



Department of Pathology & Laboratory Medicine | Transfusion Medicine Services

## **Trauma Activated Transfusion Algorithm (TATA)/ Massive Transfusion Protocol (MTP)**

Further Information Is Available By Contacting The Medical Director of the Transfusion Medicine Service: Zbigniew M. Szczepiorkowski, M.D. or the Blood Bank Medical Director, Nancy M. Dunbar M.D.

- The TATA/MTP provides a coordinated hematologic resuscitation effort, including the use of thawed plasma, cryoprecipitate, platelets, and red blood cells guided by frequent monitoring of laboratory tests using the Massive Hemorrhage Panel (MHP).

### **TATA/MTP Candidates:**

- Life threatening trauma presenting to the Emergency Room or Operating Room
- Unexpected surgical or medical bleeding emergencies potentially requiring extensive blood support

The identification of TATA/MTP candidates is made by the Trauma Surgery Attending or responsible Medical, Surgical or Anesthesia staff. The protocol is may also be activated by the Transfusion Medicine Service for patients receiving transfusion of a volume of red cells equal to the patient's red cell mass within a 24 hour period.

### **Notification of Transfusion Service**

The physician, or designee, responsible for the potential TATA/MTP candidate shall notify the Blood Bank (5-7207) that TATA/MTP is indicated. The Blood Bank will contact the Transfusion Medicine Physician to provide consultation and support by phone as needed.

Tier 1 (6 units red blood cells and 4 units thawed plasma) will immediately be prepared by the Blood Bank. Uncrossmatched O Rh negative or O Rh positive units may be sent based upon patient status, gender, and age.

The need for subsequent components is communicated to the Blood Bank (5-7207) by the clinical team. If additional blood components are needed, the clinical team will contact the Blood Bank and request Tier 2 and/or Tier 3.

### **Transportation**

Transportation of blood components is coordinated by the local unit, using unit based runners or via Supply Chain Management (Patient Transportation/Distribution). If the unit is unable to contact Supply Chain Management to arrange for STAT transportation of blood product during the TATA/MTP the unit will request that the blood bank notify the dispatcher for Supply Change Management. The OSC (Outpatient Surgery Center) will be responsible to provide their own couriers.

### **TATA/MTP algorithm**

- Tier 1 – 6 units RBC, 4 units thawed potentially incompatible group A plasma
- Tier 2 – 3 units RBCs, 1 dose thawed plasma, 1 pack platelets
- Tier 3 – 3 units RBCs, 1 dose thawed plasma, cryoprecipitate

Contents are adjusted for pediatric patients weighing < 50kg.

### **Goals**



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The goals of the TATA/MTP are:

1. To provide optimal blood component therapy for patients experiencing bleeding emergencies. The initial resuscitation for the first 3 tiers provides a ratio of 1:1:1 – Thawed plasma (TP): Platelets (PLT): Red Blood Cells (RBC).
2. To standardize laboratory monitoring to guide blood component support. As laboratory testing results become available, the approach is transitioned to goal directed resuscitation guided by frequent laboratory monitoring using the Massive Hemorrhage Panel. Goals are to maintain Hgb > 8 g/dl, INR < 2.0, platelets > 50 and fibrinogen > 100.)

### Specific Protocol Guidelines

- Role of Clinical Team
  - Notify the Blood Bank of TATA/MTP
  - Obtain tests as indicated by the case, including the Massive Hemorrhage Panel (MHP), at the onset and at intervals throughout the resuscitation to guide blood component
  - Order specific blood components via eD-H
- Role of the Transfusion Medicine Physician
  - Support Blood Bank to ensure availability of appropriate blood components during the resuscitation
  - Provide consultation by phone as needed for appropriate blood component transfusions based on clinical situation and laboratory testing results
  - Recommend additional laboratory testing as clinically appropriate to guide blood component transfusion and assess response to transfusion