

# CMH Adult Massive Haemorrhage Pathway

**(Massive Bleeding PLUS  
Shock Signs or HR ≥ 120 or SBP < 90)**

<b>Code Crimson</b> Trauma + ABC Score ≥ 2 + senior clinician approval	<b>MHP - Standard</b> Medical or Surgical Bleeding	<b>MHP - Obstetric</b>
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<b>2g Tranexamic Acid</b>	<b>1g Tranexamic Acid</b>	<b>1g Tranexamic Acid</b>
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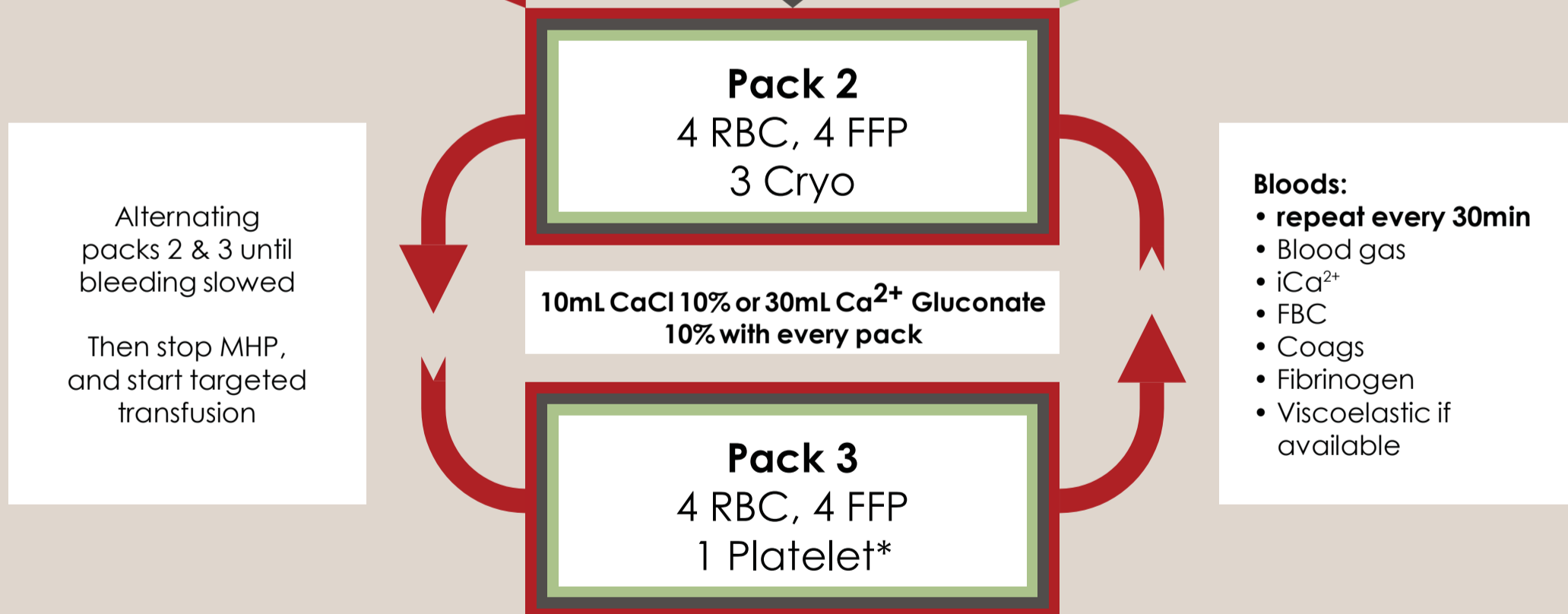
<b>Send Group + Screen</b>		
<b>Code Crimson - Call 777</b>	Call Blood Bank <b>59151</b> , state "which Stat Pack is required (Standard/Obstetric) my location is...patient details..."	

<b>Stat Pack – Code Crimson</b> *2 RBC, 2 FFP	<b>Stat Pack - Standard</b> *2 RBC	<b>Stat Pack - Obstetric</b> *2 RBC
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**Reassess: On-going Massive Bleeding + Shock?**

**Activate MHP, Call Blood Bank 59151 or use issued mobile phone  
State "I am activating the MHP (Code Crimson, Standard, Obstetric) "**

<b>MHP – Code Crimson</b> Straight to Pack 2	<b>MHP -Standard Pack 1</b> 2 RBC, 2 FFP	<b>MHP - Obstetric Pack 1</b> 2 RBC, 3 Cryo
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Coagulation Targets	If Not, Give
PR < 1.5   APTT < 40	4 U FFP
Fibrinogen > 2g/L	3 U Cryoprecipitate
Platelets > 75 x 10 <sup>9</sup> /L	1 U Platelets**
Ionised Ca <sup>2+</sup> > 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
- Positive eFAST\*\*\* = 1
- SBP ≤ 90 mmHg = 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

## Resuscitation Team Leader

- Send Group & Screen to Blood Bank
- Ensures Tranexamic Acid is administered, as a bolus through a fast flowing IV line
- Decides if activation of the MHP is required once the stat packs have been transfused  
(\*ED to use local fridge emergency RBC units for the Stat Pack)



## MHP Coordinator

- Supports the team leader
- After the Stat Packs have been transfused, reassess the patient in conjunction with the team leader
- Activates relevant MHP pathway (Code Crimson/standard/obstetric)
- If senior clinician requests MHP activation immediately, ensure stat pack is still issued while the Blood Bank prepares pack 1/pack 2
- After activation liaises with the Blood Bank team. Ensure Blood Bank have your name and contact number (Blood Bank issued mobile phone or locality number)



## Tasks (Delegated as Necessary)

- Ensure orderly/health care assistant support
- Repeat MHP bloods every 30mins
- Ensure Calcium is given with every MHP pack (**10mL CaCl 10% or 30mL Ca<sup>2+</sup> Gluconate 10%**) as a bolus through fast flowing line
- Hand-over coordination role if patient location changes; ensure Blood Bank is notified of new coordinators name and number
- Cease MHP once the patient is haemodynamically 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 10<sup>9</sup>/L

## Blood Bank Tasks

- Process group & screen ASAP
  - Liaise with MHP coordinator
  - Release Stat Pack and MHP Packs as per protocol / SOP
  - Notify NZBS TMS as per SOP & manage inventory
  - Maintain Blood Bank Tracking Sheet / Checklist documentation and eTraceline records
- \*\***Smaller Centres BEFORE Pack 3**, liaise with MHP coordination role to confirm PLT count is < 75 x 10<sup>9</sup>/L and platelets clinically indicated



## 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/spinal injury



## MHP Runner

- Identified by MHP coordinator and works with MHP coordinator
- Code Crimson 777 call- orderly to go direct to Blood Bank and collect Stat Pack **Fresh Frozen Plasma**

