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| **University of Washington,** **Harborview Medical Center****325 9th Ave. Seattle, WA, 98104****Transfusion Services Laboratory****Policies and Procedures Manual** | **Original Effective Date:**May 6, 2013 | **Number:** **12102-3** |
| **Revision Effective Date:**4/7/2022 | **Pages:** **5** |
| **TITLE: Quality Policy: Transfusion Service Disaster Plan** |

**Purpose**

The Transfusion Service Disaster Plan is designed to ensure effective response to disasters or emergencies. This plan works in conjunction with the following:

* Department of Laboratory Medicine and Pathology (DLMP) Disaster Plan
* DLMP Extreme Temperature Response Plan
* Laboratory Incident Management Plan
* Hospital Incident Command System (HICS)/Harborview Medical Center Disaster Plan
* Regional Emergency Management Plans

**Scope**

* Internal disasters within the department or the HMC campus as a whole; i.e. fires, explosions.
* External disasters encompassing local, state, or national geographic areas, i.e. earthquakes, fires, explosions, severe weather, power failures, etc.

**Objectives**

* Provide specific instructions for the Transfusion Service for ongoing evaluation of the workplace and workplace practices to reduce or mitigate the potential for damage or injury in the event of a disaster.
* Outline specific roles and responsibilities to enable the Transfusion Service staff to respond to an emergency or disaster in an organized and effective manner.
* Protect the health and safety of patients and staff members during and after a disaster or emergency.
* Ensure the continuation of Transfusion Service operations during and after a disaster, or in the event of an evacuation of the laboratory.

**Mitigation**

The DLMP takes a proactive approach to minimizing the impact of disasters upon the department, hospital, and individual staff members. The directors, managers, and safety teams have identified and minimized risks within each division, conducting training to prepare staff for appropriate action during a disaster. Mitigations efforts include the following:

* Regular safety audits conducted in each division to review the workplace for health and safety risks.
* Regular review of Emergency supplies, and supply checklists.
* Training and annual drills to familiarize staff with appropriate response to potential disaster situations, including mass casualty, to ensure the continuation of patient care.
* Annual LIS Downtime Competency Assessment
* Earthquake mitigation devices installed in various areas of the laboratory and checked on a regular basis.
* Regular review of hazardous materials storage to ensure protection during fire or earthquake.
* Annual review of the Emergency Plan with the Blood Supplier.

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| **Step** | **Action** |
| 1 | **General Preparedness*** The Transfusion Service will follow the DLMP Disaster Plan with the addition of division specific preparations detailed in this plan.
* The Transfusion Service disaster response policies will be reviewed biennially by the Transfusion Manager.
* TSL Manager or designee participates in the monthly HMC Emergency Management Committee meeting
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| 2 | **Personnel*** The TSL staff will be divided into three teams.
* Team A—Staff currently at work or on the way to work.
* Team B—Staff not currently scheduled to work but available to come in as relief or additional staff.
* Team C—Staff who are not able to report to work at this time (vacation, no transportation, family care issue, injuries, etc.)
* Staff availability will be maintained by the Floor Warden or designee.
* Decisions on staffing will be made by the TSL Manager, Lead, or Floor Warden.
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| 3 | **Laboratory Services*** The minimum number of staff required for essential operations in TSL is 2
* The TSL Medical Director or designee and/or Transfusion Service Manager will determine what limited menu of testing will be available in the case of system failure.
* The TSL Manager or designee will contact the critical supply vendors to apprise them of the disaster and schedule emergency shipments of reagents, processing supplies, and other test supplies.
* Sharing or pooling of critical supplies within the community will be coordinated by TSL Manager or Medical Director.
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| 4 | **Blood Supply*** The TSL Manager or designee will contact the blood supplier with the following:
* Information about the nature of the disaster or emergency.
* Current Blood Product inventory.
* The TSL Manager or designee will request from the blood supplier:
* Inventory Levels of products.
* Availability of courier or transportation options.
* Storage availability for products needing to be relocated.
* Plans for importing blood from other areas to supplement inventories.
* TSL Staff will place inventory order based on anticipated needs as disaster details are available.
* TSL Management will make decisions about contacting other vendors if necessary, following evaluation of the primary blood supplier’s capacity and resources.
* TSL Manager will communicate availability of inventory to the Lab Incident Commander and the Command center immediately.
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| **Step** | **Action** |
| 5 | **Mass Casualties**—The TSL Trauma Response Processes will be followed in addition to the following:* When mass casualties are anticipated, the TSL staff will prepare multiple trauma packs.
* Trauma packs will be stored in the ED blood refrigerator; portable refrigerators will be assigned to OR or patient care areas and maintained by TSL staff.
* O Pos and O Neg RBCs and whole blood will be issued according to the Selection of Red Blood Cell Units procedure.
* TSL staff will take over the management of the ED blood refrigerator and use it as storage for universal blood products support in the Emergency Department
* If the elevators are inoperable:
* Load Trauma packs into validated blood storage boxes with wet ice per SOP Packing Blood Products for Shipment, and carry via stairway, using 2 people.
* Coordinate with Facilities/Engineering for moving portables via alternate route through parking garage and/or receiving dock to ED (does not require elevators.)
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| 6 | **Relocation of Operations during disaster*****Temporary (Within 24 Hours)*** Remote Location site is GWH 47.* TSL staff will request additional validated shipping boxes from supplier, if possible.
* Endurotherm boxes for platelet storage
* Large and medium storage boxes for frozen and refrigerated components
* **Note:** Large and medium storage boxes are validated up to 20 hours for maximum transport time by Bloodworks Northwest with 10 lbs wet ice minimum. TSL Staff will repackage each box approximately every 18 hours.
* Products will be packaged for relocation based on the blood supplier packaging information for each type of validated shipping box.
* TSL Staff will attach a temperature log to each box or place it under the top flaps.

