Trauma Massive Transfusion Protocol
Activation

   (For rFVIIa (recombinant factor VIIa), call Pharmacy at 271-4047.)
2. Request “Massive Transfusion Protocol”.
3. State patient’s name or trauma number
   patient’s medical record number
   ordering physician’s full name
   where product is needed (OUMC ED, OUMC Ors, OUMC Trauma ICU, and TCH Labor & Delivery only)
   number of stored group O RBC units used
   method of delivery: transporter or dumb waiter.
4. Request Blood Bank to prepare TEG machine for rapid TEG – when machine ready, draw rapid TEG sample and hand deliver specimen to Blood Bank. Request rapid TEG after every 4th cooler. Stop when MTP is completed.
5. Send specimen to Blood Bank ASAP for type & screen, if not done yet.
6. Draw fibrinogen level with initial labs and repeat after every 4th cooler.
   Fibrinogen level > 200 no cryo needed
   Fibrinogen level 100 – 199 Ask for 10 units of cryo
   Fibrinogen level < 100 Ask for 20 units of cryo
7. Receive product set in cooler(s).
8. If injury occurred within 3 hours of initiation of MTP initiate Tranexamic Acid treatment as follows: 1 gm Bolus over 10 minutes followed by 1 gm gtt over 8 hours then discontinue. *Notification to Pharmacy 271-4047 by clerk / RN once MTP initiated.

Products provided by Blood Bank

<table>
<thead>
<tr>
<th>Set 1</th>
<th>Set 2</th>
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<tbody>
<tr>
<td>5 units RBCs</td>
<td>5 units RBCs</td>
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<tr>
<td>1250 ml thawed plasma</td>
<td>1250 ml thawed plasma</td>
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<tr>
<td>1 unit apheresis platelets</td>
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</tbody>
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Product Storage
- RBCs, thawed plasma: 1 to 6°C (in cooler)
- Platelets, cryo: room temperature

1 Blood Bank staff may take a verbal order from a physician or through another caregiver. The ordering physician must subsequently sign the verbal order and complete the emergency release of blood authorization forms.
2 The Massive Transfusion Protocol can be activated only in these locations, which have prearranged the required coordination of product transport.
3 Use the emergent-use group O RBCs stored in OUMC ED (5 units Rh+), OUMC Ors (2 units Rh-), and TCH L&D (2 units Rh-) as needed.
4 Includes any stored group O RBC units used
5 The Blood Bank will switch the type of RBCs and thawed plasma issued as inventory allows and as the patient’s specimen is processed: RBCs O+ (OUMC ED) or O- (OUMC Ors and TCH L&D) ➔ type specific, uncrossmatched ➔ type specific, Crossmatched Plasma A ➔ type specific

Questions? Call 271-6222
Emergency-use RBCs stored here

- Two units of group O, Rh-negative red blood cells are stored in this refrigerator for emergency use.*
- When units are used, call 271-6222 for restocking, and return the emergency release forms to the Blood Bank.
- If more units are needed immediately, activate the Massive Transfusion Protocol:
     (For rFVIIa (recombinant factor VIIa), call Pharmacy at 271-4047.)
  2. Request “Massive Transfusion Protocol”.
  3. State patient’s name or trauma number
     - patient’s medical record number
     - ordering physician’s full name
     - where product is needed (OUHC ED, OUMC Ors, OUMC Trauma ICU, and TCH Labor & Delivery only)
     - number of stored group O RBC units used
     - method of delivery: transporter or dumb waiter.
  4. Notify Blood Bank to prepare TEG machine for rapid TEG – when machine ready, draw rapid TEG sample and hand deliver specimen to Blood Bank. Request rapid TEG after every 4th cooler. Stop when MTP is completed.
  5. Send specimen to Blood Bank ASAP for type & screen, if not done yet.
  6. Draw fibrinogen level with initial labs and repeat after every 4th cooler.
     - Fibrinogen level ≥ 200 no cryo needed
     - Fibrinogen level 100 – 199 Ask for 10 units of cryo
     - Fibrinogen level < 100 Ask for 20 units of cryo
  7. Receive product set in cooler(s).
  8. If injury occurred within 3 hours of initiation of MTP initiate Tranexamic Acid treatment as follows: 1 gm Bolus over 10 minutes followed by 1 gm gtt over 8 hours then discontinue.
     (*Notification to pharmacy by clerk / RN once MTP initiated)

