



Appropriate Initial Interventions

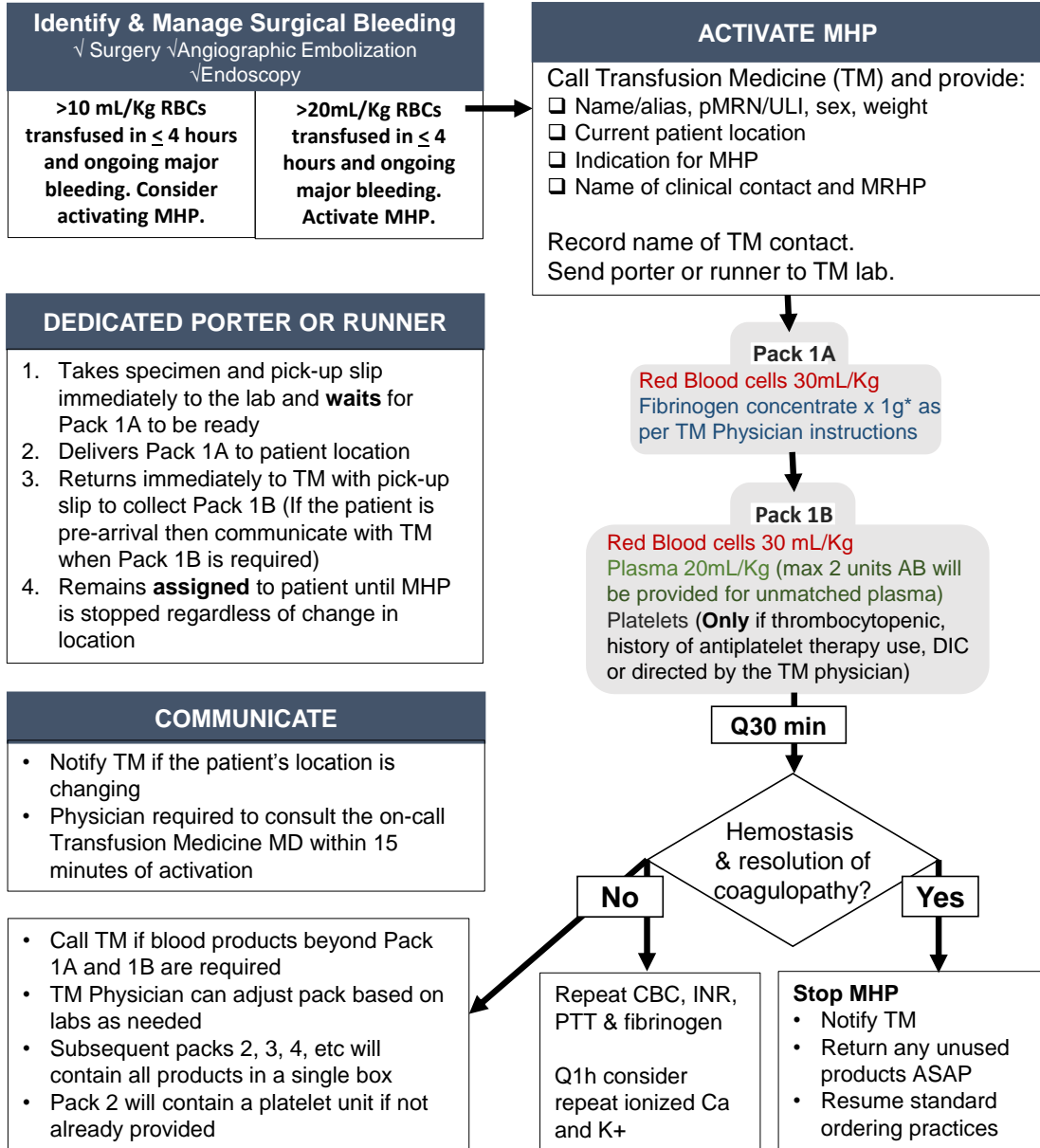
- √ Intravenous access: 2 large bore IVs ± CVC
- √ Crystalloid: as per attending physician
- √ Labs: **Type and Screen, CBC, INR, Fibrinogen, electrolytes, creatinine, Mg, ABGs, lactate and ionized Ca**
- √ Continuous Monitoring
- √ Aggressive rewarming
Blood warmer if rate >50 ml/kg/h
- √ Prevent/reverse acidosis
- √ Correct hypocalcemia**:
Adults: Ca gluconate 3 g IV slowly
Pediatrics: Ca gluconate 30 mg/kg/dose
- ** If using calcium chloride, it MUST be infused into a central line due to the risk of tissue necrosis with peripheral lines.
- √ Transfuse with unmatched RBCs on hand
- √ Tertiary Trauma Survey

Other considerations

- √ Heparin reversal
Protamine 1 mg IV / 100 U of heparin
- √ Warfarin reversal
Vitamin K 10 mg IV
Prothrombin Complex as per TM protocol dosing for INR and weight
- √ Consider antifibrinolytics
Tranexamic Acid 10-15mg/kg bolus (if not already administered), followed by 1mg-5mg/kg/h infusion
- √ Cell Salvage

General Guidelines for Blood Product Replacement:

RBCs	No threshold Dose: MD discretion
Plasma	If INR>1.5 Dose: 10-15 mL/kg
Platelets	If Plt <50 x 10 ⁹ /L or <100 x 10 ⁹ /L if CNS injury Dose: Adult: 1 platelet pool Pediatric: 10 mL/kg to max of 1 pool or apheresis adult dose (250 mL)
Cryoprecipitate or Fibrinogen	If Fibrinogen: ≤1.8 g/L (Trauma) ≤ 2.5 g/L (Cardiovascular surgery or Obstetrical) Dose: Cryoprecipitate: 1 Unit/10kg Dose: Fibrinogen: 30-60 mg/kg



Massive Hemorrhage is defined as blood loss > 150 mL/min or replacement of 50% of blood volume in 3 h or greater than one blood volume in < 24 h.