

Eligibility

Blood Bank Staff: Please complete the following Inclusion/Exclusion criteria for any trauma patient for whom the Massive Hemorrhage Protocol (MHP) has been initiated. ☒

#	Inclusion Criteria	Yes	No
1.	Estimated age greater than 16 years old	☐	☐
2.	Severely injured (penetrating or blunt) trauma patients.	☐	☐
3.	Triggered MHP within first hour of hospital arrival at the trauma bay/ED	☐	☐

#	Exclusion Criteria	Yes	No
4.	Have received more than 2 U RBCs during the pre-hospital phase of care	☐	☐
5.	Have received more than 2 U RBCs in the trauma bay/ED before activation of the MHP	☐	☐
6.	Have an elapsed time from injury of more than 3 hours	☐	☐
7.	Have a penetrating traumatic brain injury with Glasgow Coma Scale (GCS) of 3	☐	☐
8.	Are suspected or known to be on anticoagulants in the last 7 days	☐	☐
9.	Have known congenital or acquired bleeding disorders	☐	☐
10.	Have a known pregnancy	☐	☐
11.	Refuse blood transfusion due to religion or other reasons	☐	☐
12.	Previous history of heparin induced thrombocytopenia (HIT)	☐	☐

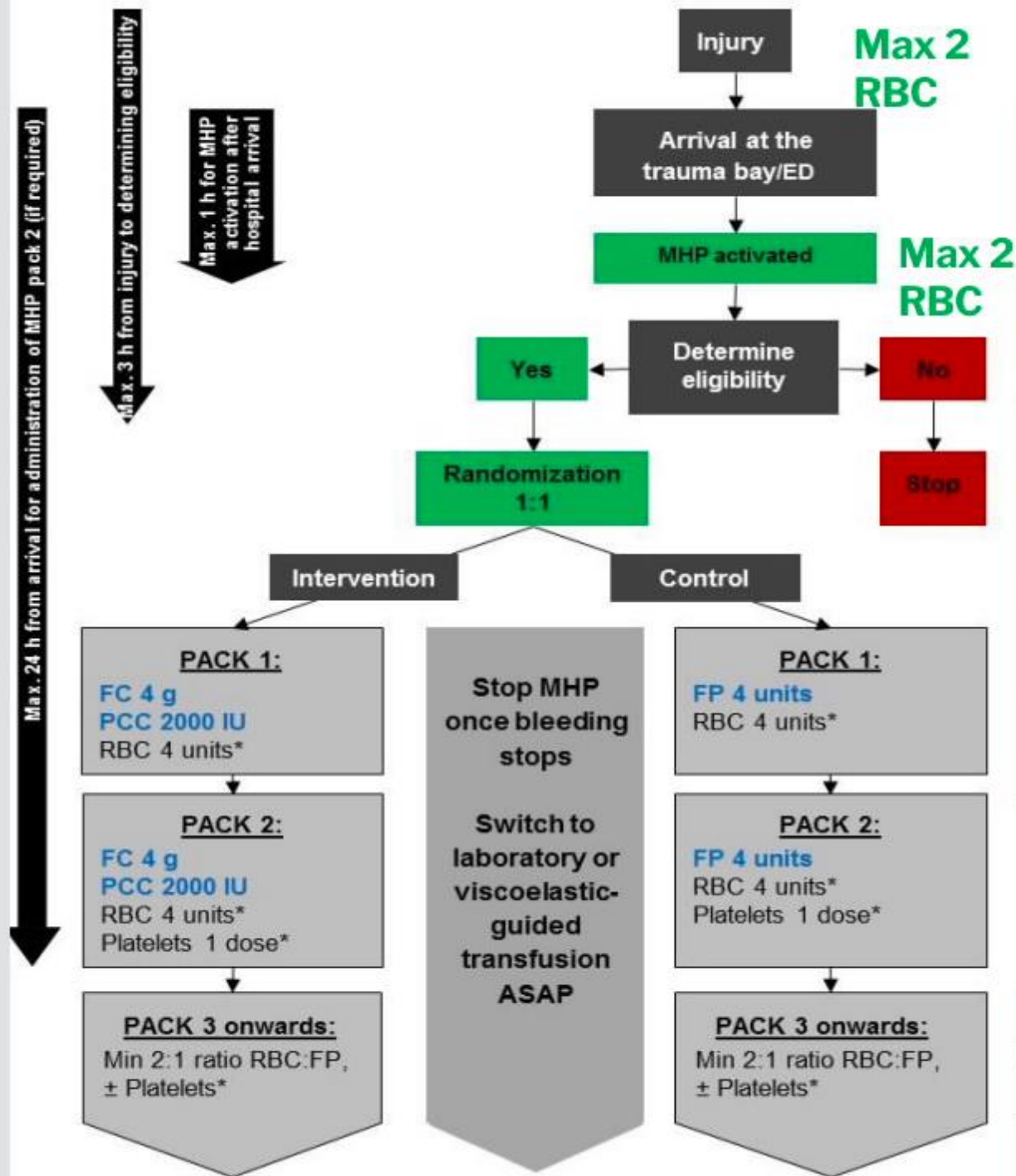
FiiRST-2 Packs

Control Arm

- [pack 1]
 - 1 tube of 4 RBCs
 - 1 tube of 2 FP
 - 1 tube of 2 FP
- [pack 2]
 - 1 tube of 1 plt
 - 1 tube of 4 RBCs
 - 1 tube of 2 FP
 - 1 tube of 2 FP

