Mid Essex Hospital Services NHS Trust

POSTPARTUM HAEMORRHAGE	CLINICAL GUIDELINES Register No: 04234 Status: Public

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CQC Fundamental Standards:	11, 12

Consulted with:	Post/Committee/Group:	Date:
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Document Review History:

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1.0	Julie Bishop	January 2005
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3.0	Paula Hollis	April 2012
3.1	Sarah Moon – Clarification to points 7.6 and 9.0	November 2012
3.2	Sarah Moon – point 7.12 – Intraoperative cell savage facility	December 2012
3.3	Sarah Moon – Clarification to point 4.0	February 2013
3.4	Gemma King – Clarification to points 4.0, 7.0 and Appendix A	April 2013
3.5	Sarah Moon – Clarification to Appendix B	October 2013
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4.1	Sarah Moon – Clarification to point 7.17	23 November 2015
4.2	Sarah Moon – Clarification to point 7.2;11.0; 7.18; 7.19; 7.20	21st March 2017
5.0	Anita Dutta – Full review	11th July 2018

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1.0 Purpose

1.1 The aim of this guideline is to provide guidance on prediction, early detection, and management of postpartum haemorrhage (PPH) and provide the optimum outcome for the woman.

2.0 Equality and Diversity

2.1 Mid Essex Hospital Services NHS Trust is committed to the provision of a service that is fair, accessible and meets the needs of all individuals.

3.0 Background

3.1 In triennium 2013-2015 (UK & Ireland), 22 women died from haemorrhage; 10 maternal death was due to postpartum haemorrhage. Obstetrics Haemorrhage is the second common cause of direct maternal death

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4.0 Definition

4.1 The assessment of blood loss and identification of the need for replacement of fluids and blood products is key to the management of obstetric haemorrhage.

4.2 **The Massive Haemorrhage Protocol: 'code red'** should be initiated at **> 2000 mls blood loss** or at any stage where the woman is **haemodynamically compromised** or showing signs of shock.

4.3 **Primary minor PPH** involves the loss of 500 ml to 1000 ml of blood from the genital tract within 24 hours of birth of the baby.

4.4 **Primary moderate PPH** involves the loss of 1000 ml to 1500 ml of blood from the genital tract within 24 hours of birth of the baby.

4.5 **Primary severe PPH** involves the loss of 1500 ml or more of blood from the genital tract within 24 hours of the birth of the baby.

4.6 **Massive PPH** involved the loss of 2000ml or more of blood from the genital tract within 24 hours of the birth of the baby or when the woman is haemodynamically compromised or showing signs of shock as a result of obstetric haemorrhage of any amount over 500 mls

4.7 Secondary PPH is defined as excessive blood loss from the genital tract after 24 hours following delivery, until six weeks post delivery.

4.8 Post caesarean section (LSCS) a PPH involves the loss of 1000 ml or more.

4.9 A severe PPH following LSCS involves the loss of 1500 ml or more.

4.10 A blood loss can be considered a Massive Obstetric Haemorrhage in cases where either four units of blood have been transfused and further units are required, regardless of blood loss or there is a blood loss > 2000 mls.
(Refer to Appendix A)

5.0 Aetiology

- Uterine atony
- Retained placental tissue
- Trauma
- Coagulopathy

6.0 Risk Factors

6.1 Risk factors for PPH may present antenatally or intrapartum; care plans must be modified as and when risk factors arise.

6.2 Clinicians must be aware of risk factors for PPH and should take these into account when counselling women about place of delivery.

