POLICY

Good transfusion practice requires that set policies and procedures for blood administration be implemented and practiced to prevent and reduce errors. Nursing personnel must follow Blood Bank and Nursing Services Policy and Procedure when transfusing blood and blood products.

PROCEDURE

PATIENT INFORMATION AND INFORMED CONSENT

1. Transfusionist should explain to the patient how the transfusion will be given, how long it will take, what the expected outcome is, what symptoms to report and that vital signs will be taken. Patients experience less anxiety when they are made aware of the steps involved in a transfusion.

2. The physician has the responsibility to explain to the patient the benefits and risks of transfusion as well as alternatives to transfusion in a way that the patient can comprehend.

3. Patient must be given the opportunity to ask questions regarding transfusion therapy.

4. Informed consent for transfusion by way of patient’s signature must be obtained prior to transfusion.

VENOUS ACCESS

1. To avoid delay in transfusion and potential wastage of blood components, venous access should be established before blood is picked up from the blood bank.

2. If a pre-existing line is to be used, it should be checked for signs of infiltration, inflammation or infection.

3. The lumen of needles or catheters used for blood transfusion should be large enough to allow appropriate flow rates without damaging the vein. Although there are no strict guidelines limiting the size of the catheter or needles used, an 18-gauge needle usually provides good flow rates for cellular components without excessive discomfort to the patient.

4. Patients with small veins require much smaller needles.

5. If the flow rate will make the transfusion process longer than 4 hours per unit, unit should be separated into aliquots and parts kept under refrigeration in the blood bank until the first aliquot is transfused.

BLOOD COMPONENT PICK UP

Blood and blood component is picked up from the Blood Bank following Policy No. UM132.01 “Release of Blood and Blood Products”
PRE-ADMINISTRATION
1. The single most important step in ensuring transfusion safety is accurate identification of the blood component and the intended recipient.

2. Immediately before transfusion, the Transfusionist shall verify that all information matching the blood or component with the intended recipient has been verified in the presence of the recipient (by the patient’s bedside) item by item. A second individual (co-identifier) also must cross check the information. Both individuals must initial the checklist once completed.

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<th>PRE-TRANSFUSION CHECKLIST</th>
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<tr>
<td><strong>Patient Name</strong></td>
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3. Vital signs should be taken and recorded in the patient’s chart and on the Blood Bank slip.

ADMINISTRATION
INFUSION SETS
1. All blood or blood components must be administered through a sterile, pyrogen-free transfusion set that has a filter designed to retain blood clots and particles potentially harmful to the recipient.

2. All filters and infusion sets must be used according to the manufacturer’s directions.

3. Sets should be primed according to the manufacturer’s directions, using either the component itself or a solution compatible with blood (see Compatible IV Solutions).

4. For optimal flow rates and performance, filters should be fully wetted and drip chambers filled no more than half full.

5. Infusion sets should be changed after every transfusion. Additionally, their use should be limited to 4 hours only in order to minimize the risk of bacterial contamination.

COMPATIBLE IV SOLUTIONS
1. If red cells require dilution to reduce their viscosity or if a component needs to be rinsed from the blood bag or tubing, normal saline (0.9% sodium chloride injection, USP) can be used.

2. Other drugs or solutions intended for intravenous use may be added to blood or components or may come into contact with an blood in an administration set only if they have been approved for this use by the Food and Drug Administration (FDA) or if there is documentation to show that their addition to blood is safe and does not adversely affect the blood or component.
3. **DO NOT USE OR ADD** lactated Ringer's Solution, 5% dextrose or hypotonic sodium chloride solutions to blood.

4. Dextrose solutions may cause red cells to clump in tubing. Lactated Ringer's Solution contains enough ionized calcium to overcome the chelating agents in the anticoagulant-preservative solutions, which results in clot development.

**RATE OF INFUSION**

1. Nursing personnel should record the date and time transfusion is started on the blood bank slip and on the patient's chart.

2. The transfusion should be started slowly at a rate of approximately 2 mL/minute except during urgent restoration of blood volume. Catastrophic reactions from acute hemolysis, anaphylaxis or bacterial contamination can become apparent after a very small volume enters the patient's circulation.

3. The rate of infusion can be increased to that specified in the doctor's order or at a rate of approximately 4 mL/minute. The desirable rate depends on the patient's clinical condition, patient's blood volume, cardiac status and hemodynamic condition. **Most red cells are transfused within 1 to 2 hours while platelets and plasma are usually administered within 30 to 60 minutes.**

4. The **maximum time** for infusion is 4 hours.

**PATIENT CARE DURING TRANSFUSION**

1. The Transfusionist should either remain with or be in a position to closely observe the patient for at least the first 15 minutes of the infusion.

2. Nursing personnel should continue to observe the patient periodically throughout the transfusion (i.e. every 30 minutes) and up to one hour after the transfusion has ended.

3. Nursing personnel should look for any signs of adverse reaction toward the blood or component transfusion. Refer to the blood bank slip for a list of common symptoms.

4. If a reaction is suspected, **stop the transfusion**.

5. Check all labels, forms and patient identification to determine whether the transfused component was intended for the recipient.

6. Maintain an intravenous line with normal saline (0.9% sodium chloride, USP) until a medical evaluation of the patient has been performed. Secure any needles attached to tubing but leave the blood unit by the patient. Lab will need to verify unit information during transfusion reaction workup.


8. Patient's physician will evaluate the reaction and determine course of action for nursing staff and transfusion service.

9. Blood Bank will proceed with a transfusion reaction workup as required.

UM Disk 1/ Transfusion of Bld. & Bld. products
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POST-ADMINISTRATION
1. After the unit of blood or blood component has been infused, nursing personnel should record the date and time transfusion ended, the volume and type of blood component transfused on the blood bank slip and on patient’s chart. Also, the identity of the person who observed the patient and stopped the transfusion, along with the condition of the patient shall be noted on the patient’s chart.

2. The original Pink copy of the Blood Bank slip should be placed in the patient’s chart. The white lab copy should be forwarded to the Blood Bank along with the empty blood bag.

3. The empty blood bag with or without the tubing of the Administration set should be placed in the ziplock plastic bag, secured tight to prevent leakage and sent to the Blood Bank with the lab copy of the blood bank slip either stapled outside of the bag or placed in the outside compartment of the plastic bag.

REFERENCES
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GMHA LABORATORY

Scope          Title                                      Policy/Version #

UM133.01