Top of Form

**Nursing Procedures**

**Blood: Pre-Transfusion Compatibility Testing (Type & Screen) and Requesting Blood Products for Adults & Pediatrics**

|  |  |
| --- | --- |
| **Division:**  | Patient Care Services |
| **Effective Date:**  | 01/1988 |
| **Review Date:**  | 01/2013 |
| **Reviewer:**  | Patrick Ramos |

**POLICY PURPOSE:**

To ensure that ordering of blood components for the patient utilizes accurate identification of the patient, blood specimen, and TSL order form.

**POLICY:**

1.   The patient must wear a hospital armband at all times.

2.   Pre-transfusion/compatibility (e.g., type and screen) blood draws are a HIGH RISK procedure.

3.   Do not think of a pre-transfusion/compatibility testing as a “routine” lab. Whenever possible, make it a separate draw from other specimens.

4.   If the patient’s armband information is incorrect, stop all blood ordering procedures and correct the patient information in admitting before proceeding.

5.   If a current pretransfusion/compatibility specimen (e.g., type and screen) is available, order blood products by sending, via pneumatic tube, *Transfusion Service Blood Product Release* form (**HMC2594**) to Transfusion Support Lab (TSL).

6.   If there is a change in the patient’s name or medical record number (MRN), send a confirmation specimen. When completing Type & Screen order in ORCA, note “confirmation sample” in comment box. The TSL requisition form must clearly link the previous and current information on the patient.

7.   If sending a confirmation sample to TSL, keep the original armband(s) on the patient until the completion of transfusion of all blood components with the original information.

8.   Physicians / providers must enter all orders for type and screen, blood product requests, and blood transfusion in ORCA.

9.   Immediately discard unlabeled specimen tubes containing blood.

10. Two licensed clinicians must witness the collection of all pre-transfusion/compatibility testing. If you did not witness the procedure, you must refuse to sign the labeled specimen. Obtain a new specimen with a witness present at the bedside for the entire procedure.

11. Rejection of the pre-transfusion/compatibility specimen will occur if:

a.   If any of the following does nto match exactly on the specimen label and type and screen requisition form(there is an acceptable exception if a middle name or initial is present; see below for details):

* + 1. The patient’s first name, last name, and suffix(s) as it appears on the patient’s armband
			- If the middle name or initial is present on one document, **either** must be present on all documents.
			- **It is acceptable** to have a middle name on one and only a middle initial on the other, providing the middle name begins with the same letter used for the middle initial. For Example:

|  |  |  |
| --- | --- | --- |
| **Patient’s ID Band** |   | **T&S Requisition or Transfusion Record** |
| Harborview Medical Center | = | Harborview Medical Center | Acceptable |
| Harborview M. Center | = | Harborview M. Center | Acceptable |
| Harborview Medical Center | = | Harborview M. Center | Acceptable |
| Harborview M. Center | ≠ | Harborview Center | *Unacceptable* |
| Harborview Medical Center | ≠ | Harborview T. Center | *Unacceptable* |

* + 1. MRN including the “H”
		2. Date drawn (including year)
		3. Time drawn
		4. Signatures of two licensed clinicians who verified the patient's identity

b.  The specimen label and the requisition form are not labeled clearly (missing, incorrect or illegible patient name, MRN, date, time, or signature).

c.  The specimen label and the requisition form may not have information added, altered, or corrected once it has left the bedside.

12. All pre-transfusion/compatibility specimens are valid for 3 days only and expire at 2359.

13. In an emergent, life-threatening situation, obtain a stock of uncrossmatched group O RBCs from TSL. See “**Ordering Emergency Release Uncrossmatched Group O Red Blood Cells**” policy.

**PERFORMED BY:**

Two licensed clinicians, such as: Registered Nurse (RN), physician (MD), Physician Assistant (PA), Certified Registered Nurse Anesthetists (CRNA), Advanced Registered Nurse Practitioner (ARNP), Operating Room Perfusionist, Licensed Practical Nurse (LPN), and phlebotomist or Trained Laboratory Professional.