6.3 Antenatal risk factors:

- Previous retained placenta or PPH
- Maternal haemoglobin level below 8.5 g/dl at onset of labour (Antenatal anaemia should be investigated and treated appropriately as this may reduce the morbidity associated with PPH
- Body mass index greater than 35 kg/m2
- Grand multiparity (parity 4 or more)
- Antenatal haemorrhage
- Over distention of the uterus (i.e. multiple pregnancy, polyhydramnios or macrosomia)
- Existing uterine abnormalities
- Low lying placenta
- Maternal age (35 years or more)

6.3 Risk factors in labour:

- Induction of labour
- Prolonged first, second or third stage of labour
- Secondary arrest of labour, especially in multi-gravid patients
- Use of oxytocin®
- Precipitate labour
- Operative birth or caesarean section

6.4 Advise women with risk factors for postpartum haemorrhage to give birth in an obstetric unit, where more emergency treatment options are available; as well as a blood bank on site.

6.5 If a woman has risk factors for postpartum haemorrhage, highlight these in her notes; make and discuss with her a care plan covering the third stage of labour.

6.6 Uterine massage is of no benefit in the prophylaxis of PPH.

6.7 When uterine atony is perceived to be a cause of the bleeding, then a sequence of mechanical and pharmacological measures should be instituted in turn until the bleeding stops.

7.0 Management of PPH

7.1 Once a PPH has been identified management may involve four components, all of which must be undertaken **simultaneously**

- Communication
- Resuscitation
- Monitoring and investigation
- Arresting the bleeding

7.2 **Communication:**

7.2.1 Communication with the patient and her birthing partner is important, and clear information of what is happening should be given from the outset.

7.2.2 Relevant staff with an appropriate level of expertise should be alerted of PPH.

7.3.1 **Minor / Moderate PPH** (no clinical shock) – the procedure for the treatment of minor and moderate PPH without cardiovascular compromise is as follows:

- In the consultant unit the midwife responsible for the care of the patient should inform the senior midwife/labour ward co-ordinator
- The senior midwife/labour ward co-ordinator should inform the obstetric registrar/ consultant and anaesthetist on call
- In the community setting or midwife-led unit the midwife responsible for the care of the patient should inform the labour ward co-ordinator and arrange transfer by ambulance to the consultant unit, stating **'obstetric emergency'**
  (Refer to the 'Guideline for the transfer of mother and babies to different care settings'. Register number 06029)
- Where there are signs of shock and continued bleeding the Massive Obstetric Haemorrhage Protocol via **'Code Red' alert** should be initiated and followed to manage the blood loss, continue fluid resuscitation, identify and treat the cause

7.4 **Severe/Massive PPH**

- Call for assistance from the senior midwife/labour ward co-ordinator
- Request a **'code red'** to be instigated
  (Refer to Appendix B)
- A Lead must be identified for the emergency, this will normally be the Obstetric Consultant who attends the emergency, they may delegate this responsibility to another senior clinician, this decision-making must be explicit at the time. All communication and decision-making will be through this person who will be the central point of decision-making
- The management of PPH requires a multidisciplinary approach: the anaesthetist plays a crucial role in maintaining haemodynamic stability and, if necessary, in determining and administering the most appropriate method of anaesthesia
- The obstetric registrar should inform the obstetric consultant on call
- The anaesthetic registrar should inform the anaesthetic consultant on call if he/she has any cause for concern
- If the patient is in a stable condition but require a blood transfusion the obstetric/anaesthetic registrars should update the senior midwife/labour ward co-ordinator and inform the haematologist/blood transfusion as appropriate
- **'Major Obstetric Haemorrhage Event'** should be activated by the senior midwife/labour ward co-ordinator at request of obstetric/anaesthetic registrar; in the event of 'O negative' blood being required/used; this code will alert the

haematologist and inform a porter that he needs to come directly to the Labour Ward to collect the blood samples. He/she will then wait until the units of blood/blood products are ready and bring them directly back to Labour Ward for use.
(Refer to the guideline entitled 'Emergency transport of blood and specimens in the event of massive obstetric haemorrhage'; register number 07024)