Intervention Arm

- [pack 1]
 - 1 tube of 4 RBCs
 - 1 tube of 2000 IU PCCs
 - 1 tube of 4g FC (in 1g syringes)
- [pack 2]
 - 1 tube of 1 plt
 - 1 tube of 4 RBCs
 - 1 tube of 2000 IU PCCs
 - 1 tube of 4g FC (in 1g syringes)



Pack 3 onward as per hospital MHP

The Ask from the Department

- Patients will be included in the trial by the Trauma Team
- Trauma Surgeon will inform case anesthesiologist of trial eligibility
- If trial has started, please complete transfusion of pack 1 or pack 2 if started
- If needed, transfuse pack 2 if needed
- After pack 2, can order blood products as needed
 - Can continue ExP or convert to MTP
- Can stop transfusing at any time if patient stabilizes and no longer needs ExP

Trial blinding and unit checking

- Trauma surgeon and ICU care team to be blinded
- Units will be labeled: "Pack 1A, Pack 1B, Pack 1C" and "Pack 2A, etc"
- Inform ICU and/or trauma surgeon which packs have been transfused
 - This blinds the future care providers to what was given
 - Ex: "The patient was given all of packs 1 and packs 2, as well as 2 units PRBCs, 2 units FFP, and 8 g Fibrinogen"



PACK: 1A ☐ 1B ☐ 2A ☐ 2B ☐

***** Maintain the Blind *****

Time Started: _____

All Products Transfused: Yes ☐ No ☐ Initials: _____

Ex: Scenario 1

- Patient has ExP activated in ER and comes straight to OR before receiving any blood products
- Blood products routed to OR
- Please transfuse all blood products as received from the ExP if needed
- Continue ExP or convert to MTP after packs 1 and 2 administered

Ex: Scenario 2

- Patient has ExP activated in ER and received part of pack 1 (2 units PRBCs), then brought stat to OR
- Blood products routed to OR
- Transfuse remainder of Pack 1 (PRBC x 2, FFP x 4 or PCC+Fib) and Pack 2 if needed
- Continue ExP or convert to MTP after packs 1 and 2 administered

Ex: Scenario 3

- Patient has ExP activated in ER and received all of pack 1 (4 units PRBCs, 4 units FFP or PCC+Fib), then brought stat to OR
- Blood products routed to OR
- Transfuse pack 2 (PRBC x 4, FFP x 4 or PCC+Fib, Plts x 1) if needed
- Continue ExP or convert to MTP after pack 2 administered

Ex: Scenario 4

- Patient has ExP activated in ER and received all of pack 1 (4 units PRBCs, 4 units FFP or PCC+Fib), and part of pack 2 (PRBC x 2), then brought stat to OR
- Blood products routed to OR
- Transfuse remainder of pack 2 (PRBC x 2, FFP x 4 or PCC+Fib, Plts x 1) if needed
- Continue ExP or convert to MTP after pack 2 administered

Ex: Scenario 5

- Patient has ExP activated in ER and received all of pack 1 (4 units PRBCs, 4 units FFP or PCC+Fib), and all of pack 2 (PRBC x 4, FFP x 4 or PCC+Fib, Plts x 1), then brought stat to OR
- Blood products routed to OR
- Continue ExP or convert to MTP after pack 2 administered

Charting in SA-Anesthesia

Documentation

Blood Products

- Albumin 5% Volume Transfused
- Albumin 25% Volume Transfused
- Auto Transfusion (Cell Saver)
- Cryoprecipitate Volume Transfused
- Fibrinogen Volume Transfused
- Plasma Volume Transfused
- Platelets Volume Transfused
- Red Blood Cells Volume Transfused
- IV Immune Globulin Volume Transfused
- Other Blood Volume Transfused
- Prothrombin Complex Volume Transfused

1 → **Intake**

2 ↓ **Blood Products**

3 → **Other Blood Volume Transfused**

Crystalloid | **Blood Products** | Colloids | Other Intake

Intake

Other Blood Volume Transfused

☐ Bolus Bag volume: mL Height: 0
☒ Infusion Weight: 0

22-Nov-2022 16:45 17:00 17:15 22-Nov-2022 17:30

Intake
Start time: Stop time:

Volume rate: mL/hour

Weight based rate: **Weight required**

Volume: mL

Duration: 0+ hour

7	8	9
4	5	6
1	2	3
.	0	«

Route: IV Site: No Site Specified

☐ Show all routes ☒ Show all sites

Comment:
Pack 2A - Bag 1