

Title: **BLOOD & BLOOD PRODUCTS: TRANSFUSION REACTION GUIDELINES**

Policy: If patient exhibits any of the following: urticaria, rash, chills, fever (greater than 1.8°F or 1°C above baseline), flushing, nausea, vomiting, palpitations, headache, or severe reactions of oliguria, anuria, hematuria, substernal pain, flank pain, back pain, hypotension, dyspnea, bronchospasm, bleeding, shock, convulsions or coma, stop transfusion of blood or blood product immediately. Initiate the following procedure.

Responsibility: RN

Part A: Discontinuing Transfusion for Suspected Reaction

<u>Procedure</u>	<u>Point of Emphasis</u>
1. Stop transfusion immediately!	
2. Add <u>new tubing</u> and 0.9% normal saline and run at a keep open rate as determined by patient's status.	<u>DO NOT RUN NORMAL SALINE THROUGH BLOOD TUBING AS YOU WILL BE INFUSING BLOOD LEFT IN FILTER AND TUBING, INCREASING ADVERSE REACTIONS.</u>
3. Transfer sterile cap from new tubing to end of blood tubing.	Maintain sterility of blood unit and tubing for: a. lab analysis, or b. continuation of blood infusion if physician so orders
4. Notify physician and Blood Bank immediately of suspected transfusion reactions.	Blood Bank must complete preliminary investigation of all reported suspected transfusion reactions. This preliminary testing includes clerical verification, Direct Coombs, Type and rh and Hemoglobinemia evaluation. Proceed to Part B. Physician should not order transfusion continued until after Part B.
5. Recheck the identification of the patient with the blood product or unit of blood including patient's name, medical record number, location, ABO group and RH factor, unit number and blood ID number.	Blood Bank must complete preliminary investigation of all reported suspected transfusion reactions. This preliminary testing includes clerical verification, Direct Coombs, Type and rh and Hemoglobinemia evaluation. Proceed to Part B. Physician should not order transfusion continued until after Part B.
6. Monitor vital signs. Initial set of vital signs then every hour x 12hours.	

Part B: Blood Reaction Work-Up

<u>Procedure</u>	<u>Point of Emphasis</u>
7. For any or all symptoms except urticaria, immediately obtain a fresh blood sample in one red and one lavender (or pink) top tube.	Obtain from a different site than the transfusion site. Blood is used for preliminary testing so it is important to avoid traumatic venipuncture and hemolysis.

<u>Procedure</u>	<u>Point of Emphasis</u>
8. Obtain a urine sample as soon as possible if ordered by physician. Label it "ADVERSE TRANSFUSION REACTION".	For analysis of free hemoglobin.
9. Send the remainder of blood or blood product, tubing, normal saline and blood sample and complete the bottom half of the Transfusion Record Form and send to Transfusion Service immediately.	Physician or RN must complete Transfusion Record Form. Include date, time, and unit number of all transfusions in last 24 hours. Send remainder of blood bag with Transfusion Record Form, for gram stain and culture. It should take about fifteen minutes for Blood Bank to do this preliminary testing to determine whether it is a hemolytic reaction. NOTE THAT BLOOD BAG MUST BE RETURNED TO BLOOD BANK IF REACTION SYMPTOMS INCLUDE FEVER AND HYPOTENSION (SHOCK) WHICH MAY INDICATE SEPSIS OR IF PRELIMINARY TESTING BY BLOOD BANK INDICATES A POSSIBLE HEMOLYTIC REACTION.
10. Closely monitor intake and output.	Note evidence of decreased/no urine output as this may indicate renal damage from deposition of hemoglobin in the renal tubules.
11. Make patient as comfortable as possible by providing emotional support as needed.	
12. Document on Daily Patient Care Record the following: a. date and time of reaction b. adverse reaction symptoms c. physician notified d. nursing interventions e. medical interventions f. vital signs g. patient's progress h. nurse's signature	

Part C: Continuing Blood or Blood Product Infusion

<u>Procedure</u>	<u>Point of Emphasis</u>
1. Complete bottom half of the Blood Transfusion Record Form for chills and fever. Notify Blood Bank.	Bottom half of Blood Transfusion Record Form for adverse reactions does <u>not</u> need to be completed if only urticarial reaction.
2. When Blood Bank completes preliminary testing for transfusion reaction, notify physician of results.	
3. If preliminary testing is negative and no symptoms suggestive of bacteremia are present, the physician may order the transfusion be continued.	UNDER NO CIRCUMSTANCES SHOULD A TRANSFUSION BE CONTINUED WITHOUT DOCUMENTATION OF EXAMINATION AND AN ORDER FROM PHYSICIAN <u>AND</u> COMPLETION OF PRELIMINARY TESTING IN BLOOD BANK.

ProcedurePoint of Emphasis

4. If preliminary testing is positive or if symptoms suggest bacteremia, the transfusion must be discontinued and the blood bag and administration set sent to the Blood Bank.
5. If the Direct Coombs is positive, the blood transfusion should NOT be resumed and the physician should be notified. The full Transfusion Reaction workup should be completed as in Part B.
6. It is also recommended in the case of chilling and fever that a blood culture be drawn and sent to Microbiology for the patient and the blood bag and tubing sent to the lab for blood culture and gram stain to rule out a bacterial contamination of the blood.

Approved by:



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References: Lippincott's Nursing Procedures 5th Edition, Lippincott, Williams, Wilkins; 2009
AABB Standards for Blood Banks and Transfusion Services, 21st edition, 2002
AABB Technical Manual, 13th edition, 1999