- The obstetric registrar should inform the obstetric consultant on call unless he/she requests that the senior midwife/labour ward co-ordinator should liaise on their behalf
- It is the responsibility of the both the obstetric consultant and anaesthetic consultant to liaise with each other regarding the patient's condition and updating the individual management plan. The obstetric/anaesthetic consultants should update the senior midwife/labour ward co-ordinator
- The Consultant Obstetrician should consider referral for interventional radiology and contact should be made with the on call consultant radiologist
- Ensure all care, discussions and decisions have been clearly documented in the patient's health care records
- Once again, in the community setting or midwife-led unit the midwife responsible for the care of the patient should inform the labour ward co-ordinator and arrange transfer by ambulance (paramedic) to the consultant unit
(Refer to the 'Guideline for the transfer of mother and babies to different care settings'. Register number 06029)

7.5 Blood Components

7.5.1 Transfusion of fresh frozen plasma (FFP) - If no haemostatic results are available and bleeding is continuing, then, after 4 units of red blood cells, FFP should be infused at a dose of 12–15 ml/kg until haemostatic test results are known.

7.5.2 If no haemostatic tests are available, early FFP should be considered for conditions with a suspected coagulopathy, such as placental abruption or amniotic fluid embolism, or where detection of PPH has been delayed. [New 2016]

7.5.3 If prothrombin time/activated partial thromboplastin time is more than 1.5 times normal and haemorrhage is ongoing, volumes of FFP in excess of 15 ml/kg are likely to be needed to correct coagulopathy.

7.5.4 Clinicians should be aware that these blood components must be ordered as soon as a need for them is anticipated, as there will always be a short delay in supply because of the need for thawing.

7.5.5 Fibrinogen - a plasma fibrinogen level of greater than 2 g/l should be maintained during on-going PPH.

7.5.6 Cryoprecipitate should be used for fibrinogen replacement.

7.5.7 Transfusion of platelets - during PPH, platelets should be transfused when the platelet count is less than 75 3 109/l based on laboratory monitoring.

7.5.8 Consideration should be given to the use of tranexamic acid in the management of PPH.

7.5.9 The routine use of rFVIIa is not recommended in the management of major PPH unless as part of a clinical trial.

7.5.10 The management of PPH requires a multidisciplinary approach: the anaesthetist plays a crucial role in maintaining haemodynamic stability and, if necessary, in determining and administering the most appropriate method of anaesthesia.

7.6 **Resuscitation:**

7.6.1 Minor PPH

- IV access (16G cannula x1)
- Urgent venepuncture:
  - full blood count (FBC)
  - group and screen
  - coagulation screen, including fibrinogen
- Commence crystalloid (hartmann's) infusion
- Observations (refer to point 7.13) every 15 minutes

7.6.2 Severe/Massive PPH or signs of shock/cardiovascular compromise

- IV access (16G cannula x2)
- Obtain blood for full blood count, clotting screen and cross match
- Commence crystalloid (Hartmann's) infusion
- Lay patient flat
- Administer oxygen via reservoir mask at 15 litres/minute
- Transfuse blood (refer to point 7.4)

7.6.3 Until blood available, infuse in turn as rapidly as required

- crystalloid maximum 2 litres (i.e. Hartmann's)
- colloid maximum 1.5 litres (i.e. gelofusine, haemacel)

7.6.4 If cross-matched blood is still unavailable once 3.5 litres of crystalloid/ colloid infused, Administer O negative blood or uncross-matched (own group blood). Two units of 'O' negative blood are available in the maternity unit and a further 2 units are available in the blood fridge in the general corridor. The porter should be bleeped to collect these 2 units of blood urgently from the general side.

7.7 If the bleeding is ongoing and results of coagulation studies are still unavailable, the anaesthetic registrar/consultant should administer one litre of fresh frozen plasma (FFP) and 10 units of cryoprecipitate empirically.

7.8 Use the rapid warmed infusion equipment if available. Do not use special blood filters as they slow infusion.

7.9 Intraoperative cell salvage is a routine procedure within MEHT. It is the responsibility of the obstetric and anaesthetic teams to arrange on an individual basis. The operation department practitioners (ODP) are trained to collect and set up the intraoperative cell salvage equipment.

