Emergency Transfusion Guide
University of Chicago Medicine

Step 1: Administer emergency O Negative RBCs if stored on your unit.

Step 2: Select the appropriate emergency transfusion pathway.

A. Emergency release:
   - Patient needs 1-5 units of RBCs, 1-3 units of FFP, or 1 plateletpheresis emergently
   - Blood will be un-crossmatched unless the patient already has units crossed.

   EMERGENCY RELEASE BLOOD REQUEST
   Adult, OB, Pediatric

B. Adult or Obstetrical Massive Transfusion Protocol (MTP):
   - Patient needs ≥6 units RBCs in 4 hours, or
   - Replacement of total body volume (TBV) in 24 hours, or
   - Blood loss >150 mL/min
   - The first MTP pack will be uncrossmatched regardless of Type & Screen status

   MASSIVE TRANSFUSION PROTOCOL
   Adult or Obstetrics Activation

C. Pediatric MTP indications:
   - Patient age 0-17 years old
   - Replacement of >50% TBV in 3 hours, or
   - Replacement of >100% TBV in 24 hours, or
   - Blood loss >10% TBV/min
   - The first MTP pack will be uncrossmatched regardless of Type & Screen status

   MASSIVE TRANSFUSION PROTOCOL
   Pediatric Activation

Step 3: Follow the attached guide(s)

   - ALWAYS call Blood Bank first to request emergency release or activate MTP
   - Place Epic transfusion orders when time allows

Contact: Ariana King, Quality Performance Improvement. University of Chicago Medicine.
**Blood Bank turn-around-times:**

<table>
<thead>
<tr>
<th>Task or Test</th>
<th>Turn-around-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stat Type &amp; Screen</td>
<td>80 min from receipt</td>
</tr>
<tr>
<td>Stat ABO Verification</td>
<td>15 min from receipt</td>
</tr>
<tr>
<td>Product thawing (frozen plasma, cryoprecipitate)</td>
<td>25-30 min</td>
</tr>
<tr>
<td>Extended crossmatch (for antibodies)</td>
<td>60+ min</td>
</tr>
<tr>
<td>Product preparation, Emergency release</td>
<td>&lt; 5 min</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; MTP pack (for patients age &gt;15)</td>
<td>10 min</td>
</tr>
<tr>
<td>Product prep, 2&lt;sup&gt;nd&lt;/sup&gt; or greater MTP pack</td>
<td>10-20 min</td>
</tr>
</tbody>
</table>

- Send all specimens or products directly to Blood Bank (tube #400). Sending specimens to the main laboratory results in delays of ≥30 minutes.
- Blood Bank prepares subsequent MTP packs ahead of request to minimize delays.
- Patients younger than 15 years old require group AB plasma. Processing time for group AB plasma may be 25-30 minutes during critical inventory shortages.
Massive Transfusion Protocol (MTP) Algorithm
Adult, Obstetrics, Pediatrics
University of Chicago Medicine

MTP Roles (Key)
- Attending or Designee
- Bedside Clinician (MD or RN)
- Care Team Contact
- Tube System/Blood Runner

Recognize blood loss & mobilize care team

Activate MTP
Call Blood Bank 2-6827

Send T&S and/or ABO2ND if needed
Blood Bank tube 400

Recognize blood loss & mobilize care team

Activate MTP
Call Blood Bank 2-6827

Single or Continuous pack?

Send Hemorrhage Panel after each MTP pack
Main lab tube 901

CONTINUOUS

1 MTP pack sent every ~15 min until deactivation

Send Hemorrhage Panel after each MTP pack
Main lab tube 901

SINGLE

1 MTP pack sent

Send Hemorrhage Panel after each MTP pack
Main lab tube 901

Patient is stable

Need more products?

