

ADULT MASSIVE TRANSFUSION PROTOCOL (MTP)

Senior clinician determines that patient meets criteria for MTP activation

Notify transfusion laboratory to: 'Activate MTP'. Footscray: 56292 Sunshine: 51480 Communicate using ISBAR

Note: There is no massive transfusion pack at WH. Blood & Blood products must be requested according to the patient's clinical condition and requirements.

Allocate team roles: Team leader; Communication lead to communicate with the lab; Sample taker/investigation organiser/documenter
Transporter for blood samples & pick up of blood and blood products

Baseline: FBE, coagulation screen (PT, INR, APTT, fibrinogen), biochemistry, ABGs, Blood Group – accurately & legibly hand labelled

Is blood required in less than 10 minutes?

NO

YES

Request 2 units uncrossmatched O Neg RBC

Request:

- 4 units Red Blood Cells (1 unit expected to ↑ Hb in average sized adult by approx. 10 g/L)
- 2 units Fresh Frozen Plasma (1 unit=approx. 300mL recommended dose 15mL/kg. 20 -30 mins to thaw)

Consider:

- 1 adult therapeutic dose platelets (expected to ↑ platelet count of a 70 kg adult by 20–40 x 10⁹/L
Limited supply on-site lab will arrange for additional stock.)
- Tranexamic acid in trauma patients: loading dose 1g over 10 min, then infusion of 1g over 8 hrs

Include:

- Cryoprecipitate if fibrinogen < 1 g/L ; <2 g/L in obstetric patients (10 standard or 5 apheresis units contain recommended dose of approx. 3-4g of fibrinogen. 20 -30 mins to thaw)

Warfarin effect:

INR > 1.5 with life threatening (critical organ bleeding) add: Vitamin K₁ 5-10mg IV; Prothrombinex 50 IU/kg
FFP 150 - 300mL

INR > 2 with clinically significant bleeding (not life threatening) add: Vitamin K₁, 5-10mg IV,
Prothrombinex 35 - 50 IU/kg.

YES

Bleeding controlled?

NO

Notify transfusion laboratory to: 'Cease MTP'

Return all unused blood products to the laboratory. Ensure complete documentation

OPTIMISE:

- Oxygenation
- Cardiac output
- Tissue perfusion
- Metabolic state

MONITOR

(Every 30–60 mins):

- Full blood count
- Coagulation screen
- Ionised calcium
- Arterial blood gases

AIM FOR:

- Temperature > 35°C
- pH > 7.2
- Base excess > -6
- Lactate < 4 mmol/L
- Ca²⁺ > 1.1 mmol/L
- Hb > 70g/L
- Platelets > 50 × 10⁹/L
- PT/APTT < 1.5 × normal
- INR ≤ 1.5
- Fibrinogen > 1 g/L
- Fibrinogen > 2 g/ for obstetric patients.

Laboratory staff

- On MTP activation notify Haematologist. M-F BH **51378**
Afterhours: 9244 0450
(main lab Heidelberg)

On MTP activation from ED or Theatre or for a PPH:

- Request platelets from ARCBS
- Thaw 2 units of FFP
- Thaw 5 units of cryoprecipitate

- Prepare and issue blood products as requested
- Anticipate repeat testing and blood product requirements
- Minimise test turnaround times
- Consider staff resources
- Ensure complete records of issue & documentation

Haematologist

- Liaise regularly with laboratory and clinical team
- Assist in interpretation of results, and advise on blood product support

AFFIX PATIENT ID LABEL HERE or	Medical Officer:	Contact number:	Consultant Haematologist::
Patient Name:	Date:/...../....	MTP: Activated:.....hrs. Ceased:.....hrs.	
Patient UR:	Comments:		

PRODUCTS GIVEN	Time											
Uncrossmatched O Neg units												
RED CELLS - crossmatched												
FFP Units												
PLATELETS Pool												
CRYOPRECIPITATE Units												
PROTHROMBINEX Int Units												
Recombinant factor VIIa (Novo 7)												
Other:												
Pathology Results												
INR												
APTT												
FIBRINOGEN												
D-Dimer												
Hb												
PLATELET COUNT												