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Response to Red Level Trauma Activation - Dearborn Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This document will provide the Blood Bank staff with policies and instructions for preparing and dispensing emergency blood and blood components for Red Level Trauma patients in advance of patient arrival in the Emergency Trauma Center.

II. CLINICAL SIGNIFICANCE:

A. Red Level Trauma patients with massive bleeding may occasionally need blood or blood products so urgently that the patient registration, and antibody screen and crossmatch cannot be completed before blood is needed for transfusion. In such cases, blood will be issued uncrossmatched and tagged with a fictitious blood bank patient to facilitate rapid dispense from the blood bank.

III. DEFINITIONS:

A. **Child Bearing Age:** Females less than 50 years of age.

B. **CRYO**: Abbreviation for Cryoprecipitate.

C. **Dispense**: Process of issuing blood products for transfusion.

D. **Plasma**: Refer to any type of plasma product, including liquid plasma and thawed plasma.

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

F. **ABO-plasma-compatible**: Refers to platelets, plasma, or cryoprecipitate. A component that does not contain ABO antibodies corresponding to the recipient's ABO antigens.

G. **ABO compatible RBCs**: Donor RBCs that lack the ABO antigens corresponding to the recipient's ABO antibodies.

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

I. **Rh compatible component**: 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.

J. **Compatibility testing**: Testing that must be completed prior to dispense in non-emergency situations. Includes sample labeling requirements, ABO and Rh testing, antibody screening, possible antibody investigations and crossmatching

K. **Emergency issue**: A bleeding event in which the attending physician determines that blood components must be dispensed/transfused prior to completion of required compatibility testing

L. **Standard Blood Bank cooler**: A temperature-monitored cooler used for inpatients that:

    1. Is intended for the transport of 1 - 6 blood components which require refrigeration.
    2. Has been validated for the transport of blood components.

M. **Post-issue crossmatch**: Serologic compatibility testing of donor unit and recipient after the unit has been issued in an emergency situation and transfused to the recipient.

IV. POLICIES:

A. Authorization / Signature for Emergency Issue Blood Components

1. Authorization for emergency issue of blood products must be documented with signature on the *Blood/Component Pick Up Tag (x23480)* .
2. Signature by the patient's physician or designated mid level provider (Physician Assistant or Nurse Practicioner) is required for issue of uncrossmatched blood or blood products.
3. The signature is not required at the time of issue but signed release form must be submitted within 24 hours of Red Level Trauma Activation.

B. Required Information

1. The Blood Bank requires the following patient information as soon as it becomes available after the arrival and registration of the patient
    a. Patient's name or Undoe Name
    b. Medical record number (MRN).
    c. Wrist band number.

C. Patient Specimen

1. A type/screen specimen is not required to initially dispense components under the Emergency Issue Protocol.
2. A specimen should be collected prior to transfusion to avoid typing discrepancies.
3. Specimens must meet the requirements of Transfusion Medicine policy, Triaging and Identifying Acceptable Blood Samples for Testing.

D. Release of Products Prior to Patient Arrival

1. In order to reduce the time required to dispense products to red level trauma patients, the blood bank will always have a minimum of three (3) O negative RBCs labeled with information for a fictitious Blood Bank patient available in the blood bank to allow for rapid issue in advance of the patient arrival to the Emergency Trauma Center.
2. An attempt to keep a second set of three (3) O negative RBCs with information for another fictitious patient to be available in advance of a second patient arrival.
3. Upon receipt of a Red Level Trauma activation page, the blood bank will immediately pack 3 packed red cells in a transport cooler. Advanced Phone notification is not required.

E. General ABO and Rh Requirements for Components Dispensed

1. RBCs will be dispensed under the RLT activation emergency issue protocol as follows:
    a. If plasma is requested issue type A or AB.
    b. Platelet components should be Rh negative if pediatric patient or individual with child bearing potential, if possible.
    c. If cryoprecipitate is requested any type may be issued.
    d. Refer to more specific guidelines located in Transfusion Medicine policy, Emergency Issue of Blood Products
    Job Aid: Appropriate ABO and Rh of Emergency Issue RBCs
    Job Aid: Appropriate ABO and Rh of Emergency Issue Platelets, Plasma, and Cryoprecipitate

V. PROCEDURE:

A. Advance Preparation of O Neg Units For Emergency Issue Buckets

1. Prepare a minimum of three (3) O negative RBC units for the *RLT Emergency Issue Buckets* using as directed in the steps below:
    a. Verify that the expiration dates of the adult units in the *RLT Emergency Issue Buckets* are acceptable (greater than 10 days from expiration).

b. If the expiration date is unacceptable, then return the unit to inventory and obtain a suitable replacement unit from the inventory.

2. Tag each unit with an UNCROSSMATCHED BLOOD label.
3. Remove two segments from each unit. Label them with a unit number sticker from the back of the unit and place them into a plastic bag.
4. Make a copy of the face label of each unit and place with the segment in the corresponding plastic bag.
5. Select the unit(s) in the Blood Bank Computer using Product Selection and the designated fictitious patient information provided below:
    a. Patient Name: TESTBLOOD, DB RLT ONE
    b. Patient MRN: TESTDBRLT1
6. Print the P-Tag.
7. Remove the transfusion label from the P-Tag and attach to the manilla tag on the unit. Verify that the unit information on the label matches the component face label.
8. Detach the bottom paper portion of the P-tag and place in the in the corresponding plastic bag with segments and copy of the unit face label. Discard the extra label that prints on the P-Tag.
9. Load the printer with the yellow paper designated for print of RLT tag.
10. Reprint one additional copies of the p-tag on the designated yellow paper which will be used to recoup actual patient information in the blood bank computer
11. Fold the yellow copy of the P-tag attach with a rubber band.
12. Attach the plastic bag to the appropriate unit with a rubber band.
13. Return the plastic bag and the unit(s) to the *RLT Emergency Issue Bucket*.