**PROCEDURE:**

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| --- | --- |
| Table of Contents | 1.      General Informationa.       Purposeb.      Performed byc.       Equipmentd.      Pediatric-Specific Equipment**2.** Policies3.      Proceduresa.       **Obtaining Pre-Transfusion/Compatibility Testing (Type & Screen/Cross)**b.      **Pre-Admission Testing and Red Blood Cell Request****c.** Requesting Blood Products**d.** **Downtime**4.      Appendix A: Ordering Components Summary Chart |
|   |   |
| Equipment: | One pink-top specimen tubeSpecimen label Type and screen requisition form  |
|   |   |
| Pediatric Equipment: | **Patient Age** | **Specimen size for RBC units** (tube size) |
| < 5 years old (< 18Kg\*) | *Two*full lavender top pediatric microtubes  |
| ≥ 5 years old (≥ 18Kg\*) | *One*full pink top tube tube |
| As a general guideline, a minimum 2 mL specimen is required for ABO/Rh typing and antibody screen. However, if you are notified by TSL that an antibody is detected and an electronic crossmatch cannot be performed, add 1 mL for each additional red cell unit in excess of 2 units. When a child’s blood volume is adequate to tolerate collection of a pink top specimen, it is best to collect the full pink top specimen to avoid re-draws if an antibody is identified or more blood is required.*\*Based on 50th percentile weights for boys and girls, and the weights listed are only an estimate.* |
|   |   |

