POSTPARTUM HAEMORRHAGE

ST1 INDUCTION-11/10/2024

- Primary postpartum haemorrhage (PPH) is the most common form of major obstetric haemorrhage.
- Primary PPH is the loss of 500 ml or more of blood from the genital tract within 24 hours of the birth of a baby.
  - Minor (500–1000 ml)
  - Major (more than 1000 ml)
    - Moderate (1001–2000 ml)
    - Severe (more than 2000 ml)
- Secondary PPH is defined as abnormal or excessive bleeding from the birth canal between 24 hours and 12 weeks postnatally.

WHAT IS THE CAUSE OF BLEEDING??

Tone

Tissue

Trauma

Thrombin

PPH – CAUSES/RISK FACTORS

- Tone
  - Previous pregnancy
  - Multiple pregnancy
  - Fetal Macrosomia/polyhydramnios
  - Failure to Progress in second stage
  - Prolonged 3rd stage
  - GA
- Tissue
  - Retained placenta

- Trauma
  - Perineal Laceration
  - Episiotomy
  - 3rd/4th degree tear
  - Uterine rupture
  - Uterine inversion
- Thrombin
  - PET
  - Haemophillia
  - AFE

- Measures for minor PPH (blood loss 500–1000 ml) without clinical shock:
  - intravenous access (one 14-gauge cannula)
  - urgent venepuncture (20 ml) for:
    - group and screen
    - full blood count
    - coagulation screen, including fibrinogen
  - pulse, respiratory rate and blood pressure recording every 15 minutes
  - commence warmed crystalloid infusion

- Full protocol for major PPH (blood loss greater than 1000 ml) and continuing to bleed or clinical shock:
  - A and B–assess airway and breathing – give O2
  - C–evaluate circulation – 2 x 14G cannula → send bloods
  - position the patient flat
  - keep the woman warm using appropriate available measures
  - transfuse blood as soon as possible, if clinically required
  - until blood is available, infuse up to 3.5 l of warmed clear fluids, initially 2 l of warmed isotonic crystalloid. Further fluid resuscitation can continue with additional isotonic crystalloid or colloid(succinylated gelatin). Hydroxyethyl starch should not be used
  - the best equipment available should be used to achieve rapid warmed infusion of fluids special blood filters should not be used, as they slow infusions

