University Hospitals Sussex
NHS Foundation Trust

Obstetric Haemorrhage

(RSCH PRH Only)

Maternity Protocol: MP053

Date agreed: April 2022

Amendment : December 2023

v3.1

This protocol includes:

- Antepartum Hemorrhage
- Placental Abruption
- Placenta Praevia
- Postpartum Hemorrhage
- Women who decline blood products

Guideline Reviewer:	Heather Brown
Version:	3.1
Approval Committee:	Women's Services Safety and Quality Committee
Date agreed:	April 2022
Amendment:	December 2023
Review date:	April 2025
Cross reference:	**C006** Administration of Blood and Blood Components **MP056** High Dependency Care (HDU)

Contents

Key Principles

A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol.

Scope

This protocol applies to:

- All women who experience antepartum and/or postpartum haemorrhage
- Any women with Placenta Praevia
- Any woman with a diagnosis of placental abruption
- Any woman who declines blood or blood products

Responsibilities

Midwives, Anaesthetists & Obstetricians:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this protocol

Management:

- To ensure the protocol is reviewed as required in line with Trust and National recommendations
- To ensure the protocol is accessible to all relevant staff
- To ensure the protocol is available to service users on request

1 Agreed Definitions of Obstetric Haemorrhage

1.1 Minor Antepartum Haemorrhage
Episode of bleeding of less than 50mls from the genital tract during pregnancy (after 24 weeks gestation) and prior to birth of the baby

1.2 Major Antepartum Haemorrhage
Episode of bleeding of more than 50mls from the genital tract during pregnancy (after 24 weeks gestation) and prior to birth of the baby *or* when clinical signs are suggestive of significant concealed bleeding (see below for signs and symptoms)

1.3 Minor Primary Postpartum Haemorrhage
The loss of 500-1000mls of blood from the genital tract within 24 hours of the birth of a baby

1.4 Major Primary Postpartum Haemorrhage
The loss of over 1000mls of blood from the genital tract within 24 hours of the birth of a baby

1.5 Massive Primary Postpartum haemorrhage
The sudden and continuing blood loss of 2 litres or more
Or
50% blood volume loss within 3 hours or at a rate of 150ml/min

1.6 Secondary Postpartum Haemorrhage
Abnormal or excessive bleeding from the birth canal between 24 hours and up to 12 weeks post-delivery.

1.7 Volume is a guide:
The mother's individual weight and clinical situation, signs and symptoms will need to be taken into consideration as to when to escalate for more assistance, actions and procedures

1.8 Requirement to document fluid balance
All women who have an antenatal or postpartum haemorrhage must have fluid balance monitoring commenced and documented on a chart which is secured in the maternal notes. *See individual charts below for details*

2 Antepartum Haemorrhage (APH)

2.1 Causes

2.1.1 Normal physiological changes to cervix

2.1.2 Local conditions of cervix, vagina and vulva including polyps and erosions

2.1.3 Mild trauma caused by

Sexual intercourse

Cervical sweeps

2.1.4 Placental abruption

2.1.5 Placenta praevia

2.1.6 Vasa Praevia

2.2 Minor APH

A minor APH will usually present as mild bleeding from the genital tract with no other clinical symptoms

2.3 Management

If a pregnant person experiences vaginal bleeding then they should be invited into MAU for a clinical review which should include maternal observations, fetal heart auscultation and abdominal palpation and an assessment of the volume and appearance of the vaginal loss. Consider a CTG after 26 weeks as per protocol.

2.4 Minor APH

2.4.1 Women presenting with spotting who are no longer bleeding and where placenta praevia has been excluded can go home after a reassuring initial clinical assessment. All women with APH heavier than spotting and women with ongoing bleeding should be admitted for observations

2.4.2 Tocolysis is contraindicated in placental abruption and is 'relatively contraindicated' in 'mild haemorrhage' due to placenta praevia.

2.4.3 Anti-D Ig should be given to all non-sensitised RhD-negative women after any presentation with APH, independent of whether routine antenatal prophylactic anti-D has been administered. In the non-sensitised RhD-negative woman in the event of recurrent vaginal bleeding after 20+0 weeks of gestation, anti-D Ig should be given at a minimum of 6-weekly intervals.

