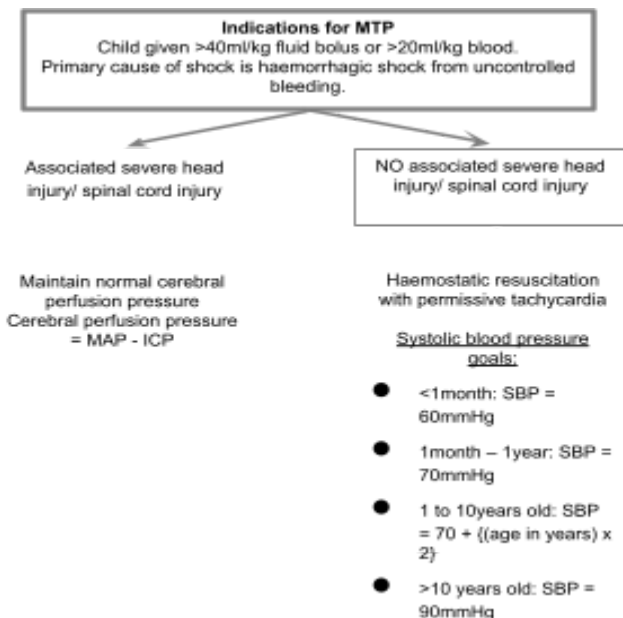


KKH Paediatric Massive Transfusion Protocol (MTP)

Massive transfusion in children is defined as transfusion of >40 ml/kg (blood volume in children >1 month old is approximately 80 ml/kg)

MTP hotline to KKH blood bank: dial extension **8718** (only from CE/ CICU/ OT/ Angio suite).

See below for the MTP activation chart.



Monitor for:

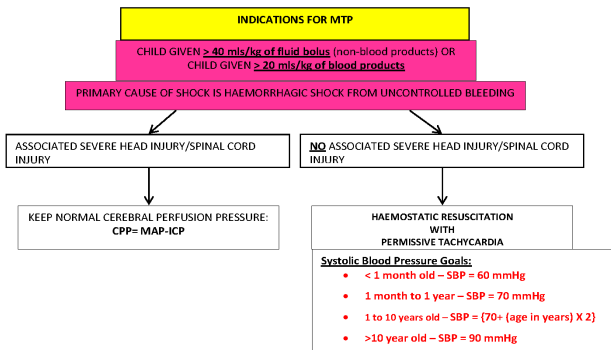
1. Temperature >38 and treat hyperthermia aggressively
2. Treat hypotension aggressively in children with head injury or spinal cord injury
3. Platelets
 - Keep platelets $\geq 50 \times 10^9/L$ if NO significant head injury present
 - Keep platelets $\geq 100 \times 10^9/L$ in presence of significant head injury
4. Blood gases/ electrolytes
 - pH >7.2
 - Base excess < -6
 - Ca $^{2+} > 1.1\text{mmol/L}$
 - Monitor for hyperkalemia
5. Coagulation profile
 - PT/ aPTT $< 1.5\times$ normal
 - INR ≥ 1.5
6. Fibrinogen $>1\text{g/L}$
7. Lactate $< 3 \text{ mmol/L}$

KKH MASSIVE TRANSFUSION PROTOCOL (MTP) FOR PAEDIATRICS

Massive transfusion is defined, in adults, as replacement of >1 blood volume in 24 hours or >50% of blood volume in 4 hours (adult blood volume is approximately 70 mL/kg).

In children, **it is defined as transfusion of >40 mL/kg** (blood volume in children over 1 month old is approximately 80 mL/kg).

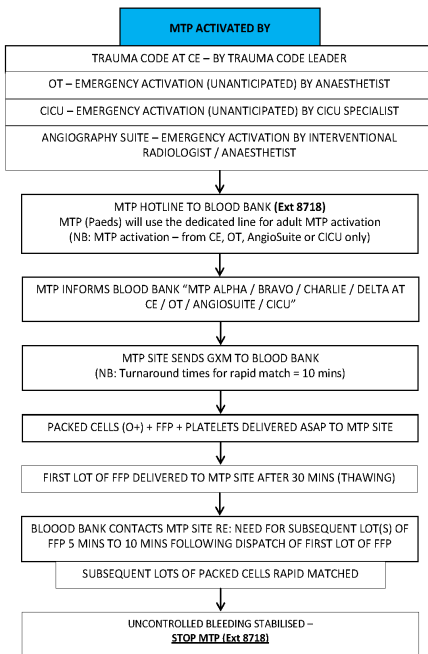
(Australian Red Cross Blood Service)



MONITOR FOR:

- Temperature > 35 °C and treat hyperthermia aggressively
- Treat HYPOTENSION aggressively in patients with head or spinal cord injury
- FBC
 - Platelets $\geq 50 \times 10^9/L$ if NO significant head injury
 - Platelets $\geq 100 \times 10^9/L$ if significant head injury present
- Blood gases
 - pH > 7.2
 - Base excess < -6
 - Ca^{2+} > 1.1 mmol/L
 - K^+ : monitor for hyper K^+
- Coagulation profile
 - PT/APTT < 1.5 x normal
 - INR ≤ 1.5
- Fibrinogen (if done) > 1.0 g/L
- Lactate (if done) < 3 mmol/L

ACTIVATION FOR MTP



MTP (Paeds) Workflow Sheet (For Blood Bank Use)

Affix Patient's Label	Name of Doctor: _____ Clinical Area: CE / CICU / OT / HD (circle 1) Extension No.: _____
Date & Time of specimen received: _____ Date & Time of activation: _____	Dial 87 18 for MTP activation ONLY

