



CONWAY MEDICAL CENTER

PROCEDURE

When in hard copy form, refer to Policy Manager to validate this as the most current revision.

TITLE:	LAB-SPC-BBK-07.18 Massive Transfusion Protocols-PRO		
ISSUED BY:	Lab BBK Supervisor	REFERENCE #:	LAB-SPC-BBK -07.18-PRO
APPROVED BY:	Lab Director	EFFECTIVE DATE:	2015-01-14

SCOPE: All staff involved with trauma situations.

DEFINITION:

Massive transfusion is defined as transfusion approximating or exceeding the patient’s blood volume, or more than 10 units of blood within 24 hours. Replacement of more than 50% of circulating blood volume in less than 3 hours or transfusion at the rate of more than 150ml/min is also considered a massive transfusion.

NOTE: DO NOT CONFUSE AN EMERGENCY RELEASE WITH THIS MTP PROTOCOL.

PROCEDURE:

I. INDICATIONS FOR MASSIVE TRANSFUSION PROTOCOL (MTP):

The treating physician will be responsible for initiating the MTP based the following criteria:

- A. Clinical massive hemorrhage in hard-to-control area
- B. Loss of 50% of blood volume in 4 hours (>2L in most adults)
- C. Loss of 10 or more units PRBCs in 24 hours

II. **INITIATION OF MTP:** Treating physician or nurse designee orders the MTP in the computer and contacts the blood bank with patient name. The computer order is only for paper documentation, the “call” to the lab is required to activate the protocol actually initiates the MTP.

III. PROTOCOL FOR LABORATORY STAFF:

- A. Call in extra help (2nd and 3rd shift), once help arrives:
 - 1. One person will do the cross matching and keeping up with ordering more units on the patient in the computer.
 - 2. One person will do the tagging of units and the issuing.
- B. Send Release #1: 4 units of O negative PRBCs and an Emergency Release Form to the trauma location in a validated ARC cooler containing ice. (If we have a history on the patient send type-specific units). This will be picked up by the designated “Runner”.
- C. Put 2 units of AB FFP in to thaw.
- D. Pull the backup thawer out and prepare for use. Place two additional FFP units in to thaw when ready.
- E. Call the Red Cross and let them know what is going on. Order the following:



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1. 15 "O" positive
 2. 4 packs of platelets
 3. As many O negative units as the ARC will allow.
- F. Once you get a blood bank specimen on the patient:
1. Do the type and Rh **MANUAL METHOD**
 2. Then put the sample on the TANGO for the antibody screen
 3. When you have the type and Rh give type-specific units only (blood and FFP)
- G. Cycle release as follows: Approximately every 40 minutes, starting from the Emergency Release (Release #1 in Step III (B):
1. Release #2: 6 PRBC's; 2 FFP's and 2 Platelets (if available) to the designated "Runner".
 2. Release #3: 6 PRBC'S; 3 FFP's (no platelets)
 3. Release #4: 6 PRBC's ; 3 FFP's; 1 Platelet
- We will prepare these packages for 6 cycles. Rotating between Release #2 and #3 for platelets.
- Then start again when more arrive from the Red Cross. (There will be a worksheet to help keep track of everything). This cycle preparation continues until the blood bank is notified to end the protocol or until one successive cycle of prepared products has not been picked up by the "Runner".
- H. The laboratory inventory will include 2 platelet pheresis on hand. As those are used a new order will be placed with the ARC to order additional units.
- IMPORTANT: DO NOT** put platelets, or cryo in the cooler, they must stay at room temp.
- I. Monitor blood replacement therapy: Obtain full set of laboratory studies every other release
1. PT/IN/PTT/Fibrinogen
 2. CBC with platelet count

NOTE: The ability to deliver products may be limited to product availability, particularly in the case of platelets. In such instances the blood bank will notify the treating physician of shortages as soon as possible.

IV. PACKAGING OF BLOOD PRODUCTS : Laboratory Staff Instructions

- A. Get small Red Cross box from under counter (near the inside window)
- B. Get a plastic FFP bag, fill ¼ to ½ with ice from the machine in Pathology. You may also use 2 frozen ice packs from the freezer in Urinalysis.
- C. Get an Emergency Release form and a Massive Trauma Worksheet. (located with the box)
- D. Get 4 units of O Negative blood (if available). If O Negative is not available use O Positive blood.
- E. Fill out Emergency Release Form
- F. Place blood in bottom of box
- G. Place a piece of bubble wrap (locate under counter) on top of blood.
- H. Place bag of ice or ice packs on top of bubble wrap.(NEVER place directly on blood)



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- I. Place piece of Styrofoam back on top of box.
- J. Close lid.
- K. When person comes to pick up, have them sign the Emergency Release Form and then make a copy to go with them.
- L. Once the blood has been picked up fill out the Massive Trauma Worksheet (this is to keep track of the 40 minute intervals)

V. UNPACKING OF BLOOD PRODUCTS: Instructions for Unit receiving the blood products

- A. Open box cooler
- B. Remove styrofoam piece
- C. Remove bag of ice or ice packs
- D. Remove needed units from under bubble wrap
- E. For remainder of units in cooler
 - 1) Place bubble wrap back over units
 - 2) Place ice or ice packs back in box
 - 3) Place Styrofoam piece back in box
 - 4) Close lid

F. PRECAUTIONS: WHAT NOT TO DO

- 1) DO NOT: Leave Blood lying on the counter
- 2) DO NOT: Place bag of ice directly on the blood (could cause freezing of cells)
- 3) DO NOT: Throw away Styrofoam lid
- 4) DO NOT: Place Platelets or Cryo in the box with ice or ice packs (they are Room temp products)

G. RETURN Cooler Box to the LAB ASAP

VI: RETURN OF BOX COOLER TO THE LAB: Instructions for Lab staff

- A. Open box
- B. Remove styrofoam lid
- C. Remove bag of ice or ice packs
- D. Make sure there are no unused units left in the box**
 - 1) If no units in box proceed to next step
 - 2) If there are units in the box
 - a) Check the temperature of the unit(s)
 - b) If temp. is okay put unit(s) back in the refrigerator
 - c) If temp. is not okay, put unit(s) back in the refrigerator on the bottom right shelf with a note "TO BE DESTOYRD" and the senior tech will take care of it in the A.M.
- E. If no more Trauma Cycles are needed, empty ice bag into sink or put ice packs back in freezer.
- F. Replace styrofoam lid
- G. Put box back under the counter



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SEE ATTACHED FLOW CHART

RECORDS: NA

REFERENCE STANDARDS: AABB Technical Manual, 17th edition; ACS,TQIP, Mass Transfusion Guidelines, 2015, American College of Surgeons.

REVISION/REVIEW HISTORY:

Date	Affected Section(s)	Summary of Changes ('Reviewed' or details of change)
01-14-15wm	ALL	NEW
06-24-15lds	II (B)	ARC cooler to be used. Moved to SPC and uploaded in MCN LAB-SPC-07.18 Added packaging instructions.
08-05-15wm/DMW	ALL	Revised steps to reflect ACS guidelines. Added flowchart .
02/22/17wm	All	Changed from ER to trauma location
03/09/17wm	All	Reviewed no changes.
06/19/17lds	All	Reviewed no changes.. Did not upload on previous review. Will change dates
10/19/17lds	II	Added need to order MTP in computer.



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MASSIVE TRANSFUSION PROTOCOLS – FLOWCHART PROCEDURE LAB-SPC-BBK-07.18 8/05/15

