MANAGEMENT OF OBSTETRIC HAEMORRHAGE

Celia Bygrave
Consultant Anaesthetist
Worthing Hospital
Western Sussex NHS Foundation Trust

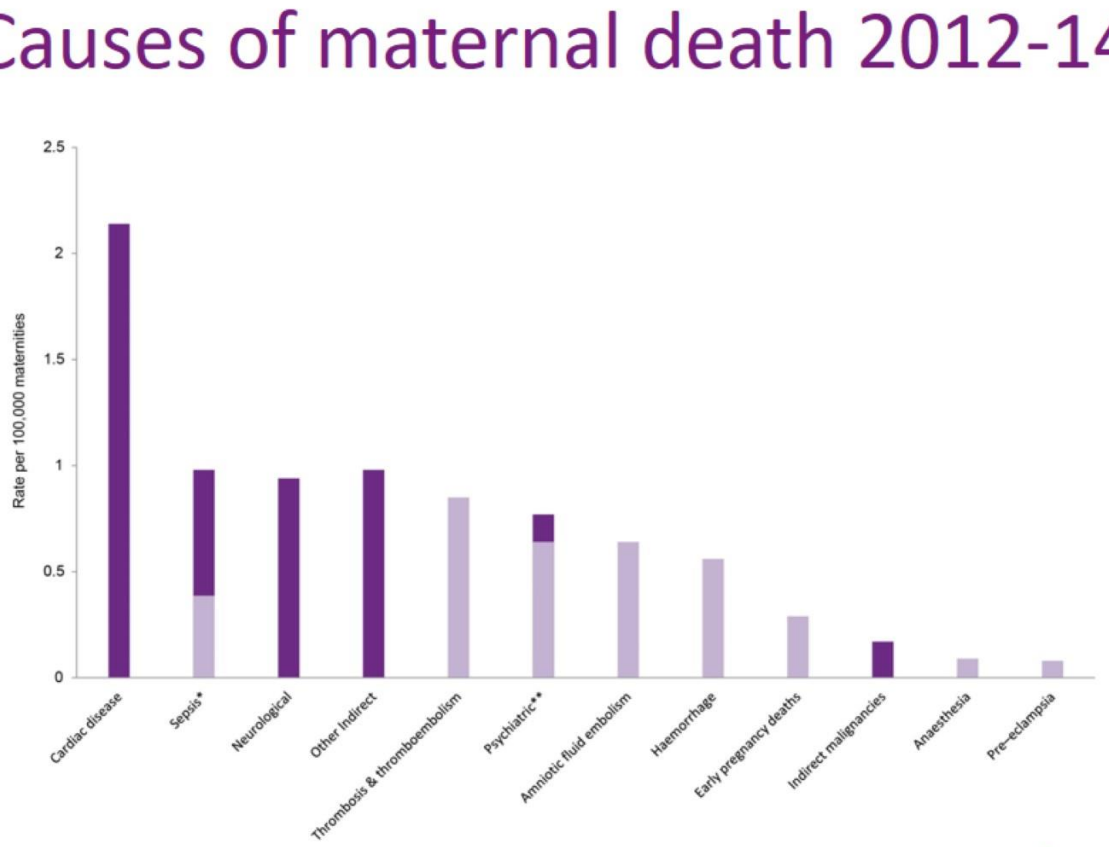
- The problem
- The challenges we face

The problem

- Haemorrhage is the leading cause of maternal death worldwide
- UK deaths from haemorrhage are now rare, but have remained static
- Mortality rate of 0.56 per 100000 births
- 13 direct deaths in the UK between 2012-2014

- Severe morbidity is 50x mortality rate

Maternal death



MBRRACE-UK

Circulatory changes in pregnancy

- Circulating blood volume increases by 40-50% at term
- 100ml/kg – so 7 litres in a 70kg woman
- Cardiac Output increases by 50% at term
- Blood flow to the uterus at term is 850ml/min

- Theoretically - could bleed entire circulating blood volume **within 10 mins**

Haemorrhage

- Post partum haemorrhage (PPH) – greater than 500ml
- Major Obstetric haemorrhage (MOH) – greater than 1500ml
- Massive Obstetric haemorrhage – greater than 2500ml

