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Dispensing Blood Products - Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This document will provide the Blood Bank staff with policies and instructions that are to be followed when dispensing blood components.

II. SCOPE:

This document applies to the normal, routine dispense of blood products. For dispense of blood products under the massive transfusion or emergency issue protocols, refer to site specific Transfusion Medicine policy, *Providing Components for Massive Transfusion* and Emergency Issue of Blood Products.

III. PRINCIPLE:

A process must exist to confirm that the identifying information, the request, the records, and the blood component are all in agreement, and that any and all discrepancies have been resolved before the component is dispensed.

IV. DEFINITIONS / ACRONYMS:

A. **ABO-identical:** A component that is of the identical ABO blood group as the recipient.

B. **ABO compatible:** A RBC or granulocyte component that lacks ABO antigens corresponding to the recipient's ABO antibodies.

C. **ABO-plasma-compatible:** A platelet, plasma, or cryoprecipitate component that lacks ABO antibodies corresponding to the recipient's ABO antigens.

D. **Current sample: A** sample that was collected no more than 3 days before the current date. For example, if a sample is drawn on Monday (day 0), then the sample remains "current" all day Mon., Tues., Wed., and Thur. Day 0 is the sample collection date.

E. **Rh identical:** A component that is of the identical Rh as the recipient.

F. **Rh compatible:** A blood component of the following specificity:

1. For an Rh negative recipient, the component is Rh negative.
2. For an Rh positive recipient, the component is either Rh positive or Rh negative.

3. For a recipient with an Rh type that is undetermined for any reason, the component is Rh negative.
4. For weak D patients and additional information, refer to Transfusion Medicine policy, *Resolution of Rh(D) Discrepancies*.

G. **Designee:** Any Blood Bank technical director, or transfusion medicine fellow.

H. **Autologous Blood Components:** Blood product donations in which the blood donor and transfusion recipient are the same person.

I. **Directed Blood Components:** Blood components that are donated for an intended recipient.

J. **RBCs:** Packed Red Blood Cells

K. **CDM:** Blood Bank Computer Documentation Manual

L. **MRN:** Medical Record Number

M. **MD:** Blood Bank Medical Director or designee

N. **OR:** Operating Room

O. **HIS:** Hospital Information System; Epic One Chart

P. **RO**: Royal Oak

Q. **DB**: Dearborn

R. **FH**: Farmington Hills

S. **GP**: Grosse Pointe

T. **TY**: Taylor

U. **TR**: Troy

V. **TN**: Trenton

W. **WA**: Wayne

X. **RN**: Registered Nurse, patient's nurse.

V. POLICIES:

A. Visual Inspection

1. Each component must be visually inspected as described in Transfusion Medicine policy, Visual Inspection of Blood Products, and must meet many requirements before it is dispensed.

B. One Patient Per Runner / Courier

1. The Blood Bank may dispense blood components to the same runner / courier for only one patient at a time.

C. Blood Bank Computer System is Used to Dispense Components

1. During normal operations, all components should be dispensed using the Blood Bank computer system.
2. If the Blood Bank computer cannot be used to issue a blood product (e.g., computer downtimes), the technologist should be very careful to ensure that any special transfusion requirements are met, and that

antigen negative blood is provided when applicable. Refer to site specific Transfusion Medicine policies, *Blood Bank Computer Downtime.*

3. All computer warning messages must be investigated before dispensing a component. If applicable, the technologist may override the warning message, but only if justified by the Transfusion Medicine policies. The technologist must answer an exception message with an appropriate reason / justification.

D. All Components Must be Tagged

1. All components dispensed from the Blood Bank must be accompanied by a *Record of Transfusion* (F-1566) which includes a plastic-coated blood product tag. The blood product tag that prints must be securely attached to the blood component. The *Record of Transfusion* (F-1566) must accompany the blood component at issue.