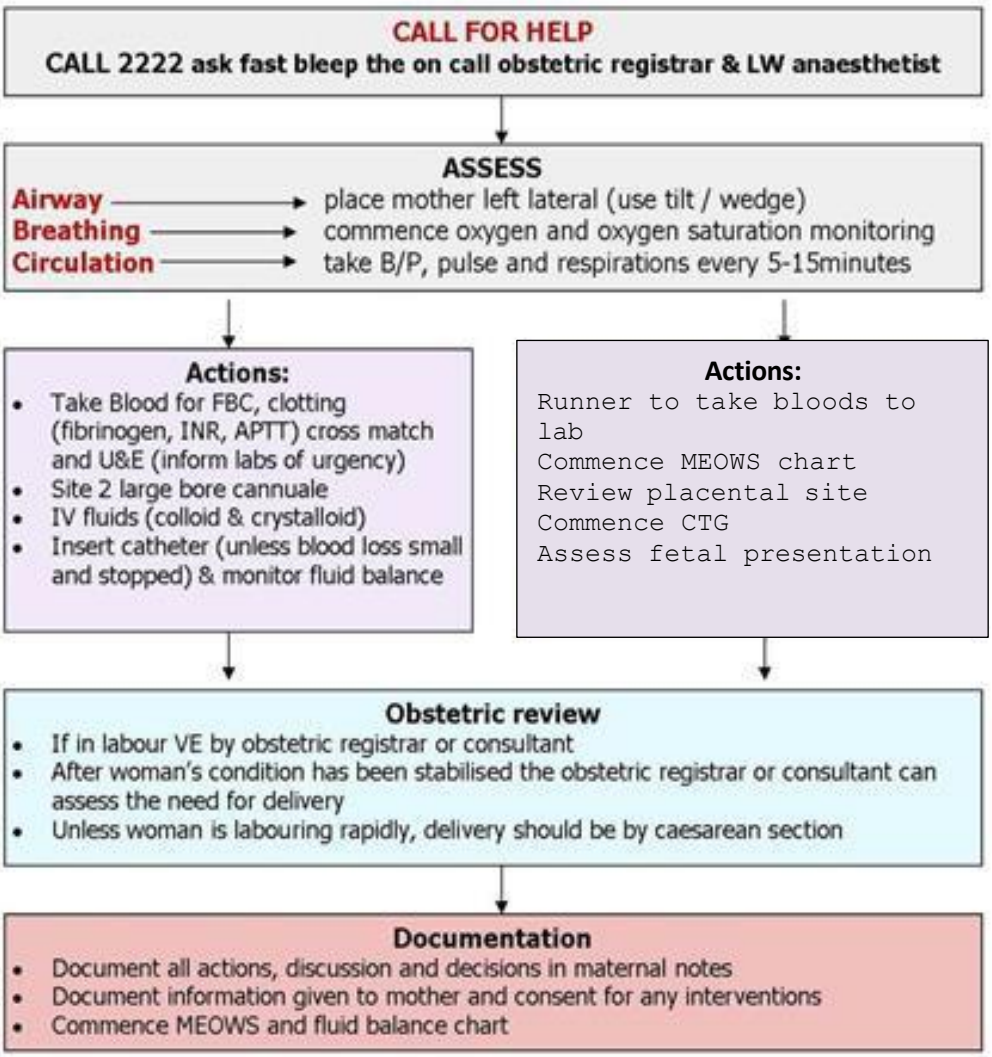
2.5 Major APH

2.5.1 Placental abruption
The diagnosis is clinical and ultrasound is poor at confirming or excluding the presence of a retro-placental clot.

2.5.2 Symptoms include severe abdominal pain and bleeding which is variable in amount. The uterus is hard and tender on palpation with no relaxation between contractions and may be large for dates. Pulse and BP may suggest hidden blood loss, or remain normal.

2.5.3 The fetal heart should be electronically monitored – typically the CTG will be abnormal, with signs of hyperstimulation and in some cases a sinusoidal pattern.

2.6 Management of Major APH



2.6.1 Oxytocin (10iu/IM) should be given for the third stage of labour, followed by a Oxytocin infusion.

2.6.2 **If the abruption has been severe, postnatal management should be as described in the major haemorrhage protocol.**

3 Placenta Praevia

3.1 Antenatal

3.1.1 All women with placenta praevia confirmed at the 32 week scan should be referred to the next available Consultant Obstetrician Antenatal Clinic, or their named consultant if already under the care of a Consultant.

3.1.2 The grade of placenta praevia or the distance between the leading edge of the placenta to the internal os should be documented on the USS report confirming the placenta praevia, the position of the placenta should also be clearly stated e.g. anterior / posterior.