- PPH – 2222 call stating Obstetric emergency
- MOH – 2222 call stating Major Obstetric haemorrhage

At Western Sussex

- Our haemorrhage rate has remained relatively static in last few years 2.8 – 3.5% of all deliveries

Year	2015	2016
Number of births	5600	5017
>1500ml	213	141
>2500ml	29	30

This should worry us all

Overall assessment of care

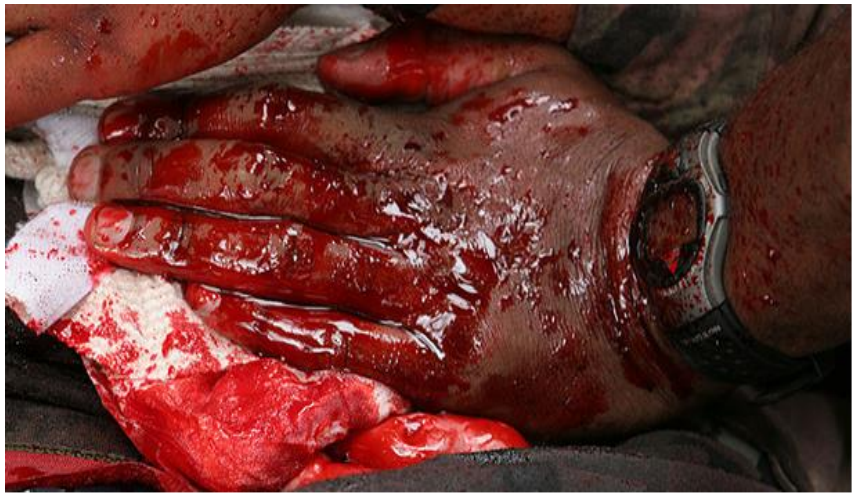
Classification of care received for women who died and are included in the confidential enquiry chapters (n=183)

	(n=183) Number (%)
Classification of care received	
Good care	85 (46)
Improvements to care which would have made no difference to the outcome	22 (12)
Improvements to care which may have made a difference to the outcome	76 (42)