NO

YES

Call to request MTP Pack
Blood Bank 2-6827

Deactivate MTP
Call Blood Bank 2-6827

Enter Epic transfusion order(s) ASAP

MTP Pack Contents:

<table>
<thead>
<tr>
<th></th>
<th>RBCS</th>
<th>FFP</th>
<th>PLT</th>
<th>CRYO POOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1 on request</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Important Blood Bank Info:
Phone: 2-6827
Tube #: 400
Room: CCD 2730

Turn-Around-Times

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st MTP pack</td>
<td>10 min</td>
</tr>
<tr>
<td>Thaw time (Frozen plasma or cryo)</td>
<td>25-30 min</td>
</tr>
<tr>
<td>Stat Type &amp; Screen (T&amp;S)</td>
<td>80 min from receipt</td>
</tr>
<tr>
<td>Stat ABO verification (ABO2ND)</td>
<td>15 min from receipt</td>
</tr>
</tbody>
</table>

Products Sent

<table>
<thead>
<tr>
<th>Products Sent</th>
<th>5-9 kg</th>
<th>10-19 kg</th>
<th>20-29 kg</th>
<th>30-39 kg</th>
<th>≥ 40 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RBC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1 FFP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1 PLT</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Recommended PLT to Give</td>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cryo to Request if Needed</td>
<td>1 UNIT</td>
<td>1 UNIT</td>
<td>1 UNIT</td>
<td>1 POOL</td>
<td>1 POOL</td>
</tr>
</tbody>
</table>
EMERGENCY RELEASE BLOOD REQUEST
Adult, OB, Pediatric

1. GIVE O NEG RBCS FROM REFRIGERATOR IF AVAILABLE

2. CALL BLOOD BANK: 2-6827
   a. “I need ___ (quantity) units of emergency release ______.”
   b. “The patient’s name is _______ and MRN is _______.”
   c. “Patient is ___ years old and their date of birth is _____.
   d. The patient is a _______ (male or female).”
   e. “Patient’s location is ____ (unit), room _____.”
   f. “The physician requesting blood is ______.” (give full name)
   g. “My name is _____ and my call-back number is _______.”

3. YOU MAY REQUEST

<table>
<thead>
<tr>
<th>BLOOD PRODUCT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED BLOOD CELLS</td>
<td>1-5 UNITS</td>
</tr>
<tr>
<td>FRESH FROZEN PLASMA</td>
<td>1-3 UNITS</td>
</tr>
<tr>
<td>PLATELETHERESIS</td>
<td>1 UNIT</td>
</tr>
</tbody>
</table>

   a. Allow up to 5 minutes to receive products
   b. Plasma may require up to 30 minutes if thawing is required

4. PLACE EPIC TRANSFUSION ORDER(S) WHEN TIME PERMITS
   a. Keyword search “emergency”, “transfuse”, or “release”

5. CALL BLOOD BANK FOR PRODUCTS OR MTP 2-6827
   **ACTIVATE MTP IF ≥6 RBCS NEEDED FOR AN ADULT**
EMERGENCY RELEASE BLOOD REQUEST
Adult, OB, Pediatric

BLOOD BANK IS IN CCD EAST, 2ND FLOOR
ROOM: 2-2730
PHONE: 2-6827
TUBE: 400

DESIGNATE ONE PERSON TO CALL BLOOD BANK

MASSIVE TRANSFUSION PROTOCOL
Adult or Obstetrics Activation

1. CALL BLOOD BANK TO ACTIVATE: 2-6827
   b. “My name is _____ and my call-back number is ______.”
   c. “The patient’s name is _____ and MRN is ______.”
   d. “Patient is ___ years old and their date of birth is ______.”
   e. “Patient is a ____.” (male or female)
   f. “Patient’s location is _____ (unit), room ______.”
   g. “We need a ______ (single or continuous) pack.”
   h. “The physician requesting MTP is ______.” (give full name)

2. BLOOD BANK WILL SEND:

<table>
<thead>
<tr>
<th></th>
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<th>FFP</th>
<th>PLT ¹</th>
<th>CRYO POOL ²</th>
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<td>6</td>
<td>4</td>
<td>1</td>
<td>1 upon request</td>
</tr>
<tr>
<td>OBSTETRICS</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

1. One (1) plateletpheresis = Six (6) or more platelet units; each plateletpheresis is one (1) dose.
2. One (1) cryoprecipitate pool = Five (5) cryoprecipitate units.
   a. Cryoprecipitate pool only available by request for non-OB patients
   b. Allow up to 10 minutes to receive first MTP pack
   c. Allow up to 30 minutes to receive cryoprecipitate or plasma requiring thaw

