

MHPPP Action Card

Clinical Team Leader

**Subjectively (clinical suspicion of major bleeding) or
Objectively (see overleaf QR Table)
identify Major Haemorrhage**

ACTIVATE MHPPP

- Phone 2222
- State "Activate Major Haemorrhage Protocol for Paediatric Patient"
- Provide to switchboard operator:
- Patient location
- Contact Extension Number for Paediatric Major Haemorrhage Co-Ordinator (DECT Preferred)

Simultaneously (delegate / assign roles):

Blood Components		Clinical Response	
PRCs	20 ml / kg	IV (2 attempts) then IO Access	
FFP	20 ml / kg	Control Bleeding	
Platelets	15 – 20 ml/kg	Keep Patient Warm	
Cryo	10 ml/kg	Send Bloods:	Cross Match (Must be hand-written)
Consider 2:1:1 vs 1:1:1 ratio			U&Es Calcium
Discuss additional products, anticoagulation or special requirements with Haematologist			Coag Screen
			VBG
			Tranexamic Acid 15 mg / kg (max 1 g)
		Consider IV Calcium if ionised Ca2+ < 1.0 (see over)	

**Stand Down Blood Bank and Inform Switchboard
at conclusion of Major Haemorrhage Response**

Infant (< 1 yo): Total Blood Volume = **90 ml / kg**
Child (>= 1yo): Total Blood Volume = **80 ml / kg**

Indicators of Paediatric Major Haemorrhage

Rate of blood loss
 OR rate of blood transfusion
 $\geq 8 \text{ ml / kg / min}$

Total estimated blood loss
 OR volume of blood transfusion
 $\geq 15 \text{ ml / kg in } < 1 \text{ hour}$

Estimate 50% Total Blood Volume loss in $< 3 \text{ hours}$

$40 \text{ ml / kg PRCs transfused in } < 3 \text{ hours}$

Additional Drugs / Products

Calcium Gluconate 10%	0.5 ml / kg (max 20 ml)
Beriplex	25 – 50 Units / kg (max 5000 Units)
Vitamin K	30 micrograms / kg

Target Values

Haemoglobin (Hb)	$> 80 \text{ g/L}$
Platelets (Plt)	$> 75 \times 10^9/\text{L}$ $> 100 \times 10^9/\text{L}$ if major trauma, HI or anti-platelets.
Fibrinogen (Fib)	$> 1.5 \text{ g/L}$ $> 2.0 \text{ g/L}$ if major trauma or HI
PT	$< 17 \text{ seconds}$ (Ratio < 1.5)
APTT	$< 41 \text{ seconds}$ (Ratio < 1.5)