7.10 **Monitoring and Investigation:**

Minor PPH (blood loss 500-1000 ml, no clinical shock)

- Venepuncture (20ml) for FBC, clotting screen and X-match
- ¼ hourly – ½ hourly pulse, respirations and BP recordings
- Observing any further blood loss via the genital tract

- Maintaining a fluid balance and document in the maternity early obstetric warning score (MEOWS) chart
  (Refer to the guideline for the management of bladder care in pregnancy'. Register number 09007)
- Clinicians should be aware that the visual estimation of peripartum blood loss is inaccurate and that clinical signs and symptoms should be included in the assessment of PPH

7.11 **Major/Severe/Massive PPH** (blood loss more than 1000ml; continuing to bleed or clinical shock)

- A and B – assess airway and breathing
- C – evaluate circulation
- Position the patient flat
- Keep the woman warm using appropriate measures
- Obtain 20ml of blood for FBC, clotting screen and X-match. Fill clotting sample (blue bottle) first and ensure the bottle is completely filled. Inability to do this may affect results
- Instigate **category 1** for immediate transportation of blood specimens for analysis
- ¼ hourly pulse, respirations and BP recordings (using oximeter, ECG (electro-cardiograph) and automated BP (blood pressure). Initial recording of these can be on the PPH proforma but a MEOWs chart should be commenced as soon as possible (Refer to the 'Guideline for the severely ill pregnant patient' Register number 09095)
- Transfuse blood as soon as possible, if clinically required until blood is available, infuse up to 3.5 litres of warmed clear fluids, initially 2 litres of warmed isotonic crystalloid. Further fluid resuscitation can continue with additional isotonic crystalloid or colloid. 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
- Commence and Maintain a 'high dependency' observation chart where indicated
- Insert a Foley's catheter to monitor the urine output hourly and commence and maintain a fluid balance chart
  (Refer to the guideline for the management of bladder care in pregnancy'. Register number 09007; and the guideline for the 'Management of the severely ill pregnant patient'; register number 09095)
- Observing any further blood loss via the genital tract
- If a central venous line has been inserted then CVP (central venous pressure) monitoring must be documented on the observation chart in use, this will depend on the availability of appropriately experienced staff on the Labour Ward, if none are available the woman should be transferred to HDU/ITU for ongoing monitoring and assessment
- Women who have not been transferred to HDU/ITU should be cared for on labour ward where they must receive one to one care by an appropriately trained member of staff
- Depending on the stability of the patient consider transfer to ITU, this is a decision for the Obstetric Consultant and Anaesthetic Consultant
  (Refer to the 'Guideline to assist medical and midwifery staff in the provision of high dependency care and arrangements for safe and timely transfer to ITU'. Register number 04232)
- If clinically significant red cell antibodies are present, close liaison with the transfusion laboratory is essential to avoid delay in transfusion in life-threatening haemorrhage.

7.11.2 In the event of a major catastrophic haemorrhage, the obstetric registrar/consultant on call in consultation with the anaesthetic registrar/ consultant on call should instigate an Active Major Obstetric Haemorrhage Event.
(Refer to 'Emergency transport of blood specimens in the event of major obstetric haemorrhage'; register number 07024)

7.11.3 The major catastrophic haemorrhage event should be triggered by the Labour Ward Co-ordinator by contacting Switchboard on 2222, informing Switchboard by stating: "Active Major Obstetric Haemorrhage. This initial emergency call to Switchboard will initiate the arrival of the Trigger Response Team.
(Refer to 'Emergency transport of blood specimens in the event of major obstetric haemorrhage'; register number 07024)

7.12 **Arresting the bleeding:**

7.12.1 The commonest cause of PPH is uterine atony. However, clinical examination must be undertaken to exclude other causes:

- Retained products (placenta, membranes, clots)
- Vaginal/cervical laceration
- Ruptured uterus
- Broad ligament haematoma
- Extra-genital bleeding

7.12.2 Prophylactic uterotonics i.e. Syntocinon 10 iu IM should be routinely offered in the management of the third stage of labour in all women as they reduce the risk of PPH.

