UCDMC MASSIVE TRANSFUSION GUIDELINE: PHYSICIAN INFORMATION

**Purpose:** The Massive Transfusion Guideline (MTG) was created to provide a standard for efficient and effective procurement and delivery of blood products to patients exhibiting hemorrhagic shock at risk of coagulopathy. The term “massive transfusion” is classically defined as the replacement of approximately one blood volume (~5 liters in an adult) within the first 24 hours of resuscitation\(^1\).

**Massive Transfusion Guideline Pack:**
The products are dispensed according to the age/weight categories listed below.

<table>
<thead>
<tr>
<th>Age (Yr)</th>
<th>Wt (Kg)</th>
<th>Patient approx. blood volume (mL)</th>
<th>Blood Products Provided</th>
<th>MTG approx volume (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11</td>
<td>&lt;35</td>
<td>270-2450</td>
<td>3 RBC adult, 1 Jumbo FFP*, 1 Plateletpheresis</td>
<td>1500</td>
</tr>
<tr>
<td>12-Adult</td>
<td>&gt;35</td>
<td>&gt;2451</td>
<td>6 RBC adult, 2 Jumbo FFP*, 1 Plateletpheresis</td>
<td>2800</td>
</tr>
</tbody>
</table>

*Plasma may be dispensed in equivalent volume

**Activation:** MTG can be activated by an attending physician or his/her designee in any hospital location, most often from:
- Emergency Department (ED)
- Surgery (OR)
- Critical Care Unit (ICU)
- Radiology (Interventional Radiology, IR)
- Labor & Delivery

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\(^1\) Transfusion Committee historically uses 6 pRBC within 24 hours for purposes of tallying “massive” usage.
Physician steps:

1. The physician caring for the patient evaluates the need for MTG using an accepted method of determining injury severity and probability of massive hemorrhage.

2. The physician or designee **MUST** call the Transfusion Services (4-2585).

3. The Special Blood Bank Requisition for Exsanguination ("Pink Sheet") is labeled with patient identification. The physician activates the MTG by selecting the adult or pediatric MTG box or selects uncrossmatched blood (2 RBC or 2 FFPJ). The completed form is submitted to Transfusion Services.

4. A specimen for Type & Screen should be sent to Transfusion Services STAT.

5. As long as the MTG is activated, it is not necessary to complete blood product orders in EMR.

6. Other lab tests should be ordered and sent STAT: Hgb, Hct, platelet count, INR, APTT, and fibrinogen or TEG.

7. Transfusion of plasma (FFP) should be started together with red cell units (RBC) as soon as it is determined that transfusion of greater than 50% of the age/size appropriate patient blood volume is likely to be necessary.

8. Appropriate cardiovascular, electrolyte and coagulation parameters should be monitored closely throughout and following massive transfusion, understanding that more blood products may be available than are necessary or appropriate to administer.

9. All blood products should be given via a Level 1 rapid infuser/fluid warmer or other blood-warming device to prevent hypothermia.

10. Subsequent requests for MTG products should be made by calling 4-2585 and be accompanied by another MTG "Pink Sheet".

11. Once it is determined that the MTG can be discontinued, the physician or designee must call Transfusion Services.

12. The cooler and all unused blood products must be returned to Transfusion Services within 4 hours in accordance with Transfusion Services policy.

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2 Special Blood Bank Requisition for Exsanguination (form # A6754 located in Hospital Policy XIII-12, attachment 4).

3 There is no EMR order set called “MTG”. Blood products will be ordered by Transfusion Services personnel via LIS- Meditech using the physician PI # submitted on pink sheet.
Transfusion Services steps:

1. Upon activation of MTG, Transfusion Services personnel will prepare the MTG cooler with universal donor RBC and FFP units based on age and sex of patient.
2. A full Plateletpheresis unit, stored at Room Temperature, will be sent with the cooler.
3. The products will be picked up by the ordering department.
4. As soon as the first MTG cooler has been dispensed, the Transfusion Services readies a second MTG “pack”. This process will be continued until the MTG is discontinued.

References:

Call Transfusion Services 4-2585 to Activate the MTG
(Please also call to discontinue the MTG)

☐ Request for MTG Blood Products (Massive Transfusion Guideline)

<table>
<thead>
<tr>
<th>Check one box</th>
<th>Age (Yr)</th>
<th>Wt (Kg)</th>
<th>Patient approx. blood volume (mL)</th>
<th>Blood Products Provided</th>
<th>MTG approx volume (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>0-11</td>
<td>&lt;35</td>
<td>270-2450</td>
<td>3 RBC adult, 1 Jumbo FFP*, 1 Plateletpheresis</td>
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*Plasma may be dispensed in equivalent volume

**** OR ***

☐ Request for uncrossmatched “O” RBC: _____________ # units.

☐ Request for uncrossmatched “AB” PLASMA: ______ # units.

Units may not be crossmatched at time of issue; crossmatch will be completed once specimen is received.

It is my clinical judgment that the above named patient is in urgent need of blood.

M.D. ___________________ ___________________________ _________ __________
Print Name Physician Signature PI # Date/Time

Dispensing Record & Blood Component Donor Numbers:

Inspected for color, appearance, expiration date, clots, and hemolysis by (Initials): ________________________

Receiving RN or Designee (Signature): ________________________