

MASSIVE TRANSFUSION PROTOCOL

STEP 1 : Bleeding control

- Control of bleeding is the single most important intervention.
- Minimise time between arrival and surgery if indicated
- Use tourniquets to control peripheral bleeding vessels
- Tamponade techniques: eg. pelvic binders, direct pressure, suture lacs
- Intrauterine balloon devices for PPH, manual compression, oxytocics

STEP 2: Identify the need for Massive Transfusion

- Use a clinical scoring predictor: TASH or ABC
- Based on clinically obvious massive bleed / trauma
- Based on initial response to empirical resuscitation

STEP 3: Activate Hospital Massive Transfusion system

- Laboratory staff
- Dedicated nursing team for transfusion device
- Surgeon & theatre staff activation early

STEP 4: Initial Empirical Resuscitation (first 15 – 30 minutes)

- Bolus 2 units pack RBCs and 2 units FFP
- Avoid excessive crystalloid / colloid infusion
- **SEND**: FBP, group and X match, coags (INR, APTT, fibrinogen), ABG / lact

STEP 5: Continue Volume Resuscitation / Monitoring

- **Continue PRBCs and FFP in 1:1 ratio – target MAP is 65 – 70**
 - NB: target MAP is 90 – 100 in patients with traumatic brain injury / raised ICP
- **Monitoring – establish early and use to target agents**
 - Recommend invasive monitoring (arterial line) if available
 - Send repeat investigations every ~ 30 minutes: Hb, ABG, Ca, coags
 - Frequent / continuous temperature monitoring

STEP 7: Target therapy to results / clinical parameters

Target BP - MAP = 65 mmHg	Give fluid volume: ideally RBCs / FFP
Hb target > 80 g/l	Give RBCs
if INR > 1.5 OR APPT > 50 sec	Give 2u FFP consider Prothrombinex
if fibrinogen < 1.0 g/l	Give 8 units of cryoprecipitate
Calcium target is > 1.1 mmol	Give 1 amp of Ca-gluc 1g/10mls
Optimise acidosis	Consider intubation / ventilation
Maintain patient T > 35 deg	IV fluid warmer, airblanket, limit exposure