| Planned Actions | Key Information |
| --- | --- |
|   |   |
| **Obtaining Pre-Transfusion/Compatibility Testing (Type & Screen/Cross)** |
|   |   |
| 1.      Call TSL (206-744-3088) to verify the availability of a current pre-transfusion/compatibility specimen (e.g., type and cross). You can also find a specimen’s expiration date in ORCA under Blood Transfusion Band.  | 1.      All pre-transfusion/compatibility specimens expire at 2359, three days after the specimen is drawn. |
|   |   |
| 2.      If there is no current valid sample, the physician/provider enters order for a type & screen in ORCA. This order appears for Nurse Review in ORCA and will appear on the Caredex. | 2.      A physician/provider’s order is required to order blood components. ORCA will alert the ordering provider if a type & screen is required. |
|   |   |
| 3.      Print type and screen requisition form off ORCA, and bring this along with a specimen label and other required supplies to the patient’s bedside. | 3.      When patient identification label is not available for the specimen tube, you may handwrite the patient’s name (written as “*last name, first name*” and completely spelled out), MRN and birth date on a label as it appears on the patient’s armband. PRINT LEGIBLY.  |
|   |   |
| 4.      At the patient’s bedside, if the patient (or parent/guardian for pediatrics) is able, have the patient verbally validate identification by asking, “Please verify your name and date of birth.” | 4.      Verifying accurate patient identification prior to blood draw is critical and minimizes the chance of misidentification. The patient must wear a hospital armband at all times. |
|   |   |
| 5.      Perform the 2-person verification process. Compare the following information on the requisition form and specimen label.a.       Patient’s first name, last name, and suffixes (if present)i.        It is acceptable to interchange the middle name with a middle initial (and vice versa) so long as they both begin with the same letter (See Policy 11.a.i). b.      MRN including the “H”c.       Birthdate | 5.      Typically, the charge nurse is the second person involved in the verification process. If the lab draws the specimen, the two clinicians can be either two phlebotomists or the phlebotomist and the nurse caring for the patient.Use *read back* to confirm transmission and accuracy of information. For example:*Clinician #1*: “MRN is H-1-2-3-4-5-6-7." *Clinician #2*: “MRN H-1-2-3-4-5-6-7 is correct.” |
|   |   |
| 6.      If the patient’s identification is accurate, one clinician will proceed to draw blood per standard blood collection protocol. The second clinician will witness the first drawing the blood into the specimen tube. |   |
| a.       If a provider/physician is unable to participate in the identification process but is drawing the blood, two licensed clinicians may:i.        Verify the patient identification on the type and screen requisition form. ii.      Sign the labels and place the label on the tube. iii.    Fill the tube with blood when they witness the physician/provider drawing the patient’s blood during:-   An angiogram procedure-   An emergency department’s “Code Yellow or Code Red” trauma resuscitation (EMERGENCY DEPARTMENT ONLY)-   Procedures where the physician/provider needs to remain gowned and/or gloved (e.g., placing central venous access, drawing blood cultures, etc.) | a.       Verification at the bedside by two licensed clinicians is a requirement. One of the two people verifying information must be an RN or MD. *These signatures assure that the information on all three identification pieces (requisition form, specimen label, and patient ID band) is correct and that they witnessed the drawing of the patient’s blood into the tube.* |
| iv.    If two clinicians witnessed a physician/provider draw the blood, handwrite the physician’s first and last name on the specimen label and on the type and screen requisition form as the person drawing the sample. |   |
|   |   |
| 7.      Both clinicians must sign and date the requisition form and the specimen label. Attach specimen label(s) to the tube(s). | 7.      If any of this information is incorrect or missing, it will result in rejection of the specimen. TSL cannot enhance, add, or alter any information on the requisition or the label. Do not re-label or over-label the tubes. Only one label can be on the tube. |
|   |   |
| 8.      Place the blood-filled specimen tube in a biohazard bag. Send it with the requisition form to TSL through the pneumatic tube station (#229) or taken to BCT 67. | 8.      If TSL determines that the blood specimen is mislabeled, you will need to redraw a new blood specimen. **Under no circumstances will TSL accept labels or forms with changes to the patient name, medical record number, or draw time and date.** |
|   |   |
| 9.      If a patient has antibodies, additional blood pre-transfusion/compatibility blood specimens (e.g., type and screen) may be required.  |   |
