

# SARASOTA MEMORIAL HOSPITAL

## NURSING PROCEDURE

PS1094

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<b>TITLE:</b>	REACTIONS TO BLOOD AND BLOOD COMPONENTS (blo12)	<b>DATE:</b>	01/79
		<b>REVIEWED:</b>	10/04, 9/08
		<b>PAGES:</b>	1 of 5

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<b>ISSUED</b>	<b>RESPONSIBILITY:</b>
<b>FOR:</b> Nursing	RN, LPN I, LPN II

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**PURPOSE:** To provide procedures when reactions to the administration of blood components occur.

**KNOWLEDGE BASE:**

1. Corporate Policy 00.PAT.00, Administration of Blood and Blood Products, applies.
2. Transfusion reactions can result from a single or massive transfusion of blood and blood components. Although many reactions occur during or shortly after blood/blood component administration, other adverse effects can develop days, weeks or even months after transfusion.
3. Transfusion reaction requires immediate recognition and prompt nursing action to prevent further complications, particularly if the patient is unconscious or heavily sedated so that he cannot report the common symptoms.

**PATIENT EDUCATION:**

1. Instruct the patient to report any symptoms such as chills, shaking, flushing, hives, shortness of breath and/or discomfort at the infusion site immediately both while receiving transfusion and after a transfusion.
2. For outpatients, provide the written instructions for reporting adverse reactions after the transfusion.

**EQUIPMENT:** Assemble the following:

1. Possible Transfusion Reaction Report (computer)
2. Urine specimen container

**PROCEDURE:**

1. As soon as a blood reaction is suspected, stop the transfusion. Wash hands and don non-sterile gloves
  - a. Maintain the venous access with normal saline (NS) infusion at a maximum of 50 ml per hour.
  - b. In cases of severe reactions, change the tubing and NS setup and maintain a patent IV access.
2. Assess the patient including vital signs and record vitals on the Transfusion Reaction Report. Institute emergency measures as indicated by the patient's status.
3. **Notify the physician immediately.**
4. Monitor vital signs every fifteen minutes or as indicated by the severity and type of reaction.
5. Compare the labels on all blood containers to corresponding patient identification forms to ensure transfusion was the correct blood component and document as such.
6. Notify the Suncoast Communities Blood Bank of a possible transfusion reaction in CareVISION. Print a copy of the Possible Transfusion Reaction Report. Have the RN complete the form and send it to the Suncoast Communities Blood Bank along with the remainder of the unit, the administration set and the normal saline.
7. Order and collect blood specimen (lavender tube) and indicate in the comment section "possible transfusion reaction".
9. Collect the first post-transfusion urine specimen. In CareVISION, select "Transfusion Reaction-Urine". In the comment section, add "Possible Transfusion

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**PROCEDURE (cont'd):** Reaction" and print. Send the slip and collected urine specimen to the Laboratory immediately.

10. Continue to assess and monitor the patient including I and O and vital signs until the patient condition is stable.

11. Document the reaction in the nurse's notes and on an occurrence report, including all actions taken.

**DOCUMENTATION:**

1. CareVISION Intake and Output Flowsheet: Document amount of blood components and saline infused.
2. Nursing Reassessment Flowsheet or Special Care Area Forms: Document the patient responses to treatment and any signs of reaction noted and action taken.
3. Medication Administration Record (MAR): Record time and name of medications given to treat the reaction.

**REFERENCE:**

American Association of Blood Banks, American Red Cross Council of Community Blood Centers. (1999, January). Circular of Information For The Use of Human Blood And Blood Components. Author.

Sarasota Memorial Hospital Personnel. (2007). Administration of blood and blood products. (00.PAT.00). Sarasota, FL: Author.

U.S. Dept. of Health & Human Services, National Institutes of Health. (1990). Transfusion Therapy Guidelines For Nurses. Washington, D.C.: Author.

