



COMMUNITY MEDICAL CENTER

Department of
NURSING
Policy &
Procedure
Manual

Blood - Administration of Whole Blood
and Packed Cells

SKILL LEVEL: RN

PURPOSE: To replace red blood cells due to blood loss
To avoid hypovolemic shock due to reduction in circulating blood volume
To increase oxygen-carrying capacity

EQUIPMENT:

1. Blood component from Blood Bank
2. Crossmatch/transfusion record attached to blood bag
3. Y-type blood administration set
4. 50-100 ml normal saline solution partial fill
5. #18g. IV catheter or greater, if possible
6. Male adapter for needleless system
7. 10 ml normal saline solution vial (to flush existing IV tubing)
8. Blood consent
9. Alcohol preps

IMPLEMENTATION:

1. Explain procedure to patient.
 - a. Special Considerations:
 - **The informed consent for blood administration must be obtained by the physician.**
 - **Physician order for blood transfusion:**
 - **The MD must write an order to transfuse the blood**
 - **Frequency of follow-up H&H**
 - Whenever a type and crossmatch is ordered, a GREEN ID band is placed on the patient by the Lab at the time the specimen is drawn. ****This band is to remain on the patient's arm for the entire hospital admission, since it is the original number used for the patient.****
 - **IF THE PATIENT HAS AUTOLOGOUS BLOOD (PATIENT'S OWN BLOOD), THIS MUST BE ADMINISTERED PRIOR TO BANKED BLOOD.**
2. Take stamped 3 x 5 card with the green band number to Blood Bank to obtain blood along with the signed blood consent. Blood is issued from the Blood Bank for only one patient at a time.
3. Check the expiration date on component bag.
4. **AT THE BEDSIDE:** 2 RNs must confirm the identity of the patient by comparing the patient's name, medical record number and green blood band identification number (as they appear on the patient's green blood band and patient identification band) with the patient data on the transfusion record attached to blood bag. Patient **MUST** have an identification band on in order to receive

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blood. Compare the blood component, unit number, ABO group, Rh group and expiration date on the blood bag with the same information on the transfusion record.

NOTE: If, for any reason, there is a question regarding the identification of the patient or the blood unit, the unit should not be transfused and the Blood Bank notified immediately.

5. Both RNs must sign the crossmatch slip.
6. Document start time.
7. A blood warmer is to be used when the Crossmatch/Transfusion Report is marked indicating same. If a blood warmer is used, note the initial temperature of the warmer in the designated space. (Note: Blood can only be warmed in blood warming unit.)
8. Take patient's vital signs and record on the transfusion record.
9. Close all clamps on the administration set.
10. Insert one piercing spike into the normal saline solution partial fill.
11. Open clamp under solution container.
12. Squeeze and release filter chamber until solution level is at the top of filter. Tap filter to remove air, if necessary. Partially open clamp on unused side to prime tubing then close clamp.
13. Open clamp below filter to prime set, purge air, close clamp until roller meets bottom of frame.
14. Insert remaining spike into blood bag.
15. Close clamp below filter. Open clamp to blood bag.
16. Squeeze filter to backprime saline into blood tubing.
17. Close clamp to saline solution.
18. If patient has an existing IV, prepare IV tubing for blood administration by closing clamp of IV tubing above Y-site, clean port with alcohol prep and flush with 10 ml normal saline solution, if dextrose infusing, and shut off IV solution.
19. Insert male adapter into Y-site of IV tubing and open roller clamp to allow blood to infuse slowly for the first 15 minutes, closely observing the patient for signs of transfusion reaction.
20. Take and record vital signs after first 15 minutes of transfusion is completed and record on the Transfusion Record. Increase rate of infusion.
21. When transfusion is completed, close all clamps on blood administration set and remove from IV tubing. (for patient with IV line)
22. Clean Y-site with alcohol prep and flush with 10 ml normal saline solution, if dextrose infusion is present, and resume IV fluids as ordered.
23. Take and record patient's vital signs on the Transfusion Record.
24. Record amount of blood infused and the amount of normal saline solution infused on the Crossmatch/Transfusion Record and on the Intake & Output sheet.



