

# Massive Transfusion Protocol Improvement in Level I Trauma Center

Chrissie Schaeffer, DNP, APRN, ACCNS-AG, CEN, TCRN, Carol McGovern, MSN, CEN, CPEN, TCRN, Kimberly W. Sanford, MD, MASCP, Medical Director, Transfusion Medicine  
Virginia Commonwealth University, Richmond, VA



## ABSTRACT

### Background:

- An opportunity for improvement was identified in practice and in the activation of MTP. Locations that rarely utilized MTP demonstrated prolong period of time from order to time administered. The PI project sought to establish a standardized process across the hospital in ordering, procuring and administering blood products from MTP. There are about 175 MTP activations annually. The PDSA cycle started November 2020.

- Purpose:** To Improve team performance in “order to hang” times, decrease wastage of blood products and increase knowledge of best practices in MTP event response.

### Methods:

- Lean Principles in conjunction with the IHI Model. Multiple PDSA cycles for project design. Multidisciplinary taskforce met weekly to address gaps and barriers in the current MTP process.

- The success of the Massive Transfusion Protocol was contingent on a dedicated runner, ongoing education and a timely review of each MTP activation.
- Implemented changes in a phased manner

### Results:

- 138 activations from Jan-Sept 2020. Since start of PDSA cycle 186 activations. Consistent process for product delivery was maintained with a dedicated runner and the establishment of a rapid infuser RN expert. There was a 5% waste prior to start of the PDSA with a decrease to 3% since the implementation of these changes.

### Conclusion:

- Adjustments were made on a smaller level before expanding to the larger organization. Support and commitment for response process has sustained. The establishment of a MTP response team with defined roles and responsibilities has proven to be a positive experience in our organization with great implications in improved patient care and team communication.

**ADULT MASSIVE TRANSFUSION PROTOCOL**

- Activate**
  - Call \*500
  - “Mass Transfusion Protocol Alert”
  - “Mass Transfusion Protocol on the Move”
  - Place MTP Order in EHR
- Designate**
  - Team Roles
  - Team Leader • Podium/Recorder RN
  - Rapid Infuser Expert (Belmont) • Runner
  - Consult team(s) as needed
- Communicate**
  - Rolling call to receiving unit if patient still on MTP
  - Order additional MTP Phases in EHR
- Evaluate**
  - Complete Debrief Form

Scan HERE to view protocol

**MTP RESOURCE NUMBERS**

- Blood Bank 628-2595
- Transportation 628-0524
- Runner ASCOM 683-4765
- Interventional Radiology 628-1115
- Main 5 OR Control 628-6850

MTP Debrief

**INDICATIONS FOR MTP**

Massive Blood Loss

- Replacement of 50% total blood volume within 3 hours OR entire blood volume within 24 hours
- Anticipated need of at least 6 units pRBCs

PLUS 2 Clinical Triggers:

- SBP < 90 mmHG
- HR > 120 bpm
- Positive FAST (Focused Assessment w/Sonography for Trauma)
- Severe thoracic, abdominal, pelvic or multiple long bone trauma
- Coagulopathic disruption/dysfunction
- Post-Partum Hemorrhage

Laboratory Testing	Products Released	Phases
Priority! 2 Samples in Blood Bank	6RBC 6FFP 1 Platelet	All
CBC, Coags, Ion CA+, ABG, TEG Monitor every 30-60 mins during MTP	1 Cryo	II, IV, VII

MAGNET RECOGNIZED  
AMERICAN NURSES CREDENTIALING CENTER

Badge Buddies