**Purpose:**

To describe the Harborview Medical Center (HMC) Transfusion Service (TS) response to a medical emergency situation enacted by a Trauma page. *If an MTP is activated, follow MTP procedure.*

**Policy:**

TS staff are an integral part of the Trauma Response Team and should be ready and available at all times to respond to a trauma response page/call with blood components.

**Procedure:**

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents** |
| **Trauma Response Activation** |
| 1 | In the event of a trauma or medical emergency situation, the Trauma Phone Tree is enacted. * Members of the Trauma Response Team are notified via pager, requiring a response to the Emergency Department (ED) or O.R. if direct admission to OR instead of ED.
 |  |
| 2 | The TSL **Trauma Pagers** are kept at the front desk in TSL.* The **E.D. Refrigerator Pager** is kept at the front desk in TSL.
* Volume is set to be easily heard throughout TSL by all staff.
 |  |
| 3 | The Trauma Phone Tree activated with “Full trauma response to the ED” or similar message displayed on the trauma pager |  |
| 4 | When a trauma page is received:* + - Read the Trauma Page
		- Notify TSL staff of potential response
		- E.D.: See if further action is required at this time
		- O.R.: Prepare to respond

When one or more of the following occur:* + Phone call from E.D. - Respond to MTP activation requesting full response
	+ CPOE MTP order prints in TSL: Call Patient Care Location for clarification of MTP activation:
	+ E.D. Refrigerator Pager sounds. Product is being removed. Call Patient Care Location for clarification of MTP activation:
 | Massive Transfusion Protocol |

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents** |
| **Trauma Response Activation** |
| 5 | Communicate the TSL ability to respond* TSL staff are responding
	+ - TSL staff cannot respond but can issue emergency release RBC, plasma and platelet plus further blood products as required
		- Obtain any known information on the patient
		- Record known information on the erasable board in TSL:
	+ Age
	+ Gender
	+ Location
	+ Initial Diagnosis
	+ ***NOTE:*** *If the required information is not known about the patient at the time of the page, phone call and/or refrigerator page, do not delay trauma response.*
 | Selection of Red Blood CellsSelection of Platelets, Plasma, and Cryoprecipitate |
| **Trauma Response Procedure**  |
| 1 | Inform all TS techs of the trauma response activationPrepare to leave TS immediately with blood component quantities specified in Table B:* + Load portable blood refrigerator with age appropriate blood components:
		- Trauma Whole Blood pack
		- Trauma RBC Pack
		- Trauma Plasma Pack(s)
* Package Platelet in Platelet container.
	+ Place Trauma Platelet container on top of portable blood refrigerator or on platelet shelf
	+ Equivalent number/type RBC, plasma and platelet if no Stock Trauma Packs immediately available
	+ Add refrigerator number, responding tech name and phone number to the erasable board
	+ Paperwork:
		- Portable Refrigerator Response Logs
		- Request for Urgent Product Release form
	+ Pick up a Portable phone, a pen, and an Elevator Key.
 | Blood Component Selection PolicyUsing Portable Blood refrigeratorsPacking Blood Products for TransportPortable Refrigerator Response LogRequest for Urgent Blood Product Release formTable B: Trauma and Massive Transfusion Protocol Response Quantities |
| 2 | * ED Response: Utilize an Elevator key to call an elevator
* OR Response: Don (or obtain in the O.R.) the appropriate attire
 |  |
| 3 | Upon arrival obtain:* + O.R.: Estimated time of patient arrival (ETA)
	+ Location where the patient is/will be treated (patient information board/Whiteboard)
	+ Patient’s age and gender
	+ Any other pertinent information
 |  |
| 4 | Confirm patient information matches phone conversation.* + - Verify Rh type of stock uncrossmatched RBCs is correct based on patient’s age and gender.
		- Contact TSL for replacement RBCs if inappropriate Rh RBCs are in the portable refrigerator.
 | Selection of Red Blood Cell Units |
| 5 | Go to the patient location (for example, Resus 2, OR1).* + Plug in the portable blood refrigerator.
	+ Attach Trauma Team Identification Sticker to scrubs: **BLOOD BANK**
	+ Trauma Team contact
* If you don’t know who to talk with, ask!
* Introduce yourself
* Notify team of available products including platelet
* Urgent Release form: Obtain signature for the blood removed from the E.D. refrigerator and/or stock RBC trauma packs.
	+ E.D: Trauma Doctor
	+ O.R: Anesthesiologist
* Contact TSL with patient information
 |  |
| 6 | Organize refrigerator so that components are dispensed in the order written on the PRR Log. Make every effort to continue this practice until one pack is completely used before starting with the next pack.* + - * Begin to dispense blood components as requested by the Trauma Team.
* Call TSL for additional units after dispensing:
	+ 2nd RBC, whole blood, or plasma
	+ Platelet
* Utilize RBCs and plasma in the E.D. Refrigerator as needed.
 | Table A: Instructions for Completing the Trauma LogManagement of the Emergency Department Refrigerator  |
| 7 | **Use of Low Titer Plasma (LTP) and Whole Blood (LTWB)*** Limit transfusion of LTP and LTWB to less than 10 units in adult patients, if possible. If more than 10 units given to adult of unknown or non-compatible blood group, notify Medical Director on next business day by printing out BBI summary.
* Infants and small children: use of LTP should be minimized to during emergency when AB plasma is not available or there will be a delay. Use of LTWB should also be minimized. Notify Medical Director as soon as possible.
* Subsequent transfusion of LTP and LTWB to a non-group compatible patient (beyond 10 LTP and LTWB in an adult patient) should be performed after consultation with the TS Lead, Manager, and/or Medical Director.
* Any evidence of hemolysis is to be immediately investigated and reported to the Medical Director.
 | Receiving and Processing Low Titer PlasmaReceiving and Using Low Titer Group O Whole BloodTransfusion Reaction Investigation Process |
| 8 | At the point of care:* + Listen to the nurses or field medic's report when the patient arrives as this will help anticipate the need for blood components
	+ Pay attention to the treatment of the patient
	+ Remain alert and prepared to take instructions from the physicians and nurses
	+ Remain in constant contact with TS for ordering blood components and updates on the patient's location and status
	+ Notify TSL of patient’s HID as soon as available
	+ Utilize the back of the PRR Log to note lab values, conversations, requests for additional products, or other information pertinent to the situation.
 |  |
| **Step** | **Action** | **Related Documents** |
| **Trauma Response cont.** |
| 9 | Facilitate immediate collection and transport of the patient’s sample(s) to TS:* + Remind the team if obtaining sample(s) is being delayed.
	+ CPOE order or TST & BPO form should reflect the emergent level of the trauma
 |  |
| 10 | Obtain patient ID labels at the patient location.* + - Attach a label to the PRR Log, Urgent Release form, and/or Urgent Release Unit card
	+ Patient ID labels are usually available 5-10 minutes after patient arrives.
 |  |
| 11 | Coordinate exchange of universal donor type blood components with units released based on:* + Subsequent physician orders
	+ Admitting name and HID
	+ In-date sample
	+ Plasma and Platelets: Type specific or ABO compatible if patient has had ABO/Rh performed during current HMC encounter