3. CALL BLOOD BANK IF: 2-6827
   a. Additional MTP pack needed (single-pack MTP only)
   b. Different MTP needed (e.g. from continuous to a single-pack)
   c. Patient transferred to new unit

4. PLACE EPIC ORDER(S) WHEN TIME PERMITS

5. CALL BLOOD BANK TO DEACTIVATE

MASSIVE TRANSFUSION PROTOCOL
Adult or Obstetrics Activation

BLOOD BANK IS IN CCD EAST, 2\textsuperscript{ND} FLOOR
ROOM: 2-2730
PHONE: 2-6827
TUBE: 400

1. Activate
2. Resuscitate
3. Communicate
4. Deactivate

DESIGNATE ONE PERSON TO CALL BLOOD BANK

MASSIVE TRANSFUSION PROTOCOL
Pediatric Activation

1. CALL BLOOD BANK TO ACTIVATE: 2-6827
   b. “The patient’s name is _____ and MRN is ________.”
   c. “Patient is ___ years/months old and their date of birth is ____.”
   d. “The patient weighs ________ kg.”
   e. “Patient is a ____.” (male or female)
   f. “Patient’s location is _____ (unit), room ______.”
   g. “We need a _____ (single or continuous) pack.”
   h. “The physician requesting the MTP is ______.” (give full name)
   i. “My name is _____ and my call-back number is ________.”

2. BLOOD BANK WILL SEND:

<table>
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<tr>
<th>PRODUCTS SENT</th>
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<tr>
<td>1 RBC</td>
<td>2 RBC</td>
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<td>4 RBC</td>
<td>6 RBC</td>
<td></td>
</tr>
<tr>
<td>1 FFP</td>
<td>2 FFP</td>
<td>3 FFP</td>
<td>4 FFP</td>
<td>4 FFP</td>
<td></td>
</tr>
<tr>
<td>1 PLT</td>
<td>1 PLT</td>
<td>1 PLT</td>
<td>1 PLT</td>
<td>1 PLT</td>
<td></td>
</tr>
</tbody>
</table>

RECOMMENDED PLT TO GIVE

| 1/2 PLT | 1/2 PLT | 1/2 PLT | 1 PLT | 1 PLT |

CRYO TO REQUEST IF NEEDED

| 1 UNIT | 1 UNIT | 1 UNIT | 1 POOL | 1 POOL |

1. ONE (1) PLATELETPHERESIS = SIX (6) OR MORE PLATELET UNITS.
2. BLOOD BANK WILL SEND ONE (1) PLATELETPHERESIS. RECOMMENDED TRANSFUSION IS ONE-HALF PER MTP PACK.
3. ONE (1) CRYOPRECIPITATE POOL = FIVE (5) CRYOPRECIPITATE UNITS.

   a. May request cryoprecipitate if needed
   b. Allow up to 10 minutes to receive first MTP pack
   c. Allow up to 30 minutes to receive cryoprecipitate

3. CALL BLOOD BANK IF: 2-6827
   a. Additional MTP pack needed (single-pack MTP only)
   b. Different MTP needed (e.g. from continuous to a single-pack)
   c. Patient transferred to new unit

4. PLACE EPIC ORDER(S) WHEN TIME PERMITS

5. CALL BLOOD BANK TO DEACTIVATE

MASSIVE TRANSFUSION PROTOCOL
Pediatric Activation

BLOOD BANK IS IN CCD EAST, 2ND FLOOR
ROOM: 2-2730
PHONE: 2-6827
TUBE: 400

1. Activate
2. Resuscitate
3. Communicate
4. Deactivate

Comer ED Trauma Bay to Blood Bank (Total trip time = ~5 min)

1. Exit through FAST TRACK to main hall and make a SLIGHT LEFT

2. Take elevator by “Dawn the Dinosaur” to Comer LL

3. Turn RIGHT to follow the GREEN LINE through double doors

4. Continue along GREEN LINE to the LEFT

5. Turn RIGHT to take CCD EAST - STAFF ELEVATOR to the 2nd FLOOR

6. Exit LEFT onto main hallway

7. Turn RIGHT towards Blood Bank entrance

8. Ring bell at window for service

**If elevators are out of service, only take stairwells lined with gray mats**
**Comer OR, CICU, or Family Birthing Center to Blood Bank**

