

## TRAINING UPDATE

**Lab Location:** SGAH and WAH      **Date Implemented:** 8.18.2014  
**Department:** Blood Bank      **Due Date:** 9.15.2014

### DESCRIPTION OF PROCEDURE REVISION

<b>Name of procedure:</b>
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Blood Bank Disaster Plan
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<b>Description of change(s):</b>
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1. Added Mass Casualty section and new form to issue blood in mass casualty situation (to minimize paperwork)
2. Added requirement to notify the command center if blood is ordered. Security will block entrances to the hospital. The command center will guide "where" the blood should be delivered and notify security to expect delivery to allow driver through.
3. Added requirement to test the emergency response system at least biennially (new AABB requirement)

# Electronic Document Control System



**Document No.:** WAH.BB39[2]

**Title:** BLOOD BANK DISASTER PLAN

**Owner:** LESLIE.X.BARRETT LESLIE BARRETT

**Status:** INWORKS

**Effective Date:** 17-Sep-2014

**Next Review Date:**

Non-Technical SOP

<b>Title</b>	<b>Blood Bank Disaster Plan</b>	
<b>Prepared by</b>	Stephanie Codina	<b>Date:</b> 03/16/2010
<b>Owner</b>	Stephanie Codina	<b>Date:</b> 03/16/2010

<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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Form 03/16/10

**TABLE OF CONTENTS**

1. PURPOSE..... 2  
2. SCOPE..... 2  
3. RESPONSIBILITY..... 2  
4. DEFINITIONS..... 2  
5. PROCEDURE..... 3  
6. RELATED DOCUMENTS ..... 8  
7. REFERENCES ..... 8  
8. REVISION HISTORY..... 9  
9. ADDENDA AND APPENDICES..... 9

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**1. PURPOSE**

This procedure provides systematic and organized guidelines to facilitate continued operations in the event of an emergency situation, disaster, or disruption of critical services involving the blood bank. This procedure should be used with hospital's Code Yellow policy.

**2. SCOPE**

This procedure applies to any situation that disrupts the blood bank's ability to provide an immediate and adequate supply of transfusable blood products to the hospital's patients.

**3. RESPONSIBILITY**

All blood bank staff members must know how to react in a disaster.

**4. DEFINITIONS**

**BLOOD BANK DISASTER** is any domestic disaster or act of terrorism that

- Suddenly requires a much larger amount of blood than usual  
OR
- Temporarily restricts or eliminates a blood collector's ability to collect, test, process, and distribute blood  
OR
- Temporarily restricts or prevents the local population from donating blood, or restricts or prevents the use of the available inventory of blood products and thus requires immediate replacement or resupply of the region's blood inventory from another region

Examples of **INTERNAL** disasters include flooding from a plumbing rupture, hazardous spills, or a fire.

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Examples of EXTERNAL disasters include hurricanes, earthquakes, terrorism, and industrial accidents such as a cloud plume.

CODE YELLOW is the hospital's emergency response plan in the event environment of care is disrupted as in the case of damage to the buildings or grounds due to severe wind storms, tornados, and hurricanes, earthquakes; or the impact on patient care and treatment activities due to such things as the loss of utilities (power, water, telephones) due to floods, riots, accidents, or emergencies within the hospital or surrounding community that disrupts the hospital's ability to provide care.

## 5. PROCEDURE

### A. External Disaster

Step	Action
1	<p>When an external disaster occurs or when a hospital Code Yellow is called, immediately assess the blood supply and complete the "Blood Bank Inventory" form.</p> <ul style="list-style-type: none"> <li>A. Count the number of each blood product by type and document on the form.</li> <li>B. Count all blood products in the blood bank (include crossmatched, uncrossmatched, and unprocessed red blood cells).</li> <li>C. Fax the form to the Incident Command Center. The fax numbers are listed on the forms.</li> </ul>
2	<p>Complete the "Hospital Needs Assessment" form.</p> <ul style="list-style-type: none"> <li>A. The laboratory administrator in charge will contact the hospital command center. He/she will provide information to the blood bank regarding                             <ul style="list-style-type: none"> <li>a. Total current hospital admissions</li> <li>b. Total potential for expected hospital admissions</li> <li>c. Total hospital admissions expected</li> </ul> </li> <li>B. Blood bank staff members will complete the section listing the total number of Type O RBCs available section.                             <ul style="list-style-type: none"> <li>a. Begin with the count of group O red cells from step 1 above.</li> <li>b. Subtract the number of crossmatched red cells from the number.</li> <li>c. Record the final calculated number on the form.</li> </ul> </li> <li>C. Calculate the total number of group O red blood cells needed from the blood supplier.                             <ul style="list-style-type: none"> <li>a. Multiply the total number of expected hospital admissions by 3 (average of 3 units of blood per patient).</li> <li>b. Subtract the total number of group O rbc's currently available from that number.</li> </ul> </li> </ul>