25. Complete the Crossmatch/Transfusion Report with time completed, amount given and if reaction occurred or not.
26. Remove "patient copy" from Crossmatch/Transfusion Report and place on patient's chart. Return signed second copy to the Blood Bank.
27. Discard the blood bag and administration set in an infectious waste container and the needle in a sharps container.
28. Two (2) units of blood may be administered per blood administration set.
29. Observe the patient throughout transfusion for possible reaction which includes:
 - a. fever
 - b. chills
 - c. tachycardia
 - d. hypotension
 - e. back pain
 - f. wheezes
 - g. pain at infusion site
 - h. chest pain
 - i. pruritis/urticaria

SIGNS OF VOLUME OVERLOAD:

- a. shortness of breath
 - b. increased respiratory rate
 - c. tachycardia
 - d. rales and/or wheezes
30. If transfusion reaction occurs:
- Discontinue transfusion; maintain IV line with saline. Use a new bag and new tubing.
 - Notify physician (note any new orders)
 - Call Blood Bank; send remaining blood component and administration set along with first voided sample of urine to the Lab.
 - Complete front side of "Suspected Transfusion Reaction Workup" and send to Blood Bank.

NOTE: The earlier a transfusion reaction occurs, the more severe it is likely to be. For this reason, the patient should be monitored closely the first 15 minutes of the transfusion.

CLARIFICATION AND EXTRA CLINICAL INFORMATION:

1. Tyco pressure infuser may be used if administration of blood is too slow.



2. **DO NOT** take blood from bank until ready to infuse. If the blood cannot be administered within 30 minutes, the blood should be returned to the Blood Bank within 30 minutes from the time of release in order to be placed back in the Blood Bank refrigerator.
3. **FOR OUTPATIENT TRANSFUSIONS:**

After the transfusion, the attending nurse will keep the patient under observation for at least one hour after the transfusion is completed and post transfusion vital signs should be recorded on the transfusion record. **Vital signs will also be taken and recorded one hour after transfusion prior to discharge.** Written instructions understandable to non-medical individuals must also be provided for the outpatient.

 4. Blood should not be administered via a central line unless ordered by a physician.
 5. Normal saline solution is the **ONLY** solution that may be added to blood.
 6. **NEVER ADD MEDICATIONS TO BLOOD.**
 7. Use the largest gauge needle appropriate for the patient.
 8. Because of the risk of bacterial growth, one unit of blood must be transfused within 4 hours. If the patient can't tolerate a rate fast enough to infuse the blood over 4 hours, notify the Blood Bank and they will divide the unit into two parts.
 9. Documentation of blood transfusions that occur during surgery will be made on the Anesthesia Record.
 10. Refusal of blood/blood components due to religious beliefs:
 - Document patient refusal in the appropriate area on blood consent.
 - Notify physician
 - When appropriate, the physician can discuss bloodless alternatives with the patient.
 - In the event of a life-threatening situation, the physician may obtain a court order to administer blood.
 - Risk Management to be notified by the physician or nursing staff to facilitate process for court order.
 11. Blood Documentation Summary
 - The following must be documented in the patient's medical record:
 1. Transfusion order
 2. patient consent
 3. name of the component, donor unit or pool identification number
 4. date and time of transfusion
 5. pre and post transfusion vital signs
 6. amount transfused
 7. identification of the transfusionist
 8. transfusion-related adverse events, if applicable



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REFERENCES:

1. AABB Technical Manual. American Association of Blood Banks, 13th edition, 1999, pages 491-492.
2. AABB Technical Manual. American Association of Blood Banks, 14th edition, 2002, pages 485-495.
3. CMC Laboratory – Blood Bank – Policy & Procedure “Suspected Transfusion Reaction Investigation”, pg. 18.000

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