E. Number of Components that may be Dispensed at One Time and Component Transport

1. When dispensing components through the pneumatic tube system or with a runner / courier, the number of components that may be dispensed at one time for a given patient should not exceed the number of established IV lines. However, note there may be exceptions during traumas and massive transfusions.
2. All components not dispensed in a cooler shall be transported in a sealed, leak-proof bag.
3. When dispensing blood or blood products in a cooler the technologist shall adhere to the site specific Transfusion Medicine policy, *Transporting Blood Components in a Cooler*.
4. RO ONLY: No more than one RBC or one platelet may be dispensed in a pneumatic tube carrier. If requested, two plasma or two cryoprecipitate units may be dispensed in a carrier if not restricted by the foam padding / space in the carrier.
5. RO ONLY: When a unit is dispensed through the pneumatic tube system, the nursing provided *Unit Transport Label* shall be affixed to the sealed, leak-proof bag and the component will be transported.

F. RBCs and Platelets Must be Leukocyte Reduced

1. All RBCs and platelets dispensed by the Blood Bank must be leukocyte reduced. Rare exceptions to this are:
   a. Autologous components that have not been leukocyte reduced by the blood suppler.
   b. Granulocytes should not be leukocyte reduced. Refer to Transfusion Medicine policy, Granulocytes by Apheresis.
   c. Rare RBCs that were collected and frozen prior to current leukocyte reduction practices. If a non-leukocyte reduced RBC is received into inventory, the technologist must get approval from the Blood Bank Medical Director (MD) or designee before dispensing the component.

G. Autologous and Directed Components

1. Autologous components must be dispensed to only the autologous donor. They must not be dispensed to any other patient.
2. Autologous components must be dispensed before allogeneic or directed components, and directed components should be dispensed before allogeneic components, regardless of the order of expiration for

the components.

3. Among each type of component, the component with the shortest expiration date should be dispensed first.
4. RO ONLY: Autologous and directed blood components may NOT be transported through the pneumatic tube system; they must be dispensed to a courier / runner or (if indicated) in a cooler.
5. RBCs from directed donations must not be dispensed to the intended recipient if:
    a. The recipient has a clinically significant antibody, AND
    b. The RBC is positive for the antigen corresponding to the antibody.
6. If a patient has been transfused with an aliquot of an allogeneic component and a directed donation is subsequently received by the Blood Bank, then the continued transfusion with the remaining aliquot is preferred to the transfusion with the directed donation. If transfusion of the directed donation is required or requested instead of the remaining aliquot, authorization from the patient's physician or the Blood Bank Medical Director (MD) must be obtained, and the occurrence shall be documented in a variance.

H. Documentation of the Dispense Form by the Patient's Caregivers

1. The patient's caregivers will provide a dispense form to the Blood Bank when ready to transfuse a blood component. The dispense form shall be completed by the patient's caregivers and must be documented correctly and legibly with the following information:
    a. Recipient's name.
    b. Recipient's medical record number (MRN).
    c. Recipient's wristband number in the approved format (ie BG1234X), including the prefix and suffix letters.
    d. The number and kind of component(s) requested.
    e. The requestor's or courier's employee identification number or name (the dispensing technologist may ask the runner / courier for this information, if present).
    f. The pneumatic tube system number (unless a runner / courier is present) if applicable.
    g. In addition (but not required), the form may be documented with:
        i. The date and time that the form was sent.
        ii. Special requests; for example, to weigh the component or to provide aliquots of a component.
        iii. A Mobile HeartBeat (MBH) number or other phone number for the transfusionist.
            A. RO Only: If this number is present, the technologist should use the number to notify the requestor immediately before sending the component through the pneumatic tube system.

I. Inspection of the Dispense Form by the Blood Bank

1. The technologist shall inspect the dispense form to ensure that it was documented completely, legibly, and accurately by the patient's caregiver.
2. The technologist will observe whether any special transfusion requirements (e.g., CMV negative or irradiated) or special requests were documented on the form.

