Massive Blood Transfusion Protocol: we need blood NOW!

Sarah Berry, DNP, RN, AGCNS-BC, CEN
Emergency Center ■ Beaumont Hospital – Troy, MI

PURPOSE

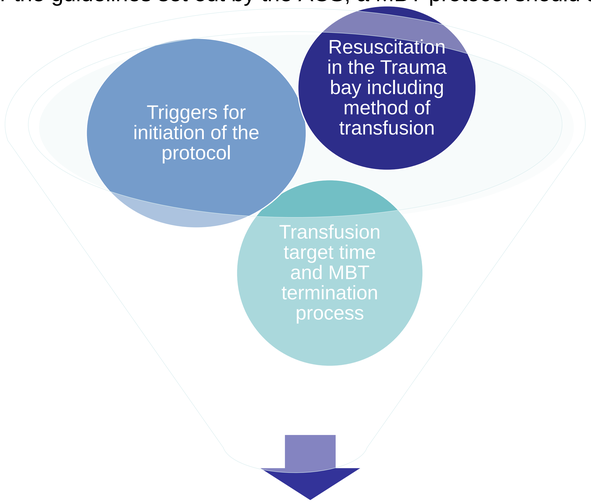
To decrease the time of blood arrival to the bedside for patients who required a massive blood transfusion.

INTRODUCTION

Hemorrhage is the most common cause of death for Trauma patients with in the first hour of arrival to the hospital (ACS TQIP). During Beaumont Hospital, Troy's journey of becoming a Level II trauma center, it was identified an extensive amount of time was taken to obtain blood for Massive Blood Transfusion (MBT) patients and that the process lacked an official protocol. In a review of one MBT case, it was found that it took approximately 25 minutes to have blood at the bedside. In order to align with guidelines set out by the American College of Surgeons (ACS) regarding MBT and to improve patient outcomes, a MBT protocol for the Emergency Center was created with a goal of obtaining blood at the bedside within 10 minutes of order placement.

Since MBTs are unplanned and require the preparation of large amounts of blood products in a short period of time, significant planning between blood bank, the emergency center, OR, and delivery personnel is critical.

Per the guidelines set out by the ACS, a MBT protocol should address:



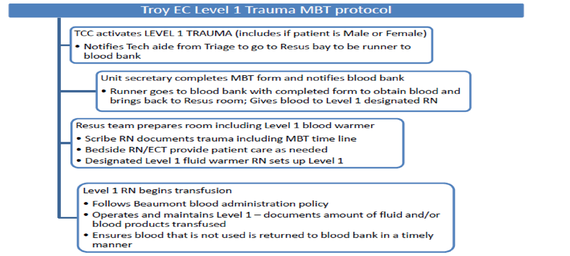
MBT Protocol

METHODOLOGY

Implementation included inter-professional collaboration between the Emergency Center, Blood Bank, Trauma Services, Quality department, and Registration to determine the protocol. The committee also decided to include an automatic order for the MBT protocol for any patient identified as a Level 1 Trauma. Emergency Center and Blood bank staff were then educated on the new process and MBT drills were done.

Implementation included:

- Education for all staff in the EC including unit secretaries, technical aides, and RNs
- Development of an audit tool in order to track timing of blood arrival at the bedside
- Unannounced Level 1 trauma drills which included trauma services, OR, as well as EC staff
- One on one coaching for staff regarding the MBT process

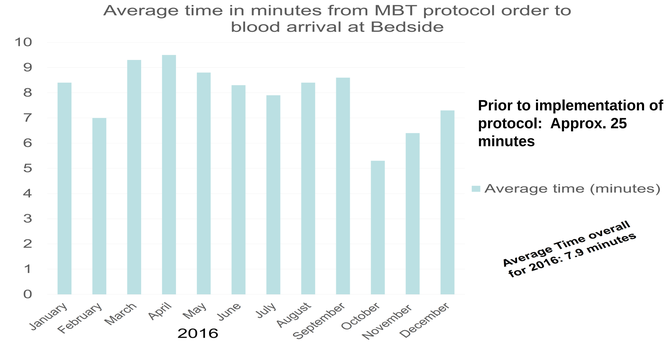


MBT audit tool

MASSIVE BLOOD TRANSFUSION TIMES	
DO NOT SCAN INTO CHART!!!!	
ETA	
Activation of L 1 Trauma	
Page to Trauma Team	
Registration generates 2/3 Doe Wristband	
EC UC/designee notifies Blood Bank	
Secretary Enters Trauma Panel	
EC Runner goes to Blood Bank w/Requisition	
OR ROOM READY	
Patient arrived in Resus Bay	
EC Runner returns with Level 1 Cooler	
Starts Blood Transfusion	
TOTAL TIME	
TOTAL TIME (Arrival to Transfusion)	
Please turn in this sheet with your Trauma documentation	
*Clinicians: please turn in to Quality RN	
DO NOT SCAN INTO CHART!!!!	

RESULTS

As a result of this new protocol, there was a dramatic decrease in time to receive blood at the bedside for MBT patients. A total of 89 patients had the MBT ordered in 2016. In 2016, the average time to have blood at the bedside under the MBT protocol was 7.9 minutes from order placement.



CONCLUSION

The current MBT protocol has been proven to decrease the time for blood to arrive at the patient bedside for a MBT patient by utilizing a collaborative effort between the EC, Trauma, and Blood bank. The protocol also aligns with the guidelines set out by the ACS.

ACS Guidelines for MBT Protocol	EC Protocol
Identifying a trigger for initiation of MBT protocol	Level 1 Trauma activation
Transfusion target time	Less than 10 minutes from order placement to bedside
MBT termination process	May only be terminated by Trauma Surgeon
Transfusion method	Rapid transfusion device
Performance improvement monitoring	Audit tool for MBT patients
Blood product availability and delivery	Collaboration between blood bank and EC staff

REFERENCES

American College of Surgeons Trauma Quality Improvement Program. *Massive Transfusion in Trauma Guidelines.*