| a.       Send additional pink-top specimen tube(s) as needed and appropriately labeled. b.      Send a type and screen requisition form, and write at the top of form, “Additional specimen requested by TSL.”c.       If you later send additional tubes, a type and screen requisition form must accompany them. |   |
|   |   |
| **Pre-Admission Testing and Red Blood Cell Request** |
|   |   |
| 1.      Patients can have a pre-transfusion blood sample collected at their pre-admission visit. Follow the same steps as above using the *Transfusion Service Preadmission Testing and Red Blood Cell Request* form (HMC2595) instead. | 1.      You may collect the pre-transfusion sample up to 14 days in advance of the date when the units are required. NOTE: The patient must not have been transfused or pregnant within the past 3 months. You must ask the patient the two questions printed on the HMC2595 form, and document the answer by signing and dating under the questions. Both answers must be ‘NO’ for the patient to qualify for pre-admission testing.If an outpatient setting collected a pre-transfusion sample for a future transfusion, the patient must take his/her armband with them and return with it for the future visit or transfusion. |
|   |   |
| **Requesting Blood Products** |
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| 1.      Review the physician’s order for transfusion.  | 1.      A physician/provider’s order is required to transfuse blood products.  |
|   |   |
| 2.      Call TSL (206-744-3088) to verify the availability of a current pre-transfusion/compatibility specimen (e.g., type and screen). You can also find a specimen’s expiration date in ORCA under Blood Transfusion Band. | 2.      If there is no valid current sample available, you will need to obtain a sample as outlined in the Obtaining Pre-Transfusion/Compatibility Testing section above. |
|   |   |
| 3.      If there is a valid and current pre-transfusion/compatibility specimen (e.g., type and screen), order blood products using a *Transfusion Services Blood Product Release* form (HMC2594), via pneumatic tube system.  The following information is required:a.       Patient’s full name as it appears on the armband.b.      MRN including the “H”c.       Pneumatic tube station number delivery locationd.      Any special processing required such as filtration (leukoreduction), irradiation or CMV safee.       Number and type of units | 3.      TSL will notify the unit when sending the blood product to the pneumatic tube station.a.       Any staff member who removes the blood product from the pneumatic tube must sign *Transfusion Services Blood Product Release* form (HMC2594) and return the form to TSL tube station #229.  |
|   |   |
| 4.      TSL will send blood products to the pneumatic tube station. If requiring a monitored blood refrigerator, TSL will deliver it to the unit. | 4.      TSL will notify the unit when sending the blood product to the pneumatic tube station. Do not place platelets and cryoprecipitate in the refrigerator. (Refer to the “Portable Monitored Blood Refrigerator” policy for additional information.) |
|   |   |
| 5.      If delivered via the pneumatic tube system, the person opening the tube at the receiving location must verify that the patient’s name designated on the blood product is on the receiving location. The same person will sign the *Transfusion Services Blood Product Release* form (HMC2594) and send it back to TSL.a.       If sent to the wrong unit/department, notify TSL and return the blood product to TSL. | 5.      Any staff member who removes the blood product from the pneumatic tube must sign *Transfusion Services Blood Product Release* form (HMC2594) and return the form to TSL tube station #229. |
|   |   |
| **Downtime** |
|   |   |
| 1.      During ORCA downtimes, the physician/provider will not be able to order a type and screen off ORCA. Therefore, you will not be able to print out a type and screen requisition. Instead, you will need to complete the top section of the TSL *Transfusion Services Testing and Blood Product Request* form (HMC2596). The person completing this information on the request form must sign next to the “X” where it states “Person Completing Request.” If the physician is requesting blood products, complete the bottom-half of the *Transfusion Services Testing and Blood Product Request* form (HMC2596). Make sure to:a.       Document the number of unit(s) needed b.      Indicate any special processing on the physician order on the form such as filtration, leukoreduction, CMV safe, or irradiation | 1.      The Transfusion Services Testing & Blood Product Request form serves two purposes. The top-half of the form requests TSL to perform computability testing on a blood specimen. The bottom-half (Blood Product Requested) notifies TSL that the patient will potentially need a transfusion and when. It is their version of a “physician order form.” **\*\*\*PEDIATRIC NOTE\*\*\***For infants less than 4 months of age, all blood products should be irradiated. |
|   |   |

