**PROCEDURE FOR:** **Blood Components: Administration of: Packed Cells, Autologous, Fresh Frozen Plasma, Granulocytes, Cryoprecipitate, Platelets and Blood Derivative Infusions**

**POLICY:**

1. To ensure that the correct component is given to the correct patient, two licensed professionals (RN, LPN, APRN, PA, or MD) or certified perfusionist must check the blood component and patient identification information at the patient's bedside.

2. An RN, APRN, PA or certified perfusionist, or MD may administer transfusions of blood components. LPNs are NOT allowed to administer the transfusion, spike the bag, or monitor the first set of vital signs. They may, however, monitor the patient for the duration of the transfusion.

3. No medications or solutions, with the exception of normal saline (0.9% NaCl) may be infused simultaneously through the same tubing with blood or blood components.

4. Blood components that are preserved by storage in a monitored blood refrigerator may not be reissued if they are out of the refrigerator for more than 30 minutes. The transfusion may be started on the patient for whom the blood was ordered after 30 minutes. (Note: pooled platelets are at room temperature.)

5. Transfusion of any blood component unit should be completed within 4 hours from the time the unit has left the Blood Bank or monitored refrigerator or the outdate of the unit, whichever is sooner. Split units of components will be made available upon specific order; e.g. half-units for patients in congestive heart failure. It is thought that a complete unit cannot be safely infused within this 4 hour time frame. An order must justify need for split units.

6. Blood components are never to be stored in refrigerators on the nursing units. The Operating Room is the only non-Blood Bank location where a monitored blood refrigerator is available for storage of blood components.

7. Tubing through which blood components are administered is safe to use for either 4 hours or 2 units maximum, whichever comes first. Tubing must be changed after either time or unit maximum occurs. IV pumps with appropriate tubing may be used for transfusion.

8. All blood derivatives (e.g., Factor VII, Factor VIII, Albumin) are obtained from the Pharmacy and should be administered in accordance with the pharmaceutical packaging insert.

9. All components for neonatal patients will be prepared and issued in syringes and will be prefiltered in the Blood Bank.

10. All cellular components (red cells and platelets) prepared for neonatal patients and patients on the $6^{th}$ floor and in the Cancer Center will be irradiated. Exception for Neonatal ICU: the Blood Bank receives a direct order from the neonatal attending physician not to irradiate a component.

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11. If the patient has a known or suspected acute transfusion reaction, the transfusion will be ceased immediately. The attending physician and Blood Bank will be notified and the Procedure for Transfusion Reaction will be implemented.

12. An RN, APRN, PA, or MD will accompany any patient being transported while receiving blood components in order to assess for signs and symptoms of transfusion reaction.

**EQUIPMENT:** Central or peripheral IV access device
Normal saline
Y-type Administration Set
Blood warming unit (required for patients with cold agglutinins)

**EQUIPMENT FOR NEONATAL PATIENTS:** Packed Red Blood Cells and FFP: Prefiltered and aliquoted by Blood Bank in a syringe with 10 ml over-fill. Use standard volume extension tubing.

Platelets: Prefiltered and aliquoted by Blood Bank in a syringe with 10 ml over-fill. Use standard volume extension tubing.

Cryoprecipitate: Prefiltered and aliquoted by Blood Bank in a syringe. Use microbore tubing – No volume over-fill.

**PROCEDURE:**

| **ACTION** | **POINTS OF EMPHASIS** |
|---|---|
| A. **PROCUREMENT OF BLOOD COMPONENTS**: | |
| 1. If blood components are ordered, review the Blood Product Order Sheet (HCH-1240) for:<br>• Proper patient ID and medical record number<br>• Type of blood component(s) requested<br>• Number of units requested<br>• Date and time needed<br>• Indication for transfusion<br>• Any special requests, e.g., irradiated, premedication, and rate of infusions | 1. Form HCH-1240 is the official order form for transfusion and should be signed and completed by the ordering LIP. |

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| | |
|---|---|
| 2. Verify availability of blood component(s); if RBCs ordered, determine whether type and cross-match has occurred. | 2. Refer to Procedure for: Blood Components: Type and Screen/Type and Cross-Match for Transfusion Purposes if specimen needed. Call Blood Bank as needed. |
| 3. Confirm that a "Request for Blood Release from Blood Bank" (HCH-444) is completed prior to sending a courier with it to the Blood Bank. | |
| 4. Confirm or establish IV access. | 4. A size 20 gauge catheter or larger is preferred because flow of blood through a smaller gauge catheter may damage the RBCs. |
| 5. Administer premedication as ordered. | |

B. **IDENTIFICATION OF BLOOD COMPONENTS**:

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|---|---|
| 1. Check licensed independent practitioner's order. If special requests are ordered, verify that appropriate units are delivered:<br>• For irradiated: check for irradiated sticker on blood component bag. | |
| 2. At the patient's bedside, two licensed professionals (RN, LPN or MD) must verify that the correct blood component is administered to the correct patient and sign the Transfusion Record. All identifying information must be identical:<br>• Patient name<br>• Patient medical record number<br>• Blood component unit number<br>• Check expiration date and time prior to starting the transfusion to make sure the blood component has not expired or when it will expire.<br>If any discrepancies are found, return the unit to the Blood Bank immediately. | 2. Name and medical record number are present on the transfusion record, tag label attached to the component and patient ID wristband.<br>Blood component unit number is located on the Transfusion Record and the blood component unit tag label.<br>Pooled unit numbers are valid for platelets and cryoprecipitate. |

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C. **BLOOD COMPONENT ADMINISTRATION**:

| | |
|---|---|
| 1. Obtain and record baseline vital signs on Transfusion Record. | |
| 2. Initiate the transfusion. | 2. LPNs cannot initiate a transfusion. |
| 3. Initiate the transfusion of packed RBCs, Autologous RBCs, FFP, cryoprecipitate, platelets, or granulocytes by:<br>• Priming the line with normal saline;<br>• Stopping flow of normal saline; and<br>• Starting flow of component from the unit at a slow drip. | 3. The RN must monitor the patient closely for the first 15-30 minutes of the transfusion. Vital signs must be documented on the Transfusion Record at 15 minutes by the RN and then hourly by the RN, LPN, MA or CNA for the duration of the transfusion, or more often if patient condition warrants. |
| 4. For neonatal patients, the extension tubing will be primed with the component. The component will be administered by syringe pump over the desired time period. | |
| 5. Check the flow rate frequently to prevent complete emptying of either the normal saline or the blood component unit. | |
| 6. When a transfusion is complete, flush the blood component through the line completely, then disconnect the tubing. | 6. Discard the blood bag and used tubing in red bag waste. |
| 7. Draw any post-transfusion labs that are ordered. | |

**APPROVAL:** Nursing Standards Committee
Transfusion Committee
Director, Transfusion Medicine

**EFFECTIVE DATE:** 10/82

**REVISION DATES:** 3/86, 1/87, 8/88, 12/90, 9/93, 8/96, 11/96, 3/97, 10/97, 8/98, 9/00, 11/01, 9/02, 4/03, 6/04, 5/05 2/06, 8/06, 4/08, 9/09