**Purpose:**

To describe the Harborview Medical Center (HMC) Transfusion Service (TS) management of the Emergency Department (E.D.) refrigerator.

**Policy:**

TS is responsible for stocking and maintaining the monitored blood storage refrigerator in the Emergency Department. Inventory Management and Equipment Maintenance policies apply. Use of units stored in the E.D. refrigerator by clinical care staff is limited to Massive Transfusion Protocol (MTP) response.

**Procedure:**

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| **Step** | **Action** | **Related Documents** |
| **Inventory Management**  |
| **1** | Every shift:* Print report of E.D. refrigerator contents.
* Perform reconciliation:
* SmarTerm/Function BBR/#2/AREA: EDH
	+ Products in the E.D. refrigerator
* Segments in the rack.
* Resolve any discrepancies. See Table B: Problem Resolution
 | Daily Operations Reports in Sunquest Table B: Problem Resolution |
| **2** | Remove plasma with 2 days remaining shelf lifeRemove RBCs with 7 days remaining shelf life |  |
| **3** | Products returned to TSL:* Correct status/location in Blood Location function
* Determine if unit returns to inventory or is quarantined/discarded.
* Record action on reverse side of URU card.
* RBCs: discard unit segment from Blood Location Rack.
* Store or discard units.
* File URU cards in the BPR folder.
 | Changing Blood Location in SunquestQuarantine of Blood ProductsBlood Product Storage PolicyURU stamp |
| **4** | E.D. refrigerator is password protected.* Access is limited to nurses and TSL staff.
* Nursing Access code: 9111
* TSL Access code: 3088
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| **Preparing Units to Stock E.D. Refrigerator** |
| **Step** | **Action** | **Related Documents** |
| **1** | * Select RBCs and Plasma components.
* Attach Transfusion Record.
 | Stock Trauma Pack MaintenanceUsing TAG for Emergency Release of Blood Products |
| **2** | Prepare and attach TSL Urgent Release Unit Record:* Red cards for RBC and Yellow cards for Plasma are preferred
* Circle **ED** in upper right corner
* Record unit number on the form using a sticker and/or written unit number and aliquot designation
* Check product type box: RBC or Plasma
	+ LTP: add Low Titer Plasma sticker

Red Blood Cells:* Label glass 12x75 tube with RBC unit number including aliquot designation.
* Place one segment from RBC unit in the labeled tube.
* Store in the Blood Location Rack in TSL.
 | Urgent Release Unit Record  |
| **3** | Transfer products in Sunquest to E.D. Refrigerator location. | Changing Blood Location in Sunquest |
| **4** | * Record Tech ID for preparer.
* Perform review by 2nd tech:
* Transfusion Record
* URU Record
* Segment in Blood Location Rack
* Location transfer in SQ
 |  |
| **5** | Restock refrigerator up to levels identified in Table A. |  |

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| **Massive Transfusion Protocol Response**  |
| **E.D. staff** |
| **1** | Notifies TSL of Massive Transfusion Protocol:* Phone call to TSL
* CPOE MTP order: Phone confirmation required
* Pager sounds when refrigerator door is opened in E.D.: Phone confirmation required

***Note:*** *Do NOT hesitate to go to E.D. and assess the situation. Call TSL if a Trauma/MTP response is indicated.* |  |
| **Nursing Staff** |
| **2** | * Removes RBCs and/or plasma for transfusion during the period between notification and TSL staff arrival.
* URU Record:
	+ Attaches ORCA/EPIC label
	+ Prints physician name
	+ Time stamps OUT and signs for product removal
	+ Places in Unit Card basket in E.D. Refrigerator
 |  |
| **Massive Transfusion Protocol Response (continued)** |
| **Step** | **Action** | **Related Documents** |
| **Nursing Staff** |
| **3** | For units returned to the E.D. Refrigerator:* Retrieve URU record from box.
* Time Stamp RETURNED and sign
* Place URU record back in the box
* Place unit in the Returns/Quarantine bucket in the E.D. Refrigerator
 |  |
| **TSL staff** |
| **4** | * Receives call from E.D. to respond to Trauma/MTP.
* Confirms by phone any MTP CPOE or E.D. Refrigerator pages
* Responds to Trauma/MTP per SOP.
 | Massive Transfusion Procotol SOP |
| **5** | * Obtains physician signature on Request for Urgent Blood Release form.
 |  |
| **6** | * Utilizes stock E.D. Refrigerator units as needed for patient resuscitation.

