

RBWH MAJOR HAEMORRHAGE TRANSFUSION PROTOCOL

ACTIVATION CRITERIA ONGOING BLEEDING and SBP < 90MMHG and ANTICIPATED TRANSFUSION > 4U RBC IN AN HOUR

Ring Blood Bank 67188 to notify

Runner to take samples & request form to Blood Bank [coag tube + cross match tube] & return with products

Transfuse 2-4 units O NEG or O POS RBC [including prehospital products] and reassess

TRANEXAMIC ACID [if within 3 hours of injury]
1g over 10min, then 1g over 8 hours

PACK ZERO Only for critical patient with no ROTEM available
4 RBC, 2 FFP, 4G FIBRINOGEN CONCENTRATE
Check Calcium: keep iCa > 1mmol/L

If ongoing transfusion requirements continue with 4 RBC + ROTEM guided products - repeating as required

The ROTEM test guiding product use must have been taken within the previous 30 minutes

ROTEM STEPS

Repeat ROTEM 10 mins after any step actioned

Follow the TEMguide app



Flat line trace? Give 4G Fibrinogen Conc & 1g TXA

Fibrinogen Replace if FIBTEM A5 < 10mm

Use Fibrinogen Concentrate only if time critical & FIBTEM A5 < 8mm

Otherwise use Cryoprecipitate 10-20 units

Then repeat ROTEM

OBSTETRIC
HAEMORRHAGE

Target 2mm higher in obstetric haemorrhage
Treat if FIBTEM A5 < 12mm [use FC if < 10mm]

Platelets

Replace if EXTEM A5 < 35mm AND
FIBTEM A5 > 10mm [normal]

Give 1 dose platelets

Then repeat ROTEM

Plasma

Replace if EXTEM CT > 90s AND
EXTEM A5 > 35mm [normal]

Give 2-4U FFP

Then repeat ROTEM

Tranexamic Acid

Replace if EXTEM ML > 15%
Give 1g TXA

Then repeat ROTEM

TARGETS Temp > 36°C, iCa > 1mmol/L, Hb > 70 g/L, Platelets > 75 x 10⁹/L, Fibrinogen > 2g/L 3g/L in OBSTETRICS

