



RCH **Massive Transfusion Protocol** medical

Dr. Helen Savoia
Nicole vander Linden
Mary Comande



What is the Massive Transfusion Protocol (MTP)?

- Provision and mobilisation of large amounts of blood product to a critically bleeding child.
- Clear guidelines for the multidisciplinary team caring for the critically bleeding child.
 - Trauma Doctors
 - Trauma nurses
 - Haematologist staff
 - Laboratory staff
 - Distribution PSA's



Why do we need a MTP?

- Provides certainty to clinical staff managing a bleeding patient.
- Activates a response within our Blood Bank and notifies The Blood Service.
 - Increasing staffing in the Blood Bank
 - Commencement of thawing of frozen components
 - Ordering of urgent blood from The Blood Service



A comprehensive response to Major Bleeding

- Treating Haemorrhage and Coagulopathy of Trauma by
 - Replacing 'blood'
 - Red Cells: increase oxygen carrying capacity
 - Plasma: Replace clotting factors
 - Platelets: replace platelets
 - Reduction in hypothermia related coagulopathy
 - Provision of warmed components



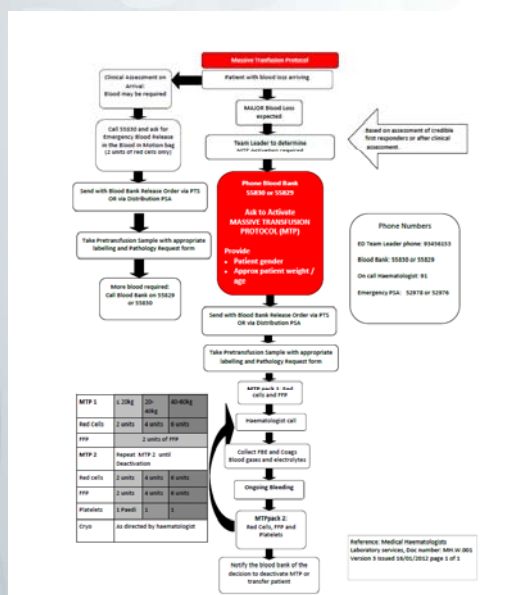
What is “critical bleeding” in a child?

- In adults: “major haemorrhage that is life threatening and likely to result in the need for massive transfusion”

What is a “massive transfusion” in a child?

- Greater than 40mls/ kg in blood

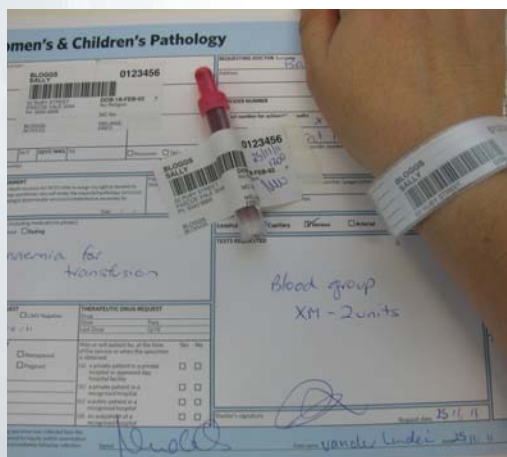
Massive transfusion protocol



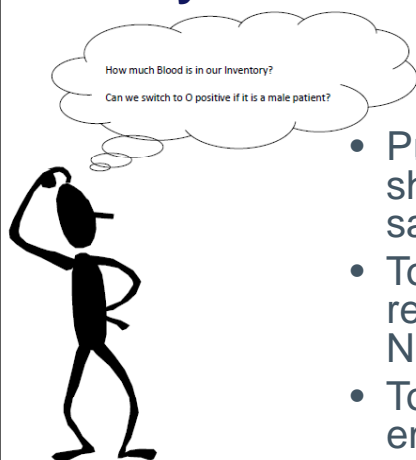


Pretransfusion samples

- Must have a patient label
- Sign date and time the tube
- Sign date and time declaration
- Dr contact details in case of error



Why do we need a sample?



- Prior to transfusion all patients should have a pre transfusion sample.
- To ensure there is a group on record despite provision of O Negative Blood.
- To reduce the use of emergency O Negative blood in patients who don't require it.
- To ensure group specific blood can be made available ASAP.

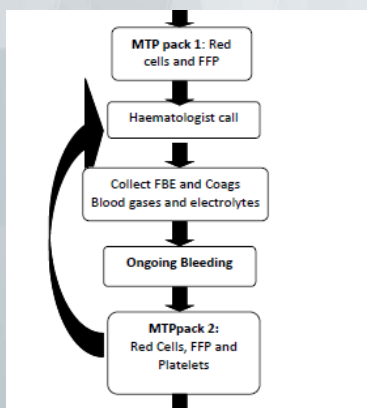
What's in an Massive Transfusion Pack?



MTP 1	≤ 20kg	20-40kg	40-60kg
Red Cells	2 units	4 units	6 units
FFP	2 units of FFP		
MTP 2	Repeat MTP 2 until deactivated		
Red cells	2 units	4 units	6 units
FFP	2 units	4 units	6 units
Platelets	1 Paedi	1	1
Cryo	As directed by haematologist		



Other steps



After the request has been made:

- MTP packs will be delivered as available.
- Liaise with the on-call Haematologist.
- Blood samples should be collected at the end of each MTP pack.

Stopping the MTP



Notify the blood bank
of the decision to stop
or transfer patient

- When the patient moves
 - Inform the blood bank
- IF the MTP is stopped
 - Inform the blood bank

Circulation Doctor Responsibilities:



Task:

- Assess and communicate with the Blood Bank

Example:

“ We will require the massive transfusion protocol to be activated our patient is a female patient, approx 25kg, with a significant head injury. We will send a sample in the PTS, our PSA has the green card and is on the way to pick up the bag”



Direct other team members:

- Circulation Nurse
- Emergency PSA
- Blood Bank Staff



Ensure blood is given

- PSA to Blood Bank to collect pack
- Allocate role of circulation nurse
- Communicate with the circulation nurse regarding
 - Volumes administered
 - Products administered



Communicate with Haematologist

- Products received
- Progress and plan (theatre, CT)
- Clinical assessments (vital signs, type of bleeding, other injuries)
- Pathology collected/ to be collected



Direct Circulation Nurse

- Order of blood products
 - Depends on number of access points
 - Clinical condition
 - Can be Red cells, FFP, Platelets and Cryo but depends on access
 - Platelets always need their own filter, or line preferably



Notify of transfer or end of MTP.

- Blood bank
- Haematologist



Further questions

- Call Nicole 56561 or page 6562
- Call Blood Bank 55830 or 55829
- Call on call Haematologist 91
- Go to [Massive Transfusion Webpage](#)