

TRAINING UPDATE

Lab Location: All Sites **Date Implemented:** 9.8.23
Department: Blood Bank **Due Date:** 9.22.23

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:	
Platelets for Transfusion	
Description of change(s):	
<p>The definition of "Single Donor Platelets" was added to this procedure. We have received a number of calls for single donor platelets recently that have confused blood bank staff.</p> <p>Single donor platelets are any platelet that is drawn from one donor. All apheresis platelets are considered single donor platelets. All of our platelet inventory is considered single donor platelets.</p> <p>The alternate product to single donor platelets is "random donor platelets" which are platelets derived from a whole blood donation. They come in bags and we pool them together similar to cryo. Random donor platelets are not available in our area and we do not use them.</p>	

Adventist HealthCare
 Site: Shady Grove Medical Center, White Oak Medical Center,
 Fort Washington Medical Center

Title: Platelets for Transfusion

Non-Technical SOP

Title	Platelets for Transfusion	
Prepared by	Stephanie Codina	Date: 3/25/2011
Owner	Stephanie Codina	Date: 3/25/2011

Laboratory Approval		
Print Name and Title	Signature	Date
<i>Refer to the electronic signature page for approval and approval dates.</i>		
Local Issue Date:		Local Effective Date:

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Retired or Not Yet Effective

1. PURPOSE

Platelets are essential for normal hemostasis. Specific changes induce platelet adherence to vessel walls and platelet activation, which leads to platelet aggregation and formation of a primary hemostatic plug. The primary goal of platelet transfusion is to provide adequate numbers of normally functioning platelets for the prevention or cessation of bleeding.

All platelets in inventory are pathogen-reduced, leukocyte-reduced, apheresis platelets. The volume ranges from approximately 100 – 500 mL. Each bag contains a minimum of 3.0×10^{11} platelets and less than 5.0×10^6 leukocytes. These platelets are considered irradiated-equivalent and CMV-safe. Platelets are stored at 20-24°C with continuous agitation for a maximum of 5 days.

2. SCOPE

Platelets may be ordered for transfusion in the following situations:

- Prophylactic treatment of a patient with platelet count $<15,000/\mu\text{L}$ in a stable, non-bleeding patient
- Platelet count $<50,000/\mu\text{L}$ in a patient who is actively bleeding
- Platelet count $<100,000/\mu\text{L}$ in a patient undergoing invasive procedure or massive transfusion
- Documented platelet dysfunction and one of the following:
 - Active bleeding
 - Invasive procedure

3. RESPONSIBILITY

All Blood Bank employees are required to demonstrate competency in the indications for and handling of platelets for transfusion.

4. DEFINITIONS

PRT Platelets = Platelets that have been treated using pathogen-reduction technology. The platelets are treated and exposed to UV light. This creates covalent bonds with the nucleic acids in the platelet product and prohibits the replication of bacteria, viruses, parasites, and T cells. **All PRT platelets are considered CMV-negative and irradiated.**

Single-Donor Platelets = Platelets collected from one donor. All apheresis platelets and all platelets in the AHC inventory are single-donor platelets.

5. PROCEDURE

Step	Action
1	The provider will place a "Transfuse Platelets" order in Cerner, which converts to a "TPP" order in the blood bank system. Blood bank staff members should electronically receive the order per procedure.
2	<p>Prior to allocating platelets, ensure the recipient has had a T&S drawn and tested. If the T&S is greater than 3 days old, ensure the recipient is wearing/has a valid blood bank armband (per procedure/policy). The T&S is good for the following intervals:</p> <p style="margin-left: 40px;">A. Inpatients: Entire hospitalization</p> <p style="margin-left: 40px;">B. Outpatients: One year</p> <p>Note: In emergency situations, platelets may be issued prior to completion of the antibody screen as long as blood bank has received a current T&S specimen and the ABO/Rh testing has been resulted.</p>
3	<p>Choose platelet units from the rotator for the recipient.</p> <p style="margin-left: 40px;">A. Platelets contain ABO antigens.</p>

