



UnityPoint Health

METHODIST PROCTOR

**CARE
COORDINATION**

Page # 1 of 5

Section: Emergency Situations

Policy #: H-14

Approved by CNO:

Date
Review by:

Approved by Pathologist:

Elizabeth Bauer-Marsh MD

Methodist Campus

Date:
1/22/19

Adam Quinn, MD

Proctor Campus

Date:
12/20/18

Lori Rasca, DO

Pekin Campus

Date:
1/2/19

Supersedes: 9/10/13, 7/23/14, 10/14/15, 12/9/15, 11/16, 10/11/2017

Date Revised: 3/14/2018

Primary Responsible Parties: Amy Hill

Secondary Responsible Parties: Cari Burk

Joint Commission Standard: PC

SUBJECT: MASSIVE HEMORRHAGE / TRANSFUSION

I. POLICY:

In the event of a life threatening massive hemorrhage, a physician may initiate the massive hemorrhage/transfusion policy. Acute Care areas are to transfer patients to a Critical Care unit (e.g. ICU, CVICU).

II. PURPOSE AND STANDARD:

To ensure effective restoration of circulating volume (euvolemia), arrest of bleeding where there is major blood loss/massive hemorrhage, restoration of oxygen-carrying capacity (RBC's), and correction of hemostatic abnormalities/coagulopathy.

III. SCOPE OF SERVICE:

Physician/Licensed Independent Practitioner (LIP)

Medical Alert team responder:

Methodist - CVICU nurse

Proctor - Nurse Manager of the unit or their designee during day shift (M-F)

ICU Medical Alert responder and Nursing Supervisor all other shifts M-F, weekends and holidays

Pekin - Nurse Manger of the unit or their designee during day shift (M-F)

CCU Medical Alert responder and House Supervisor

Unit RNs, one assigned as Blood Bank communicator

Unit Staff person to notify the operator to call "Medical Alert - Transfusion Protocol (specific hospital unit)"

Blood Bank Tech (to alert the Pathologist on call when time allows)

IV. EQUIPMENT:

Normal saline

Blood tubing (Y-type with filter)

Large gauge (16g) IV catheter or needle

Rapid infuser/blood warmer

Methodist-one located in Main OR, Open Heart, OB, and Emergency Department.

Proctor- one located in OR and Emergency Department

Pekin- one located in OR

Scale to weigh pads, linens, lap sponges, etc. (specific to OB patients only)

Patient warming blanket

V. GENERAL INFORMATION:

A. Massive hemorrhage can be defined as follows:

- a. Blood loss exceeding circulating blood volume within a 24-hour period,
- b. Blood loss of 50% of circulating blood volume within a 3-hour period,
- c. Blood loss exceeding 150 ml/min, or
- d. Blood loss that necessitates >8-10 units PRBC transfusion.

B. Even massive blood loss may not necessitate the need for blood replacement (clinical decision made by the physician).

VI. PROCEDURE

A. INITIATION OF MASSIVE BLOOD TRANSFUSION:

1. If a massive Blood Transfusion is being initiated by the physician, dial 33333, overhead announcement, "Medical Alert - Transfusion Protocol to (specific hospital unit) ____" will be made. Responders to the bedside:
 - Methodist- CVICU Medical Alert Team and Nursing Supervisor
 - Proctor-ICU Medical Alert responder and Nursing Supervisor
 - Pekin- CCU Medical Alert responder, ER Nurse and House Supervisor
2. The physician/LIP will direct the event on arrival.
3. Notification of patient's attending physician will be made immediately by a unit staff member.
4. A Blood Bank communicator will be designated immediately. All blood bank communication will be done by the designated person.
5. Unit RN assigned as Blood Bank Communicator must perform the following tasks:
 - a. Notify blood bank immediately that a Medical Alert - Transfusion Protocol has been called with following information:
 - 1) The patient name and date of birth.
 - 2) The unit and phone number at which the RN responsible for communication with blood bank can be reached.
 - 3) Initiate Massive Transfusion Order Set in the electronic medical record.
 - b. Notify Blood Bank when protocol is completed or deemed no longer necessary. Otherwise Blood Bank will continue to deliver subsequent coolers of blood products per protocol.
 - c. Track and retain all used bags of blood and blood products.
 - d. Complete and facilitate signatures required on the emergency transfusion form that will accompany the first blood cooler. Return the completed form to blood bank personnel.
 - e. Reconcile all blood products with the blood bank personnel once the "code blood bank" has been cancelled.
6. See Emergency Release of Blood for Transfusions Policy C-08. If ABORh is known, emergency release of type specific uncrossmatched blood may be used.

7. The order set, "Massive Blood Transfusion Focused" will initiate the Massive Hemorrhage/Transfusion policy. Blood products will be sent up according to the order in the table below.
- Blood must remain in cooler until ready to transfuse. Cooler lid must be kept closed to maintain the correct storage temperature.
 - PRBC's and FFP can be kept in cooler for up to 6 hours
 - Plateletpheresis and cryoprecipitate need to be stored at room temperature.
 - Use rapid infuser/blood warmer for PRBC infusions only.
 - Transfuse blood products according to physician orders.

