**Massive Transfusion Protocol**

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<thead>
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<th>Name of Policy:</th>
<th>Massive Transfusion Protocol</th>
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<tr>
<td>Policy Number:</td>
<td>3364-108-405</td>
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<tr>
<td>Department:</td>
<td>Pathology/Laboratory – Blood Bank</td>
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</tbody>
</table>
| Approving Officer: | Chief Executive Officer – UTMH
Associate Professor, Director, Clinical
Pathology/Hematopathology |
| Responsible Agent: | Core Lab Manager
(Michelle Bartkowski, MT(ASCP)SBB)
Administrative Director, Lab (Cynthia O’Connell) |
| Scope: | Pathology/Laboratory – Blood Bank |

| Effective Date: | 03/01/2017 |
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(A) **Policy Statement**

The Blood Transfusion Service will respond by specific procedures when massive transfusion protocol (MTP) is initiated. The attending physician initiates MTP when immediate transfusion of ten or more units packed red blood cells is anticipated.

(B) **Purpose of Policy**

To expedite and anticipate blood product requirements in emergent, massive transfusion situations.

(C) **Procedure**

**Section 1: Initiation of MTP**

1. The Blood Transfusion Service will be notified immediately when MTP is initiated for a patient. The Department of Pathology will ensure that the Blood Transfusion Service will have adequate staffing to provide for MTP demands by calling in additional personnel when necessary to bring staffing level to a minimum of two (2).

2. The “Massive Transfusion Protocol” may be initiated at any time by phone by the attending physician or designee. Note the time, ordering physician and caller on the Telephone Request Log. The Blood Bank specimen must be collected and sent to the BTS as soon as possible. The specimen must be labeled with green Blood Bank ID labels/numbers with the following information completed: Patients first and last name or temporary name and hospital ID number, initials of phlebotomist, date and time of specimen collection. The corresponding Blood Bank ID number armband **must** be attached to the patient at the time of collection in order for subsequent Type-Specific/Compatible or crossmatched transfusions to be given. Patient name may be added to the armband when permanent identification is determined.

**Section 2: Red Blood Cells**

1. The ABO & Rh Type/Antibody Screen (T&S) will be performed immediately upon receipt of the specimen. The Type should be available within 15 minutes of receipt; the antibody screen should be completed within 40 minutes of receipt. All packed red blood cells issued prior to specimen receipt or prior to completion of the ABO & Rh Type will be “Uncrossmatched - Type O Negative” unless blood inventory constraints require release of “Uncrossmatched - Type O positive”. Packed red blood cells issued prior to completion of the antibody screen but after the completion of the type will be “Uncrossmatched - Type-Specific/Compatible”. The crossmatch will be performed as soon as possible for all packed red blood cells issued as “Uncrossmatched”.

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**Note:** The document contains a table indicating the type of revision (New policy proposal, Major revision of existing policy, Minor/technical revision of existing policy, Reaffirmation of existing policy) with `X` indicating it is a Minor/technical revision of existing policy.
2. Four (4) units of uncrossmatched blood, (Type O Negative packed red blood cells) are reserved and immediately available in the Blood Bank refrigerator in the ED Trauma Room. Additional units of uncrossmatched blood, (Type O Negative packed red blood cells, unless blood inventory constraints require the use of Type O Positive uncrossmatched blood) are available in the Blood Bank refrigerator in the Blood Bank. Refer to Policy #40-4 for additional information.

3. Initiate crossmatch of six (6) units Type-Specific/Compatible packed red blood cells immediately upon determination of the patients ABO & Rh type according to procedure. If issued, the units must be considered uncrossmatched until completion of the antibody screen. NEVER RELEASE TYPE-SPECIFIC RBC UNITS UNLESS THE BLOOD RELEASE FORM INCLUDES THE BBID ARM BAND NUMBER. Refer to Policy # 40-4 for additional information.

4. The BTS will immediately initiate the crossmatch of six additional units Type-Specific/Compatible packed red blood cells when the previous six are issued until MTP is terminated.

5. Blood Release forms, Urgent Requests for Uncrossmatched Blood and O.R. Blood Delivery and Storage Records presented to the BTS for release of crossmatched and/or type-specific blood products must bear patients first and last name, BB ID number and hospital ID number (two of these identifiers).

6. The attending physician or anesthesiologist will be notified immediately when incompatibility or positive antibody screen is detected. AHG crossmatch of all packed red blood cells issued uncrossmatched will be initiated immediately.

Section 3: Thawed Plasma

1. Two (2) units of Type AB or A FFP are thawed and available at all times for urgent use prior to pretransfusion testing completion. If ABO & Rh is not determined when MTP is initiated, or when the uncrossmatched Trauma Room blood is transfused, four (4) additional units Type AB FFP will be thawed immediately and available within 30 minutes. Six (6) FFP will be thawed when the patients type is determined or when the first four FFP are issued. Notify attending physician or anesthesiologist when Thawed plasma is available.

2. The BTS will thaw six (6) additional FFP when previous set of six is issued until MTP is terminated.

Section 4: Platelets

1. One unit of Platelets, Pheresis is available on site for emergency use at all times. Two units of Platelets, Pheresis will be requested STAT from ARC as soon as MTP is initiated. Platelets should be available 30 to 45 minutes after request. The BTS will notify attending physician or anesthesiologist when platelets are available. Platelets will be issued, individually, when requested by attending physician or anesthesiologist.

2. Two additional Platelets, Pheresis will be requested STAT from ARC when first units are issued until MTP is terminated.

Section 5: Cryoprecipitated AHF

Orders for cryoprecipitate will not be anticipated by the BTS unless specifically requested. Pooled cryoprecipitate will be available within 30 minutes of request.

Section 6: Availability and Issue of Blood Products

The BTS will notify the attending physician or designee as blood and blood products are made available. Products will be issued upon request or held in the Blood Bank until needed. The goal is to maintain a 6:6:1 ratio (RBC:FFP:Pheresis) when preparing, issuing and transfusing blood products.

Section 7: Termination of MTP

The BTS will inquire at each notification of product availability if MTP should continue. It is the responsibility of the attending physician to notify BTS to discontinue MTP.
Section 8: Monitoring
Initiation of the Massive Transfusion Protocol, designation of MTP patients, use of Uncrossmatched blood and turnaround time will be monitored and reviewed by the Lab/Blood Utilization Review Committee when necessary.

Approved by:

Robert L. Booth, Jr., M.D.  Date
Associate Professor
Director, Clinical Pathology/Hematopathology

Daniel Barbee, RN, BSN, MBA  Date
Chief Executive Officer - UTMC

Review/Revision Completed By:
Michelle Bartkowiak, MT(ASCP)SBB

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