3.1.3 Women with asymptomatic placenta praevia or a low-lying placenta in the third trimester should be counselled about the risks of preterm delivery and obstetric haemorrhage.

3.1.4 Women with a known placenta praevia who experience any bleeding, including spotting, contractions or pain should attend hospital for an obstetric review.

3.1.5 Women with a history of previous caesarean section seen to have an anterior Placenta praevia at 32 weeks should be discussed with a consultant radiologist and obstetrician to evaluate the risk of placenta accreta and to decide on the need for an MRI. If there is a high risk of placenta accreta then the responsible consultant obstetrician will initiate and coordinate the multi disciplinary plans for delivery.

3.1.6 Women with asymptomatic placenta praevia should be offered an elective caesarean at 38 weeks to avoid the spontaneous onset of labour and subsequent risk of bleeding.

3.1.7 Women with placenta praevia with repeated episodes of bleeding should be admitted and timing of delivery offered earlier than 38 to avoid the risk of a major antenatal obstetric haemorrhage and emergency caesarean section. Decisions on timing of delivery should involve the wider MDT and include anaesthetics and neonatology.

3.1.8 Whilst an in-patient, regular* Group and Save samples should be taken in case of acute bleed.

**For women who have never had a blood / blood product transfusion - every 7 days. For women with unusual antibodies in her blood or who has ever*

had a blood / blood product transfusion - seek advice from the transfusion department (the sample can be valid for as little as 24 hours)

3.1.9 Caesarean sections for placenta praevia should be discussed with the wider MDT including anaesthetics and neonatology, and should consider whether the case should be on Level 13 or Level 5 theatres. If the case requires Level 5 theatres then it should be booked using the Complex Obstetric Delivery booking form in MP050 LSCS

3.2 Day of Delivery

3.2.1 For all LSCS for all major placenta praevia the Consultant Obstetrician must be present in theatre, as the primary or secondary surgeon.

3.2.1.1 The Anaesthetist will ensure good venous access, cell salvage and preparations for conversion to general anaesthetic. A Neonatology Registrar should be present for delivery

3.2.1.2 Immediate bolus of oxytocin at delivery and oxytocin infusion post-delivery. All other uterotonics to be readily available.

3.3 Emergency delivery

3.3.1 For emergency delivery of known placenta praevia cases the Consultant Obstetrician covering labour ward should attend. . The method of anaesthesia should be decided by the LW anaesthetist after discussion with the on-call Consultant Anaesthetist.

3.3.2 A Neonatology Registrar should be present for delivery

4 Postpartum Haemorrhage (PPH)

4.1 Antenatal risk assessment and care planning
Risk factors may present antenatally or intrapartum: care plans must be modified when risk factors are present. Clinicians must be aware of the risk factors for PPH and should take these into account when counselling women about place of delivery.

4.2 At Booking:
Community midwives should be aware of the risk factors associated with a PPH:

4.2.1 Previous PPH (ascertain cause and EBL)

4.2.2 Previous LSCS

4.2.3 Parity >3

4.2.4 Obesity (>30BMI)

4.3 Document any identified risks clearly in the maternal notes and offer a referral for an appointment with a Consultant Obstetrician during pregnancy. An individualised care plan should be made following discussion with the woman including recommendation for an actively managed 3rd stage of labour.

4.4 During pregnancy:
Clinicians should be aware of the following that are associated risk factors for a PPH:

- 4.4.1 Multiple pregnancy
- 4.4.2 Pre eclampsia
- 4.4.3 Placenta Praevia
- 4.4.4 Previous PPH
- 4.4.5 Should these occur during pregnancy this should be clearly documented in the maternal notes and a referral made for an appointment with a Consultant Obstetrician. An individualised care plan should be made following discussion with the woman including recommendation for an actively managed 3rd stage of labour.

4.5 Intrapartum:
Clinicians should be aware of the following that are associated risk factors for a PPH:

- 4.5.1 Emergency LSCS
- 4.5.2 Elective LSCS
- 4.5.3 Augmented labour
- 4.5.4 Prolonged / arrested labour (any stage)
- 4.5.5 Retained placenta
- 4.5.6 Episiotomy / Lacerations
- 4.5.7 Instrumental delivery
- 4.5.8 Should these occur during labour / birth a review by the on call Registrar should be requested. An individualised care plan should be made following discussion with the woman including recommendation for an actively managed 3rd stage of labour.