Cooler #	PRBC's	Plasma (FFP) * use blue and white cooler for FFP.	Platelets – Given per Lab results * Given per Lab results	Cryoprecipitate * per physician order – for fibrinogen <100mg/dL; 16 min. to thaw
1	4 units O neg. uncrossmatched	Begin to Thaw 4 FFP (Type AB)	Order 1 plateletpheresis	
2	6 units	4 units - Given after 10 units PRBC's and/or per labs	1 plateletpheresis	
3	6 units	4 units	1 plateletpheresis	2 units (pooled)=10 single units
4	6 units	4 units	1 plateletpheresis	2 units (pooled)=10 single units
Lab sends a Massive Hemorrhage Requisition & the following tubes: 1 blue, 1 green, 1 small lavender				

*****Physician can adjust orders at any time as needed*****

- B. Baseline labs to be drawn as soon as possible before blood transfusions are initiated
Blood tubes should be drawn in the following order:
- Blue
 - Green
 - Lavender
 - Pink X 2 tubes with Blood Bank ID band number on these tubes

TEST	COLOR OF TUBE
CBC	Lavender
Basic metabolic panel (BMP)	Green
Protime-INR	Blue*
APTT	Blue*
Fibrinogen	Blue*
Blood gas,arterial	ABG syringe
Lactic Acid, plasma	ABG syringe
Type and Screen/Prepare See labeling instructions below	Pink x 2 Or Lavender-Large (Proctor only)

*Only one **full** blue top is needed.

C. Label Type and Screen/Prepare tube(s) according to specific process:

Label blood tube(s) with EPIC sticker and put the time, date and initials of the person drawing the blood on the tube. Place an EPIC patient label on a Blood Bank ID band and **place the Blood Bank ID number sticker on blood tube**. Place the Blood Bank Band on the patient arm.

D. Order follow-up labs after initial 5 units of blood product has been infused, and as indicated by the Massive Blood Transfusion order set and/or physician during the code. Medical Alert-Transfusion Protocol Place orders using requisition form sent in Cooler #2 for this purpose. Place patient sticker on form. See Appendix.

Blood tubes should be drawn in the following order:

1. Blue
2. Green
3. Lavender

TEST	EPIC ORDER #	COLOR OF TUBE
PROTIME	LAB320	*BLUE
APTT	LAB325	*BLUE
FIBRINOGEN	LAB314	*BLUE
D-DIMER	LAB313	*BLUE
CMP	LAB17	GREEN
HEMOGRAM	LAB294	LAVENDER

*Only one **full** blue top is needed.

- E. Monitor vital signs frequently during acute hemorrhage.
- F. Start 2nd IV with large bore IV catheter or needle (20g or greater), blood tubing and Normal Saline.
- G. Mainline IV fluids of Normal saline.
- H. Measure blood loss – weigh pads, linens, lap sponges, amount in containers, etc. (specific to OB patients only)
- I. Maintain strict I & O.
- J. Maintain patient temperature with warming blanket as necessary.
- K. Follow Physician orders for blood administration.
- L. Document the time each unit initiated and unit number administered
- M. Save all empty blood product bags and return to blood bank following emergency.
- N. Assess patient for transfusion reactions and other possible complications of a massive transfusion (hypothermia, coagulopathy, hypocalcemia, volume overload, and DIC).
- O. Unit blood bank communicator to call and cancel “Medical Alert-Transfusion Protocol”. Immediately return cooler with all unused blood products and all empty blood product bags to lab.
- P. Blood bank personnel will notify laboratory staff that the Medical Alert - Transfusion Protocol has been canceled.
- Q. Document Medical Alert - Transfusion Protocol in electronic record.

References:

California Maternal Quality Care Collaborative; OB Hemorrhage Collaborative 2010
Current Reviews Nurse Anesthetist, Maternal Hemorrhage: Etiology and Management, Vol.34,
Joanne Donnelly CRNA, MS, 3/2012
MCN, “A State-wide Obstetric Hemorrhage Improvement Initiative,” Debra Bingham, et al,
September/October 2011
Illinois Department of Public Health Obstetric Hemorrhage Education Project, July 2008
Klienman, S., et. al. “Massive Blood Transfusion,” UptoDate, 5/20

Appendix



STAT

Laboratory Code Blood Bank Requisition – Peoria Region Massive Hemorrhage Orders Only

Patient Information

Place Patient Sticker Here

Name: _____

Location: _____

MR#: _____

Diagnosis: _____

Specimen Hand Off
(To be completed at delivery)

Specimen transported by: _____ Time: ____:____

Received in Lab by: _____ Time: ____:____

Collection Info

Date: _____ Time: _____ By: _____

Special Handling

Call results to: _____ (phone number)

Fax results to: _____ (Fax number)

Code Blood Bank Labs (Order all)

<u>TEST CODE</u>	<u>TEST NAME/TUBE COLOR</u>
<input checked="" type="checkbox"/> PTIM (LAB320)	Protime INR (Blue Top)
<input checked="" type="checkbox"/> PTT (LAB325)	APTT (Blue Top)
<input checked="" type="checkbox"/> FIBR (LAB314)	Fibrinogen (Blue top)
<input checked="" type="checkbox"/> DDIMR (LAB313)	D-Dimer (Blue top)
<input checked="" type="checkbox"/> COMPNL (LAB17)	Comprehensive Metabolic Panel (Green Top)
<input checked="" type="checkbox"/> Methodist: HGRS (LAB294) Proctor: YABCND (LAB294) Pekin: CBCND (LAB294)	Hemogram (no differential) (Lavender top)

I:\Lab\dm\Blood Bank and Cell Processing\1 Code blood Bank Lab Forms\Laboratory Code Blood Bank Orders
3/8/2018