*NOTE: Every effort should be made to issue products in SQ using patient identifiers even if blood type is not available. Products issued with patient identifiers have increased safety.* |  |
| 12 | Update the Trauma Team on component availability:* + Resuscitation Room
	+ CT Scan: remain in the observation area, retrieving blood from the refrigerator near the Resus room
	+ Angio: remain in the observation area, moving the refrigerator closer if space is available
 |  |
| 13 | Notify TS if patient is moved and follow patient to new location. |  |
| 14 | Remain at point of care until released by the patient's physician, nurse or the charge nurse. * + - Record name, date and time of release on the PRR log
 |  |
| 15 | Based on physician’s instructions:* Return to TS with the portable blood refrigerator and platelet box. **OR**
* Leave refrigerator and platelet box at patient location.
 | Using Portable Blood refrigerators |
| 16 | E.D. refrigerator:* Restock to designated levels.
* Return cards for transfused products to TSL
* Return to TSL any units removed and returned to refrigerator
 | Management of the Emergency Room Refrigerator |
| 17 | Communicate detailed information to the TS Lead/TS Manager:* + Concerns
	+ Problems and your handling of the problem
	+ Suggestions for improvement
 |  |
| 18 | Complete paperwork:* See Table A for PRR Log completion
* If units transfused, forward PRR Log and/or URU cards to an MLS for SQ allocation and issue
* Forward Trauma/MTP paperwork to a 2nd tech for review.
* Record “Reviewed by (Tech ID), (date/time)” in the upper right corner of the Trauma/MTP paperwork.
* File paperwork in the Trauma notebook.
 |  |

**Table A: Instructions for Completing the Portable Refrigerator Response Log**

|  |  |
| --- | --- |
| **Field** | **Information** |
| **Response Date/Time** | Time stamp log |
| **Responding Tech(s)** | ID number of TS staff2nd Tech: enter ID and time of arrival |
| **Patient age/Gender** | Initially: as received from the ED charge nurseAt trauma: update/correct information |
| **Medical Record Number/Name** | Update when available: written and/or ORCA label when available |
| **Component Information** | Confirm unit numbers and component type |
| **Issue and Disposition Information** | Complete as applicable:* Removed: Issued to Clinical Care Team
* Returned to Refrigerator: At trauma location
* Returned to TSL Inventory: Not transfused
* Issued in SQ by TSL Tech: Transfused
 |
| **MTP Activated** | * Yes or No
* Date and time if activated
 |
| **Clinical Trial Enrollment** | Check one NO YES If Yes, which one? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
| **Fridge Number** | Enter number |
| **Location** | DeathChange in location |
| **Samples** | Date and Time Initial and ABRH2, if indicated, Sample Drawn |
| **Released By**  | Physician or Nurse name, date and time  |
| **Return Time** | Time back to TSL *with or without the Portable Refrigerator* |

**Table B: Trauma and Massive Transfusion Protocol Response Quantities**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Age (in years) and Gender** | **Whole Blood** | **RBCs** | **Plasma** | **Platelets** |
| **≥ 1 male or ≥ 50 female** | 2 packs | 6 O positive | 6 | 1 |
| **< 50 female** | N/A | 6 O negative | 6 | 1 |
| **< 1 male or < 1 female** | N/A | 3 O negative Pediatric Pack | 3 | 1 |

**References:**

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