



# **RCH**

## **Massive Transfusion Protocol**

### **Nursing**

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## **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?

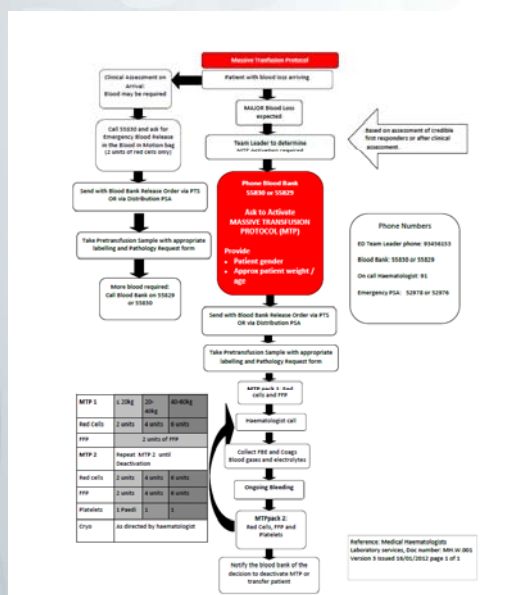


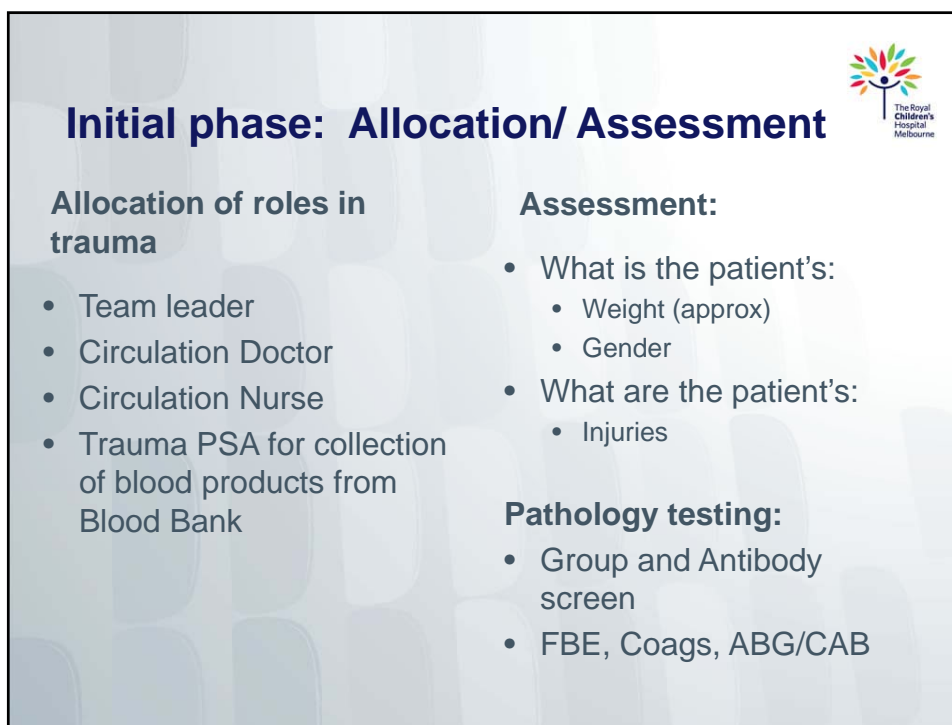
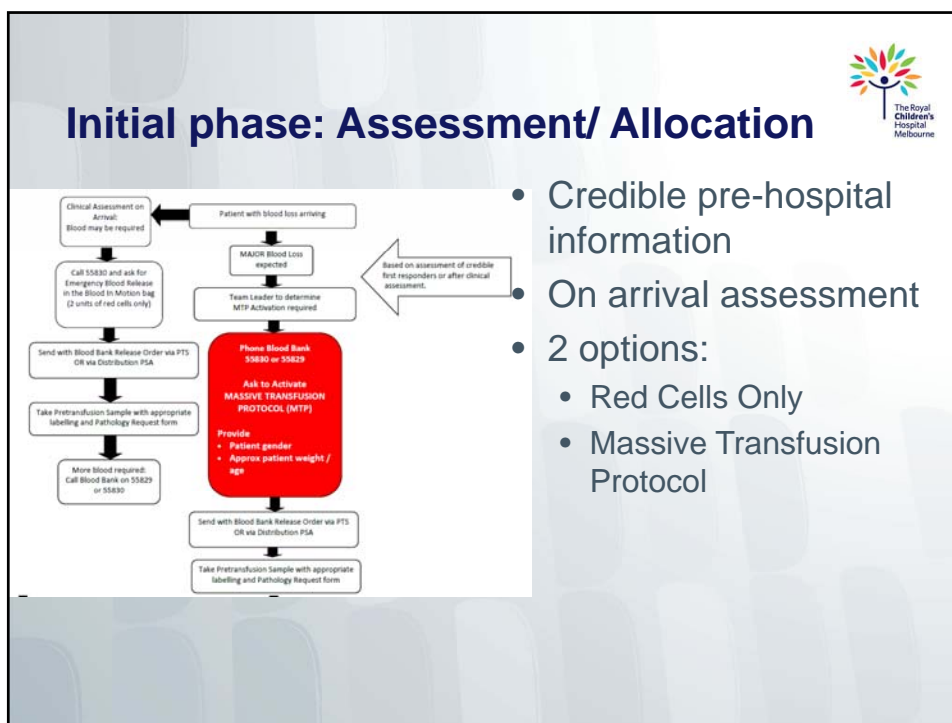
- Defined as “major haemorrhage that is life threatening and likely to result in the need for massive transfusion”

