Major haemorrhage protocol (MHP)

Continue resuscitation

- Give tranexamic acid 1 g IV over 10 minutes (if not already given)
- Maintain accurate fluid balance
- Refer to flowchart: Initial response to PPH

Optimise

- Oxygenation
- Tissue perfusion
- Cardiac output
- Temperature
- Metabolic state

Targets

- Temperature > 35° C
- pH > 7.2
- Base excess
- > minus 6 mmol/L
- Lactate < 4 mmol/L
- Ionised calcium 1 mmol/L
- Platelets > $50 \times 10^9 / L$
- PT/aPPT < 1.5 x normal
- INR ≤ 1.5
- Fibrinogen > 2.5 g/L

Monitor (30-60 minutely)

- FBC
- Fibrinogen levels (Clauss more accurate than PT derived assays)
- Coagulation screen
- Ionised calcium
- Arterial blood gases

If ROTEM®/TEG®

10 minutes post blood components

Communication

- Notify lab of products required
- Specialist involvement **ASAP**
- Check special situations (e.g. warfarin)
- Notify lab when MHP ceased
- Inform partner/family

MHP activation criteria

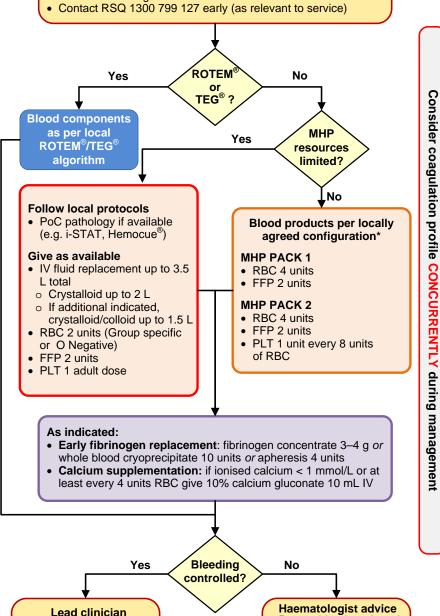
Actively bleeding and any of the following:

- Major haemorrhage, estimated blood loss of > 2.5 L Actual or anticipated need for ≥ 5 units RBC in 4 hours
- Haemodynamic instability
- Clinical or laboratory signs of coagulopathy

OR in lower resource settings as per local protocol

Lead clinician activates MHP

- Notify usual/nearest laboratory/blood bank
- Request additional staff support relevant to local setting e.g. anaesthetist, haematologist, surgeon, interventional radiologist
- Identify time frame for blood product delivery
- Inform lab if using ROTEM® or TEG®



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: major haemorrhage protocol, PLT: platelets, PoC: point of care, PPH: postpartum haemorrhage PT: prothrombin time, RBC: red blood cells, ROTEM®/TEG®: types of blood clotting analysers, RSQ: retrieval services Queensland, <: less than, >: greater than, ≥ greater than or equal to *Aim for transfusion ratio RBC:FFP:PLT no lower than 2:1:1

Queensland Clinical Guideline. Primary postpartum haemorrhage. Flowchart: F24.1-2-V5-R29

deactivates MHP

Repeat blood products in

response to results