MBRRACE-UK

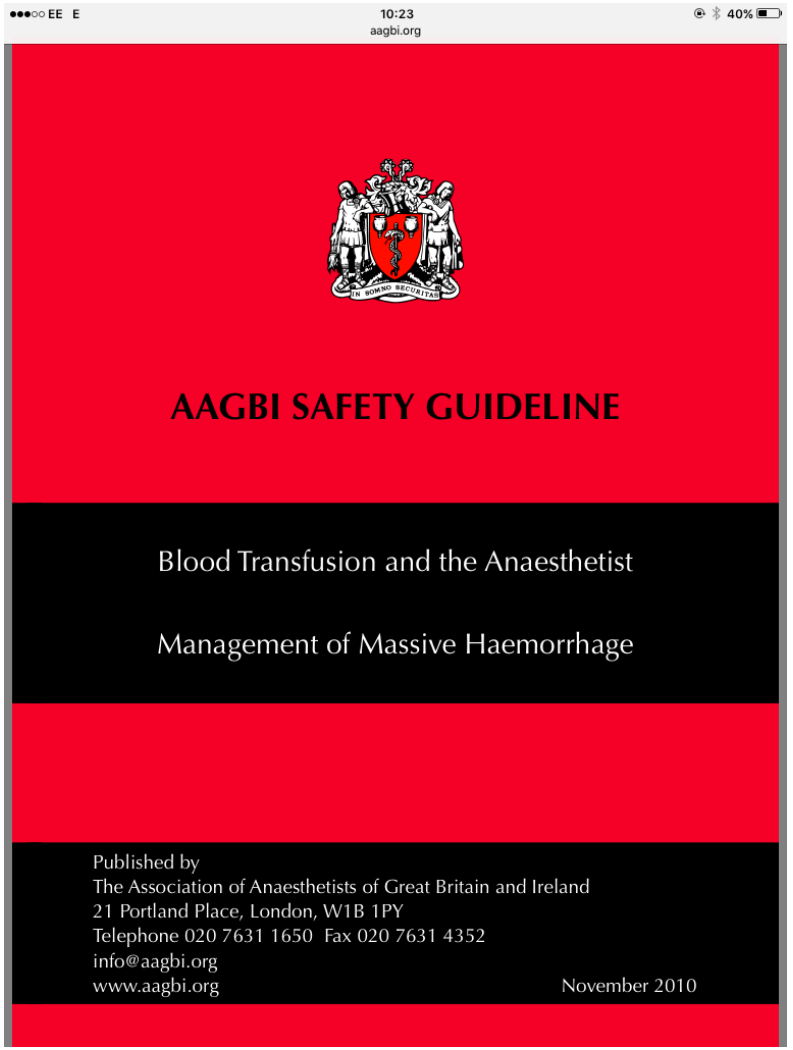
The challenges

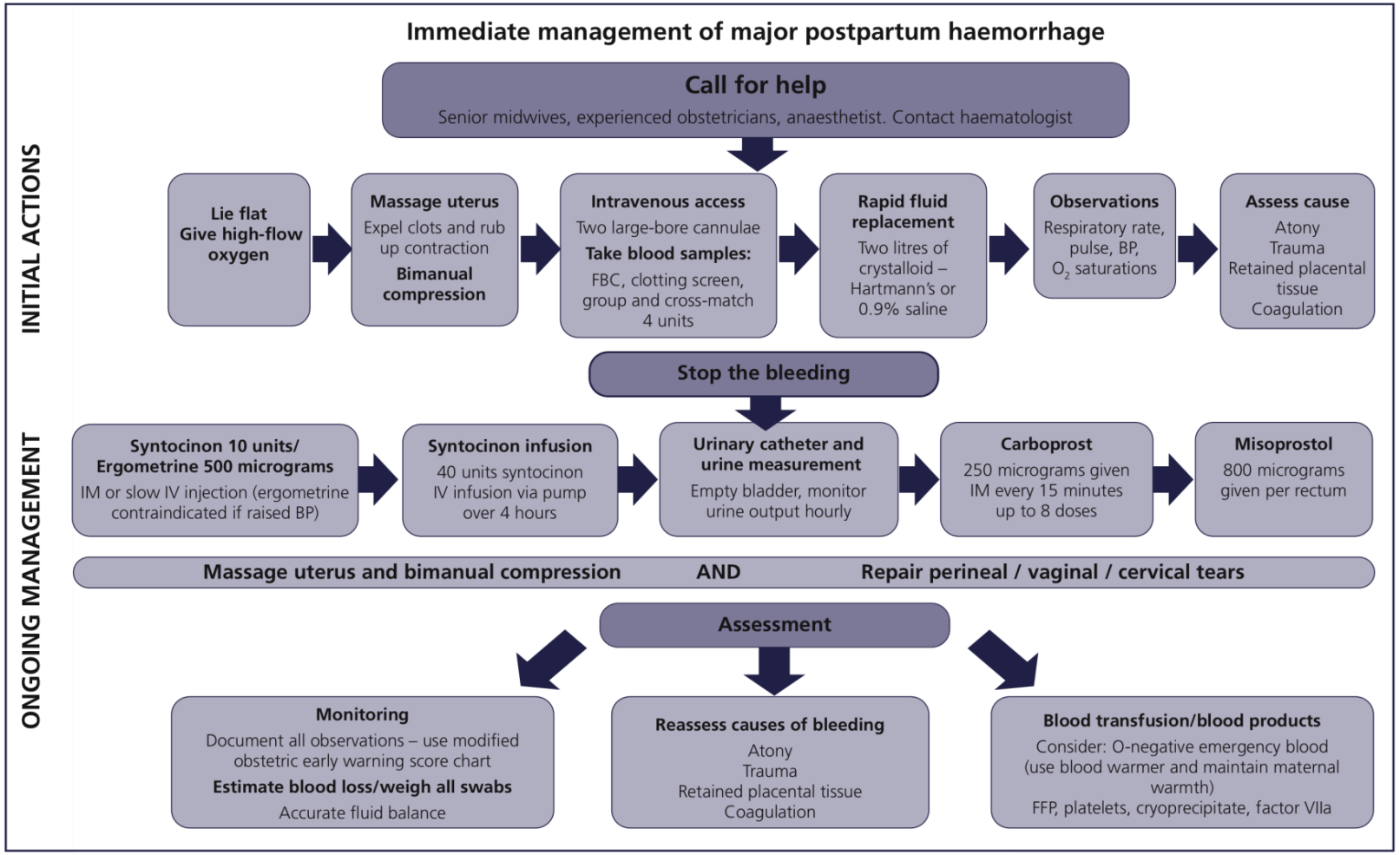
- Uncontrolled haemorrhage is incredibly scary
- Lack of personnel is not necessarily the issue
- Lack of leadership and decision making is
- The list of tasks is huge and can be time consuming