**CROSS REFERENCE:**

HMC Nursing Procedures:

      Blood: Ordering Emergency Release Group O Uncrossmatched Red Blood Cells
Blood: Administration of Blood Products, Adult
Blood: Administration of Blood Products, Pediatric
Blood: Transfusion Reactions, Adult and Pediatric
Blood: Blood Components from Outside of HMC (Excluding “Medic/Blood Run” Red Blood Cells)
Blood- Ordering Blood Components: Autologous

Blood- Portable Monitored Blood Refrigerators

**ATTACHMENT:**

**Ordering Blood Components: Summary Chart**

| **Order Detail** | **Patient Requirement** | **Required by TSL** | **Provided by TSL** |
| --- | --- | --- | --- |
|          Routine Type and Crossmatch, or          STAT Type and Crossmatch, with no bleeding emergency |       Patient requires transfusion of RBCs—and there is no current sample on file in TSL.      Current = > 3 days old. |          Two-person verification         Pink-top tube, properly labeled per policy         When ready to transfuse, complete type and screen requisition form and send to TSL via pneumatic tube |          ABO Rh type         Antibody Screen         When type and screen requisition form is received, TSL will label and send blood product via pneumatic tube |
| Emergency UncrossmatchedGroup O |          Patient is bleeding, and has no ABO/Rh type on this admission.  |          Call TSL and ask for Emergency O uncrossmatched blood and a portable refrigerator.         Tell TSL, “It is a bleeding emergency.”         Provide patient Name and MRN         Draw sample before infusing any Group O uncrossmatched blood.         Send six pink-top tube, properly labeled per policy, STAT to TSL, along with type and screen requisition form.  |          TSL will immediately send one unit of O uncrossmatched blood in the pneumatic tube and follow with delivery of three more units in a portable refrigerator. |
| Emergency Uncrossmatched Type Specific |          Patient has had an ABO/Rh type on this admission, but has no current tested sample in TSL.         Current = < 3days  |          Call TSL and ask for Emergency uncrossmatched blood, and a portable refrigerator.         Tell TSL, “It is a bleeding emergency.”         Provide patient Name and MRN         Draw sample before infusing any uncrossmatched blood.         Send pink top tube, properly labeled per policy STAT along withtype and screen requisition form.  |          TSL will immediately send one unit of type specific uncrossmatched RBCs via the pneumatic tube, and follow with delivery of three more units in a portable refrigerator. |
| Routine Type and Screen |          There is a high probability the patient may need a transfusion, i.e. surgery or procedure imminent, and there is no current sample on file in TSL.         Current = > 3 days old. |          Type and screen requisition form.          Two-person verification         Pink-top tube, properly labeled per policy |          ABO /Rh type         Antibody Screen |
| Preadmission—Use Preadmission Request form (red banded form)  |          Patient has planned surgery in 3-14 days. If patient meets criteria, TSL will accept preadmission samples drawn up to 14 days in advance.         Patient must not have been pregnant or transfused in the last 3 months.  |          *Transfusion Services Preadmission Testing & Red Blood Cell Request* form (**HMC2595**)         Pink-top tube, properly labeled per policy         Complete lower right half of request form: Patient answers to questions:o   Was pt transfused in last 3 months?o   Was pt pregnant in last 3 months?o   Sign as person obtaining history.  |          TSL will test sample immediately.          Patient’s antibody screen must be negative.         Patient must have no history of antibodies.         Patients who qualify will have blood products crossmatched for surgery when needed.         For patients who do not qualify, you will need to redraw a sample for testing upon admission for surgery. |
| Platelet Transfusion For patient with bleeding due to thrombocytopenia or platelet dysfunction  | Patient must have had a Type and Rh done on this hospital admission.  | For patients who have a Type and Rh on this admission, Send the following:         Type and screen requisition form.         Complete Platelet section.         Send to TSL via pneumatic tube. For patients who have not had a Type and Rh on this admission, send the following:         Pink-top tube, properly labeled per policy         Type and screen requisition form.         Complete Platelet section.         Send to TSL via pneumatic tube. |          TSL will call to verify when product is needed.         When TSL receives the type and screen requisition form, TSL will send blood product via pneumatic tube. |
| Plasma Transfusion For patient who is actively bleeding due to coagulation factor deficiencies.         1 unit provides approx. 200cc normal plasma Cryoprecipitate Transfusion For patient with significant fibrinogenemia         Each unit is approx.150-150 mg fibrinogen | Patient must have had a Type and Rh done on this hospital admission.  | For patients who have a Type and Rh on this admission, Send the following:         Type and screen requisition form.         Complete Platelet section.         Send to TSL via pneumatic tube.For patients who have not had a Type and Rh on this admission, Send the following:         6 mL pink-top tube, properly labeled per policy         Type and screen requisition form          Complete Platelet or Cryoprecipitate section.         Send to TSL via pneumatic tube. | Thawing of product takes approx. 15 min.         TSL will call to verify when product is needed.         When TSL receives the type and screen requisition form, TSL will send product via pneumatic tube. |
| Granulocyte TransfusionOrdered by phone call from physician to TSL Medical Director | Patient must have a current Sample in TSL. Current = < 3 days. | Granulocytes transfusions must be scheduled through the Medical Director. They require special donors. |   |

**Reference**

AABB Technical Manual 15th Edition, 2005.

**REVIEW/REVISION DATES:**

01/20/1988, 08/04/1999, 05/25/2001, 9/4/02, 3/12/04, 12/2/2005, 6/01/06, 1/12/07, 11/2/2009, 08/2011, 01/2013 (note name change from Ordering Blood Components, Adult & Pediatric)

**SIGNATURE:**

Darcy Jaffe

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