SUBJECT: MASSIVE TRANSFUSION PROTOCOL (MTP)

POLICY STATEMENT
A Massive Transfusion Protocol (MTP) is defined as “transfusion approximating or exceeding the patient’s blood volume (80ml/kg). The Massive Transfusion Protocol (MTP) is a cooperative effort between the clinical service and the Blood Bank to ensure prompt response in emergent situations.

This policy will apply to both pediatric and adult patient populations and is based on estimated weight (using Broselow pediatric emergency tape) of the patient.

The protocol has been approved by the Transfusion Committee to be initiated and carried out in the Emergency Department, Operating Rooms, Surgical ICU, Medical ICU, CPS, CCU, Pediatric ICU and Labor and Delivery.

A patient is kept on MTP for 24 hours unless the order is canceled or extended by the physician.

PROCESS/PROCEDURE
I. Initiation of a MTP
   A. A MTP is initiated by the physician (or designee) by calling the Blood Bank at extension 2-3542 and providing the patient name, medical record number, location, physician name and weight or estimated weight of the patient (if a pediatric patient).
      1. The Blood Bank will read back the order stating the patient’s name, medical record number and weight of the patient.
      2. The request for a MTP must be documented in the medical record.
      3. The emergency release of blood products does not initiate the MTP protocol.
   B. The Blood Bank will contact the Blood Bank Medical Director who is available to consult with the patient’s clinical service to assure timely availability of sufficient quantities of appropriate blood products to meet the patient’s needs.
   C. Coordinators will be designated in both the Blood Bank and the Clinical Service. These individuals will be responsible for coordinating all activities associated with the patient during the MTP. The patient’s attending physician or designee will designate the coordinator for the clinical service.
      1. For pediatric cases, the coordinator is defined as a pediatric STAT nurse who is contacted through the hospital operator. The STAT nurse will coordinate the transfusion volumes of products requested by the primary service and ensure adequate documentation and safety.

II. Materials Required
    Insulated Chests with coolant, if applicable
    Transfusion Guidelines (based on weight)
    Blood Product Delivery forms or shipping tags
    Emergency Release form if no specimen is available or testing is not completed

III. Specimen Requirements
    A. Determine if a current specimen is available in the Blood Bank for crossmatching (specimen collected within 3 days preceding the event).
    B. Send a specimen to Blood Bank, draw a 7 ml EDTA (lavender top) tube. The specimen must be legibly labeled with the patient name, medical record number, date and time of collection, initials of the collector.
       The specimen will be discarded if not properly labeled. A new specimen is required.
    C. Compatible blood will be issued without delay regardless of the status of testing.
D. Additional blood products will be typed and matched as indicated (using initial sample)

IV. Product Availability
The Blood Bank will maintain an adequate amount of product for issue according to the standard sets. An inventory of red cells, thawed plasma, pheresis platelets and cryoprecipitate (to be thawed on request) will be available to support the protocol as outlined in the table in section V.

V. Product Preparation for Shipment
A. The Blood Bank will prepare standard sets of products for issue according to the following table. The first (1st) set will be prepared immediately upon notification of the MTP and issued upon request.
   1. The standard sets will be issued in the numbered order.
   2. Subsequent sets will be immediately prepared following issue of the previous set. Further sets will be issued upon request.
   3. Cryoprecipitate is not included in a standard set and must be requested by phone.
   4. Patients in the 0-15kg weight category will receive O Negative, leukoreduced, irradiated red cells.
   5. Platelets are pheresis units (est. 300 ml volume)
   6. If more than 2 sets are needed, the composition of the sets will repeat themselves (ie. The quantities of red cells and plasma are constant with platelets included every other set.) unless otherwise specified.

<table>
<thead>
<tr>
<th>SET NUMBER</th>
<th>RED CELLS</th>
<th>PLASMA</th>
<th>PLATELET PHERESIS</th>
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<tbody>
<tr>
<td>ADULT AND PEDIATRICS (&gt; 30kg)</td>
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<td>1.</td>
<td>4</td>
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<tr>
<td>PEDIATRIC (16-30kg)</td>
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<td>2.</td>
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<tr>
<td>PEDIATRIC (0-15kg)</td>
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B. Modifications to the number or type of product must be communicated by phone to Blood Bank @ 2-3542 by the patient care area.
   1. The additional products will be prepared and issued as soon as available.
C. Unneeded products should be returned to Blood Bank immediately.

VI. Product Transport
A. Operating Room
Products will be transported in insulated chests via the dumbwaiter, TUG’s or designated personnel.
   1. A shipping tag containing the patient’s name, medical record number and operating room must be presented to the Blood Bank prior to the issue of the first set.
   2. The Blood Bank must be notified verbally if products are sent with a patient to the patient care unit.
B. Patient Care Areas
   Products will be transported in insulated chests to the patient care areas (ex: ED, SICU, PICU etc) by patient care staff.
   1. A Delivery form containing the patient’s name and medical record number must be presented to the Blood Bank at the time of issue.
C. Empty insulated chests should be returned to Blood Bank immediately.

ASSOCIATED REFERENCES

Blood Bank Standard Operating Procedures
Nursing Organization Blood Product Management Procedure
Department of Anesthesiology Policy and Procedures
AMCH Policy and Procedure: Blood Product Delivery to Patient Care Units
AMCH Policy and Procedure: Blood Transfusion