The challenges

- Immediate actions in dealing with a patient with massive
- haemorrhage
- • **Control obvious bleeding** points (pressure, tourniquet, haemostatic
- dressings)
- • Administer **high FIO2**
- • **IV access** – largest bore possible including central access
- • If patient is conscious and talking and a peripheral pulse is present, the blood pressure is adequate.
- • **Baseline bloods** – full blood count (FBC), prothrombin time (PT), activated partial thomboplastin time (aPTT), Clauss fibrinogen* and cross-match.
- • If available, undertake near-patient testing e.g. thromboelastography
- (TEG) or thromboelastometry (ROTEM).
- • **Fluid resuscitation** – in the massive haemorrhage patient, this means warmed blood and blood components. In terms of time of availability, blood group O is the quickest, followed by group specific, then crossmatched blood.
- • **Actively warm** the patient and all transfused fluids.
- • Next steps: rapid access to imaging (ultrasound, radiography, CT),
- appropriate use of focused assessment with sonography for trauma
- scanning and/or early whole body CT if the patient is sufficiently stable, or surgery and further component therapy.
- • Alert theatre team about the need for **cell salvage** autotransfusion.
- *A derived fibrinogen is likely to be misleading and should not be used.





PROMPT
PRactical Obstetric Multi-Professional Training

Case history

- 29 year old, 4th pregnancy
- Poor attender
- 2 previously uncomplicated vaginal births
- 3rd pregnancy presented late (36 weeks)
- Transverse lie – semi-elective LSCS under GA

Noonan syndrome

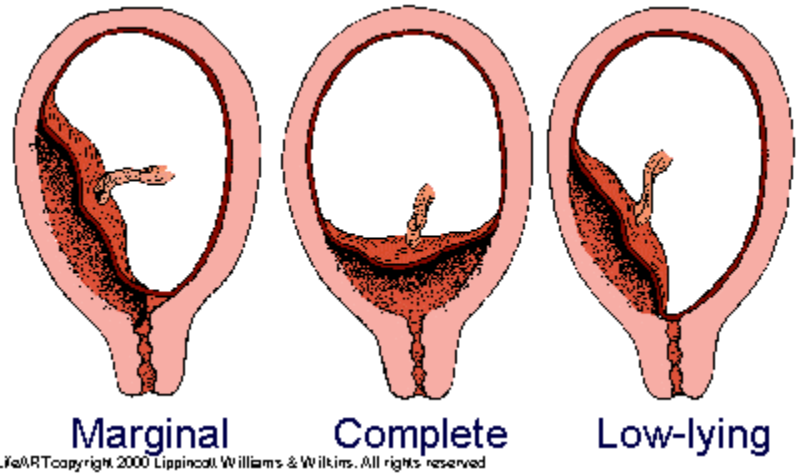
- Multiple malformation syndrome, similar to Turner's
- 1 in 2500 births
- Heart defects 80-90%
- Short stature, ptosis
- Learning difficulties
- Micrognathia, high arched palate

So to recap

- 29 year old, 4th pregnancy, 30 weeks
- Poor attender
- 2 previously uncomplicated vaginal births
- 3rd pregnancy presented late (36 weeks) with transverse lie - semi-elective LSCS under GA
- Noonan syndrome, learning difficulties
- Von Willebrands