**REVIEWING AUTHOR (S):**

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**APPROVAL:**

Nursing Standards & Practice, 4/3/08  
Blood Usage QI, 4/11/08

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**Table 1.**

**FIVE TYPES OF THE MORE FREQUENT REACTIONS ARE ADDRESSED HERE**

TYPE REACTION	PREVENTIVE MEASURES	SIGNS & SYMPTOMS	SUGGESTED NURSING ACTIONS
HEMOLYTIC	<p>Verify identification.</p> <p>Monitor patient closely for the first 10 minutes of transfusion.</p> <p>Use only approved solutions (0.9% Sodium Chloride Injection USP). Do not add any drugs or medications to blood products.</p> <p>Avoid overheating or freezing of the blood. Use only approved devices for warming.</p> <p>Avoid bacterial contamination.</p>	<p>Onset of symptoms usually in first 10 minutes of transfusion.</p> <p>Burning along vein.</p> <p><b>Flushing, fever, chills.</b></p> <p>Flank pain.</p> <p>Chest pain, tachypnea.</p> <p>Labored respirations.</p> <p>Shock.</p>	<p>Stop the transfusion.</p> <p>Change blood tubing.</p> <p>Notify MD.</p> <p>Treat shock.</p> <p>Blood, urine specimens as stated in procedure.</p> <p>Order and collect blood specimen(lavender tube)</p>
ALLERGIC	<p>Note allergy history – particularly of previous transfusion.</p> <p>Administer antihistamine per physician’s order prior to transfusion.</p>	<p><b>Hives</b> (more than one or two).</p> <p>Pruritis.</p> <p>Respiratory symptoms are rare, e.g., asthma, glottal edema.</p>	<p>Stop transfusion.</p> <p>Notify MD.</p> <p>Treat life-threatening conditions (edema, shock, respiratory distress STAT).</p>

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TYPE REACTION	PREVENTIVE MEASURES	SIGNS & SYMPTOMS	SUGGESTED NURSING ACTIONS
FEBRILE	<p>Keep patient comfortably warm during transfusion.</p> <p>Administer antipyretic per order prior to transfusion.</p> <p>Leukoreduced or washed packed cells reduce chance of febrile reaction.</p>	<p>Chills &amp; fever usually one hour or more into transfusion and usually greater than a 2 degree F rise.</p> <p><b>Headache.</b></p> <p>Flushing.</p> <p>Tachycardia.</p>	<p>Stop transfusion.</p> <p>Notify physician.</p>
BACTERIAL	<p>Maintain aseptic techniques.</p> <p>Maintain blood in controlled cool temperature.</p> <p>Do not use blood warmed greater than room temperature except in cases of hypothermia.</p> <p>Do not infuse blood for longer than 4 hours.</p>	<p>Shaking, chills and fever.</p> <p>Abdominal &amp; extremity pain.</p> <p>Vomiting.</p> <p>Bloody diarrhea.</p>	<p>Stop transfusion.</p> <p>Notify MD.</p> <p>Treat shock per symptoms.</p> <p>Broad spectrum antibiotic treatment as ordered.</p> <p>Monitor vital signs &amp; fluid/electrolyte balance.</p>
CIRCULATORY OVERLOAD	<p>Infuse at a rate per patient tolerance.</p> <p>Use of less volume packed cells for compensated, elderly or infants.</p>	<p>Dry cough.</p> <p>Labored breathing.</p> <p>Rales at lung bases.</p> <p>Pulmonary edema.</p>	<p>Stop transfusion.</p> <p>Sit patient up.</p> <p>Notify physician.</p> <p>Monitor &amp; assess</p> <p>Treat symptomatically per orders.</p>
TRANSFUSION RELATED ACUTE LUNG INJURY (T.R.A.L.I.)		<p>Shortness of breath.</p> <p>Low blood pressure.</p> <p>Chills – Fever.</p> <p>Pulmonary edema.</p>	<p>Stop transfusion.</p> <p>Respiratory support (oxygen, etc).</p> <p>Notify physician, monitor and assess.</p> <p>Treat symptomatically.</p>