## What is a “massive transfusion” in a child?

- Greater than 40mls/ kg in blood

## Massive transfusion protocol

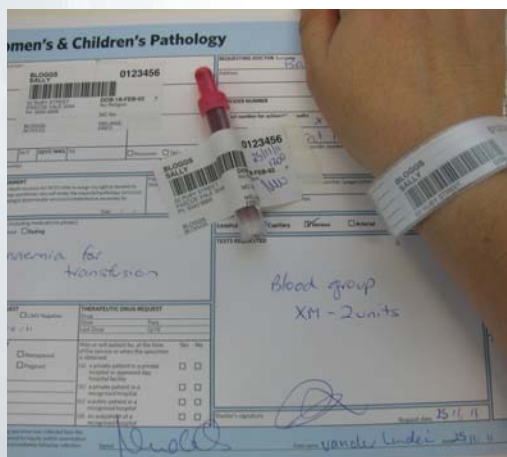




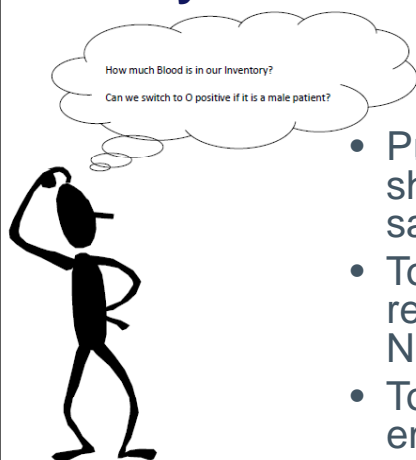


## Pretransfusion specimens

- 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?



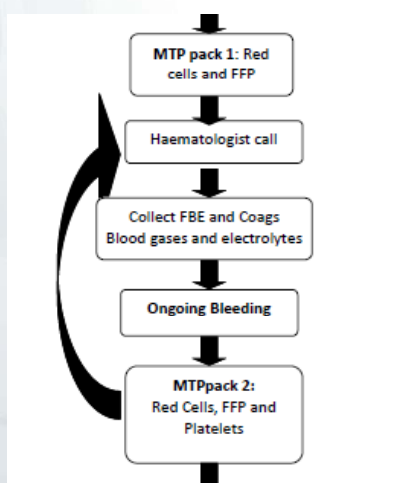
MTP 1	≤ 20kg	20-40kg	40-60kg
Red Cells	2 units	4 units	6 units
FFP	2 units of FFP		
MTP 2	Repeat MTP 2 until deactivated		
Red cells	2 units	4 units	6 units
FFP	2 units	4 units	6 units
Platelets	1 Paedi	1	1
Cryo	As directed by haematologist		



## 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.
- This will be repeated until the MTP is over.



## 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 Nurse Responsibilities:



### Task:

- Ensure patient is wearing a patient identification label
- Set up of giving sets and/or rapid infuser
- Maintain clear records of blood products administered
- Check and commence all blood products
- Keep all empty blood bags.

### Example:

- Stick a patient bradma to the patients forehead or other skin surface easily visualised.
- Trauma fluid balance charting

## Trauma fluid balance trial




**Trauma Massive Transfusion**  
ED Fluid Balance Sheet

Date:

Time arrival in ED:

Time to theatre:

Patient UR label:



Time	Fluid Input										
	Pre arrival	1	2	3	4	5	6	7	8	9	10
Packed Red cells (mls)											
FFP (mls)											
Cryoprecipitate											
Platelets (mls)											
NaCl 0.9%											
Hartmann's											
Other											
	Fluid Output										
Estimated blood loss											
Urine output											
ICC output											
Other											
Summary											

\*Please keep all used blood bags for volume/product clarification if needed

NOTE: This tool is only for use during MTP. The completed fluid information and volumes must be transcribed onto MR730/A

## Order of blood products



- After discussion with Circulation Doctor
  - Depends on number of access points
  - Clinical condition
  - Multiple access points run concurrently
  - Single access point (and depending on condition) Red cells, FFP, Platelets and Cryo
  - Platelets always need their own filter, or line preferably



## Maintain the records

- The nurse must keep a tally of all product administered.
- Each bag has the name of the product and
- The mls in the bag.



## Providing real time information for the team leader.

- In a Massive Transfusion the team leader or circulation doctor need to update the haematologist regarding:
  - Products received
  - Clinical assessments (vital signs, type of bleeding, other injuries)
  - Pathology collected/ to be collected



## 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](#)