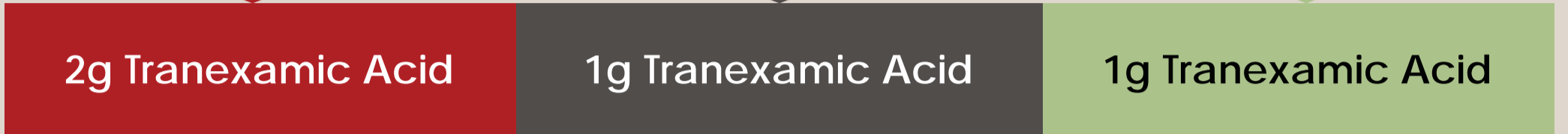


Adult Massive Haemorrhage Pathway FLOWCHART

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



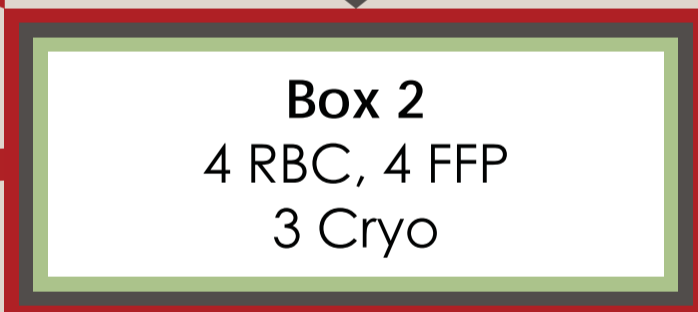
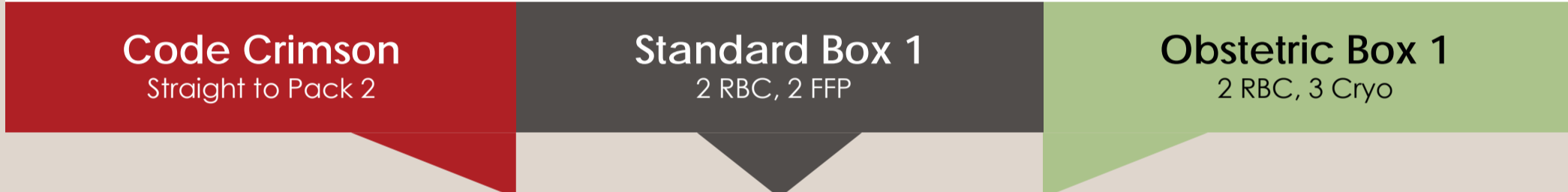
Initiate: 📞 **777**: State "This is a Standard/Obstetric MHP, my location is ..." "or this is a Code Crimson"

Send Group & Screen, eFax QMR022A† request form to Blood Bank - pre-programmed or 80159



Reassess: If ongoing Massive Bleeding + Shock
📞 **Blood Bank 80310 or use walkie talkie**

State "I am **Activating** Code Crimson/Standard/Obstetric MHP" Identify MHP coordinator
eFax QMR022A & QMR022B request forms to Blood Bank - pre-programmed or 80159



10ml CaCl₂ - OR 30ml Ca Gluconate
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	1U Platelets*
Ionised Ca ²⁺ > 1.1 mmol/L	10ml CaCl ₂ or 30ml Ca Gluconate



Obstetric Haemorrhage

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

†Initial QMR022A is not required for Code Crimson

*See notes in Checklist

Adult MHP Checklist

CODE CRIMSON - ABC Score

- Penetrating mechanism = 1
- **SBP** ≤ 90 mmHg = 1
- Positive eFAST*** = 1
- **HR** ≥ 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 (Delegate as appropriate)

- Decision to Initiate MHP, ensure Tranexamic Acid is administered
- Decision to Activate MHP if required after Stat Packs transfused
- Delegate MHP Coordinator role
- Decision to cease MHP



MHP Coordinator

- Supports the team leader
- Once the MHP has been activated, communicate with the blood bank team and Orderly/OTA (walkie-talkie)



Tasks (Delegate as appropriate)

- Urgent Group & Screen sample to Blood Bank, QMR022A request "Standard or Obstetric STAT PACK" eFaxed to Blood Bank
- Once Stat Packs have been transfused - reassess the patient in conjunction with the Team Leader
- If required - **Activate** MHP by walkie talkie or ext 80310, state which MHP pathway (ie. code crimson/standard/obstetric MHP)
 - Ensure Blood Bank has your name and contact number
 - Check is there a valid group and screen
- eFax QMR022A & QMR022B forms to Blood Bank write Standard or Obstetric MTP BOX 1 (Code Crimson Box 2) on form
- Repeat MHP bloods every 30mins
- With every MHP pack give 10 mL Calcium Chloride 10% **OR** 30 mL Calcium Gluconate 10% bolus through fast flowing line
- Hand-over coordination role and walkie-talkie eg. if patient changes location
- Cease MHP once the patient is clinically stable, move to targeted therapy and **inform Blood Bank.**
- **Return walkie talkie with unused products.**
- Ensure all transfusion documentation / checklists are maintained; all swing labels adhered to QMR form, return any green Notification of Transfusion forms to Blood Bank



Blood Bank Tasks

- Process blood group & antibody screen ASAP
- Release Stat Pack and MHP Packs as per protocol / Standard Operating Protocol
- Liaise with MHP coordinator and Orderly
- Notify NZBS TMS as per SOP & manage inventory
- Maintain Blood Bank Tracking Sheet / Checklist documentation and eTraceline records
- Check with Co-ordinator about ceasing MHP, returning unused blood, Walkie Talkies & any Notification of Transfusion forms



MHP Orderly / OTA

- Receives 777 call goes to Blood Bank, communicates and works with MHP coordinator/Blood Bank



Infusion Standards

- RBC, FFP, Cryoprecipitate
 - warmed, standard infusion set
- Platelets
 - warmed or room temp
 - new infusion set preferably if RBC have been transfused through same line



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



Contacts

Blood Bank ext 80310 eFax 80159
Coagulation Laboratory ext 80374
Theatre OTA (0700 -2300hrs) 021 354378
Transfusion Medicine Specialist 80310