ADHB Paediatric Massive Transfusion Protocol (MTP)

Team Leader Responsibilities
- Call Coag Lab and send Coag requests on the Labplus Urgent form (orange border)
- Activate protocol:
  - Call Blood Bank (ext 24015)
  - “I am activating the Paediatric Massive Transfusion Protocol Alpha, Bravo or Charlie”
- Call for each box as required and send someone to pick it up
- Alternate infusions of products to avoid swings in Hb and coag
- Call Blood Bank when stopping MTP

Ensure delivery of X-match specimen to Blood Bank

Ring Blood Bank to Activate Paediatric Massive Transfusion Protocol

REQUEST, DELIVER AND TRANSFUSE AS BELOW:

**ALPHA**
- 0-10kg
- 1 adult RBC
- 1 adult FFP
- 1 Cryoprecipitate
- 1 neo Platelet
- Transfuse 10mL/kg of each in the following order:
  - RBC, FFP
  - RBC, Cryo
  - 0.45mL/kg calcium gluconate

**BRAVO**
- 11-20kg
- 1 adult RBC
- 1 adult FFP
- 1 Cryoprecipitate
- Give 1 Unit O-neg or type specific RBC

**CHARLIE**
- 21-45kg
- Give 1 Unit O-neg or type specific RBC

MTP BOX ONE
- 1 adult RBC
- 1 adult FFP
- 1 Cryoprecipitate
- 1 neo Platelet
- Transfuse 10mL/kg of each in the following order:
  - RBC, FFP
  - RBC, Cryo
  - 0.45mL/kg calcium gluconate

MTP BOX TWO
- 1 adult RBC
- 1 adult FFP
- 1 Cryoprecipitate
- 0.3mL/kg calcium gluconate

MTP BOX THREE
- 1 adult RBC
- 1 adult FFP
- 50mL Platelets
- 0.3mL/kg calcium gluconate

Addition treatment
- Ongoing haemorrhage after box 3 - if PR > 1.5 or APTT > 40 consider additional 20mL/kg FFP
- If fibrinogen < 1g/L consider additional 5mL/kg Cryoprecipitate
- If platelets < 75 x10^9/L consider additional 10mL/kg platelets
- If ionized Ca++ < 1mmol/L give 0.3mL/kg calcium gluconate
- See Hyperkalaemia Guideline

Tranexamic Acid (TXA)
- Loading dose: 15mg/kg (max 1g)
- Consider maintenance infusion: 2mg/kg/hour

Blood Bank Responsibilities
- Ensure X-match sample processed ASAP after O neg release
- Call NZBS Medical Officer after issuing MTP Box One
- Thaw next box in advance and await request
- Ensure supply of platelets. If no neonatal platelets for Alpha, contact TMS
- Provide red cells less than 14 days old whenever possible

Contacts
- Blood Bank - Ext 24015
- Coagulation Lab - Ext 22069
- SSH Anaesth Co-ord – 021 334 344

Calcium
- For 10% calcium chloride, give one third of the mL/kg of 10% calcium gluconate
- DO NOT give calcium in same IV line at same time as blood components

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Typical component volumes
- Red cells: adult: 300
- FFP: adult: 245
- Platelets: neonatal: 50 mL adult: 270
- Cryoprecipitate: 100mL