TSL Staff will set a timer to ensure temperatures are recorded every 4 hours.* Consider using portable refrigerators

***Extended (Greater than 24 Hours)*** Remote Location site is determined by TSL Management and Lab Incident Commander.* Inventory Relocation may be possible based on availability of services:
* Power availability of potential site will be accessed by the Floor Warden in communication with Facilities Engineering.
* Relocation of storage units will be coordinated with Facility/Engineering.
* If relocation of inventory is imminent, TSL staff will consolidate inventory into a minimum of storage units, and more if space allows:
* One freezer for plasma.
* One platelet incubator/agitator
* Two single door refrigerators with red cells and thawed plasma
* One portable with trauma packs
* One portable with manual testing reagents
* Two portables for transporting products when needed.
* Tissue Freezer and contents (if possible)
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| **Step** | **Action** |
| 7 | **Equipment and Supplies**Load carts or boxes with the following minimum supplies for remote operations:

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| Patient Testing SuppliesFor two manual benches | 2 Cellwashers, 2.5 Amps | 1 EBA 20 centrifuge, 0.6 Amps |
| 2 bags of segment piercers  | Timers |
| Reagent racks, additional reagents | 2 Saline cubes |
| 1 case of 12 x 75 tubes | Wash bottles |
| Gauze \* | Biohazard containers/bags |
| Test tube racks | Agglutination viewers, 0.5 Amps |
| Sharpie pens \* | Scissors \* |
| Heatblocks, 1.6 Amps | Gloves: XS, S, M, L, XL |
| Pipettes \* | Trash cans |
| Component Processing  | Plasma Overwraps \* | Hematrax Printer and PC |
| Dry Ice Gloves | Helmer Plasma Thawer, 10 Amps |
| Ice Scoop | Bucket for filling thawer |
| Zip lock bags \* | Ark Microwave, 15 Amps |
| Miscellaneous | Forms \* | Stickers, Office supplies \* |
| Transfusion Record Forms | Inventory request forms |
| BPR forms \* | Antibody ID worksheets |
| Downtime Box and Forms | Procedure Manuals |
| Power strips, 15 Amp load capacity | Disaster Bag |
| Reagent Receipt Notebooks | Printek Printer, 3.5 Amps |
| NIST Thermometer |  |
| Tissue (extended relocation | Freezer Key | Tissue Tracking Records |
| Freezer Unlocking device | Tissue Tracking Log |
| Cryo Pen | Rubber Bands \* |
| Tissue ID Number labels |  |

Asterisked items are located in the Disaster Relocation Supplies Box  |
| 8 | **Response to Biological Attack*** Biological attack may or may not require blood transfusion, but the attack may substantially limit the blood supply by affecting donor suitability.
* Transfusion Requirements will be monitored by the TSL Medical Director and Manager, and communication with the blood supplier will be ongoing.
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| 9 | **Response to Extreme Temperature in TSL*** Follow DLMP Extreme Temp Response Plan
* If room temperature continues to rise:
* Turn off testing analyzer (if testing personnel are able to handle workload)
* Contact hospital administrator on call (AOC) and ask if fridges and freezers can be moved to another area and refrigeration assistance:
* Combine/consolidate refrigerators and freezer contents as much as possible.
* If able to move to another location, relocate and plug in empty units.
* If unable to move to another location, unplug empty units. Place towels around base of freezer to collect water. Have engineering silence all alarms.
* All equipment will need return to service performed before placing back into use.
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| **Step** | **Action** |
| 10 | **Post Disaster Evaluation**The Transfusion Service Medical Director and Manager are responsible for the following:* Evaluation of the effectiveness of actions taken during the disaster.
* Examine and discuss “lessons learned”.
* Develop recommendations from stake holders for improved response and effectiveness.
* Use feedback from external and internal customers.
* Identify opportunities for improvement.
* Implement changes to this plan expeditiously.
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**References**

Standards for Blood Banks and Transfusion Services, Current Edition. AABB Press, Bethesda MD

AABB Disaster Operations Handbook, October 2008