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Document: WAH.BB39[2] Status:INWORKS,Effective:9/17/2014, Check Version Before Use

Step	Action
3	<p>The blood bank must immediately communicate the following information to the primary blood supplier based on the form completed in step 1 above:</p> <ul style="list-style-type: none"> <li>A. Nature of the emergency</li> <li>B. Number of current and expected hospital admissions</li> <li>C. Types of expected injuries</li> <li>D. Current blood inventory levels of group O red blood cell products.</li> </ul> <p>In a disaster situation that affects more than our hospital,</p> <ul style="list-style-type: none"> <li>A. The American Red Cross (ARC) is our primary blood supplier.</li> <li>B. We will only report our needs to ARC regardless of what other suppliers offer.</li> <li>C. We will communicate our needs frequently to update the blood supplier on changes as they happen.</li> <li>D. A disaster task force will be assembled of representatives from various blood banking organizations, blood collector and hospital suppliers, and government agencies. We will not be included in the task force.</li> <li>E. Our primary blood supplier will represent our needs to the task force. No member of the blood bank staff should contact the task force directly.</li> <li>F. The hospital will not communicate blood needs to the media; AABB and the task force will coordinate and disseminate a clear and consistent message regarding the blood supply to the public.</li> </ul>
4	<p>Recall personnel to work as needed using the recall list in the Lead Tech Manual.</p>
5	<p>If blood inventory levels of any blood product may become inadequate.</p> <ul style="list-style-type: none"> <li>A. The lab administrator in charge, blood bank supervisor/manager, or Blood Bank Medical Director will notify hospital personnel via Emergency Laboratory Alert and report the information to the Hospital Command Center.</li> <li>B. Blood bank staff members will work with ARC to import blood products as quickly as possible based on hospital needs, predicted needs, and national supply.</li> <li>C. The following blood alert levels will be utilized in the Lab Alert:             <ul style="list-style-type: none"> <li>a. Blood Alert <b>GREEN</b>: Inventories of all blood products are adequate to meet patient blood product needs. No action is indicated.</li> <li>b. Blood Alert <b>YELLOW</b>: Inventories of one or more blood product are or may become inadequate to meet patient blood product needs. Treating physicians will be asked to review their blood product orders and transfused only when urgently needed prevent eminent blood product shortage.</li> <li>c. Blood Alert <b>RED</b>: Inventories of one or more blood product are inadequate to meet patient needs. All blood product orders are subjected to concurrent review by the Blood Bank Medical Director or designee. Ordering physicians are asked to reduce or defer the use of blood products. Routine surgical procedures may be cancelled or postponed. Emergency-only transfusion policies may be necessary.</li> </ul> </li> </ul>

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Document: WAH\_BB39[2] Status: INWORKS, Effective: 9/17/2014, Check Version Before Use