7.12.3 For women at increased risk of haemorrhage, it is possible that a combination of preventative measures might be superior to syntocinon alone to prevent PPH.

7.12.4 When uterine atony is perceived to be the cause of the bleeding, the following measures should be instituted, in turn, until the bleeding stops:

- Uterine compression (rubbing up the fundus to stimulate contractions);
- Ensure the bladder is empty (Foley's catheter, leave in-situ);
- Administer Ergometrine (0.5 mg IM) or Syntometrine 5 iu/0.5 mg IM;
- Administer Tranexamic Acid 1g IV;
- Syntocinon infusion (40 units in 500ml Hartmann's at 125ml/hour);
- Carboprost (Haemabate) 0.25mg IM (repeated at intervals not less than 15 minutes to maximum of 8 doses). It should be noted that **carboprost** is **kept** in the **fridge** (in terms of its location in an emergency situation). The obstetric registrar needs to consider transfer to obstetric theatre if more than 2 doses are required;
- Misoprostol 800 micrograms PR (per rectum). It should be noted that **misoprostol** is **kept** in the **CD** (controlled drugs) **cupboard** (in terms of its location in an emergency situation).

7.13 If pharmacological measures fail to control the haemorrhage, surgical interventions should be initiated sooner rather than later; a second Consultant Obstetrician should be contacted to attend or for phone consultation in order that a joint decision can be made regarding the management of the patient.

7.13 Intrauterine balloon tamponade is an appropriate first-line 'surgical' intervention for most women where uterine atony is the only or main cause of haemorrhage.

7.14 If the Consultant Obstetrician who is involved in the case needs to liaise with another consultant and is busy managing the patient; a message should be sent via the Labour Ward Co-ordinator.

7.15 Resort to hysterectomy sooner rather than later (especially in cases of placenta accreta or uterine rupture). If the surgeon thinks that the patient is heading towards peripartum hysterectomy, he/she should request a colleague to attend and to be actively involved in theatre in the management of peripartum hysterectomy earlier rather than later.

7.16 Conservative surgical interventions may be attempted as second line, depending on clinical circumstances and available expertise. It is recommended that a laminated diagram of the brace suture technique be kept in theatre. Ideally and when feasible, a second experienced clinician should be involved in the decision for hysterectomy.

7.17 If conservative measures fail to control haemorrhage, initiate surgical haemostasis sooner rather than later. The following interventions should be undertaken, in turn, until bleeding stops:

- At laparotomy, direct intra-myometrial injection of Carboprost 0.5mg
- Uterine artery embolisation
- Bilateral ligation of uterine arteries
- Bilateral ligation of internal iliac arteries
- Haemostatic uterine suturing (e.g. B-Lynch)
- Peripartum Hysterectomy

7.18 Interventional radiology is currently available at MEHT.

8.0 Considerations

8.1 There are occasions when patients will refuse blood products i.e. religious beliefs. (Refer to the ‘Guideline for the management of pregnant and postnatal patients who refuse blood products’. Register number 07040)

8.2 Debriefing - an opportunity to discuss the events surrounding the obstetric haemorrhage should be offered to the woman (possibly with her birthing partner/s) at a mutually convenient time.

8.3 In women presenting with secondary PPH, an assessment of vaginal microbiology should be performed (high vaginal and endocervical swabs) and appropriate use of antimicrobial therapy should be initiated when endometritis is suspected.

8.4 A pelvic ultrasound may help to exclude the presence of retained products of conception, although the diagnosis of retained products is unreliable.

