TRAINING UPDATE

Lab Location:	SGAH and WAH	**Date Implemented:**	7.5.2013
Department:	Blood Bank	**Due Date:**	7.31.2013

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:
Platelets for Transfusion
Description of change(s):
1. Updated indications for platelet transfusion to align with new hospital guidelines. 2. Removed instructions for how to enter orders for platelet transfusion. These should come from Cerner. 3. Updated instructions for how to receive a platelet order that nursing has placed. 4. Added instructions to give group-specific platelets when the recipient has a positive DAT due to ABO antibodies from out-of-group 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**
Refer to the electronic signature page for approval and approval dates.		
Local Issue Date:	Local Effective Date:	

Review:		
Print Name	**Signature**	**Date**

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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 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. 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/μL in a stable, non-bleeding patient
- Platelet count <50,000/μL in a patient who is actively bleeding
- Platelet count <100,000/μL 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

Random Donor Platelets or Whole Blood Derived Platelets- platelets prepared from whole blood. This product is not stocked at Adventist Hospitals. They require bacterial testing prior to transfusion.

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5. PROCEDURE

Ordering Platelets in Sunquest

Step	Action
1	A copy of the transfusion order must be faxed to blood bank for verification. Exception: A faxed order is not needed when A. The patient's condition is too unstable to take the time to fax the order. B. The patient is in OR.
2	Review the platelet order. A. Call the patient care area to clarify orders that request >2 platelets in a 24-hour period. a. Physicians often order platelets in quantities that correspond to random donor or whole-blood derived units. We only issue apheresis platelets. b. One apheresis platelet is equivalent to 6-10 random donor platelets. B. Platelet orders generally expire after 24-hours with the exception of platelets ordered in advance for surgery or outpatient transfusion. C. The recipient must have had a T&S drawn and tested within 10 days of platelet transfusion **and** be wearing a valid blood bank armband.

Receiving Transfuse Platelet Orders that Nursing HAS Placed

Step	Action
1	Access Sunquest function, "Order Entry."
2	At the "Lookup by" prompt, select "Accession Number."
3	Type the accession number that corresponds to the transfuse platelets order. Then, click the "search" button. Ensure the correct order is highlighted, then press the "Select" button. The accession number for an unreceived specimen can be found via the OL monitor, pending log, laboratory inquiry, or blood order processing.
4	Enter the time and date of order receipt then click the "Save" button.

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Selection and Allocation of Platelets for Transfusion

Step	Action
1	Choose platelet units from the rotator for the recipient. A. Platelets contain ABO antigens. 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. 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. a. Rh-negative females of child-bearing age (<50 years old) should receive Rh-negative platelets. i. These patients may receive Rh-positive platelets in emergency situations where Rh-negative platelets are unavailable. 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. C. Select platelets that meet the required attributes of the patient (CMV-seronegative, irradiated, crossmatched, or HLA-matched). Refer to procedures, HLA Matched/Crossmatched Platelet Pheresis Products, Blood Component Irradiation, Component Selection to Reduce the Risk of Transfusion Associated CMV Disease. D. Irradiate platelet per procedure, "Blood Component Irradiation" if indicated.