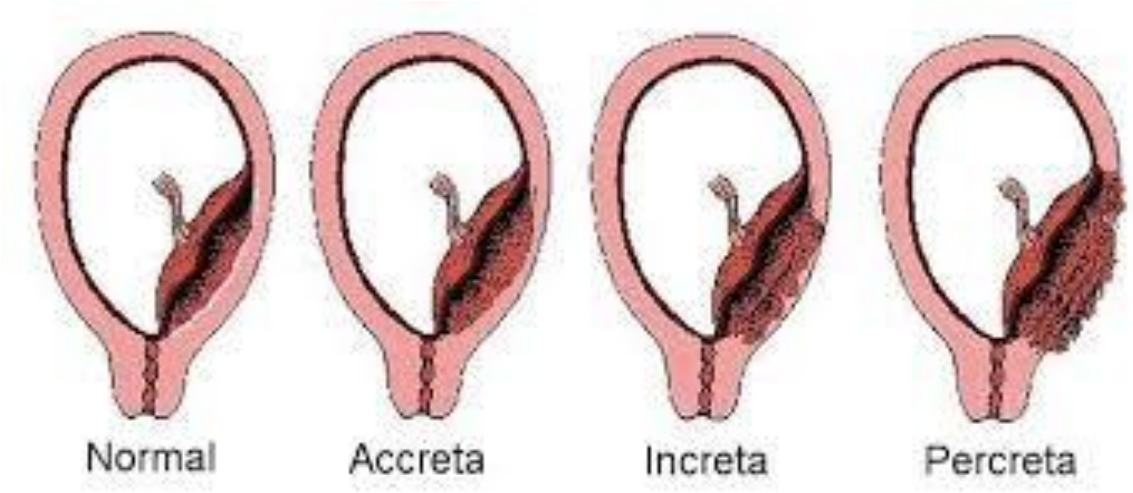
And….

- Major placenta praevia



Previous caesarean section…..

- Placenta accreta



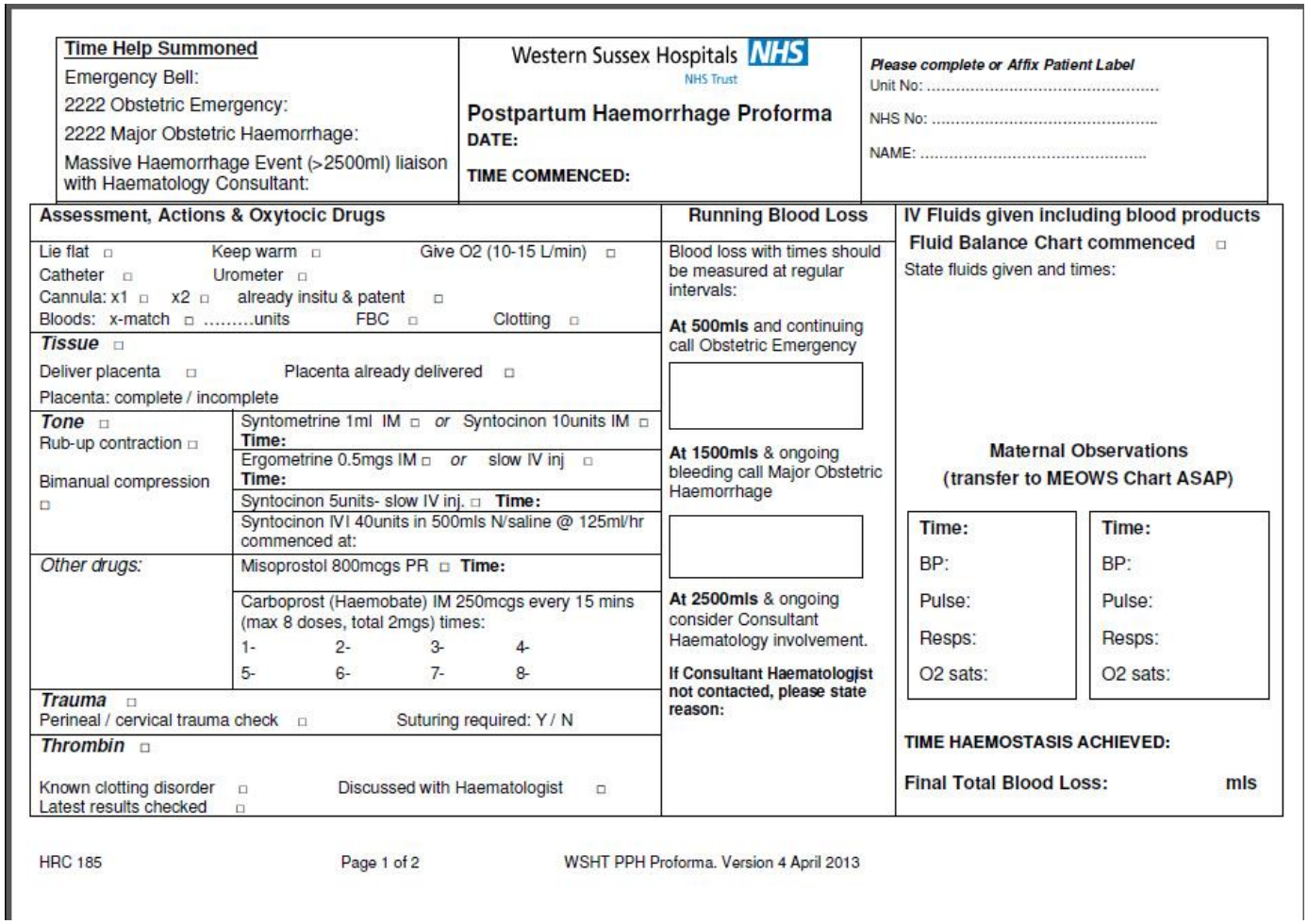
What are our options?