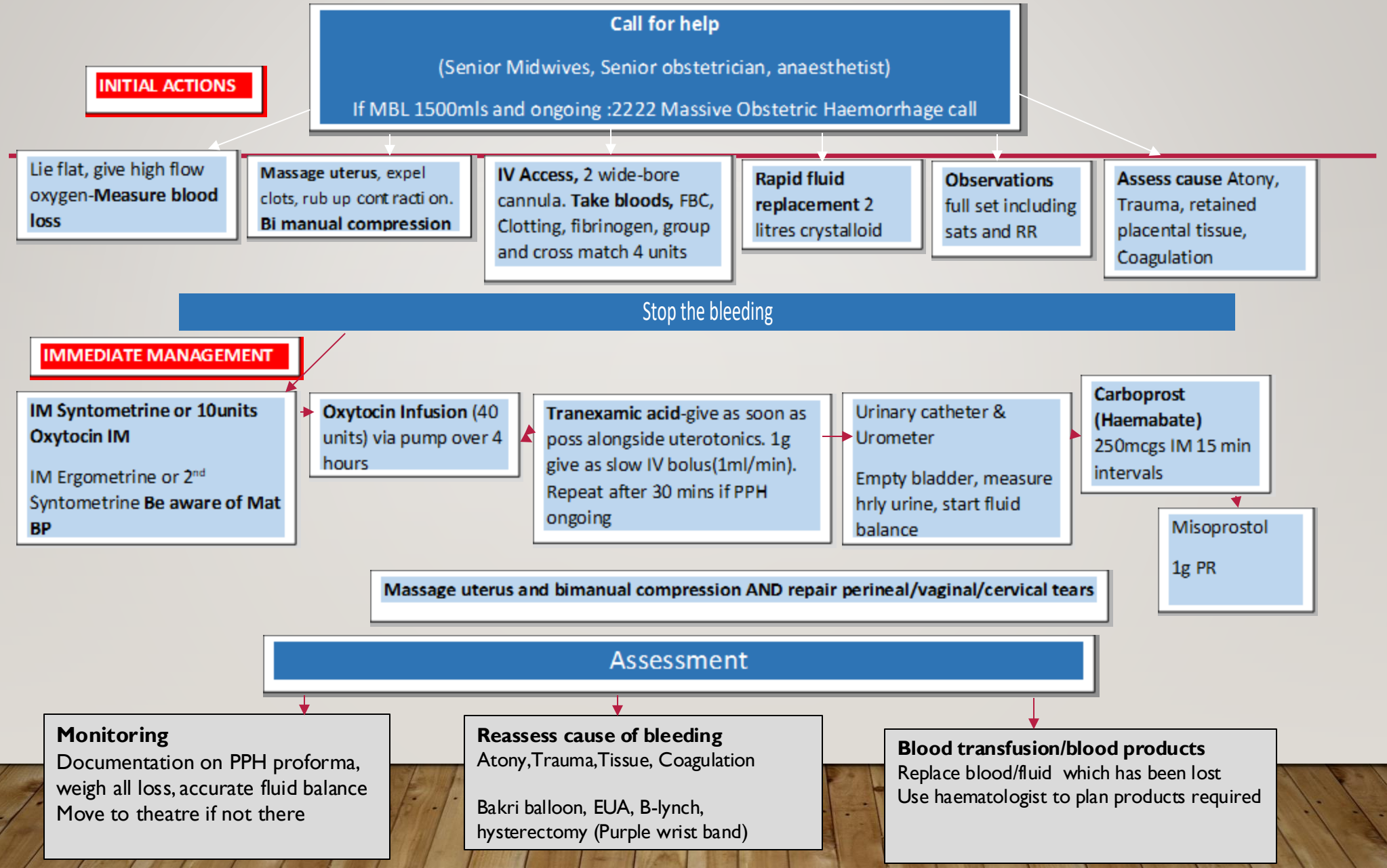
Table 2. Fluid therapy and blood product transfusion (see sections 5.3.3, 5.3.4 and 5.3.5)

Crystalloid	Up to 2 l isotonic crystalloid.
Colloid	Up to 1.5 l colloid until blood arrives.
Blood	If immediate transfusion is indicated, give emergency group O, rhesus D (RhD)-negative, K-negative red cell units. Switch to group-specific red cells as soon as feasible.
Fresh frozen plasma (FFP)	Administration of FFP should be guided by haemostatic testing and whether haemorrhage is continuing: • If prothrombin time (PT) or activated partial thromboplastin time (APTT) are prolonged and haemorrhage is ongoing, administer 12–15 ml/kg of FFP. • If haemorrhage continues after 4 units of red blood cells (RBCs) and haemostatic tests are unavailable, administer 4 units of FFP.
Platelet concentrates	Administer 1 pool of platelets if haemorrhage is ongoing and platelet count less than 75×10^9/l.
Cryoprecipitate	Administer 2 pools of cryoprecipitate if haemorrhage is ongoing and fibrinogen less than 2 g/l.

- Aims of treatment
  - Hb greater than 80 g/l
  - platelet count greater than 50
  - prothrombin time (PT) less than 1.5 times normal
  - activated partial thromboplastin time (APTT) less than 1.5 times normal
  - fibrinogen greater than 2 g/l.

- monitor temperature every 15 minutes
- continuous pulse, blood pressure recording and respiratory rate
- Foley catheter to monitor urine output
- consider arterial line monitoring
- consider transfer to intensive therapy unit once the bleeding is controlled or monitoring at high dependency unit on delivery suite, if appropriate
- recording of parameters on a modified early obstetric warning score (MEOWS) chart
- documentation of fluid balance, blood, blood products and procedures
- complete RL

MAJOR PPH-WHAT CAN YOU DO?