*Note: E.D. Refrigerator is for storage of stock trauma response products only.* ***Units allocated to a patient are not to be stored in the E.D. Refrigerator*.** |  |
| **7** | Platelets/Cryo in a Platelet Box:* Do not leave on the table next to the E.D. refrigerator
* Platelet Box can be left on top of the portable refrigerator
 |  |
| **8** | Return to TSL: * Collect URU Record(s) from E.D. refrigerator
* Count E.D. Refrigerator stock.
* Units removed and returned will be in the Returned (Quarantine) bucket. Take units back to TSL.
 |  |
| **9** | * Reconcile inventory & disposition of all released blood products on the URU Records.
* Evaluate components removed and returned for acceptability to placement in stock or quarantine/discard based on URU Record.
* Stamp back of URU Record with URU stamp
* Update Sunquest with **transfused units**:
	+ Transfused units do not need to be moved back to the “H” location in order to allocate and issue in SQ BOP.
	+ Place an accession number sticker on the back of the URU record
	+ Record actions completed.
* Staple URU Records to Trauma/MTP paperwork.
* Record review on the top right corner of the paperwork.
* Discard unit segments from the Blood Location Rack.
 | Using Portable Blood RefrigeratorsCompatibility ProcessReceiving and Processing Emergency Release OrdersTable B: Problem Resolution |
| **10** | Restock E.D. refrigerator to levels in Table A. |  |

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| **Mass Casualty/Disaster Response** |
| **1** | In the case of mass casualties and/or disaster response, TSL is expected to proceed to the E.D. Refrigerator. | QP: Transfusion Service Disaster Plan |
| **2** | TSL will:* Remain at the E.D. Refrigerator
* Distribute blood components
* Remain in contact with TSL for maintaining adequate blood component stock in the E.D. Refrigerator.
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| **Refrigerator Maintenance and Quality Control** |
| **1** | Routine maintenance and quality control will be performed by TSL. | * Critical Equipment List
* Maintenance and Troubleshooting of Blood Storage Devices
* Responding to Temperature Alarms
* Schedule for Routine Maintenance of Equipment
 |
| **2** | Time stamper at E.D. Refrigerator will be tested daily for operation and time accuracy. | * CLT Shift Responsibilities Checklist
 |

**Table A: Emergency Department Refrigerator Quantities**

|  |  |  |
| --- | --- | --- |
|  **Quantity** | **Product**  | **ABO/Rh** |
| 2  | RBC | OPOS |
| 2  | RBC | ONEG |
| 2 | Plasma | 1st choice: Low titer plasma (LTP) 2nd choice: group AB  |

**Table B: Problem Resolution**

|  |  |
| --- | --- |
| **Problem** | **Action** |
| Inventory list does not reconcile with E.D. Refrigerator contents | * Review SQ record.
* Review Trauma paperwork since last reconciliation.
* Search inventory for unit number(s)
 |
| URU card does not have a patient identifier; unit is missing from the E.D. Refrigerator | Contact the Charge Nurse; complete a PSN |
| Unit and URU card is missing | Contact the Charge Nurse and complete a PSN |
| Unit is in the return bucket but the URU card does not have a Returned Time | * Contact the Charge Nurse
* Print a list of E.D. Refrigerator Door Alarms
 |
| Unit is missing. URU card does not have a timestamp or signature | * Confirm the Transfusion Record is on the patient chart.
* Use the E.D. Refrigerator Door Alarms report or Transfusion Record to estimate the removal time for SQ issuing.
 |
| No physician’s name printed on the URU card | Physician’s name is on the Urgent Release form. |

**References:**

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