

Paediatric Massive Haemorrhage Pathway

1

(Paed MHP) Checklist

Medical decision to initiate MHP



Initiate MHP
& prepare forms

Phone "777"

State "This is an MHP, my location is ..."

- Complete a **Massive Haemorrhage form (ref: 2410416)** with patient addressograph label, date, location, contact phone number and patient weight. Send to Blood Bank asap. *(Blood Bank will photocopy for subsequent boxes)*
- Orderly or Operating Theatre Assistant (OTA) will go directly to Blood Bank
- Orderly or OTA will deliver blood/MHP box, then return to Blood Bank for next box



Activate
MHP

Phone "80310" - Blood Bank

State "I am activating the Paediatric MHP"

- Confirm location and contact number
- Identify yourself as MHP Co-Ordinator & name the Clinical Team Leader
- Identify the patient *(Full name and NHI)*
- Identify MHP stream according to patient weight *(Alpha, Bravo or Charlie)*
- Provide brief patient diagnosis & other relevant information

Pre-Transfusion
Testing (PTT)
blood sample
*(Antigen Group &
Antibody Screen)*

Clarify with Blood Bank

- Is there a valid group and screen?
 - If not, send a new pink tube blood sample (handwrite patient ID on tube)
- Blood Bank will supply emergency blood or group specific blood while the sample is being tested

Bleeding
controlled?
Cease MHP
Phone Blood
Bank

Received too many blood components?
Send the most recently received blood components
back to Blood Bank

Return to Blood Bank within 30 minutes to avoid wastage

Flow Chart

MHP Co-Ordinator Responsibilities

- Initiate (call 777)
- Prepare Massive Haemorrhage forms
- Deliver or send form to Blood Bank via Lamson or eScan to preprogrammed Blood Bank ChristchurchBBefax@nzblood.co.nz
- Activate the MHP (call 80310)
- Cease the MHP (call 80310)

Blood Bank Responsibilities

- Ensure PTT sample is processed ASAP after O neg release
- Call NZBS TMS after issuing MHP Box One
- Thaw next box in advance and await request
- Ensure supply of platelets. If no neonatal platelets for Alpha, contact TMS
- BRAVO Box 3: label platelets 'Give 150ml only'
- Provide the freshest red cells possible (less than 14 days)

Contacts

- Blood Bank – ext. 80310
- Theatre OTA (0700-2300 hrs) – 021 354378
- Coagulation Lab – ext. 80374
- Transfusion Medicine Specialist (TMS) via Blood Bank

Additional Treatment Thresholds

- PR < 1.5 or APTT < 40
If not, consider additional 20mL/kg FFP
- Fibrinogen > 1g/L
If not, consider additional 5mL/kg Cryoprecipitate
- Platelets > 75 x10⁹/L
If not, consider additional 10mL/kg Platelets
- Ionized Ca⁺⁺ > 1mmol/L
If not, give 0.3mL/kg Calcium Gluconate
- See Royal Children's Hospital Hyperkalaemia Guideline:
www.rch.org.au/clinicalguide/guideline_index/Hyperkalaemia/

Calcium

- If only Calcium Chloride (CaCl) is available give a third of the calcium gluconate (CaGluc) dose
- DO NOT give calcium in the same IV line at the same time as blood components

Massive bleeding AND shock or coagulopathy

Ensure delivery of PTT blood sample to Blood Bank

ALPHA

0-10 kg

1 adult RBC O neg or type specific
Give 15mL/kg

BRAVO

11-20 kg

1 adult RBC O neg or type specific
Give 150mL

CHARLIE

21-45 kg

Give 1-unit O neg or group specific RBC

WARMING STRATEGIES INCLUDING BLOOD WARMER

Ring Blood Bank to ACTIVATE

REQUEST, DELIVER AND TRANSFUSE AS BELOW:

MHP BOX ONE
1 adult RBC
1 adult FFP
1 Cryoprecipitate
1 CMV neg PlateletGive 10mL/kg of each in the following order:
RBC, FFP
RBC, Cryo
0.45mL/kg CaGluc
RBC, FFP
RBC, Platelets
0.45mL/kg CaGlucBeware of K⁺

and repeat

MHP BOX ONE
1 adult RBC
1 adult FFP
0.3mL/kg CaGlucMHP BOX TWO
1 adult RBC
1 adult FFP
1 Cryoprecipitate
0.3mL/kg CaGlucMHP BOX THREE
1 adult RBC
1 adult FFP
150mL Platelets
0.3mL/kg CaGlucBeware of K⁺

alternate boxes 2 & 3

MHP BOX ONE
2 adult RBC
2 adult FFP
0.3mL/kg CaGlucMHP BOX TWO
2 adult RBC
1 adult FFP
2 Cryoprecipitate
0.3mL/kg CaGlucMHP BOX THREE
2 adult RBC
2 adult FFP
1 adult Platelets
0.3mL/kg CaGlucBeware of K⁺

alternate boxes 2 & 3

Check:
• Coags
• FBC
• ABGs
• K⁺ / Ca²⁺

Tranexamic Acid

Check:
• Coags
• FBC
• ABGs
• K⁺ / Ca²⁺

Repeat every 30 mins

Tranexamic Acid (TXA)

- Loading dose: 15mg/kg (max 1g)
- Consider maintenance infusion: 5mg/kg/hour

Typical component volumes

- Red cells adult: 300 mLs
- FFP adult: 245 mLs
- Platelets adult: 270 mLs
- Cryoprecipitate: 100mLs