

Massive Haemorrhage Pathway – Adult

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Massive Haemorrhage Pathway - Adult

Purpose

To provide staff with a system to rapidly and reliably deliver blood components in pre-prescribed ratios from the Blood Bank to patients with massive haemorrhage and shock.

Scope

The MHP is initiated by a Medical Officer. The MHP is a complex set of concurrent processes which require effective leadership within a functioning multidisciplinary team

The process may involve any of the following staff groups:

- Medical Staff
- Nursing Staff / Midwives
- Anaesthetic Technicians
- Operating Theatre Assistants (OTA's)
- Hospital Aides
- Orderlies
- New Zealand Blood Service

Procedure

1. INITIATE

MHP is initiated for massive bleeding AND shock or coagulopathy and for Code Crimson patients.

A Code Crimson 777 call will Initiate the Code Crimson arm of the MHP

For Obstetric or any other non-Code Crimson patients phone 777 and state "This is an Adult Obstetric/ Standard MHP, my location is..."

The 777 call will

- Page an Orderly who will go directly to Blood Bank to collect the appropriate Stat Pack and walkie talkie and deliver them to the patient location.
- Page Blood Bank staff who will prepare to receive the "Activate" call and call in extra laboratory staff if required.
- Page the relevant OT, ICU and ED Associate Charge Nurse Manager or Birthing Suite Coordinator. The Duty Anaesthetist will also be paged.
- For other areas the Clinical Emergency Team will be activated.

Stat Packs

- **Standard and Obstetric - complete QMR022A form for issue of Stat Pack.** Write Standard or Obstetric Stat Pack on the form eFax to pre-programmed "Blood bank" or 80159
- **Code Crimson** (2 RBC & 2 FFP) released without QMR022A or QMR022B. *Return the green Notification of Transfusion forms to Blood Bank*

Walkie Talkies

- Blood Bank staff will issue 2 walkie talkies (2-way radios) to the Orderly (runner) with each Stat Pack. One will be kept by the Orderly and the other delivered to the MHP Co-ordinator a third will be held by Blood Bank staff.
- The walkie talkies can be used for 3-way communication between the MHP Co-ordinator, the Orderly and Blood Bank staff. If the MHP Co-ordinator or Orderly changes during an MHP the walkie talkie must be transferred to the appropriate replacement.

2. ACTIVATE

For Code Crimson/Standard/Obstetric MHPs call Blood Bank 80310 or use walkie talkie and say, "I am activating an Adult Code Crimson/Standard/Obstetric MHP"

- Provide Blood Bank with following information
 - Location and contact phone number
 - Name and designation of yourself and the MHP Co-ordinator
 - Full name and NHI of the patient, or "Unknown" details
 - Brief patient diagnosis and any relevant information e.g. anticoagulant
- Clarify if Blood Bank have a valid pre-transfusion test (group and screen) sample resulted for the patient - if not, send an EDTA (pink tube) patient blood sample to Blood Bank immediately. Emergency blood can be issued until testing is complete.

MHP Boxes

Standard and Obstetric MHP

Complete QMR022A form for the issue of red blood cells in MHP box 1. Write "Standard or Obstetric MHP Box 1" on this form.

Complete QMR022B form for the issue of blood plasma components in MHP box 1. Write "Standard or Obstetric MHP Box 1" on this form.

Code Crimson MHP

As above but write "Code Crimson Box 2" on the forms

In all cases

Ensure Patient Location is precisely documented e.g. "A3 PCU", ED Resus1, Theatre 26 Birthing Suite.

Send QMR022A/QMR022B forms to Blood Bank via eFax on the local printer (80159 or pre-programmed).

- The printed copies of these scanned forms will replace the original copies.
- All forms with any original administration signatures or swing labels must be retained in the patient records as the Record of Transfusion.
- *It is not necessary to send more forms for further MHP boxes.* Blood Bank will create new forms for MHP Box 2, 3 etc. as required.

3. BLOOD BANK

- Issue Stat Packs and Walkie Talkies
- Ensure Pre-transfusion test sample (Group & Screen) is processed as soon as possible after O negative issue, and resulted so group specific blood can be issued to the patient
- Communicate with the MHP Coordinator and Orderly/OTA

- Thaw next box in advance and await QMR request forms, ask for these if not arriving
- Prepare MHP boxes and label with
 - Number of the box i.e. MHP box 1
 - Patient's full name
 - NHI number
 - Time the units were packed into the MHP box
 - The name of the MHP Co-ordinator
 - Location for delivery
- Complete checks 1 and 2 on the QMR022A/QMR022B forms and return these with the Stat Packs and the MHP box (NB Code Crimson Stat Pack no QMR022A/B)
- Ensure a supply of Platelets
- Notify the NZBS Transfusion Medicine Specialist after issuing MHP Box 3 (or earlier if requested). The Transfusion Medicine Specialist may override protocol
- Request the return of unused blood, walkie talkies and any outstanding Notification of Transfusion forms

4. ORDERLIES/Operating Theatre Assistants (OTAs)

Theatres:

An Operating Theatre Assistant (OTA) will collect the Stat Pack and walkie talkies from Blood Bank and deliver them to the relevant Waipapa (including IR hybrid theatres), Women's and Parkside Theatre between 0700 - 2300hrs. The OTA will continue to run between Theatres and Blood Bank delivery MHP boxes until the MHP is ceased.