Step	Action
6	<p>ARC will put alternative communication systems in place in the event that the phone lines do not work properly due to the disaster. For immediate communication, try the following options:</p> <ul style="list-style-type: none"> <li>A. Level 1: Landline phone numbers for ARC order management are 800.233.4640. ARC also operates two emergency lines for use when other numbers are disabled 215.451.2630 and 215.451.2643.</li> <li>B. Level 2: ARC will contact each client to establish blood needs.</li> <li>C. Level 3: ARC will e-mail each blood bank contact on file to establish blood needs and provide alternate contact information.</li> <li>D. Level 4: ARC will contact hospitals via satellite phone.</li> </ul> <p>Blood bank staff members will contact the incident command center if communication between the hospital and blood supplier is compromised. The hospital has alternate emergency communication methods.</p>
7	<p>A blood bank staff member will notify the command center when blood products are being ordered for delivery.</p> <ul style="list-style-type: none"> <li>A. The command center will instruct where blood should be delivered based on the nature of the emergency and patient flow. The ED entrance may be closed for deliveries.</li> <li>B. Blood bank will notify the command center as to who will be delivering the blood products (ARC courier, Runners courier, etc) and what is expected.</li> <li>C. Security will guard all doors to prevent unauthorized access. Security must be able to verify blood delivery personnel.</li> </ul>
8	<p>ARC will put alternative transport systems in place in the event normal delivery methods are impaired due to a disaster to include transport by the State Police or helicopter.</p> <ul style="list-style-type: none"> <li>A. Level 1: Normal ARC van delivery to the hospital</li> <li>B. Level 2: Hospital courier or taxi</li> <li>C. Level 3: State police or other emergency personnel</li> <li>D. Level 4: Helicopter transport</li> </ul>
9	<p>Blood bank staff members will immediately assess the inventory of reagents and supplies for adequacy.</p> <ul style="list-style-type: none"> <li>A. Notify Quest purchasing and/or the command center if there is an immediate need for reagents or supplies (within 24 hours).</li> <li>B. Notify Quest purchasing if there is a future need (greater than 24 hours) for reagents/supplies or replacement reagents/supplies.</li> <li>C. Quest purchasing will contact other Quest sites (if applicable) and manufacturers to emergency ship reagents/supplies.</li> </ul>

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Document: WAH.BB39[2] Status: INWORKS, Effective: 9/17/2014, Check Version Before Use

### B. Internal Disasters Requiring Relocation of the Blood Bank

Step	Action
1	<p>In an internal disaster, blood products and operational equipment must be moved in an organized, systematic, and controllable manner and in such a way that minimizes the impact the event has on patient care and a disruption of services.</p> <ul style="list-style-type: none"> <li>A. The administrator in-charge, tech in-charge, or pathologist on-call will make the decision to relocate.</li> <li>B. The hospital will be notified of relocation via an Emergency Laboratory Alert.</li> <li>C. The relocation area will be determined based on the degree of internal damage present.</li> <li>D. When applicable, operations will be transferred to the sister hospital.</li> </ul>
2	<p>Immediately pack all group O red blood cell products (Rh-positive and Rh-negative) into validated storage boxes or blood transport coolers using established load restrictions.</p> <ul style="list-style-type: none"> <li>A. Pack Rh-positive and Rh-negative blood products in separate containers.</li> <li>B. Clearly label each box by contents (example: O-Neg RBCs or O-pos RBCs).</li> <li>C. Follow established procedures for packing blood products.</li> <li>D. The boxes vary, but average 18" w x 16" d x 16" h.</li> </ul>
3	<p>Obtain the equipment and supplies listed in Appendix A, load on a cart(s), and transport to the temporary location. Additional equipment/supplies may be included if time permits.</p>
4	<p>Manual testing will be performed in the event of blood bank relocation.</p>
5	<p>Forward the blood bank telephones to another area that can address phone calls.</p>
6	<p>As soon as possible after relocation, place a temperature indicator on each red blood cell unit in a temporary storage container.</p>
7	<p>If extended relocation is necessary, the Blood Bank Manager and Blood Bank Medical Director will be responsible for procuring alternate storage containers for blood products and additional equipment/supplies.</p>

### C. Mass Casualty Situation

Step	Action
1	<p>Large amounts of blood products may be needed quickly in a mass casualty situation.</p>



Document: WAH.BB39[2] Status: INWORKS, Effective: 9/17/2014, Check Version Before Use