4.6 Communication & Responsibilities
Effective communication is the key to management of an obstetric haemorrhage. Clear lines of communication between the Consultant Obstetrician, Consultant Anaesthetist, haematologist, blood transfusion personnel and Labour Ward co-ordinator are vital; and all discussions should be documented in the maternal notes. the PPH proforma on badgernet should be filled in with times ,people present in attendance communication with team members ,events, drugs used, use of cell saver and procedures undertaken to arrest bleeding

4.7 The labour ward co-ordinator is responsible for ensuring basic information about the relevant medical, social and obstetric history and events prior to the haemorrhage are communicated clearly to the midwifery, obstetric and anaesthetic staff arriving (use SBAR).

4.8 Once an initial assessment of major PPH has been made:

- **The Obstetric Registrar** is responsible for ensuring the Consultant Obstetrician has been contacted, communicating with haematology/ blood transfusion as required and commencing immediate emergency resuscitative management
- **The Anaesthetic Registrar** is responsible for ensuring the Consultant Anaesthetist has been contacted, communicating with haematology/ blood transfusion as required and commencing immediate emergency resuscitative management. When a haemorrhage is continuing the anaesthetic team should request additional equipment from the main theatre suite (via: RSCH ODP bleep 8180; PRH ODP bleep118); HEMAQ, additional fluid warmer/rapid infuser {level I}, cell saver, USS (Sonosite) as required
- **The Labour Ward Co-ordinator** is responsible for co-ordinating staff, calling the blood transfusion lab with woman's details (RSCH ext 4577 bleep 8286 & PRH ext 8218 bleep 103 with a summary of the clinical scenario, woman's name, DOB, Hospital number and woman's weight), ensuring blood samples are sent and considering needs of the partner and relatives of the woman. This can be delegated to an appropriate member of the team but the overall responsibility lies with the LW coordinator.

4.9 Home birth & Haemorrhage: The Midwife is expected to:

4.9.1 Initiate immediate emergency resuscitative management and assess the cause of the bleeding.

4.9.2 Call for help by phoning 999 asking for a cat 1 transfer with paramedic ambulance.

4.9.3 Inform labour ward of events and ETA.

4.9.4 Use emergency drugs to stop bleeding in event of uterine atony and consider bimanual compression

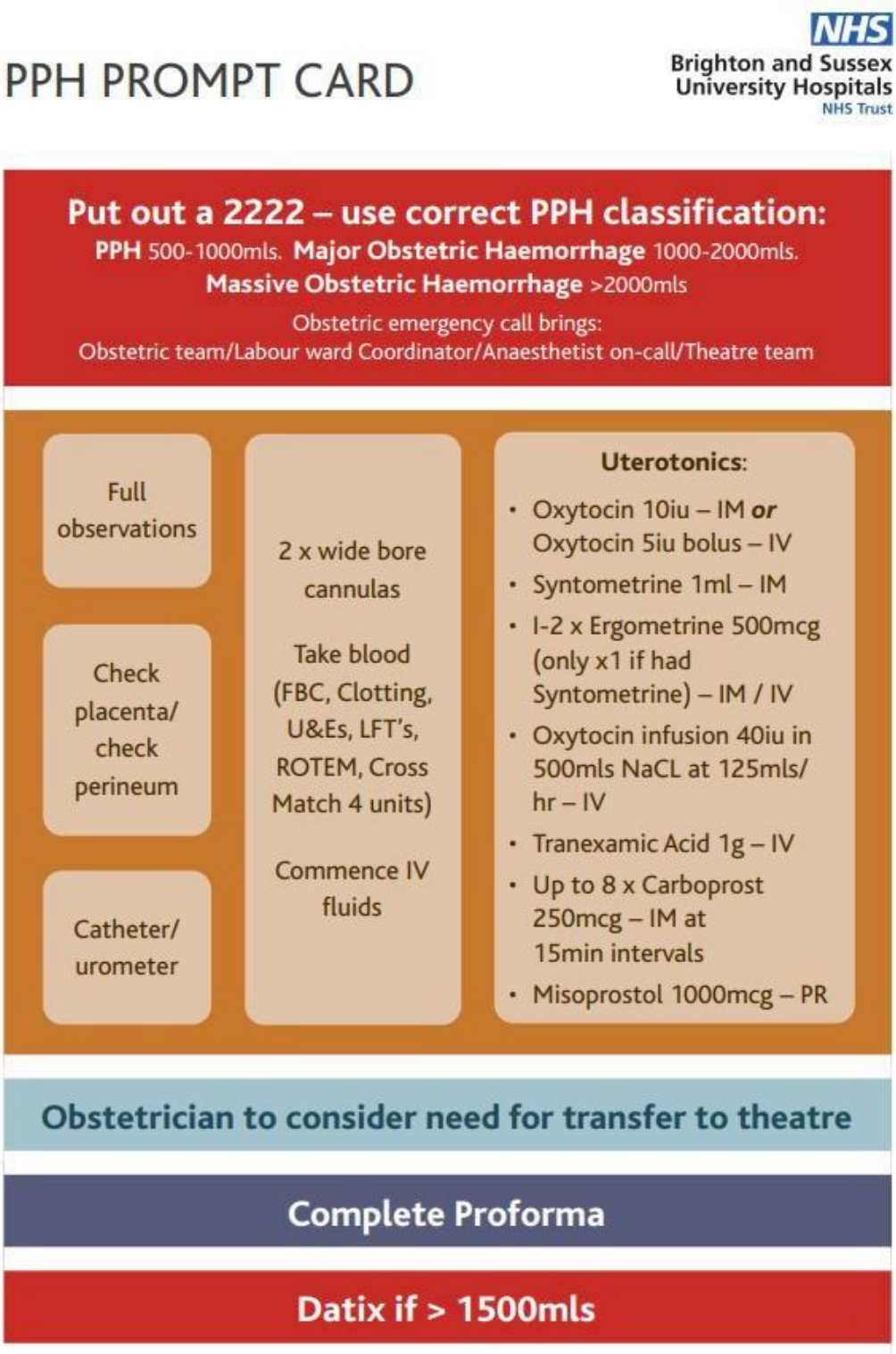
4.9.5 Cannulate using wide bore cannula and commence IV fluids where/when possible

