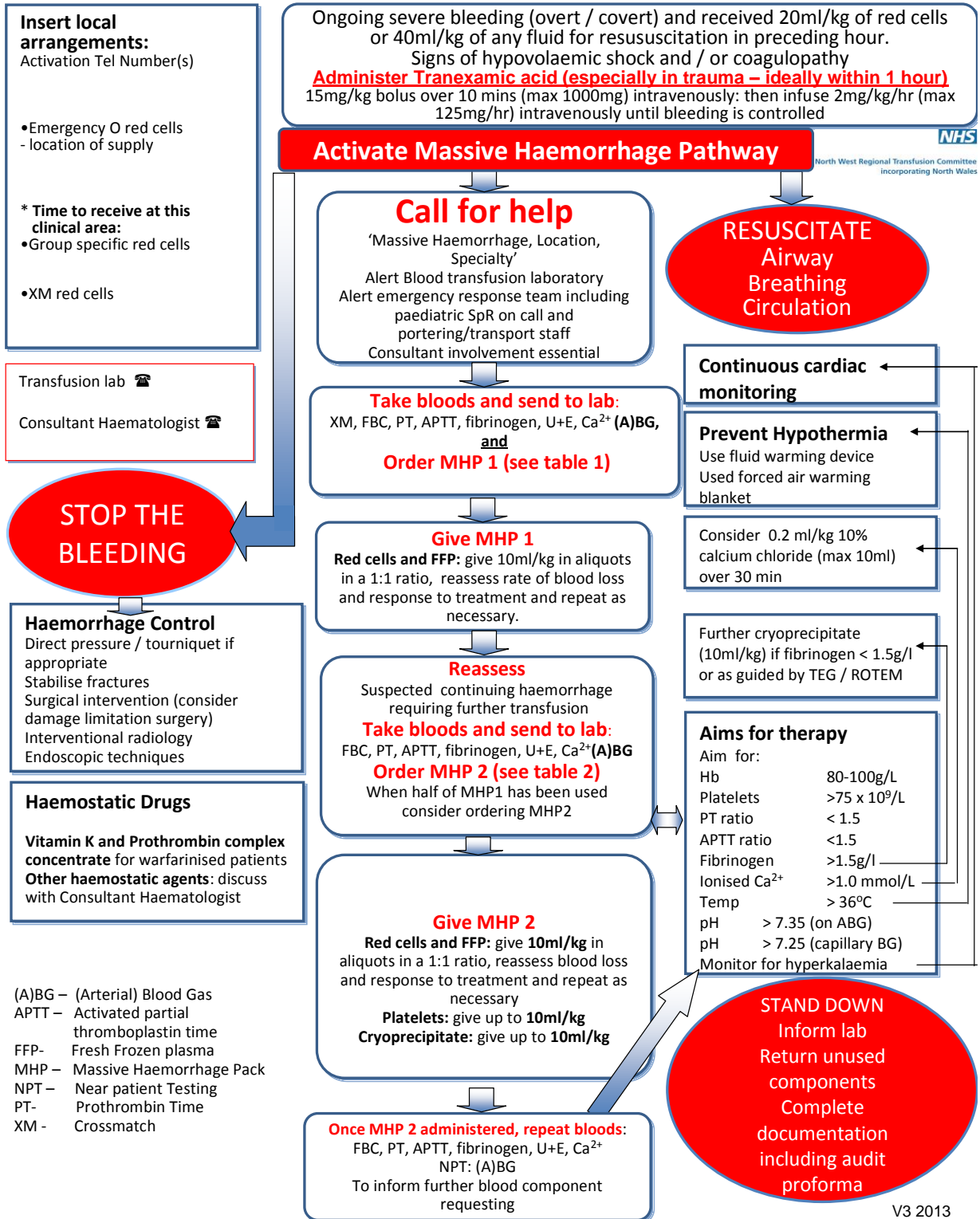


Transfusion Management of massive haemorrhage in children

Ensure a consultant is aware of the massive haemorrhage and a senior member of staff is available to take charge of resuscitation if not already present



V3 2013

Table 1 – Major Haemorrhage pack 1 (MHP 1)

Weight	Red cells	FFP
<5kg	2 paediatric units (80-100ml)	2 'neonatal' units methylene blue (MB) treated FFP (100ml) or 1 unit Octaplas
5-10.9kg	1 adult unit (250ml) , will require LVT unit if <12 months old	1 unit MB FFP (225ml)or 1 unit Octaplas
11-20kg	2 adult units (500ml) or 2 LVT if <12 months old	2 units MB FFP (450ml)or 2 units Octaplas
> 20 kg	4 adult units (1000ml)	4 units MB FFP (900ml)or 4 units Octaplas

LVT: large volume red cell pack suitable for neonates and children 12 months or less

NB MB treated Group AB cryoprecipitate is not routinely available: for group AB patients first choice is Group A and second choice is Group B

Table 2 – Major Haemorrhage pack 2 (MHP 2)

Weight	Red cells	FFP	Cryoprecipitate	Platelets
<5kg	2 paediatric units (80-100ml)	2 'neonatal' units methylene blue treated (MB) FFP (100ml)or 1 unit Octaplas	1 single MB donor unit (40ml)	1 paediatric pack of platelets (50ml)
5-10kg	1 adult unit (250ml), will require LVT if < 12 months old	1 unit MB FFP (225ml)or 1 unit Octaplas	2 single MB donor units (80ml)	2 paediatric packs of platelets (100ml)
11-20kg	2 adult units (500ml) will require LVT if less than 12 months old .	2 units MB FFP (450ml)or 2 units Octaplas	1 pool (5 units) (200ml) NB pools are not MB treated:	1 adult apheresis pack (200ml)
> 20 kg	4 adult units (1000ml)	4 units MB FFP (900ml)or 4 units Octaplas	2 pools (10 units) (400ml) NB pools are not MB treated	1 adult apheresis pack (200ml)

Red cells and FFP may be given through the same cannula via a Y-connector or 3-way tap provided the connection to the cannula is a short line. Platelets are ideally infused through a separate line, or after a clear flush, but may be given infused with red cells or FFP at a Y-connector or 3-way tap with a short connection to the cannula, **but the mixing must only occur after the platelets have passed through the filter.**

Administer red cells and FFP in aliquots of 10 ml/kg and in a ratio of 1:1; constantly assessing and reassessing the extent and rate of blood loss and the response to each such aliquot.

When half of MHP1 has been administered consider ordering MHP 2, if bleeding is on-going and control of the situation remains elusive.

Continue to administer aliquots of red cells and FFP in 10 ml/kg boluses as dictated by the patient's response to fluids, rate of blood loss etc (the whole clinical picture) until MHP2 is available.

With MHP2 use Red cells and FFP in the same fashion and administer a dose of platelets via a separate line (if at all possible) and give up to 10 ml/ kg of platelets. In addition administer a bolus of cryoprecipitate in a dose of up to 10 ml/kg .

Stop administering red cells and FFP if the patient's condition stabilises and it does not seem to be clinically indicated.

Fine tune what products to give and in what volumes based on the lab results (when these become available) or TEG / ROTEM and bedside evidence of coagulopathy (microvascular bleeding).