

# BLOOD TRANSFUSION

## Student Reference Guide

### WEST COAST UNIVERSITY

<b>NPSG</b>	Wash hands per CDC guidelines. ➤ <u>Verbalize 20 seconds per CDC hand washing guidelines.</u>
	Provide patient privacy. ➤ <u>Verbalize and physically demonstrate.</u>
<b>NPSG</b>	Introduce yourself
<b>NPSG</b>	Identify patient correctly using two identifiers (check to chart) ➤ <u>Patient's name and date of birth.</u>
<b>NPSG</b>	Verify allergy status.
	Perform environmental safety check.
	Ensure proper body mechanics.
	Gather all supplies, equipment, and PPE as needed.

#### GENERAL SURVEY

Verify MD order on chart. ➤ <u>The MD order should address indication for transfusion and administration.</u>
Assess need for procedure. ➤ <u>REVIEW rationale for procedure, associated labs and patient condition.</u> ➤ <u>VERIFY that the patient's religious beliefs do not prohibit blood transfusion therapy.</u> ➤ <u>VERIFY if the patient has any history of blood transfusion reaction.</u>
Explain the procedure and educate the patient about the rationale and associated adverse reactions.
Ensure informed consent is signed. ➤ <u>VERBALIZE that informed consent is obtained and signed by the patient. The consent should be available in the patient's medical record.</u>

#### PRE-TRANSFUSION

Complete request for blood form. Draw type and crossmatch specimen. ➤ <u>VERBALIZE that, "request for blood form has been completed" and "type and crossmatch specimen has been drawn."</u>
Have another witness for patient identification. ➤ <u>MUST have second Registered Nurse (RN) verify patient's name, date of birth, and allergies.</u>
Properly label blood tube (if applicable).
Complete and attach blood identification wristband (if applicable).
Attach barcode labels to blood tube and request form (if applicable).
Send blood tube and request form to laboratory. ➤ <u>MUST verbalize "blood tube and requests form have been sent over to laboratory."</u>

#### TRANSFUSION VERIFICATION (VALIDATE)

Use two patient identifiers.
Obtain pre-infusion vital signs. ➤ <u>VERBALIZE if vital signs are stable.</u> ○ Assess the patient's lung and heart sounds. Identify any factors that may indicate risk for a transfusion reaction such as fever, heart failure or kidney disease.
Compare patient data on blood unit, order form, blood band.
Verify blood band with blood unit.
Verify blood unit with request form.
Have another nurse verify all data. ➤ <u>MUST use two RN verification process</u> ➤ <u>Obtain the presence of another RN at bedside in front of the patient to match the blood component with the practitioner's order.</u> ➤ <u>Two RN's must verify:</u> ○ <u>The name and identification number on the patient's I.D. band to the blood bag label</u> ○ <u>The blood bag identification number</u> ○ <u>ABO blood group</u> ○ <u>RH compatibility</u> ○ <u>Patient's blood bank I.D. number with number on blood bag</u> ○ <u>Expiration date on blood bag</u>

## TRANSFUSION INFUSION (VALIDATE)

Assure patency of IV line.

- **MUST verbalize assessment of IV line.**
  - Verify patency by aspirating for blood return

Hang normal saline flush bag. Ensure all IV tubing roller clamps are closed.

- **VERIFY AND VERBALIZE, "all IV tubing roller clamps are closed."**

Spike normal saline bag and prime tubing, filling blood-tubing filter completely.

- **SPIKE normal saline bag and prime tubing all the way to the end of the IV tubing.**
- ☆ **Blood is only compatible with Normal Saline**

Close normal saline roller clamp. Spike blood bag.

- **Normal saline roller clamp MUST be clamped before blood bag is spiked.**
- ☆ **If the normal saline bag is not clamped before spiking the blood bag, then the bag(s) are contaminated.**

<p>Open blood roller clamp and prime tubing. Connect IV tubing to patient's IV access.</p> <ul style="list-style-type: none"> <li>☆ ENSURE that blood is primed until the distal part of the IV tubing. Once the blood is primed, insert tubing to IV pump and attach the distal part of the IV tubing to the patient's IV access.</li> </ul>
<p>Set pump to deliver blood at no more than 2 mL per minute for 15 minutes.</p> <ul style="list-style-type: none"> <li>☆ <b>Be sure to know this calculation:</b>  <math display="block">\frac{2 \text{ mL}}{1 \text{ minute}} \times 15 \text{ minute} = 30 \text{ mL (volume)}</math> </li> <li>☆ The Alaris pump recognizes rates at mL/hr. Know conversion of 30mL/15 minutes to mL/hr.  <b>Hint: How many 15 minutes are in 1 hour? Use that value and multiple by the volume.</b> </li> </ul>
<p>Monitor patient for adverse reactions.</p> <ul style="list-style-type: none"> <li>➤ <b>MUST verbalize what adverse reactions you are assessing/monitoring for (i.e. chest pain).</b></li> </ul>
<p>Measure vital signs after 15 minutes.</p> <ul style="list-style-type: none"> <li>➤ <b>MUST verbalize that you are measuring vital signs 15 minutes after blood administration.</b></li> </ul>
<p>Increase infusion rate per prescription or facility's policy.</p> <ul style="list-style-type: none"> <li>☆ <b>Infusion rate changes per physician's order(s). If the order is to run the infusion over 3 hours, you will need to know how to calculate the next rate. Please keep in mind the of the total volume of the blood bag.</b></li> <li>☆ <b>For example: If the order was for 3 hours, and the total volume of the blood bag was 400 mL, the calculation would be:</b>   <b>400mL – 30mL (from initial delivery of blood) = 370 mL remaining.</b>   <b>3 hours – 15 minutes: 2.75 hours remaining.</b>   <b>Once you know the remaining volume, you can set the rate and VTBI (volume to be infused) on the IV alaris pump. Hint: the rate is mL/hour.</b> </li> <li>➤ <b>MUST know how to set the next blood administration rate.</b></li> <li>➤ <b>MUST physically set the infusion rate and time on the IV alaris pump.</b></li> </ul>
<p>Measure vital signs when infusion is complete. Disconnect blood tubing. Flush IV line.</p> <ul style="list-style-type: none"> <li>➤ <b>MUST verbalize that you will be measuring vital signs when infusion is complete.</b></li> <li>➤ <b>MUST verbalize why vital signs are needed after infusion is complete.</b></li> <li>➤ <b>MUST verbalize how to "flush IV line" with the spiked normal saline bag and provide rationale.</b></li> </ul>
<p>Discard tubing and blood bag. Flush IV as needed.</p> <ul style="list-style-type: none"> <li>➤ <b>MUST verbalize where the tubing will be discarded to.</b></li> </ul>

## DOCUMENTATION

Confirmed transfusion order.
Signed consent.
Blood product requisition form completed. Type and cross match sent.
Blood recipient verification system. Verification of the patient and blood product by two nurses.
Pre-transfusion vital signs. Initiation of the transfusion.
Monitoring during transfusion, including vital signs after the first 15 minutes or per policy.
Any signs of adverse reactions. Interventions based on signs of reactions.
Completion of the transfusion. Post transfusion vital signs. Patient's response to transfusion. Disposal of tubing and blood bag.
On transfusion form: date and time transfusion completed, total volume transfused, and whether there was a reaction or not.