- Make sure she doesn’t get booked for a Wednesday
- Detailed planning

Outcome

- She bled……
- …….a lot

Proforma



Time Help Summoned

Emergency Bell:

2222 Obstetric Emergency:

2222 Major Obstetric Haemorrhage:

Massive Haemorrhage Event (>2500ml) liaison with Haematology Consultant:

Western Sussex Hospitals NHS
NHS Trust

Postpartum Haemorrhage Proforma

DATE:

TIME COMMENCED:

Please complete or Affix Patient Label

Unit No: .....

NHS No: .....

NAME: .....

Assessment, Actions & Oxytocic Drugs

Lie flat □ Keep warm □ Give O2 (10-15 L/min) □

Catheter □ Urometer □

Cannula: x1 □ x2 □ already insitu & patent □

Bloods: x-match □ .....units FBC □ Clotting □

Tissue □

Deliver placenta □ Placenta already delivered □

Placenta: complete / incomplete

Tone □

Rub-up contraction □

Bimanual compression □

Syntometrine 1ml IM □ *or* Syntocinon 10units IM □ **Time:**

Ergometrine 0.5mgs IM □ *or* slow IV inj □ **Time:**

Syntocinon 5units- slow IV inj. □ **Time:**

Syntocinon IVI 40units in 500mls N/saline @ 125ml/hr commenced at:

Other drugs:

Misoprostol 800mcgs PR □ **Time:**

Carboprost (Haemobate) IM 250mcgs every 15 mins (max 8 doses, total 2mgs) times:

1- 2- 3- 4-

5- 6- 7- 8-

Trauma □

Perineal / cervical trauma check □ Suturing required: Y / N

Thrombin □

Known clotting disorder □ Discussed with Haematologist □

Latest results checked □

Running Blood Loss

Blood loss with times should be measured at regular intervals:

At 500mls and continuing call Obstetric Emergency

At 1500mls & ongoing bleeding call Major Obstetric Haemorrhage

At 2500mls & ongoing consider Consultant Haematology involvement.

If Consultant Haematologist not contacted, please state reason:

IV Fluids given including blood products

Fluid Balance Chart commenced □

State fluids given and times:

Maternal Observations
(transfer to MEOWS Chart ASAP)

Time:	**Time:**
BP:	BP:
Pulse:	Pulse:
Resps:	Resps:
O2 sats:	O2 sats:

TIME HAEMOSTASIS ACHIEVED:

Final Total Blood Loss: **mls**

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Training

PROMPT
PRactical Obstetric Multi-Professional Training

- Multidisciplinary simulation
- Emphasis on process, system and teamwork
- Local environment, equipment and procedure
- We run ours as fairly high fidelity simulations
- Debrief

Cell salvage

- The guidelines all say…all units should have ‘appropriate training’ and use regularly
- How do we achieve this?
- Routine practice in Worthing since 2002
- We reinfuse about 1 in 9 patients with some returned blood
- Most infused back has been 3.5 litres
- Only using ‘first stage’ enables us to keep costs down

In summary

- Haemorrhage remains a challenge, particularly in a DGH setting
- It is scary stuff
- It truly requires a multi-disciplinary approach
- Avoid doing tricky cases on a Wednesday