

Adult Massive Haemorrhage Pathway

Massive Bleeding PLUS
Shock Signs or HR > 120 or SBP < 90



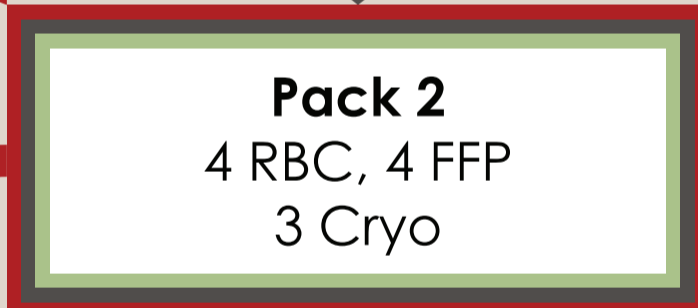
Send Group + Screen

Initiate: Call Blood Bank 24015, Provide Patient Details
State "I am requesting (Crimson, Standard, Obstetric) Stat Pack"

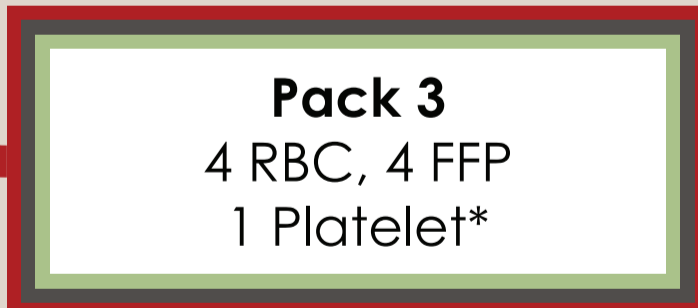


Reassess: Ongoing Massive Bleeding + Shock?

Activate MHP, Identify Transfusion Coordinator, Call Blood Bank 24015
State "I am activating (Crimson, Standard, Obstetric) MHP"



1g Calcium with every pack



Alternating packs 2 & 3 until bleeding slowed

Then stop MHP, and start targeted transfusion

- Bloods:**
- repeat every 30min
 - Blood gas
 - iCa²⁺
 - FBC
 - Coags
 - Fibrinogen
 - Viscoelastic if available e.g. TEG®

Coagulation Targets	If Not, Give
PR < 1.5 APTT < 40	4 U FFP
Fibrinogen > 2g/L	3 U Cryoprecipitate
Platelets > 75 x 10 ⁹ /L	1 U Platelets**
Ionised Ca ²⁺ > 1.1 mmol/L	1g Calcium

Obstetric Haemorrhage

- Manage Tone, Trauma, Tissue, Thrombin causes of haemorrhage
- Repeat TXA 1g 30 min after initial dose if significant ongoing bleeding

*See notes on page 2



CODE CRIMSON - ABC Score

- Penetrating mechanism = 1
- SBP \leq 90 mmHg = 1
- Positive eFAST*** = 1
- HR \geq 120 bpm = 1

Code Crimson requires senior clinician approval and input, as activation identifies the highest risk trauma patients and needs a multi-service approach.

***eFAST scan accuracy relies on the skill level of the practitioner

Team Leader of the Resuscitation



- The team leader is the decision maker including activation of the MHP once the stat packs have been transfused
- Send urgent group & screen to blood bank
- Ensure Tranexamic Acid is administered, as a bolus through a fast flowing IV line

Transfusion Coordinator (e.g. Guardian, Coordinator)



- Supports the team leader
- Once the MHP has been activated, communicate with the blood bank team

Tasks (Delegated as Necessary)

- Once Stat Packs have been transfused - reassess the patient in conjunction with the team leader
 - If required after stat pack - activate MHP, state which MHP pathway (i.e. code crimson/standard/obstetric MHP)
 - If senior clinician requests MHP activation immediately, stat pack is still issued while the blood bank prepares pack 1/pack 2
 - Ensure blood bank have your name and contact number
 - Organize adequate orderly/health care assistant support
 - Repeat MHP bloods every 30mins
 - Ensure 1g Calcium given with every MHP pack (10mL CaCl 10% or 30mL Ca²⁺ Gluconate 10%) as a bolus through fast flowing line
 - Hand-over coordination role if patient location changes; ensure blood bank notified of new coordinators name and number
 - Cease MHP once the patient is clinically stable, inform blood bank, move to targeted therapy
 - Ensure transfusion documentation / checklists maintained; all swing labels retained
- **Smaller Centres should** check Full Blood Count BEFORE giving platelets, avoid transfusing if PLT > 75 x 10⁹/L

Blood Bank Roles



- Process urgent group and screen
- Liaise with transfusion coordinator
- Release Stat Pack and MHP Packs as per protocol / SOP
- Notify NZBS TMS as per SOP & manage inventory
- Ensure Blood Bank Tracking Sheet / Checklist documentation and eTraceline records maintained

Smaller Centres BEFORE releasing Pack 3, liaise with MHP coordination role to confirm PLT count is < 75 x 10⁹/L

MHP Runner



- This can be HCA/Orderly/RN or anyone else available to collect blood products from blood bank
- Liaise with the transfusion coordinator regarding product collection
- Stay with the MHP until you are released by the transfusion coordinator
- Return blood products to blood bank as directed by the transfusion coordinator

Infusion Standards



- RBC, FFP, Cryoprecipitate:
 - warmed
 - standard blood infusion set
- Platelets:
 - warmed or room temp
 - new infusion set preferred, not essential

Clinical Targets



- Surgical/radiological **control of bleeding** ASAP
- Normal **pH/base deficit**
- Normal body **temperature**
- **A lower MAP** may be tolerated until bleeding slowed
 - unless brain injury