MECHANICAL AND SURGICAL MEASURES

- Balloon catheter(purple wrist band, removal)
- Laparotomy
- B-Lynch suture
- Interventional radiology (intra-arterial balloons)
- Uterine vessel and internal iliac artery ligation-vascular surgeon
- Hysterectomy

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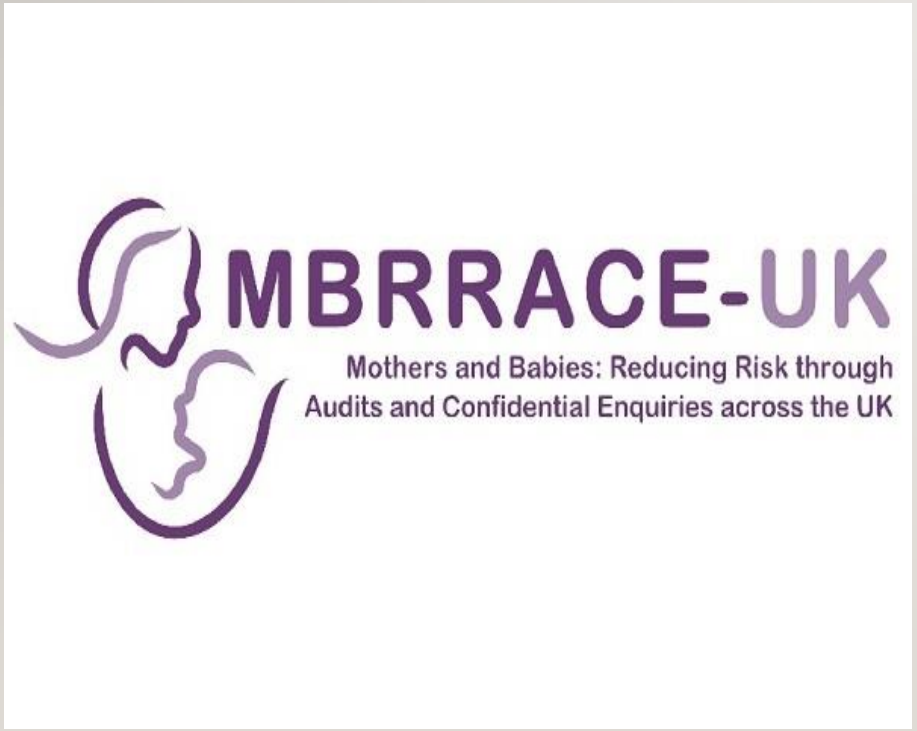

- Ensure at least one senior clinician takes a **'helicopter view'** of the management of a woman with major obstetric haemorrhage to coordinate all aspects of care
- The response to obstetric haemorrhage needs to be tailored to the **proportionate blood loss** as a percentage of circulating blood volume based on a woman's body weight
- **No controlled cord traction** if no signs of placental separation (blood loss and lengthening of the cord).
- Be aware of signs of **uterine inversion** include pain when attempting to deliver the placenta, a rapid deterioration of maternal condition and a loss of fundal height without delivery of the placenta

ESTIMATED BLOOD VOLUME AND PROPORTIONATE LOSSES ACCORDING TO BODY WEIGHT (MBBRACE, 2020)

Weight	Total blood Volume *	15% blood volume loss (Moderate)	30% blood volume loss (severe)	40% Blood volume loss (life threatening)
50 kgs	5000 mls	750 mls	1500 mls	2000 mls
60 kgs	6000 mls	900 mls	1800 mls	2400 mls
70 kgs	7000 mls	1050 mls	2100 mls	2800 mls
80 kgs	8000 mls	1200 mls	2400 mls	3200 mls
90 kgs	9000 mls	1350 mls	2700 mls	3600 mls
100 kgs	10000 mls	1500 mls	3000 mls	4000 mls

*based on 100 mls/kg blood volume in pregnancy, but may overestimate blood vol in obsese women, Lemmens et al 2006

>500ML ONGOING BLOOD LOSS-**EMERGENCY BELL-*STAGE 1***

>1000ML OR CLINICAL CONCERNS OR ABNORMAL VITAL SIGNS-**OBSTETRIC EMERGENCY CALL-*STAGE 2***

>1500MLS OR ONGOING CLINICAL CONCERNS-**MOH CALL-*STAGE 3***

Get help

Act

Treat (what is the cause of bleeding)?

KEY LEARNING POINTS

- Main risk factors, causes and treatment
- Early fluid resuscitation, give uterotonics
- Give Tranexamic Acid early
- Prompt escalation
- Complete PPH documentation
- Ensure all medications are prescribed **BEFORE** the team leave the room

QUESTIONS???