8.5 Surgical evacuation of retained placental tissue should be undertaken or supervised by an experienced clinician.

9.0 Staffing and Training

9.1 All midwifery and obstetric staff must attend yearly mandatory training which includes skills and drills training, including the management of PPH, maternal resuscitation and early recognition of the ill patient.

(Refer to 'Mandatory training policy for Maternity Services (incorporating training needs analysis. Register number 09062)

9.2 All staff involved in maternity care should receive training in the management of obstetric emergencies, including the management of PPH. Training for PPH should be multiprofessional and include team rehearsals.

9.3 All midwifery and obstetric staff are to ensure that their knowledge and skills are up-to date in order to complete their portfolio for appraisal.

10.0 Professional Midwifery Advocates

10.1 Professional Midwifery Advocates provide a mechanism of support and guidance to women and midwives. Professional Midwifery Advocates are experienced practising midwives who have undertaken further education in order to supervise midwifery services and to advise and support midwives and women in their care choices.

11.0 Infection Prevention

11.1 All staff should follow Trust guidelines on infection prevention by ensuring that they effectively 'decontaminate their hands' before and after each procedure.

11.2 All staff should ensure that they follow Trust guidelines on infection prevention. All invasive devices must be inserted and cared for using High Impact Intervention guidelines to reduce the risk of infection and deliver safe care. This care should be recorded in the Saving Lives High Impact Intervention Monitoring Tool Paperwork (Medical Devices).

12.0 Audit and Monitoring

12.1 Audit of compliance with this guideline will be considered on an annual audit basis in accordance with the Clinical Audit Strategy and Policy (register number 08076), the Corporate Clinical Audit and Quality Improvement Project Plan and the Maternity annual audit work plan; to encompass national and local audit and clinical governance identifying key harm themes. The Women's and Children's Clinical Audit Group will identify a lead for the audit.

12.2 All cases of PPH involving a blood loss of greater than 1500 ml should be the subject of a formal clinical incident review.

12.2 As a minimum the following specific requirements will be monitored:

- Agreed local definition of postpartum haemorrhage
- Documented clear lines of communication between the consultant obstetrician, consultant anaesthetist, haematologist, blood transfusion personnel and labour ward coordinator
- Description of the management of women with a postpartum haemorrhage
- Requirement to document fluid balance
- Urgent access to blood, including portering arrangements
- Clear and well understood trigger phrase to activate the massive haemorrhage protocol

- Requirement to document an individual management plan in the health records of women who decline blood products
- Current arrangements for the use of intraoperative cell salvage
- Current arrangements for the use of interventional radiology
- Maternity service's expectations for staff training, as identified in the training needs analysis
- Process for continuous audit, multidisciplinary review of audit results and subsequent monitoring of action plans

12.3 A review of a suitable sample of health records of patients to include the minimum requirements as highlighted in point 11.2 will be audited. A minimum compliance 75% is required for each requirement. Where concerns are identified more frequent audit will be undertaken.

12.4 The findings of the audit will be reported to and approved by the Multi-disciplinary Risk Management Group (MRMG) and an action plan with named leads and timescales will be developed to address any identified deficiencies. Performance against the action plan will be monitored by this group at subsequent meetings.

12.5 The audit report will be reported to the monthly Directorate Governance Meeting (DGM) and significant concerns relating to compliance will be entered on the local Risk Assurance Framework.

12.6 Key findings and learning points from the audit will be submitted to the Clinical Governance Group within the integrated learning report.

12.7 Key findings and learning points will be disseminated to relevant staff.

13.0 Guideline Management

13.1 As an integral part of the knowledge, skills framework, staff are appraised annually to ensure competency in computer skills and the ability to access the current approved guidelines via the Trust's intranet site.

13.2 Quarterly memos are sent to line managers to disseminate to their staff the most currently approved guidelines available via the intranet and clinical guideline folders, located in each designated clinical area.