3. If no read back is performed, the technologist should write the requested blood product or abbreviation (i.e. “RC” for red blood cells) next to the kind of product that was requested on the dispense form. The purpose of this policy is to help ensure that the technologist issues the correct kind of product. For example, to help ensure that RBCs are not dispensed if plasma was requested.

J. Correction or Completion of the Dispense Form

1. If a dispense form is documented incompletely, illegibly, or inaccurately then the form must be corrected or completed before the component is dispensed.
2. The patient’s caregivers must complete or correct the dispense form if a discrepancy relates to the recipient’s name, MRN, or wristband number.
3. The technologist or the patient’s caregivers may complete or correct the dispense form if the discrepancy relates to the number and kind of component(s) requested, the requestor’s or courier’s employee identification number, or the pneumatic tube system number.
4. The technologist will initiate the correction or completion of the dispense form by one of the following three methods, as appropriate.
    a. RO ONLY: The technologist may return the dispense form along with the *Blood Product Dispense Correction Form* (Attachment 1) to the patient’s caregivers for correction or completion.
    b. The technologist may ask the runner / courier (if present) to call the patient’s caregivers to obtain the necessary information. The runner / courier may then complete or correct the dispense form.
    c. The technologist may call the patient’s caregivers to:
        i. Inform the patient’s caregivers that a new dispense form must be sent to the Blood Bank (for any incomplete or illegible information), or
        ii. Obtain the necessary information from the patient’s caregivers, and the technologist may then correct or complete the dispense form.
            A. If the discrepancy relates to discrepancy with patient information, medical record number, or wristband number, the technologist may correct or complete the dispense form in an emergency situation but must submit a hospital incident report (QSR) or internal variance.
            B. If the discrepancy relates to the number and kind of component(s) requested, the requestor’s or courier’s employee identification number, or the pneumatic tube system number, the QSR or internal variance is not required.

K. RO ONLY: Policies Relating to the Nursing *Unit Transport Label*

1. A *Unit Transport Label* (Attachment 2) must be completed by the patient’s caregivers and must accompany all components requested through the pneumatic tube system.
2. If the *Unit Transport Label* is not sent with the dispense form to the Blood Bank, then the technologist should:
    a. Document the *Blood Product Dispense Correction Form* (Attachment 1) indicating that the *Unit Transport Label* was missing.
    b. Return the form and the dispense form to the caregivers, so that the caregivers may return the dispense form and the *Unit Transport Label* together to the Blood Bank.

c. It is also acceptable to call the patient's caregiver to notify them that the *Unit Transport Label* is missing and have them send it down to the Blood Bank.

3. The caregivers should document the *Unit Transport Label* with the RN's name, the RN's mobile heartbeat phone number, and the patient's name.
4. The technologist will:
    a. Verify that patient's name that is written on the label correlates with the name on the dispense form and crossmatch tag.
    b. Attach this label to the sealed bag containing the blood product.
    c. Text / call the number indicated on this label upon sending the component through the tube system.

L. Requirements for Dispensing Blood Products

1. A final check at the time of issuance is required before releasing the unit for transfusion in one of two ways:
    a. **Dispensing with Read Back**: The dispensing technologist and the courier / runner picking up the unit will read back the information starting at element 1 on the *Record of Transfusion*, working down the form matching the information between the *Record of Transfusion*, the hang tag attached to the unit and the *Product Dispense form* to verify all dispense requirements are met as indicated in the *Requirement for Dispensing Blood Components Table* in Procedure VII.J.
    b. **Dispensing With Clerical Checks**: If read back is not performed at the time of issue, the dispensing technologist must document a check mark (or equivalent mark) next to each dispense requirement to indicate that the dispense requirement has been met with the exception of step #4, the additional band number verification performed at the time of transfusion.

       Note: Read back is routinely performed at DB, FH, GP, TN, TY and WY. Documentation with clerical checks routinely occurs at RO, TR as well as all sites when pre-dispensing issued units in a cooler / emergency.