*Use the stored O- RBCs as needed for life-threatening hemorrhage when units prepared for the patient are not immediately available. The Blood Bank will switch the type of RBCs issued as inventory allows and as the patient’s specimen is processed: O- ➔ type-specific, uncrossmatched ➔ type-specific, crossmatched.

Questions? Call 271-6222
Emergency-use RBCs stored here

- Five units of group O, Rh-positive red blood cells are stored in this refrigerator for emergency use.*
- Five units of FFP are in this refrigerator, transfusion early if 1:1 ratio with pRBCs.
- When units are used, call 271-6222 for restocking, and return the emergency release forms to the Blood Bank.
- If more units are needed immediately, activate the Massive Transfusion Protocol:
  1. Call Blood Bank at 271-6222. (For rFVIIa (recombinant factor VIIa), call Pharmacy at 271-4047.)
  2. Request “Massive Transfusion Protocol”.
  3. State patient’s name or trauma number
     - patient’s medical record number
     - ordering physician’s full name
     - where product is needed (OUMC ED, OUMC Ors, OUMC Trauma ICU, and TCH Labor & Delivery only)
   - number of stored group O RBC units used
   - method of delivery: transporter or dumb waiter.
  4. Notify Blood Bank to prepare TEG machine for rapid TEG – when machine ready, draw rapid TEG sample and hand deliver specimen to Blood Bank. Request rapid TEG after every 4th cooler. Stop when MTP is completed.
  5. Send specimen to Blood Bank ASAP for type & screen, if not done yet.
  6. Draw fibrinogen level with initial labs and repeat after every 4th cooler.
     - Fibrinogen level ≥ 200 no cryo needed
     - Fibrinogen level 100 – 199 Ask for 10 units of cryo
     - Fibrinogen level < 100 Ask for 20 units of cryo
  7. Receive product set in cooler(s).
  8. If injury occurred within 3 hours of initiation of MTP initiate Tranexamic Acid treatment as follows: 1 gm Bolus over 10 minutes followed by 1 gm gtt over 8 hours then discontinue. (*Notification to pharmacy by clerk / RN once MTP initiated)
  10. To cancel protocol, notify Blood Bank
*Use the stored O+ RBCs as needed for life-threatening hemorrhage when units prepared for the patient are not immediately available. The Blood Bank will switch the type of RBCs issued as inventory allows and as the patient’s specimen is processed: O+ ➞ type-specific, uncrossmatched ➞ type-specific, crossmatched.

Questions? Call 271-6222
**Major Additions:**

1. Notify lab upon initiation of MTP to prepare TEG machine and once ready (*lab should notify us*) – draw TEG specimen and HAND deliver to lab the continue to repeat after every $4^{\text{th}}$ cooler.

2. Fibrinogen Level needs to be added to labs upon initiation of MTP
   - Transfuse Cryo: $\geq 200$ no cryo needed
     - $100 - 199$ Ask for 10 units of cryo
     - $< 100$ Ask for 20 units of cryo

3. If injury occurred < 3 hours prior to initiation of MTP, start treatment with TXA (Transexamic Acid):
   - 1 gm Bolus over 10 minutes
   - followed by:
     - 1 gm gtt (drip) over next 8 hours then discontinue

4. Change O negative policy as it is written (*now have to notify Blood Bank*)

5. Addition of 5 units FFP in OUMC ED refrigerator and need to transfuse in 1:1 ratio with pRBCs (start FFP as soon as you start Blood).