

**TRAINING UPDATE**

**Lab Location:** SGAH and WAH      **Date Implemented:** 12.19.2013  
**Department:** Blood Bank      **Due Date:** 12.31.2013

**DESCRIPTION OF PROCEDURE REVISION**

**Name of procedure:**

Procurement of Blood Product and Desired Inventory Levels

**Description of change(s):**

- Combined SGAH and WAH procedures into one (used to be separate)
- Recalculated target inventories based on blood product orders for the past 6 months
- Removed auto delivery of cryo (ARC discontinued this service)
- Added instructions for ARC's new Ad Hoc order process (fax and don't call)

Non-Technical SOP

<b>Title</b>	<b>Procurement of Blood Product and Desired Inventory Levels</b>	
<b>Prepared by</b>	Stephanie Codina	Date: 12/16/2010
<b>Owner</b>	Stephanie Codina	Date: 12/16/2010

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

<b>Review:</b>		
<b>Print Name</b>	<b>Signature</b>	<b>Date</b>

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**1. PURPOSE**

Adequate reserves of blood products must be maintained to support transfusion therapy, surgical needs, and emergency situations. Blood products are obtained from blood donor centers and/or other licensed facilities in the US or registered facilities in Maryland.

**2. SCOPE**

This procedure applies to blood products that are normally maintained in inventory. This includes red blood cells, plasma, apheresis platelets, and pooled cryoprecipitate.

**3. RESPONSIBILITY**

All blood bank staff members must know how to obtain additional blood products and what the target inventory of blood products should be. This will help to ensure adequate inventory levels with minimal wastage.

**4. DEFINITIONS**

Licensed Blood Supplier: A blood supplier that is licensed and registered with the Food and Drug Administration (FDA) to distribute blood products across state lines.

Registered Blood Supplier: A blood supplier that is registered with the FDA to distribute blood products within one state. Registered blood suppliers are not authorized to participate in interstate commerce.

**5. PROCEDURE**

**A. Routine Blood Product Deliveries**

Step	Action
1	The American Red Cross (ARC) is the primary blood supplier for Shady Grove and Washington Adventist Hospitals.
2	ARC delivers blood products for routine stock orders three times weekly at each site.

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Step	Action
3	<p>Blood bank staff members will assess the blood product inventory levels the day prior to delivery before 10am.</p> <ul style="list-style-type: none"> <li>A. Complete an ARC inventory worksheet to indicate the current inventories of each blood product.</li> <li>B. Compare the current inventory levels to the desired inventory levels and determine how many of each type of blood product should be ordered. Document the order on the form.</li> <li>C. Utilize the "Comments" section of the worksheet to document any blood products that should be cancelled.</li> <li>D. Fax the worksheet to ARC.</li> </ul>
4	<p>ARC will review the worksheet and ship the quantity of blood products needed to meet inventory requirements. Quantities may be reduced when ARC inventory is insufficient.</p>

**B. Ad Hoc and Emergency Blood Product Orders**

Step	Action
1	<p>An Ad Hoc order is placed when the blood products must be received prior to the next scheduled delivery. These include orders to maintain minimum inventory levels of desired blood types or additional requests for platelets.</p>
2	<p>Complete the American Red Cross Ad Hoc Order Form by listing the products requested.</p> <ul style="list-style-type: none"> <li>A. Include blood types and special attributes as needed. Check the box if the order is critical or required STAT.</li> <li>B. Document whether the order will be picked up (ie we will send a courier) or if we want ARC to deliver the products (only use this option when the products can be added to the routine stock delivery).</li> </ul>
3	<p>Fax a copy of the form to ARC distribution using the number printed on the form.</p>
4	<p>ARC distribution services will call to verify receipt of the order within 10 minutes. Call hospital services at 1-800-233-4640 ONLY when the order is urgent and cannot wait the 10 minutes required.</p>
5	<p>If ARC is unable to fill a needed order, call any/all of the following. Telephone numbers are stored in the blood bank.</p> <ul style="list-style-type: none"> <li>A. INOVA blood services</li> <li>B. Washington Hospital Center</li> <li>C. National Blood Exchange (AABB)</li> </ul>
6	<p>Notify the Blood Bank Supervisor, Administrator on-call, Blood Bank Medical Director, or pathologist on-call if adequate blood products still cannot be obtained.</p>

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Step	Action
7	Notify the Blood Bank Medical Director or pathologist on-call <b>immediately</b> when severe regional blood shortages occur and replacement quantities are not available. <ul style="list-style-type: none"> <li>A. The pathologist will publicize the shortage via a Blood Shortage Alert or LabAlert for physicians.</li> <li>B. Consultation is necessary for each transfusion request in order to conserve blood products for critical patients.</li> </ul>

**C. Short Dated Units and Inventory Rotation**

Step	Action
1	If an overstock of blood products exists, the units can be posted on the “American Red Cross Hospital Inventory Visibility System (IVS)” or called to ARC. <ul style="list-style-type: none"> <li>A. ARC normally does not accept blood product returns.</li> <li>B. ARC and the IVS system will help to facilitate transfer of the blood products to another hospital.</li> <li>C. Refer to procedure, “Shipping Blood and Components” for additional information.</li> </ul>
2	ARC will issue credit for all expired AB red cells. Complete an ARC Credit Request form and indicate the product expired.