M. Alias Names / Multiple Medical Record Numbers (MRNs)

1. As indicated in *Requirements for Dispensing Blood Components*, the patient's name, MRN, and wristband number that appears on the dispense form must match exactly the patient's name, MRN, and wristband number that appears on the crossmatch tag. Note that the information that prints on the crossmatch tag should be the same information that was on the sample used for compatibility testing. If the name, MRN, and wristband number on the dispense form and on the crossmatch tag do not match exactly, then additional investigation is required before the component may be dispensed.

N. New or Different Wristband Number during the Same Admission

1. The Blood Bank may become aware that a patient has a new or different wristband number during the same admission. For example: from a phone call, or if a photocopy of the wristband is sent to the Blood Bank by the caregivers, or if the wristband number that is written on dispense form is different from that in the Blood Bank computer or on the crossmatch tag. If a sample with a new or different wristband from a

previous sample is received during the same admission, take the following actions:

a. The Blood Bank should communicate with the patient's caregivers to determine which wristband number is actually on the wristband that the patient is wearing.

b. If the previous wristband number is determined to be incorrect, then any blood products which have been selected for the patient under the previous wristband number should be released to available inventory and the type & screen should be outdated. A new sample should be requested with the correct wristband number.

c. If the wristband number on the new sample is determined to be incorrect, then the new sample must be rejected.

d. If the wristband number recorded on the dispense form was incorrect, document the problem on the dispense form. RO Only: *Blood Product Dispense Correction Form* (Attachment 2) will also be sent back to the requesting caregiver.

e. If a patient has been rebanded with the same MRN and a different wristband number, follow the steps in the Blood Bank CDM, *Rebanded Patients* (new B#, same MRN).

f. If a patient has been rebanded with a new MRN, refer to the Blood Bank CDM, *Changing Demographic Discrepancies in SoftBank* and *Demog Report Flow*, relating to the patient demographic changes.

O. Training of the Blood Product Runner / Couriers

1. Training of the blood product runner / courier may be accomplished by one of the following:
   a. Clinical Orientations
   b. Hospital blood product runner / courier instructions are to deliver blood products immediately to the bedside. An instructional poster for runner / couriers is posted by the pick-up area at the Blood Bank.
   c. The Blood Bank may affix written instructions on blood product transport containers to ensure proper transport and prompt delivery. These written instructions will include information on:
      i. How long blood products may be stored in the designated transport device.
      ii. The limitations for which blood products must be stored in the designated transport device, if applicable.
      iii. Transport device-specific instructions, if applicable.
      iv. Contact information for the Blood Bank should any questions arise.
   d. The following can be used for written instruction on blood product transport containers:
      i. Cooler Policy Label
      ii. Pneumatic Tube Directions
      iii. Label with Transport Bag Directions
   e. Retraining and competency assessment is provided annually with an online education module.

P. Compatibility Testing

1. Before dispensing RBCs, compatibility testing must be completed on a current sample. If compatibility testing is not completed, the emergency issue process must be used. Refer to Transfusion Medicine

policy, Emergency Issue of Blood Products.

2. Before dispensing platelets, plasma, and cryoprecipitate the ABO/Rh must be completed on a sample from the current admission. Note that it is not necessary to wait for the antibody screen to be completed before issuing platelets, plasma, and cryoprecipitate; these products may be issued as long as the patient's ABO/Rh is complete on a sample from the current admission.

Q. Recoup of Dispensed Blood Products That Were Not Issued in the Blood Bank Computer System

1. If a blood product was dispensed but never issued in the Blood Bank computer system, the product data must be recouped to accurately display the trackability / traceability of the product.
    a. If the blood product is not expired and the patient orders have not been finalized, a technologist should recoup the blood product as described in the Blood Bank CDM, *Recoup of Dispensed Blood Products.*
    b. If the blood product is expired, the patient orders have been finalized, or there are other circumstances that may complicate the data recoup, the *Record of Transfusion* and any additional information should be left for a Supervisor or Medical Technologist Lead and a variance should be written.

