

Appendix 9: MAJOR PAEDIATRIC HAEMORRHAGE (NUH & WXH)**TEAM LEADER to ACTIVATE MAJOR PAEDIATRIC HAEMORRHAGE PROTOCOL
CALL: 2222****To NOMINATE a member of team as COMMUNICATION LEAD****Indication**

- Haemodynamically unstable patients due to rapid and continuous blood loss
- Poor response to initial fluid resuscitation (up to 40ml/kg)

COMMUNICATION LEAD to CALL the lab:

NUH	WXH
Ext: 3280	Ext: 5035 or Bleep 2168

STATE:

- MAJOR PAEDIATRIC HAEMORRHAGE
- patient unique identifier & date of birth
- Location of patient
- Your Name, Bleep or Extension number
- REQUEST PACK based on weight:
- **Patients >50kg = Follow the Adult Protocol**

PAEDIATRIC PACK A	PAEDIATRIC PACK B
• Red Cells: 20 ml/kg • FFP / Octaplas: 20ml/kg	• Red Cells: 20ml/kg • FFP / Octaplas: 20ml/kg • Platelets: 15-20ml/kg • Cryoprecipitate: 10ml/kg

N.B: Neonatal components **MUST** be ordered for children <1 year of age and collected from the laboratory. Refer to Appendix: Table of Volumes for Requesting Blood Components

PRIOR TO TRANSFUSION, take baseline blood samples for:

FBC, G&S, clotting screen and fibrinogen (Near patient testing – ABG/capillary gas, ROTEM)

COLLECT PACK A: Send porter to lab for RBC [Issued from Lab for immediate collection]

- Give **TRANEXAMIC ACID 15mg/kg bolus (Max = 1g)** over 10 minutes followed by 2mg/kg per hour for at least 8hrs or until bleeding stopped.
- Give a **SINGLE dose TRANEXAMIC ACID 15mg/kg dose (max 2g)** for Head injury

IF BLEEDING CONTINUES: Request PACK B

Anticipate need! Request early, before completion of previous pack.

- Send porter to lab to collect: RBC and Platelets
- FFP & CRYO take 20-30mins to thaw
- Give in aliquots until haemorrhage is controlled
- No crystalloid / colloid until bleeding controlled and base deficit corrected
- Keep K⁺ less than 5.8, keep Ca⁺⁺ > 1.0

ONCE BLEEDING CONTROLLEDRepeat: **FBC & CLOTTING**

IF	GIVE
Hb <100g/L	RBC: 20 ml/kg
PLT <100 x 10 ⁹ /L	PLT: 15/20ml/kg
Fibrinogen <1.5g/L	CRYO: 10ml/kg
PT / APTT ratio >1.5	FFP: 20ml/kg

STEP DOWN MAJOR HAEMORRHAGE**BLEEDING PERSISTS:**

- Contact Haematology SpR: WXH **2075**, NUH **4130**
- Out of hours:** Contact on-call General Haematology SpR via **Switchboard**

Contact Numbers NUH (PAEDIATRIC)

Department / Key staff	Contact Number	Location
A&E Resus		Main Hospital
Blood Transfusion Laboratory	3280 8123	Zone 3, Ground Floor, Pathology Department
Haematology Registrar Bleep	4130 / 4247	Main Hospital
Haemostasis Registrar (DECT)	46313	

Location of Blood Fridges (NUH)

Number	Floor	Location	Building
1	Ground Floor	Accident & Emergency Department	Main Hospital
2	1st Floor	Theatres (Zone 8)	Main Hospital
3	4th Floor	Theatres Gateway	Gateway Surgical Centre
4	Ground Floor	Blood Transfusion Laboratory	Main Hospital

Location of Haemostatic Agents at NUH

Agent	NUH
Octaplex	Transfusion lab
Recombinant Factor VIIa Novoseven	Intensive care unit fridge
Fibrinogen concentrate	Not currently available on site**

**If fibrinogen concentrate required urgently at NUH, please discuss with the Haematology SpR (bleep 1243 in hours or via switchboard out of hours) who can arrange transfer from RLH.

Please note: prescribing medications and getting drugs from the pharmacy is the responsibility of the clinical team that the patient is under.

Contact Numbers WXH (PAEDIATRIC)

Department / Key staff	Contact Number	Location
A&E Resus		Main Hospital
Blood Transfusion Laboratory	5035 2168	Junction 2, 2nd Floor, Pathology Department
Haematology Registrar (Bleep)	2075 / 2076 / 2352	Main Hospital
Haemostasis Registrar (DECT)	46313	

Location of Blood Fridges (WXH)

Number	Floor	Location	Building
1	Ground Floor	Accident & Emergency Dept.	Main Hospital
2	Ground Floor	Theatres	Main Hospital
3	Ground Floor	Plane Tree Theatres	Outpatient Building
4	Ground Floor	Acorn Ward	Main Hospital
5	Ground Floor	Woodlands Day Unit	Woodland
6	Ground Floor	Maternity Department	Maternity Unit
7	2nd Floor	Blood Transfusion Laboratory	Main Hospital

Location of Haemostatic Agents at WXH

Agent	WXH
Octaplex	Transfusion lab
Recombinant Factor VIIa Novoseven	Intensive care unit fridge
Fibrinogen concentrate	Not currently available on site**

**If fibrinogen concentrate required urgently at WXH, please discuss with the Haematology SpR (bleep 1243 in hours or via switchboard out of hours) who can arrange transfer from RLH.

Please note: prescribing medications and getting drugs from the pharmacy is the responsibility of the clinical team that the patient is under

Appendix 10: TABLE OF VOLUMES FOR REQUESTING BLOOD COMPONENTS

Paediatric Pack A

NB: Neonatal units should be used for patients <1 yrs.

Component Type	Red Cells 180-350ml (Mean 282ml)	FFP/Octaplas 200-340ml (Mean 271ml)
Dose By Weight	20ml/kg	20ml/kg
< 5kg	Max = 100ml*	Max = 100ml*
10kg	Max = 200ml ~ 1 adult unit	Max = 200ml ~ 1 adult unit
20kg	Max = 400ml ~2 adult units	Max = 400ml ~2 adult units
30kg	Max = 600ml ~3 adult units	Max = 600ml ~3 adult units
40-50kg	Max = 800ml -1000ml ~4 adult units	Max = 800ml -1000ml ~4 adult units
> 50kg	Follow ADULT Policy	Follow ADULT Policy

Paediatric Pack B

NB: Neonatal units should be used for patients <1 yrs.

Component Type	Red Cells 180-350ml (Mean 282ml)	FFP/Octaplas 200-340ml (Mean 271ml)	Platelets 200-300ml	Cryo
Dose By Weight	20ml/kg	20ml/kg	15-20ml/kg	10ml/kg
< 5kg	Max = 100ml*	Max = 100ml*	Max = 100ml*	Max = 50ml*
10kg	Max = 200ml ~ 1 adult unit	Max = 200ml ~ 1 adult unit	Max = 200ml*	Max = 100ml*
20kg	Max = 400ml ~2 adult units	Max = 400ml ~2 adult units	Max = 400ml*	Max = 200ml*
30kg	Max = 600ml ~3 adult units	Max = 600ml ~3 adult units	Max = 600ml*	Max = 300ml*
40-50kg	Max = 800ml - 1000ml ~4 adult units	Max = 800ml - 1000ml ~4 adult units	Max = 1000ml*	Max = 500ml*
> 50kg	Follow ADULT Policy	Follow ADULT Policy	Follow ADULT Policy	Follow ADULT Policy

* Discuss volumes required with transfusion