Step	Action
	<ul style="list-style-type: none"> a. Type specific platelets have shown to last longer in the circulation. However, ABO-incompatible platelets may be transfused to adults. b. Pediatric and neonatal recipients must receive platelets containing plasma that is compatible with the recipient. If ABO-compatible platelets are not available, volume-reduced platelets may be used. c. Attempts should be made to provide group-specific platelets to patients who have a positive DAT due to transfusion of out-of-group platelets (eluted anti-A, -B, or -AB from cells). Consult a supervisor or pathologist with questions. <p>B. Platelets do not contain Rh-antigens. However, the potential for red cell contamination exists. Review the following guidelines when selecting platelets for Rh-negative recipients.</p> <ul style="list-style-type: none"> a. Rh-negative females of child-bearing age (<50 years old) should receive Rh-negative platelets. b. These patients may receive Rh-positive platelets in emergency situations where Rh-negative platelets are unavailable. <ul style="list-style-type: none"> 1. These patients will require RhIG within 72 hours of transfusion to minimize the potential for D sensitization. A physician's order is needed for RhIG administration. 2. Notify the BB Supervisor or on-call pathologist if the treating physician has questions. b. Rh-negative patients who are not females of childbearing age may receive Rh-positive platelets if Rh-negative platelets are not available. These patients will be given RhIG at the request of the treating physician. c. One vial of RhIG (300 µL) will provide protection for up to 7 units of Rh-positive apheresis platelets. <p>C. Select platelets that meet the required attributes of the patient (CMV-seronegative, irradiated, crossmatched, or HLA-matched).</p> <p>Note: Under normal circumstances, AHC only uses PRT platelets which are considered CMV-negative and irradiated.</p>
4	<p>Platelet products that contain visible amounts of red blood cells are generally not accepted into inventory.</p> <ul style="list-style-type: none"> A. Platelets must be ABO-compatible and crossmatched to the recipient if they are pink or red in color due to red blood cell contamination. B. Refer to procedure, "Crossmatch." C. When crossmatch is performed, the T&S must be current per red cell transfusion procedures.
5	<p>Blood bank can request the platelet yield from the blood supplier if requested by the ordering provider.</p>

Step	Action
6	Allocate the platelet unit to the designated recipient using Sunquest function, "Blood Order Processing." A. Access Blood Order Processing. B. Open the TPP order form the order list. C. Review the order, indications, and provider instructions. D. Enter the recipient's blood bank armband number in the "Armband #" field. E. Click the "Allocation" tab. F. At the "Unit #" prompt, scan the unit number from the platelet unit. G. At the "Component" prompt, scan the E code from the product. This will autofill the component and division fields. H. Click the "Select" button to allocate the unit to the recipient. Repeat steps 6A-H for any additional platelets to be allocated.
7	Each unit that was allocated to the patient will appear in the "Compatibility Testing" area of the screen. In the "TS" column, enter "]" for each unit to indicate the unit is acceptable for transfusion to the patient. Do not allocate units that do not meet patient requirements.
8	Click the "Save" button.
9	The message, "Continue to Blood Product Issue?" will appear. A. Click "Yes" and continue per issuing procedure if the platelet will be immediately issued. B. Click "No" if the platelet will be stored in the blood bank prior to issue.
10	Attach the printed patient information and store the platelet in the platelet rotator (20-24°C) until issue or expiration.

6. RELATED DOCUMENTS

SOP: Order Entry, Receiving Orders in the GUI System
 SOP: Disposal of Blood and Blood Products
 SOP: Issuing Blood Components
 SOP: HLA Matched / Crossmatched Platelet Pheresis Products
 SOP: Crossmatch

7. REFERENCES

Standards for Blood Banks and Transfusion Services, current ed. AABB Publishing, Bethesda, Maryland.

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes WAB.016.000, SHB.016.000		
000	6.14.13	Section 2: Updated indications for platelet transfusion per new hospital guidelines. Section 5: Removed instructions for how to enter orders for platelet transfusion. Updated instructions for receiving a transfuse platelet order. Added instructions to provide group specific platelets for patients with eluted ABO antibodies due to out-of-group plt txn.	SCodina	NCacciabeve
001	2.24.15	Section 5: Deleted instructions for ordering and receiving transfuse platelet orders and refer staff to new SOP. Updated for CPOE process. Updated T&S requirements for platelet transfusion. Section 6: Updated list Footer: Version # leading zero's dropped due to new EDCS in use as of 10/7/13.	SCodina	NCacciabeve
2	2.6.17	Header: Added WAH	LBarrett	NCacciabeve
3	12.28.18	Section 5: Added allowance to issue platelets prior to AbS testing in emergencies. Removed references to platelet yield tags as they are no longer provided by blood supplier.	SCodina	NCacciabeve
4	2.18.21	Header: Changed WAH to WOMC Section 4: Added PRT platelets Section 5: Added that we only carry PRT platelets. Removed requirement to check CMV or IRR status of patient. Removed requirement to pool platelets that arrive in more than one bag. Section 7: Updated references.	SCodina	NCacciabeve
5	8.19.21	Header: Added FWMC Footer: Updated prefix to AHC	LBarrett	NCacciabeve
6	9.7.23	Added definition of single-donor platelets.	SCodina	NCacciabeve

9. ADDENDA AND APPENDICES

N/A