2	<p>When patients arrive, they will be identified with the following:</p> <ul style="list-style-type: none"> <li>A. Patient name or description (adult, white, male, etc).</li> <li>B. Disaster tag number</li> <li>C. Blood bank number (Hollister number)</li> </ul>
3	<p>ABO/Rh typing will be performed as soon as possible to ensure judicious use of the blood supply. Antibody screen and crossmatch testing will be performed as time permits. Blood should never be withheld in an emergency situation.</p>
4	<p>Patients with unknown blood type will be given group O emergency release red cells.</p> <ul style="list-style-type: none"> <li>A. O-negative red cells will be reserved for females under the age of 50.</li> <li>B. O-positive red cells will be given to all other patients.</li> <li>C. Type-compatible/type-specific blood products will be given to patients who have a current ABO/Rh type on file. Blood bank must have 2 blood types on file before releasing non-O red cells.                             <ul style="list-style-type: none"> <li>a. When feasible, a second tube should be collected and tested per ABO confirmation procedure.</li> <li>b. In emergency situations, the same tube may be tested by 2 different techs in the blood bank.</li> </ul> </li> </ul>
5	<p>To save time, blood will be issued using the "Mass Casualty Blood Issue Log." If needed, blood bank staff members will pack blood into transport boxes. The staff members will bring the blood to the ED or triage area and issue emergency release blood products from that site.</p> <ul style="list-style-type: none"> <li>A. O-negative red cells will be packed in one box labeled, "O-negative red cells for females &lt;50 years of age only."</li> <li>B. O-positive red cells will be packed in a second box labeled, "O-positive red cells."</li> </ul> <p>Patients will be given type-specific or ABO/Rh compatible blood products once a current blood type is on file.</p>

**D. Post-Disaster Evaluation**

Step	Action
1	<p>The blood bank response to disaster activities will be evaluated after each code yellow event (actual or drill) and at least biennially (every two years).</p>

Form rev 10/01 3/31/10

Document: WAH.BB39[2] Status:INWORKS,Effective:9/17/2014, Check Version Before Use

Step	Action
2	<p>The assessment will be documented on the “Blood Bank Disaster Summary Report” sheet. The following items will be documented:</p> <ul style="list-style-type: none"> <li>A. Affected areas</li> <li>B. Severity of incident</li> <li>C. Facilities affected</li> <li>D. Description of event</li> <li>E. Essential functions impacted</li> <li>F. Description of issues noted, lessons learned, corrective action, and preventive action</li> </ul> <p>The completed report will be maintained for a minimum of 2 years.</p>
3	<p>Procedures will be updated/created each time opportunities for improved handling of future disasters are identified.</p>

**6. RELATED DOCUMENTS**

Hospital Policies –

- Emergency Management Plan (Code Yellow)
- Code Red, Fire Prevention Response Plan
- Hazardous Weather Plan
- Bomb Threat Plan
- Utility Outage Plan
- Bioterrorism Response Plan

SOP: Confirmation of Patient’s Blood Type (ABO Retype)

Form: Blood Bank Inventory Sheet (Code Yellow) (AG.F189)

Form: Hospital Needs Assessment Form Blood Bank (AG.F190)

Form: Mass Casualty Blood Issue Log (AG.F301)

Form: Blood Bank Disaster Summary Report (AG.F302)

**7. REFERENCES**

- i. 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.
- ii. Standards for Blood Banks and Transfusion Services, 2014. AABB, 29<sup>th</sup> ed. AABB Publishing, Bethesda, Maryland.
- iii. AABB Disaster Operations Handbook: Coordinating the Nation’s Blood Supply During Disasters and Biological Events, 2008, AABB Publishing, Bethesda, Maryland.
- iv. American Red Cross Disaster Response Plan, version 1.0, 2004, American Red Cross Blood Services Greater Chesapeake & Potomac Region, Baltimore, Maryland.

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**8. REVISION HISTORY**

<b>Version</b>	<b>Date</b>	<b>Reason for Revision</b>	<b>Revised By</b>	<b>Approved By</b>
000	4.27.12	Section 5: Add requirement to complete BB inventory sheet and fax to command center. Moved Equipment/Supplies list to appendix A and added dimensions	SCodina	NCacciabeve
001	8.18.14	Section 5: Updated ARC phone numbers and added emergency phone numbers. Added guidance for obtaining emergency/replacement supplies. Added Mass Casualty Section and created new form. Updated Post-Disaster Evaluation section (new form and requirement to test at least every 2 years). Section 6: Added forms 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: Minimum Equipment/Supply List for Emergent Relocation