(Total trip time = ~10 min)

1. Exit unit to hallway. Take the STAFF ELEVATOR to Comer LL

2. Exit RIGHT out of elevator and turn RIGHT to follow the GREEN LINE

3. Turn LEFT at Peds-ER intersection to follow GREEN LINE

4. Continue through double doors and continue LEFT along GREEN LINE

5. Turn RIGHT to take CCD EAST STAFF ELEVATOR to 2ND FLOOR

6. Exit LEFT onto main hallway then turn immediate RIGHT towards Blood Bank entrance

7. Ring bell at window for service

**If elevators are out of service, only take stairwells lined with gray mats**

Author: Ariana King, Quality Performance Improvement. University of Chicago Medicine
Date: February 2017; Version 1
Comer NICU/CICN to Blood Bank (Total trip time = ~10 min)

1. Exit **LEFT** from NICU to **MAIN HALLWAY**

2. Take **STAFF ELEVATORS** down to Comer LL

3. Exit **RIGHT** out of elevator and turn **RIGHT** to follow the **GREEN LINE**

4. Turn **LEFT** at Peds-ER intersection to follow **GREEN LINE**

5. Continue through double doors and continue **LEFT** along **GREEN LINE**

6. Turn **RIGHT** to take **CCD EAST STAFF ELEVATOR** to **2ND FLOOR**

7. Exit **LEFT** onto main hallway then turn immediate **RIGHT** towards Blood Bank entrance

8. Ring bell at window for service

**If elevators are out of service, only take stairwells lined with gray mats**
Emergency Transfusion Guide
Tube System Downtime Maps
University of Chicago Medicine

Comer PICU to Blood Bank (Total trip time = ~10 min)

1. Take **STAFF ELEVATORS** down to Comer LL

2. Exit **RIGHT** out of elevator and turn **RIGHT** to follow the **GREEN LINE**

3. Turn **LEFT** at Peds-ER intersection to follow **GREEN LINE**

4. Continue through double doors and continue **LEFT** along **GREEN LINE**

5. Turn **RIGHT** to take **CCD EAST STAFF ELEVATOR** to 2ND FLOOR

6. Exit **LEFT** onto main hallway then turn immediate **RIGHT** towards Blood Bank entrance

7. Ring bell at window for service

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**Emergency Transfusion Guide**  
**Tube System Downtime Maps**  
University of Chicago Medicine

**Mitchell ED to Blood Bank** (Total trip time = ~7 min)

1. Exit at the rear of ED towards radiology

2. Take **ELEVATORS - H** down to Mitchell LL

3. Follow the **RED LINE** towards **Patient Transfer-DCAM CCD** through colorful hallway

4. At the DCAM split, keep **STRAIGHT** to follow **TAN LINE**

5. Pass vending machines then turn **RIGHT** into **SUPPLY TUNNEL**

6. Keep **STRAIGHT** through double doors; turn **RIGHT** at the dead end

7. Turn **LEFT** at the **GREEN LINE** Take CCD EAST - **STAFF ELEVATOR** to the **2nd FLOOR**

8. Exit **LEFT** onto main hallway then turn immediate **RIGHT** towards Blood Bank entrance

9. Ring bell at window for service

**If elevators are out of service, only take stairwells lined with gray mats**

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**DCAM OR to Blood Bank** (Total trip time = ~2 min)

1. Exit OR to **MAIN DCAM HALLWAY**

2. Turn **RIGHT** and cross the **SKY BRIDGE** TO **CCD**

3. Pass the security desk then swipe to **ENTER CCD WEST STAFF HALLWAY**

4. Go past CCD West staff elevators, turn **RIGHT** onto main hallway

5. Keep **STRAIGHT** through two sets of double doors to access **CCD EAST STAFF HALLWAY**

6. Pass the Inpatient Pharmacy, then turn **LEFT** towards Blood Bank entrance

7. Ring bell at window for service

**If elevators are out of service, only take stairwells lined with gray mats**