R. Rare Components (RO Only)

1. Rare components or hard-to-find components must be dispensed to a courier / runner, not through the pneumatic tube system. For example: HLA matched and crossmatched platelets, RBC units that are negative for multiple or high incidence antigens, and autologous / directed donations.

VI. QUALITY CONTROL (QC):

A. All components must be visually inspected before dispensing to help ensure suitability for transfusion. Do not dispense a component if the visual inspection fails. Refer to Transfusion Medicine policy, Visual Inspection of Blood Products. If any component is of questionable purity or quality then the component must not be dispensed and must be placed into quarantine or discarded, as appropriate. Document the occurrence as a variance. See Transfusion Medicine policy, Blood Product - Quarantine or Discard.

B. If the expiration date or time of the component has passed, then the component must not be dispensed and must be discarded.

VII. PROCEDURE:

A. Upon receipt of the dispense form from the runner / courier or the pneumatic tube system, time stamp the dispense form if applicable.
RO Only:
    1. As multiple dispense forms are received, place them in the Pending Issue Box.
    2. If more than 5 dispense forms are pending in this box, or if multiple runners / couriers are waiting, then the triage technologist should enlist the help of another technologist, if possible.

B. Examine the dispense form for completeness and legibility. Refer to the above policies *Documentation of the Dispense Form by the Patient's Caregivers* and *Inspection of the Dispense Form by the Blood Bank*. If the dispense form is not documented completely and legibly, refer to the policy *Correction or Completion*

of the Dispense Form. Initiate the completion or correction of the dispense form by one of the three methods listed in this policy.

C. If a read back is not going to be performed, write the requested blood product next to the kind of product that was requested on the dispense form (this policy helps to ensure that the technologist issues the correct kind of product).

D. After determining that the dispense form is complete and legible, physically obtain the component to be dispensed.

E. Proceed to the Issue function in the Blood Bank computer and enter the patient's MRN as written on the dispense form. Refer to Blood Bank CDM, Issue Units.

F. Carefully review the patient's caution window for any special transfusion requirements or antibodies as you begin to proceed through the computer work flow. Make sure that the component to be issued meets all of the patient's special transfusion requirements, or is antigen negative (if applicable), as indicated in the caution window.

G. If dispensing platelets, plasma, or cryoprecipitate confirm that ABO/Rh testing was completed on a sample from the current admission before proceeding, as described in the Blood Bank CDM, Issue Units click F5 - Patient then click Order to review the orders.

H. Scan the component's donor identification number (DIN) and ISBT product code into the computer. Note: Scanning of the DIN is required. Do not Click F7 - Menu Selection to enter a check mark for selection; this creates the risk of selecting an incorrect unit in the computer.

I. Enter the patient's wristband number in the computer as it is written on the dispense form. Do not enter the patient's wristband number from the *Record of Transfusion* or blood product label attached to the product.

J. Guided by the information listed on the *Record of Transfusion* (F-1566), verify that the information is correct in each of the locations listed in the table below. Investigate and correct any and all discrepancies before dispensing a component.

Requirements for Dispensing Blood Products					
Dispense Requirement	**Dispense Form**	**Blood Bank Computer**	**Record of Transfusion**	**Component face label or ABO Tag**	**Crossmatch Tag (attached to unit)**
Product(s) dispensed match product(s) requested	✓	✓	✓	✓	
1. Patient MRN	✓	✓	✓		✓
2. Patient Name	✓	✓	✓		✓
Patient's birth date	✓	✓			
3. Wristband number (B#)	✓	✓	✓		
5. Patient blood type		✓	✓		✓
6. Donor blood type		✓	✓	✓	✓
7. Donor unit ID		✓	✓	✓	✓
8. Product Description	✓	✓	✓	✓	
9. Product & Patient ABO/Rh Compatible		✓	✓	✓	✓
10. Crossmatch		✓	✓		✓
Patient's special transfusion requirements, attributes	✓	✓	✓	✓	
Product expiration		✓	✓	✓	
Product volume		✓	✓	✓	
Visual inspection of the blood product				✓	
Clinically significant antibodies (antigen confirmed)		✓			✓ **(Antigen Tag)**
Special Requests	✓	✓		✓	
Initials of the person who tagged the blood product			✓		