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**Appendix A  
 Minimum Equipment/Supply List for Emergent Blood Bank Relocation**

Description	Quantity Required	Width (Inches)	Depth (Inches)	Height (Inches)	Storage
Centrifuge	1 Each	11	13	16	Countertop
Serofuge	2 Each	11	19	19	Countertop
Cell Washer	1 Each	14	17	25	Countertop
Dry Heat Block	1 Each	8	14	8	Countertop
Agglutination Viewers	2 Each	4.5	9	14	Countertop
Timers	2 Each	3	1	3	Countertop
Reagent Rack	2 Racks	8	3.5	5	Countertop
QC Rack	1 Rack	7	5	6	Countertop
Antisera Rack	1 Rack	8	5	6	Countertop
Antibody Panel with Antigam	1 Panel 10 Antigam Copies	9	6	1	Countertop
Test Tube Racks	3 Racks	10	3	5	Countertop
Test Tubes	4 Boxes	3	12	4.5	Either
Saline Cubes	2 Cubes	10	10	10	Either
Sharps Container	1 Each	15	16	30	Floor
Biohazardous Trash Container	1 Each	17	16	34	Floor
Regular Trash Container	1 Each	12	16	21	Floor
Gauze	1 Pack	5	4	12	Countertop
Disposable Pipettes	1 Box	6.5	10.5	8.5	Countertop
Temperature Indicators	1 Box	3	4.5	5.5	Countertop
Saline Squirt Bottles	2 Each	3	3	7	Countertop
Scissors	2 Each	N/A	N/A	N/A	Countertop
Segment Cutters	1 Pack	12	16	3	Either
Gloves	3 Boxes (1 per size)	5	10	3	Countertop
Marking Pens	2 Each	N/A	N/A	N/A	Countertop
Ballpoint Pens	2 Each	N/A	N/A	N/A	Countertop
Crossmatch Tags	1 Box	10	12	11	Either
Uncrossmatched Blood Stickers	1 Box	4	4	1	Countertop
Downtime Forms	All Available	9	11	8	Countertop

**Minimum Amount of Counterspace Required for Operation = 74" x 24"**

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# Electronic Document Control System



Quest  
Diagnostics

**Document No.:** AG.F.301[0]

**Title:** Mass Casualty Blood Issue Log

**Owner:** LESLIE.X.BARRETT LESLIE BARRETT

**Status:** INWORKS

**Effective Date:** 17-Sep-2014

**Next Review Date:**



- Shady Grove Adventist Hospital
- Washington Adventist Hospital
- Germantown Emergency Center

### Mass Casualty Blood Issue Log

Patient Name or Description (adult, white, male, etc)	Disaster Tag Number	Blood Bank Number	Blood Product DIN	Issue Time	Issued To	Data Entry (Disaster Recovery)

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# Electronic Document Control System



**Document No.:** AG.F.302[0]

**Title:** Blood Bank Disaster Summary Report

**Owner:** LESLIE.X.BARRETT LESLIE BARRETT

**Status:** INWORKS

**Effective Date:** 17-Sep-2014

**Next Review Date:**



### Blood Bank Disaster Summary Report

Date of Disaster/Drill: \_\_\_\_\_

- Drill
- Disaster Event

**Affected Areas:**  Blood bank and/or lab  
 Hospital  
 Surrounding community

**Severity:**  Minor (do not decrease ability to provide services)  
 Moderate (minor effect on ability to provide services)  
 Severe (loss of operations for any period of time)  
 Mass casualty situation

**Facilities Affected:**  Shady Grove Adventist Hospital  
 Washington Adventist Hospital  
 Germantown Emergency Center

**Description of event:**

<b>Essential Functions</b>	<input type="radio"/> Facility	<input type="radio"/> Logistics
<b>Impacted:</b>	<input type="radio"/> Security/safety	<input type="radio"/> Utilities
	<input type="radio"/> Vital records	<input type="radio"/> IT
	<input type="radio"/> Communications	<input type="radio"/> Staffing
	<input type="radio"/> Other:	

**Description of issues noted and lessons learned (include corrective and preventive actions):**

Completed by/date: \_\_\_\_\_

Reviewed by/date: \_\_\_\_\_

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