B. Advance Preparation of Additional Units For Emergency Issue Buckets

1. Prepare an additional three (3) O Negative RBC units for the *RLT Emergency Issue Buckets* for use on a second blood bank fictional patient as directed in the procedure above.
    a. Patient Name: TESTBLOOD, DB RLT TWO
    b. Patient MRN: TESTDBRLT2

C. Response to Activation Page

1. When a Red Level Trauma activation page is received in the Blood Bank, staff is to assume that the need for blood is urgent and proceed as outlined below.
2. Document the attached RLT Activation Response Form with the time and details of the activation page and immediately alert your co-workers.
    a. Record the Time of the RLT activation

b. Document the age/sex of the patient and details provided on the page.

3. Prepare a standard cooler in accordance with Transfusion Medicine policy, Transporting Blood Components in a Cooler
4. Obtain 3 units from the RLT Emergency Issue Bucket.
5. Retain the bag containing the copies of unit face label, retained bottom portion of the P-Tags and segments from each unit issued. These segments will be used to perform post issue crossmatches.
6. Place units in the cooler and document the cooler identification and the time packed on the *RLT Activation Response Form.*
    a. Set a timer for 4 hours.
7. The runner picking up blood should have a completed *Blood/Component Pick Up Tag (x23480)*.
    a. If the runner does not have the appropriate documentation, the technologist will immediately dispense the products and report issue on internal variance report when time permits.
        a. If the form is not signed return the form with the runner for signature and document on the RLT activation form.
    b. Document the employee ID# /printed name of the transport runner and actual time of dispense on the *RLT Activation Response Form.* Note: Identification must be legible and traceable. Illegible signatures are not allowed.
    c. Request a type/screen sample be sent if not already received.
8. If additional products are required before sample is obtained continue to use fictional MRN to select and tag additional products in the blood bank computer.
    a. In the Blood Bank computer, select components of the appropriate ABO and Rh in accordance with policy, *General ABO and Rh Requirements for Components Dispensed.*
    b. If necessary component tags may be prepared manually.
9. As soon as possible, complete the type and screen testing in accordance with routine procedure.
10. Document the cooler return time and temperature of the cooler on the RLT Activation Response Form.
11. Determine whether any products returned in the cooler is acceptable for reissue. Refer to Transfusion Medicine policies Transporting Blood Products in a Cooler and Return of Blood Products From Issue.
12. Document the units final disposition on the RLT Activation Response Form.
13. Units used uncrossmatched and assigned to fictitious patient are processed as follows:
    a. Release the units from the appropriate fictitious patient and select to the identified patient as confirmed by patient sticker on the yellow copy of the record of transfusion returned with the cooler.

b. Emergency Issue blood products in the computer using the time from the *RLT Activation Response Form* when the products were received by the runner.

c. Retain the P-Tags for the units and file with the corresponding copies of the original P-Tags.

d. Perform post issue crossmatches and full crossmatches when appropriate. Refer to Post-Issue Crossmatch in the Transfusion Medicine policy, Serological Crossmatching of Red Blood Cells.

    i. If incompatibility is detected at any stage of the testing, immediately notify the patient's physician and the Blood Bank Medical Director or other Blood Bank pathologist or fellow.

14. When time permits replace the unit(s) in the buckets as described in *Advanced Preparation of Unit Procedures V.A and V.B* above.

VI. REFERENCES:

1. AABB, *Technical Manual*, current edition.
2. College of American Pathologists, *Transfusion Medicine Checklist*, current edition.

Attachments

RLT Activation Response Form (rev. 07/27/2024)

Approval Signatures

Step Description	Approver	Date
	Jeremy Powers: Chief, Pathology	7/29/2024
Policy and Forms Steering Committe (if needed)	Kelly Sartor: Mgr, Division Laboratory	7/29/2024
	Christopher Ferguson: Dir, Lab Services	7/29/2024
	Kelly Sartor: Mgr, Division Laboratory	7/29/2024
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Corewell Health

Dearborn Blood Bank

RLT

Patient Name:
MRN:
Band Number:
Antibodies/Messages:

ACTIVATION RESPONSE & COOLER DISTRIBUTION LOG

RLT Pager Date/Time:

RLT Demographic/Alert Information:

Ordering Physician:

Dispense Form Signed by Authorizing Physician: Y N
(Return with Runner for Signature if not signed)

	Products Issued	Cooler ID	Cooler Picked up/By	Cooler Returned	Product Status (OK/Not OK/Transfused)	Notes
Initial Cooler	RBC 1:		Time:	Time:	RBC 1: ___ °C ☐ OK ☐ NOK ☐ TR	
	RBC 2:		Employee ID:	Cooler Temp: ___ °C	RBC 2: ___ °C ☐ OK ☐ NOK ☐ TR	
	RBC 3:				RBC 3: ___ °C ☐ OK ☐ NOK ☐ TR	
2nd Cooler	FFP 1:		Time:	Time:	FFP1: ___ °C ☐ OK ☐ NOK ☐ TR	
	FFP 2:		Employee ID:	Cooler Temp: ___ °C	FFP2: ___ °C ☐ OK ☐ NOK ☐ TR	
	FFP 3:				FFP3: ___ °C ☐ OK ☐ NOK ☐ TR	
	PLT 1:				PLT1: ___ °C ☐ OK ☐ NOK ☐ TR	

If additional coolers are required use MTP Cooler Log if necessary. Refer to Transfusion Medicine policy, Providing Components for a Massive Transfusion – Dearborn.