13.3 Guideline monitors have been nominated to each clinical area to ensure a system whereby obsolete guidelines are archived and newly approved guidelines are now downloaded from the intranet and filed appropriately in the guideline folders. 'Spot checks' are performed on all clinical guidelines quarterly.

13.4 Quarterly Clinical Practices group meetings are held to discuss 'guidelines'. During this meeting the practice development midwife can highlight any areas for further training; possibly involving 'workshops' or to be included in future 'skills and drills' mandatory training sessions.

14.0 Communication

14.1 A quarterly 'maternity newsletter' is issued and available to all staff including an update on the latest 'guidelines' information such as a list of newly approved guidelines for staff to acknowledge and familiarise themselves with and practice accordingly.

14.2 Approved guidelines are published monthly in the Trust's Focus Magazine that is sent via email to all staff.

14.3 Approved guidelines will be disseminated to appropriate staff quarterly via email.

14.4 Regular memos are posted on the guideline notice boards in each clinical area to notify staff of the latest revised guidelines and how to access guidelines via the intranet or clinical guideline folders.

14.0 References

Royal College of Obstetricians and Gynaecologists (2016) Postpartum haemorrhage, prevention and management. GTG52: RCOG; December.

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Intrapartum Care: Care of Healthy Women and Their Babies During Childbirth. June London. NICE
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NHS
Mid Essex Hospital Services
NHS Trust

PPH ≥ 1000mls Proforma

Or signs of cardiovascular compromise

First Name		**Surname**
NHS No	**Hospital No**	**DOB**
Date / Time of Event		**Location**

Staff Present	Name	Time Called	Arrived
Midwife 1			
Midwife 2			
Labour Ward Co-ordinator			
Obstetric Registrar			
Obstetric Consultant			
Anaesthetist			
Anaesthetic Consultant			
ODP			
Obstetric Theatre Staff			
Interventional Radiologist			
Others			
Designated lead for emergency			
Scribe			

Provisional Diagnosis					
Resuscitation required	No	☐	Yes	☐	*Details*
Code Red	No	☐	Yes	☐	*Time Initiated*
Active Major Obstetric Haemorrhage Event	No	☐	Yes	☐	*Time Initiated*

Management and Drugs Admin (Not listed in order of administration)						
Initial Management (trigger at 500mls or maternal compromise)					**Time**	**By Whom**
Uterus Contracted	No	☐	Yes	☐		
Uterine Compression	No	☐	Yes	☐		
Placenta and membranes						
• Delivered	No	☐	Yes	☐		
• Retained	No	☐	Yes	☐		
• Complete	No	☐	Yes	☐		
• Incomplete	No	☐	Yes	☐		

IV Access (x2 16 gauge cannula)	No	☐	Yes	☐		
Indwelling Urinary Catheter	No	☐	Yes	☐		

					Time	By Whom
Hourly Urine (commence FBC ASAP) •	No	☐	Yes	☐		
•	No	☐	Yes	☐		
•	No	☐	Yes	☐		
Vagina Inspected for tears	No	☐	Yes	☐		
Cervix identified and inspected for tears	No	☐	Yes	☐		
Uterine angle identified at caesarean section	No	☐	Yes	☐		
Pre delivery Hb and platelets checked	No	☐	Yes	☐		

Oxytocic Management

						Time	By Whom
Oxytocic Management commenced • Syntocinon 10 iu IM or		No	☐	Yes	☐		
• Ergometrine (0.5 mg IM) or • Syntometrine 5 iu/0.5 mg IM		No	☐	Yes	☐		
• Tranexamic Acid 1g IV		No	☐	Yes	☐		
• Syntocinon infusion (40iu in 500mls)		No	☐	Yes	☐		
Carboprost / Haemabate 0.25mg (at 15 min intervals / max 8 doses)	**1**	No	☐	Yes	☐		
	2	No	☐	Yes	☐		
	Consider Transfer to theatre						
	3	No	☐	Yes	☐		
	4	No	☐	Yes	☐		
	5	No	☐	Yes	☐		
	6	No	☐	Yes	☐		
	7	No	☐	Yes	☐		
	8	No	☐	Yes	☐		
Misoprostol 800mg PR		No	☐	Yes	☐		