**D. Leukocyte-Reduced Blood Products**

All cellular blood products will be leukocyte-reduced.

- Whole blood contains 2-3 x 10<sup>9</sup> leukocytes/500 mL unit.
- Transfusion of these leukocytes may result in HLA alloimmunization, febrile transfusion reactions, CMV disease transmission, immune suppression, and graft-versus-host disease.
- In order to be labeled leukocytes-reduced, a blood product must contain fewer than 5 x 10<sup>6</sup> leukocytes.

When leukocyte-reduced blood products are not available,

- Issue a bedside leukocyte-reduction filter with each cellular blood product.
- Notify the Blood Bank Supervisor, Blood Bank Medical Director, or an approved designee.

**6. RELATED DOCUMENTS**

- Form: ARC Managed Inventory Worksheet
- Form: ARC Ad Hoc Order Fax Form
- Form: ARC Credit Request Form
- SOP: Shipping Blood and Components

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**7. REFERENCES**

1. Standards for Blood Banks and Transfusion Services, 2012. AABB, 28<sup>th</sup> ed. AABB Publishing, Bethesda, Maryland.
2. Roback, J.D., Grossman, B.J., Harris, T., and Hillyer, C.D. 2011. Technical Manual of the AABB, 17<sup>th</sup> ed. AABB Publishing, Bethesda, Maryland.

**8. REVISION HISTORY**

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes SG/WAH B307.01, SG/WAH B308.01		
000	11.21.11	Section 5: Updated desired inventory levels; Removed Walter Reed Military Medical Center and National Institute of Health as acceptable suppliers for ad hoc orders	SCodina	NCacciabeve
001	12.10.13	Section 5: Moved desired inventory levels to appendix to create 1 procedure for both SGAH and WAH. Added new ARC process for ad hoc orders. Section 9: Added App A and B Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13.	SCodina	NCacciabeve

**9. ADDENDA AND APPENDICES**

- Appendix A: Desired Inventory Levels for SGAH
- Appendix B: Desired Inventory Levels for WAH
- Appendix C: Blood Shortage Alert

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**Appendix A  
 Desired Inventory Levels for SGAH**

1. Routine Deliveries are made on Tuesday, Thursday, and Saturday.
2. Blood Product Inventory Levels must be faxed to ARC on Monday, Wednesday, and Friday BEFORE 10am
3. ARC will automatically ship neonatal red cell units (O-negative, CPDA-1, CMV-seronegative, <7 days old) on Tuesdays and Thursdays.
4. Desired Inventory Levels
  - a. Actual inventory levels may occasionally drop below desired levels and may exceed these levels. Cryoprecipitate is routinely delivered monthly.
  - b. Blood bank staff members will use discretion when ordering and base decisions on anticipated blood product usage.
  - c. Inventory levels should be stocked a little higher on Fridays to avoid a large blood product delivery on the weekends when staffing is minimal.
  - d. Inventory levels should be stocked a little higher during holiday seasons where there is a typical shortage of blood products.

**The following represents the desired minimum inventory levels of blood products normally maintained in inventory.**

Red Blood Cells							
O-Pos	O-Neg	A-Pos	A-Neg	B-Pos	B-Neg	AB-Pos	AB-Neg
55	15	40	5	15	3	2	0

Plasma			
Group O	Group A	Group B	Group AB
35-40	30-35	10-15	8-10

Platelets	Cryoprecipitate
Keep 2 platelets in inventory at all times. When possible, at least 1 should be group AB, CMV-negative.	Maintain a minimum inventory of 4 pooled cryoprecipitate products at all times. Pooled cryo is normally shipped monthly.

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**Appendix B  
 Desired Inventory Levels for WAH**

1. Routine Deliveries are made on Tuesday, Thursday, and Saturday.
2. Blood Product Inventory Levels must be faxed to ARC on Monday, Wednesday, and Friday BEFORE 10am
3. Desired Inventory Levels
  - a. Actual inventory levels may occasionally drop below desired levels and may exceed these levels. Cryoprecipitate is routinely delivered monthly.
  - b. Blood bank staff members will use discretion when ordering and base decisions on anticipated blood product usage.
  - c. Inventory levels should be stocked a little higher on Fridays to avoid a large blood product delivery on the weekends when staffing is minimal.
  - d. Inventory levels should be stocked a little higher during holiday seasons where there is a typical shortage of blood products.

The following represents the desired minimum inventory levels of blood products normally maintained in inventory.

Red Blood Cells							
O-Pos	O-Neg	A-Pos	A-Neg	B-Pos	B-Neg	AB-Pos	AB-Neg
35	10	25	5	8	3	2	0

Plasma			
Group O	Group A	Group B	Group AB
60	45	20	5

Platelets	Cryoprecipitate
Keep 2 platelets in inventory at all times.	Maintain a minimum inventory of 8 pooled cryoprecipitate products at all times. Pooled cryo is normally shipped monthly.

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Appendix C

# BLOOD SHORTAGE ALERT

There is a regional shortage of O positive and  
O negative red blood cells.

Please defer, if possible, all non-emergent transfusions to  
group O patients.

It is anticipated that this situation will continue through  
*the holiday weekend*. An update will be provided on  
*insert date*.

*Thank you for your cooperation during this critical situation.*

**Pathology Department of Shady Grove and Washington  
Adventist Hospitals**