K. Complete the process of dispensing the component(s) from the Blood Bank computer, as described in the Blood Bank CDM, Issue Units. Note that the technologist must also verify that the unit was issued in the computer.

L. Complete the documentation of the *Record of Transfusion* as follows:

1. Tagged by, if not already tagged and documented.
2. Inspecting/Issuing technologist's initials.
3. Identification of the requestor / courier to whom the component was issued.
4. The cooler number used or pneumatic tube station number sent to (if applicable).
5. Date and time of issue (may be time stamped).
6. The OR number that the components are being dispensed to (if applicable).

The above information is documented on the *Record of Transfusion* that was generated when selecting the component in the Blood Bank computer system.

M. RO ONLY: Verify that patient's name that is written on the *Unit Transport Label* correlates with the name on the dispense form and *Record of Transfusion* and attach the label to the sealed, leak-proof bag containing the blood product.

N. Components should be issued in an appropriate sealed, leak-proof transport bag.

O. Send the component(s) to the appropriate destination.

P. If sending through the pneumatic tube system or with a runner / courier, send the component in a sealed, leak-proof bag.

Q. RO ONLY: Text / call the patient's caregiver to inform them that the component has been sent through the pneumatic tube system.

R. If sending component(s) in a cooler, refer to site specific Transfusion Medicine policy, *Transporting Blood Components in a Cooler*.

S. Staple the retention copy (generated automatically out of the blood bank system) of the *Record of Transfusion* to the dispense form and place in the appropriate location.

1. If the component(s) were transported in a cooler, place this stapled paperwork in the designated location to ensure the cooler does not extend past the validated time.

VIII. REFERENCES:

1. AABB, *Standards for Blood Banks and Transfusion Services*, current edition.
2. AABB, *Technical Manual*, current edition.

Attachments

Blood Product Dispense Correction Form- Royal Oak
Unit Transport Label - Royal Oak

Approval Signatures

Step Description	Approver	Date
	Jeremy Powers: Chief, Pathology	2/16/2022
	Ann Marie Blenc: System Med Dir, Hematopath	2/14/2022
	Vaishali Pansare: Chief, Pathology	2/14/2022
	Ryan Johnson: OUWB Clinical Faculty	2/10/2022
	John Pui: Chief, Pathology	2/10/2022
	Muhammad Arshad: Chief, Pathology	2/10/2022
Policy and Forms Steering Committe (if needed)	Kelly Sartor: Supv, Laboratory	2/10/2022
Policy and Forms Steering Committe (if needed)	Gail Juleff: Project Mgr Policy	2/10/2022
	Craig Fletcher: System Med Dir, Blood Bank	2/9/2022
	Rebecca Thompson: Medical Technologist Lead	2/2/2022
	Karrie Torgerson: Supv, Laboratory	1/31/2022
	Teresa Lovins: Supv, Laboratory	1/31/2022
	Anji Miri: Supv, Laboratory	1/31/2022
	Kelly Sartor: Supv, Laboratory	1/31/2022
	Michael Rasmussen: Supv, Laboratory	1/31/2022
	Brooke Klapatch: Medical Technologist Lead	1/31/2022
	Kelly Sartor: Supv, Laboratory	1/31/2022

Applicability

Dearborn, Farmington Hills, Grosse Pointe, Royal Oak, Taylor, Trenton, Troy, Wayne