ETC Cons 75900

ICU Cons 75946

TRAUMA Service CNC 0418723231

Duty ANAES 75922

ANAEs Reg [after hours] 75924

Theatre Shift Co-ord 75915

Cell Salvage 74670

ANAEs Reg 75925

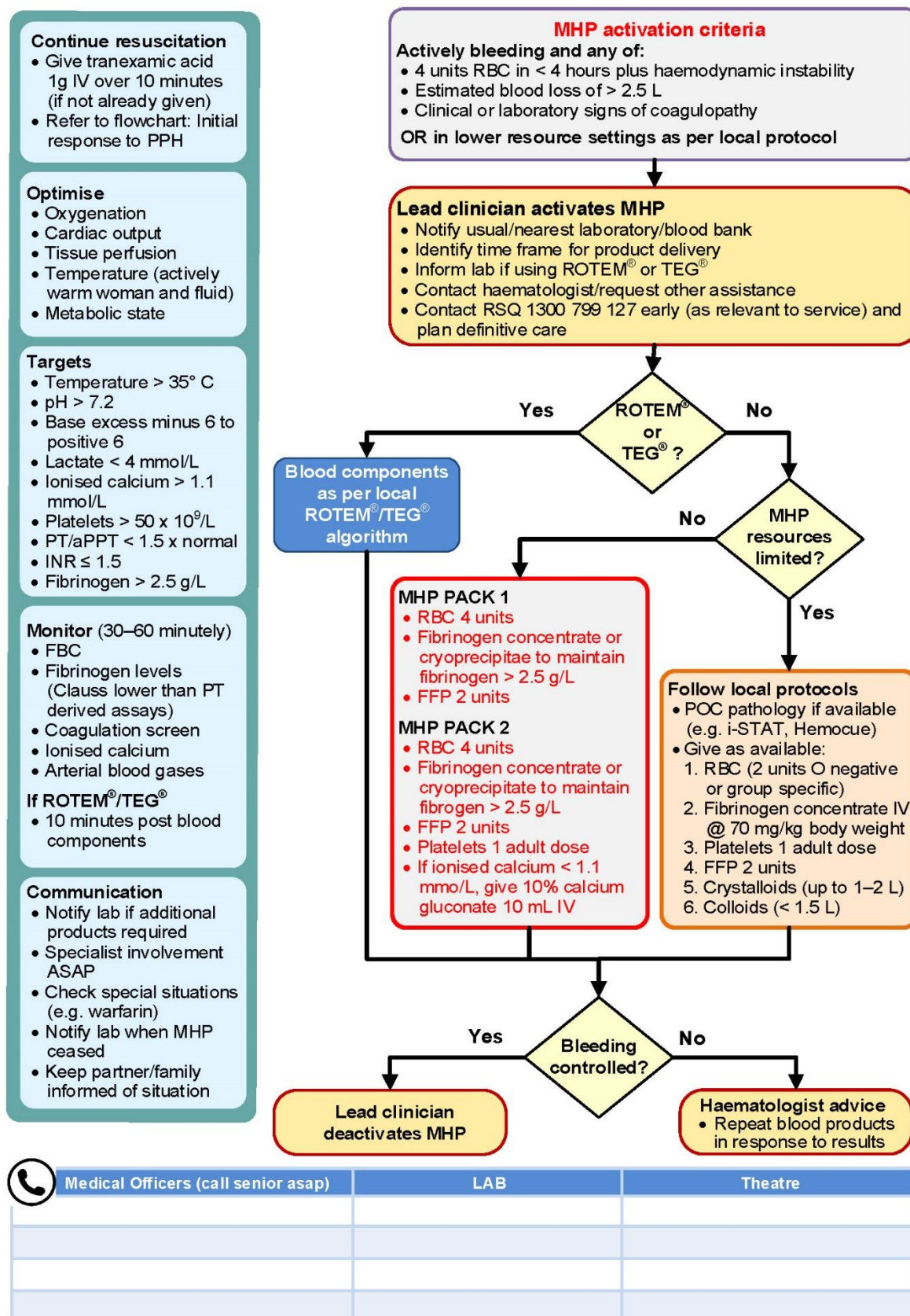
Women's Theatre

Shift Co-ord 65969



L5

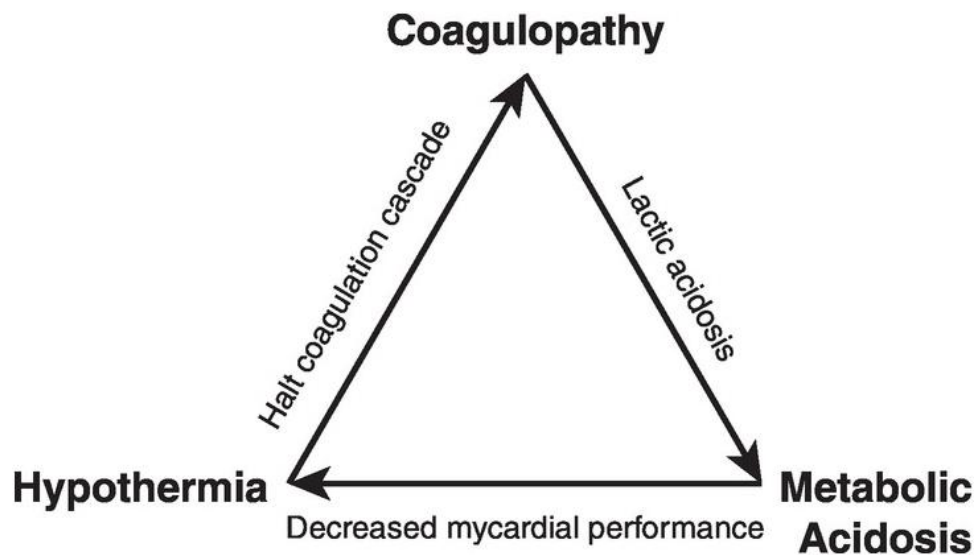
Massive haemorrhage protocol (MHP)



Queensland Clinical Guidelines: Massive haemorrhage protocol (MHP). Flowchart version: F18.1-2-V4-R23

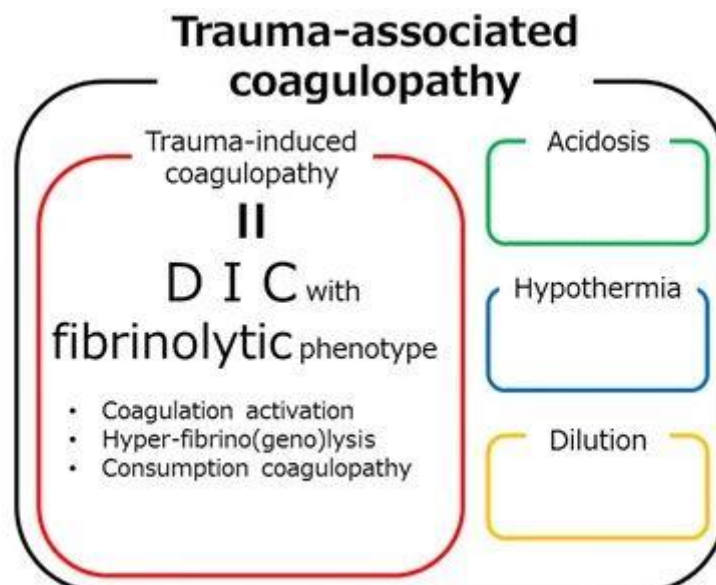
APPT: activated partial thromboplastin time, ASAP: as soon as possible, FBC: full blood count, FFP: fresh frozen plasma, INR: international normalised ratio, IV: intravenous, MHP: massive haemorrhage protocol, POC: point of care, PPH: postpartum haemorrhage PT: prothrombin time, RBC: red blood cells, ROTEM®/TEG®: types of blood clotting analysers, <: less than, >: greater than

Lethal triad



Reference. Transfusion in trauma (chapter 3)- The Emergency Medicine Trauma Handbook. Cambridge University Press.

Trauma-associated coagulopathy



Reference: Hayakawa, M. Pathophysiology of trauma-induced coagulopathy: disseminated intravascular coagulation with the fibrinolytic phenotype. *j intensive care* **5**, 14 (2017).
<https://doi.org/10.1186/s40560-016-0200-1>