

# Massive Hemorrhage Protocol in Traumatically Injured Patients

Western
The Centre for Quality,
Innovation and Safety

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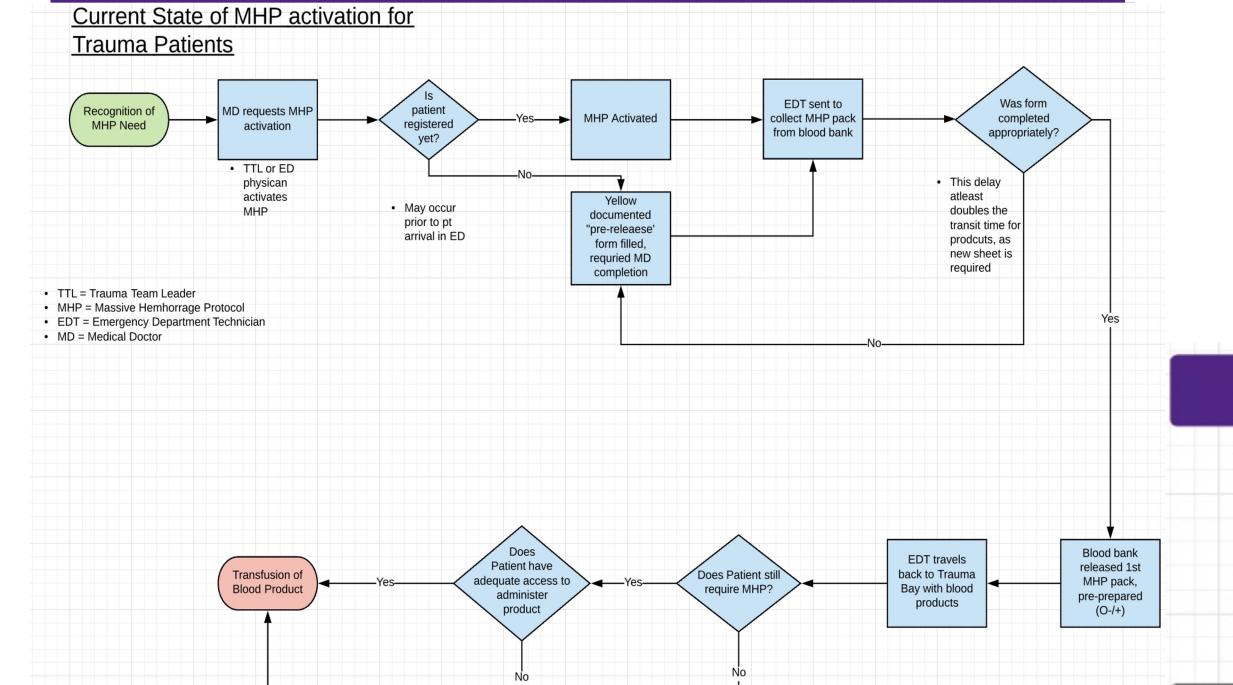
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**AIM Statement:** By Summer 2022, implement a 2 minute reduction in time from Emergency Department registration to time of 1st blood product administration for traumatically injured patients in need of massive hemorrhage protocol

# PROBLEM DEFINITION

Critically ill bleeding trauma patients require rapid access to blood products to minimize associated mortality and optimize damage control resuscitation. Local analysis showing a median delivery time of over 10 minutes. Each minute reduction in receipt of blood products to trauma patients would result in a 5% mortality benefit.

# ROOT CAUSE ANALYSIS



Process Map from Trauma Activation to blood product delivery.

central access secured

Stakeholder interviews suggest areas for improvement involve focus on automation and minimizing delays in release of blood to arrival of patient

Automated activation of blood product for all trauma team activations reduces time to blood product administration and improves communication between front line providers and blood bank personnel.

### **Secondary Drivers** Vitals/Information not delivered pre-hospital 1. Time of blood **Automatied Activation** administration Occult Shock Uncrecognize **Process:** Blood Bank receives physical page 2. % of Activations Preparation of Blood as per BEEP network received by blood bank Products 3. % of coolers eparting as unknow To reduce tin Initial Trauma pack deployed as 4. Time from trauma to blood Delayed Receipt of Pt activation to blood unknown Receipt of eciept by Demographics ank depature Blood to . Time of from blood Trauma Bay Trauma ank departure to ED Dedicated Porter System inluded in patients Transport to/from Trauma Activation equiring MH Blood Bank 6. Time from ED arriva activation o blood administratior Delayed Arrival of blood to **EDT Route optimization** Delivery of Trauma bay unknown blood to Patient Announcement/Engagment of Inability/Lack of Access to delivery porter/technician for blood arrival

Underscoring importance of access

Level 1 for MHP

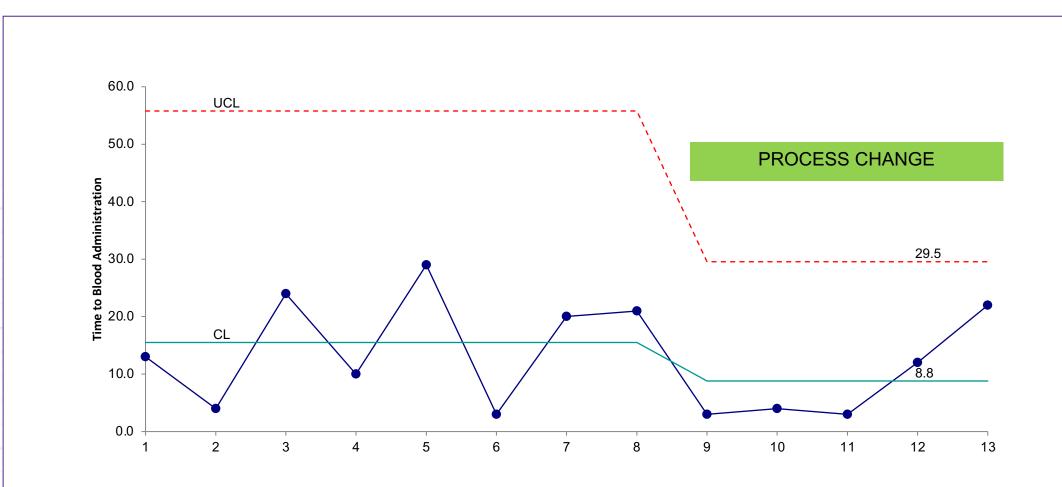
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# IMPLEMENTATION

PDSA cycles demonstrated

- 1. Excellent blood product preparation from blood bank
- 2. Personnel challenges in transport of product from blood bank to Trauma
- 3. Improved documentation of blood product delivery times is required
- 4. Communication qualitatively improved within all stakeholders, with flow of information targeting Rh status for product delivery

# MEASUREMENT & RESULTS



Run chart in process of completion to date

## SUSTAINABILITY

Each trauma activation will be reviewed by charge RN to ensure documentation completed and delays identified. Blood bank personnel monitoring rates of pick up by ED team.