4.9.6 Transfer to maternity unit as soon as possible

5 Primary PPH

5.1 Primary PPH involving an estimated blood loss of 500–1000 ml (and in the absence of clinical signs of shock) should prompt basic measures (close monitoring, intravenous access, full blood count, group and screen) to facilitate resuscitation should it become necessary.

5.2 Management of a woman with a Primary PPH:



6 MAJOR and MASSIVE Obstetric Haemorrhage (trigger phrases)

Management of a woman with a Major Primary Postpartum haemorrhage
If a woman with primary PPH is continuing to bleed after an estimated blood loss of 1000ml (or has clinical signs of shock or tachycardia associated with a smaller estimated loss), the emergency call should be made with the trigger phrase: ***'Major Obstetric Haemorrhage'*** which will summon the correct assistance and prompt a full protocol of measures to achieve resuscitation and haemostasis.

6.1 **Team summoned:** Obstetric Registrar, obstetric anaesthetist, OPA on for labour ward, LW coordinator, CCA / porter. Haematology department and blood transfusion department will be made aware and on standby to provide support.

6.2 **When blood loss exceeds 1500mls** and haemorrhage is continuing a blood loss of over 2000mls may be anticipated and the massive haemorrhage protocol may be triggered.

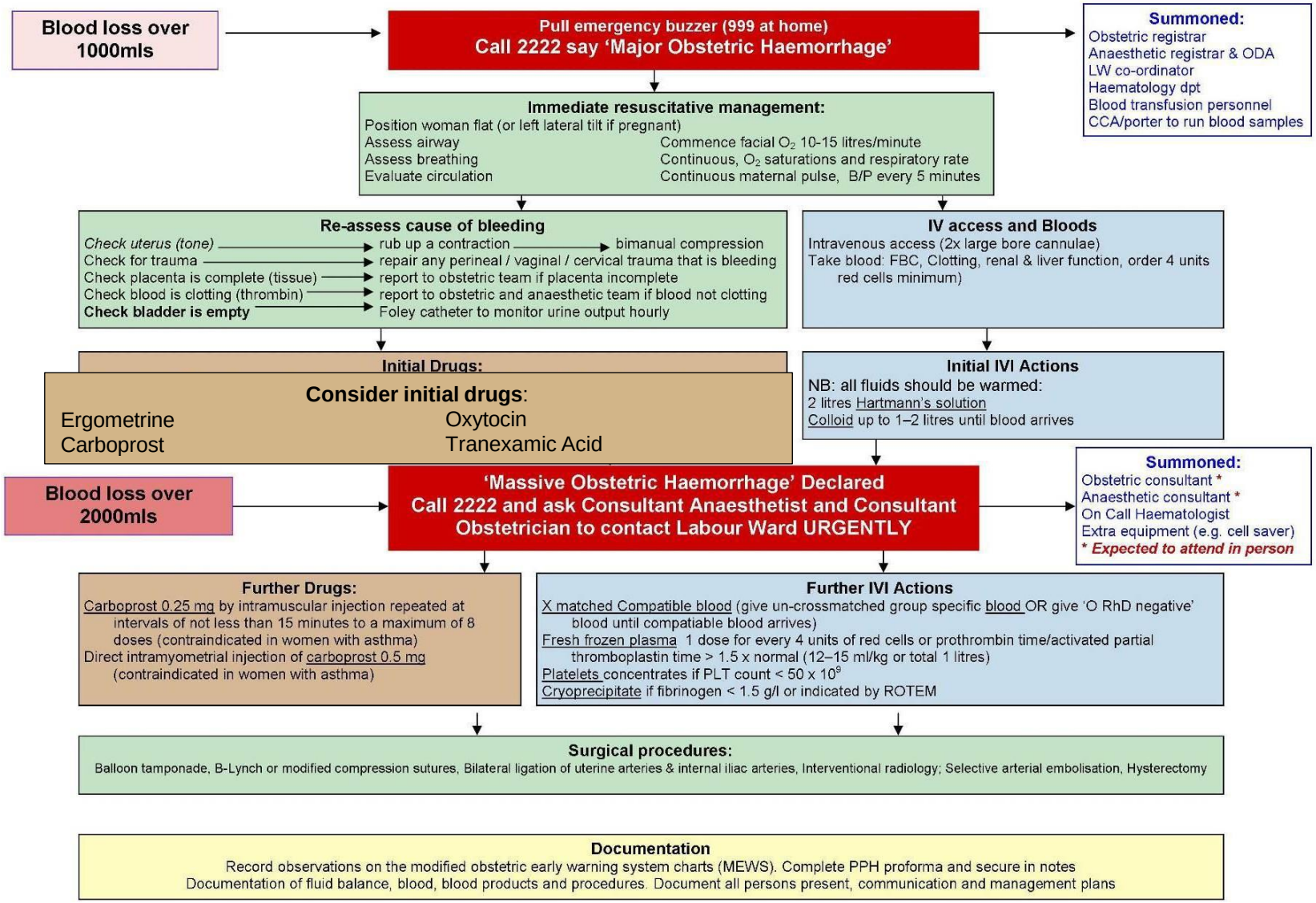