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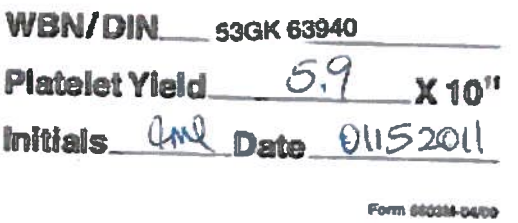
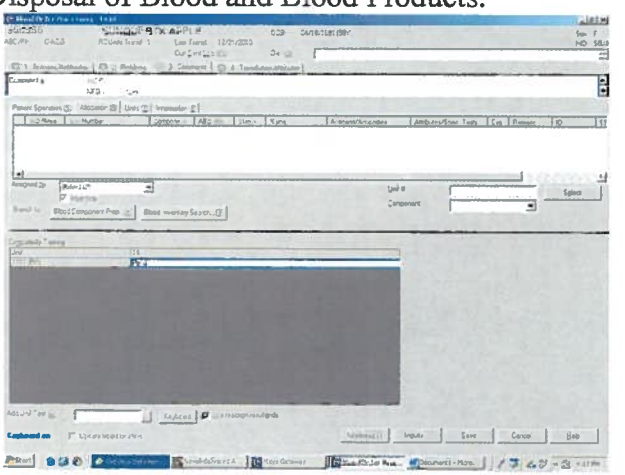
Step	Action
2	Platelet products that contain visible amounts of red blood cells are generally **not** accepted into inventory. A. Platelets must be ABO-compatible and crossmatched to the recipient **if they are** pink or red in color due to red blood cell contamination. B. Refer to procedure, "Crossmatch."
3	Some blood suppliers will document the platelet yield on a tie tag attached to the product. This can be given to the patient care area if requested.  WBN/DIN 53GK 63940 Platelet Yield 5.9 X 10¹¹ Initials AMR Date 01152011 Form 8003M-04/09
4	Access the patient in Sunquest function Blood Order Processing.
5	Select the "TPP" order from the order selection list.
6	Click on the "Allocation" tab.
7	Scan the unit number into the LIS (the unit number can be typed when the barcode is damaged or unreadable; this will default the collection facility).
8	Each unit that was allocated to the patient will appear in the "Compatibility Testing" area of the screen. Indicate whether each platelet is OK for transfusion. A. Type "[" to indicate "OK for transfusion." B. Type "]" to indicate "not OK for transfusion." C. DO NOT issue any unit that is not acceptable for transfusion. Discard per procedure, "Disposal of Blood and Blood Products." 

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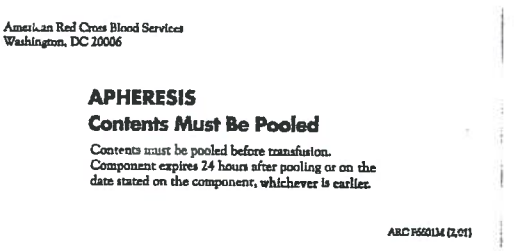
Step	Action
9	Click the "Save" button.
10	Attach the "Blood Bank Product Tag and Administration Record" to the appropriate platelet bag and store at room temperature (20-24°C) with gentle agitation until issue.
11	Note: Some platelet products are left in two connected bags to improve platelet viability during storage by providing more surface area for gas exchange. ARC places the following tag on the platelets:  American Red Cross Blood Services Washington, DC 20006 **APHERESIS** **Contents Must Be Pooled** Contents must be pooled before transfusion. Component expires 24 hours after pooling or on the date stated on the component, whichever is earlier. ARC F6501134 (2,01) A. Pool the platelets into one bag and heat seal the tubing. B. Change the expiration of the unit to 24 hours after the pool (date and time) if sooner than the current expiration date. Do not extend an expiration date! a. Place a line through the original expiration date. b. Initial next to the line. c. Write the new expiration date and time on the blood product. d. Change the expiration date in the LIS sytem. i. Access Sunquest function "Blood Product Entry." ii. Click on the "Modify Unit" button. iii. At the "Unit #" prompt, scan or type the unit number of the blood product. iv. If prompted, scan the collection facility. v. Choose the correct component from the dropdown list if it doesn't autofill. vi. Click the "OK" button. vii. Change the expiration date and time in the appropriate fields. viii. Click the "Save" button. C. Document the change in expiration date on the "Thawed Product Verification Log." a. Document the date of modification, unit number, product type, E code, expiration date, expiration time, and tech identification. b. Give to a second tech to verify the new labeling. The second tech must review the E code, expiration date, expiration time, further processing, and volume on the label. The second check is documented on the "Thawed Product Modification Form." D. Remove the tag and discard.

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Step	Action
12	Store at room temperature (20-24°C) with gentle agitation and issue per procedure, "Issuing Blood Components." At SGAH, a platelet administration filter is issued with platelet products.

6. RELATED DOCUMENTS

SOP: Disposal of Blood and Blood Products
SOP: Issuing Blood Components
SOP: HLA Matched / Crossmatched Platelet Pheresis Products
SOP: Blood Component Irradiation
SOP: Component Selection to Reduce the Risk of Transfusion Associated CMV Disease
SOP: Crossmatch
Form: Thawed Product Label Verification Log (AG.F82)

7. REFERENCES

1. Roback, J.D., Combs, M.R., Grossman, B.J., Hillyer, C.D. 2008. Technical Manual of the AABB, 16th ed. AABB Publishing, Bethesda, Maryland.
2. Standards for Blood Banks and Transfusion Services, 28th 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

9. ADDENDA AND APPENDICES

N/A

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