- From 2230 - 0700hrs an Orderly will deliver Stat Packs and MHP boxes to Theatres. Orderlies will deliver blood to the relevant theatre door rather than the theatre holding bay, to reduce delays.
- OTA's covering Theatres 38-42 will carry a dedicated MHP cell phone (021354378) and will be notified by the switchboard when an MHP is initiated from theatre suites. You do not need to call them directly unless there is a problem.

Birth Suite, ED & ICU:

Runners/Hospital Orderlies will deliver Stat Packs and MHP boxes/blood to the relevant clinical area.

All Other Clinical Areas:

Hospital Orderlies will deliver Stat Packs and MHP boxes/blood to the relevant clinical area.

5. TEAM LEADER Role (delegates task as appropriate)

- Initiates MHP, ensures tranexamic acid is administered
- Activates the MHP
- Delegate MHP Co-ordinator role
- Ceases the MHP with MHP Co-ordinator

6. MHP CO-ORDINATOR ROLE (delegates tasks as appropriate)

- Ensure Blood bank have a valid Pre-transfusion test (Group and Screen) sample

- Prepare request forms QMR022A & QMR022B
- eFax forms to Blood Bank (dial 80159)
- Liaises with the Clinical Lead re ongoing transfusion needs
- Is responsible for overseeing checking the patient and components identification
- Responsible for the transfusion process including documentation (see 6 & 7)
- Monitor time components stored at room temperature
- Communicating with Blood Bank re ongoing needs, any changes to MTP box content required and **when MHP is ceased** (see 8)
- Communicating with the Orderly/OTA, send back to Blood Bank to collect the next

7. IDENTIFICATION CHECKS & DOCUMENTATION

- It is vital the patient is fully identified and checked against the QMR022A & QMR022B forms and each blood component before transfusion as described in Blood Protocol – Components see [Policies and Procedures - Policy View \(cdhb.health.nz\)](https://cdhb.health.nz)
- Ensure QMR022A/B forms are completed and swing tag labels are attached to the back of these forms and any green Notification of Transfusion forms are returned to Blood Bank

8. CHANGING PATIENT LOCATION

- The MHP boxes and walkie talkies can move with the patient e.g. Emergency Department to Radiology to Operating Theatre to ICU or Ward.
- If required the MHP co-ordinator role can be passed to another individual and a handover provided to include
 - Type and number of units remaining in the box
 - The time these units expire
 - Any recent communication with Blood Bank staff
 - Any units identified as unnecessary, these should be returned to Blood Bank
- The MHP boxes must be controlled by the MHP Co-ordinator
- Blood Bank should be informed of any change in location or MHP Co-ordinator

9. MHP CESSATION

- Once bleeding is controlled inform Blood Bank immediately so that MHP can be ceased and return any MHP boxes, unused blood components, walkie talkies and any green Notification of Transfusion forms to Blood Bank immediately with the Orderly / OTA.

10. TIME CONSTRAINTS

MHP boxes do not contain ice or coolant to maintain controlled storage conditions for blood components.

Blood components must be returned to Blood Bank within 30 minutes to avoid wastage.

- RBC, FFP and Cryoprecipitate must be transfused within 4 hours of issue
- Platelets should be transfused within 1 hr. Please contact Blood Bank for further advice on transfusion after 1hr in emergency situations.

11. COMMUNICATION WITH BLOOD BANK

The walkie talkies can be used for frequent 3-way communication between the MHP Co-ordinator, Blood Bank and the Orderly/OTA.

The Transfusion Medicine Specialist (TMS) on call will be notified by the Blood Bank when MHP box 3 is issued, or earlier if requested. Blood Bank can provide TMS contact details.

Supporting material

[MHP - Adult Checklist and Flowchart](#) Ref: 2401534

NZBS 111F159 Request for Blood Components or Blood Products form

QMR022A – Resuspended Red Cells Transfusion Sheet ref: 2401690 Oracle 264562

QMR022B – Blood Components / Blood Products Transfusion Sheet ref: 2403338 Oracle 264589

[Blood Protocol – Components Ref: 2408293](#)

[Blood Protocol – Pre-transfusion Ref: 2408295](#)

NZBS111F009 Notification of Transfusion form

[Code Crimson Policy](#)