Cumulative Blood Loss

	Time	Volume	Cumulative Total	Signature
EBL at Delivery				
Following administration of Ergometrine (0.5 mg IM) or Syntometrine 5 iu/0.5 mg IM				
Prior to Syntocinon Infusion				
Following Haemabate				
Following Misoprostol				
Ongoing blood loss estimate				

Initial Observations						
BP	**P**	**T**	**Resps**	**O2 SATS**		**Est Blood Loss**
Capillary Refill		MEOW Score		ECG		
Pulse Oximeter						
MEOWS Chart Commenced	Yes ☐		Fluid Balance Commenced		Yes ☐	
Baby Delivered		Time				
Method of Delivery		SVD	Forceps	Ventouse		Kiwi
		ELSCS	EMLSCS	Live Birth		Stillbirth

Bloods / Test	Time Taken and Sent	By Whom
FBC		
G+S		
Haemacue		
Cross Match		
U & E's		
LFT's		
Clotting		

Fluids		Time Given & by Whom	Running Total Including Volumes
Fluid resuscitation commenced			
Hartmanns (crystalloid)	Bag 1 (1000mls)		
	Bag 2 (1000mls)		
Volpex (colloid)	Bag 1 (1000mls)		
	Bag 2 (1000mls)		
Normal Saline	Bag 1		
	Bag 2		
Blood Products			
O Negative Bloods	1st Unit		
	2nd Unit		
Cross Matched Bloods	1st Unit		
	2nd Unit		
	3rd Unit		
	4th Unit		
	5th Unit		
	6th Unit		
	7th Unit		
	8th Unit		
FFP	1st Bag		
	2nd Bag		
Factor 8			

Cryoprecipitate 10 Units			
Platelet Concentrate			
Haematologist Informed			
Declined blood products			

Transfer to Theatre			
		Time	**By Whom**
Arrival in Obstetric Theatre			
Type of Procedure	EAU		
	Return to theatre		
	Repair of Vaginal / Uterine tears		
	Management of Uterine Atony		
	Removal of Placenta / Retained Products		

Transfer from Obstetric Theatre			
To Recovery			
To Labour Ward			
To ITU	ITU Informed		
	Date/Time to ITU		

Communication		
Partner Informed		
HoM Informed		
SOM Informed		
Debrief Counselling of women and partner		

Cause of Bleed				
Tone	**Trauma**	**Tissue**	**Thrombin**	**Other (state)**
Total Blood Loss				
Additional Notes				

If Blood Loss > 2000mls		
	Date	**Person Responsible**
Notes Photocopies		
Risk Management MW Informed		
HOM Informed		
DATIX Completed		
Concise (Level 1) report completed & emailed to risk midwife + HoM		

Appendix B

Mid Essex Hospital Services NHS Trust
Women's and Children's Division

CODE RED

There are two types of emergencies (code RED) that require urgent 'crash call' responses using the new 4444 emergency call number.

Initiating an emergency

- Co-ordinator/senior staff member to initiate code
- Dial 4444
- Specify code **RED**
  (Refer to below criteria)
- Give location to switchboard (i.e. maternity obstetric theatre/delivery room)

Code RED for obstetric emergencies

- Grade 1 emergency section
- Major/ massive haemorrhage
- Maternal fitting

Code RED switchboard will fast bleep the following:

- Labour ward co-ordinator (#6555 2017)
- On call obstetric registrar
- On call obstetric SHO
- On call anaesthetist
- On call anaesthetic assistant
- On call paediatric registrar
- On call paediatric SHO
- Theatre scrub team

****** In the event of a cardiac arrest you will still need to dial 2222******