6.3 THE MOH CALL (Management of a woman with a Massive Primary Postpartum haemorrhage)-

If a woman has a sudden and continuing blood loss of 2000mls or more *or* 50% blood volume loss within 3 hours or at a rate of 150ml/min the emergency call should be made with the trigger phrase: ***'Massive Obstetric Haemorrhage'***

6.4 Call **2222** and state "**Major Obstetric Haemorrhage**" giving location.

Switchboard will then generate a call out to the following:
Obstetric Consultant*(by telephone/LWC)
Anaesthetic Consultant* (by telephone/LWC)
Obstetric Registrars
Obstetric SHO
Anaesthetic Registrar*
ODA
Senior midwife (labour ward coordinator)*
Haematology BMS
Porter
Neonatal SHO
On call Haematologist

6.5 Flowchart to show management of Major and Massive Obstetric Haemorrhage



6.6 Haematological targets whilst bleeding continues

6.6.1 Haemoglobin > 8 g/dl

6.6.2 PT and APTT (INR and KCR) <1.5 x control mean

6.6.3 Platelets >50 x 10^9/l or >100 x 10^9/l for multiple/CNS trauma
Fibrinogen greater than 2g/l

6.6.4 Blood can be sent for ROTEM (if available) analysis which will give a quicker more accurate estimate of the need for clotting products

6.7 Procedure for urgent access to blood and blood products including portering arrangements:

6.7.1 Senior team (Registrar, Anaesthetist or LW co-ordinator) should communicate with each other about the need for requesting blood.

