promptly notify the nurse of symptoms resulting in; itching, chest pain, swelling, dyspnea, or low back pain, because these may indicate a possible transfusion reaction.
3. All patient education regarding blood transfusion process in patient education section of EMR.

D. Documentation

1. If transfusion was started and the patient is transported to the OR, complete the "transport to OR" field in the Blood Transfusion band of the EMR.
2. Document the following steps of the process:

Pre transfusion

 - a. Physician order was obtained
 - b. Transfusion consent signed
 - c. Pre-transfusion vital signs.

Immediate Prior to Initiation

 - a. Signatures of verification on crossmatch tag
 - b. Blood unit number and product type
 - c. Equipment used
 - d. Transfusion start date and time
 - e. Blood product volume (volume estimated by the Blood bank and found on Crossmatch Tag.

During transfusion (15 Minutes after initiation)

 - a. Vital signs
 - b. Signs of reaction, if none document no transfusion reaction noted

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Page: 6 of 6

Post Transfusion (immediately after completion)

- a. Transfusion stop date and time
- b. Transfusion completed
- c. Vital signs
- d. Transfusion amount of specific blood product type
- e. Signs of reaction

Other Products

- A. Factor IX
 - a. May be given by IV push or IV drip
 - b. Use 20-23 gauge filtered needle
- B. Cryoprecipitate
 - a. May be given IV push or IV drip.
 - b. 1-2ml/min infused within 15-20 minutes or determined by plasma volume
 - c. If given by IV drip, use blood administration tubing
 - d. May be supplied as individual 15 ml. bags (10 per adult dose) or bags of pre pooled units (75 ml) (2 per adult dose).
- C. Other factors
 - a. Factors VIII and IX distributed from pharmacy

REFERENCES

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