6.7.2 The labour ward coordinator is responsible for contacting the Transfusion Laboratory/on-call haematologist informing that there is a major (obstetric) haemorrhage, and providing the following information

6.7.3 Women's identity /approximate weight

6.7.4 Degree of urgency for red cells

- stat (2 units of O neg blood)
- 10 minutes (group specific)
- 40 minutes (cross matched)

7.4 Continue repeating FBC and coagulation hourly whilst blood loss is ongoing and always following the transfusion of plasma components and/or platelets. ABG should be sent every 45mins

7.5 Platelets will be issued after 12 units of red cells (or approximately 1.5 x blood volume) have been transfused. Further FFP, cryoprecipitate and platelets will be issued in accordance with coagulation results:

7.7.1 FFP (12-15ml/kg) if PT or APTT/INR or KCR >1.5

7.7.2 cryoprecipitate (1.5 unit/10kg) if fibrinogen <1.0g/l

7.7.3 platelets, 1 or 2 pools, depending on count and target

7.8 Consider tranexamic acid

7.9 Recombinant factor VII a therapy should be based on the results of coagulation (90mcg/kg responds within 15 – 30minutes provided there is fibrinogen)

7.10 Note: Good communication between the clinical team and the haematology staff and regular haematological monitoring provides the basis for timely blood component support. All communication must be documented in the maternal notes

7 Management of secondary PPH:

7.1 Secondary PPH is often associated with endometritis and antibiotics are clinically indicated:

- Cefuroxime 1.5g IV TDS and metronidazole 500mg IV TDS switching to oral, when able to co-amoxiclav 625mg PO TDs
- If penicillin allergic use: clindamycin 900mg IV TDS and gentamicin 5mg /kg stat IV (maximum dose 450mg)

7.2 Surgical measures will be undertaken if there is excessive or continuing bleeding despite antibiotic treatment, or if there are obvious retained products.

7.3 A senior obstetrician will be involved in decisions and performance of any evacuation of retained products of conception as these women have a high risk of uterine perforation. Ultrasound directed removal of retained products can be helpful.

8 Postnatal Care of Women who have had an Obstetric Haemorrhage

8.1 Women who have had a PPH of 500-1000mls

8.1.1 Transfer to postnatal ward only when woman is stable

8.1.2 If a woman reports symptoms of bleeding or being unwell observations (PV loss, uterine tone, temperature, blood pressure and pulse) should be undertaken immediately. These should be documented in the maternal notes. If observations are abnormal the obstetric team should be asked to review the woman urgently.

8.1.3 If a woman has been commenced on a fluid balance chart this should be continued 24 hours post-delivery. If output is abnormal the obstetric team should be asked to review the woman urgently.

8.1.4 Women should have an FBC on day 2 or prior to discharge if discharge before day 2.

8.1.5 Midwifery review and plan of care prior to discharge documented in the maternal notes

8.2 Women who have had a PPH of over 1000mls (or are symptomatic)

8.2.1 Transfer to postnatal ward only when woman is stable and transfer is agreed with the obstetric team

8.2.2 On postnatal ward women should have daily observations of PV loss, uterine tone, temperature, blood pressure and pulse. If a woman reports symptoms of bleeding or being unwell these observations should be undertaken immediately. These should be documented in the maternal notes. If observations are abnormal the obstetric team should be asked to review the woman urgently.

8.2.3 A fluid balance chart should be continued for 24 hours post delivery. If output is abnormal the obstetric team should be asked to review the woman urgently.

8.2.4 Women should be informed about signs of bleeding, expected amount of PV bleeding in the postnatal period and when they should inform the midwife of concerns.

8.2.5 Women should have an FBC on day 2 or prior to discharge if discharge before day 2.

8.2.6 Women should be given an opportunity to discuss their labour and birth and events around their haemorrhage. Ideally the obstetrician or midwife providing care during the haemorrhage should see the woman prior to her discharge. If this is not possible the discussion can be with a senior obstetrician or midwife familiar with the events (from the documentation at the time). Implications for future pregnancies and births should be discussed. All discussions should be documented in the maternal notes. Women should be offered the 'Birth Stories' service and this should be documented in the maternal postnatal notes.

8.2.7 Women should be reviewed and plan of care prior to discharge; if women's observations are normal (and FBC within normal limits) this can be undertaken by a midwife. If observations are abnormal, Hb levels are under 10 or the woman remains symptomatic this review should be undertaken by a member of the obstetric team. All reviews and plan of care should be documented in the maternal notes

9 Women Who Decline Blood Products

9.1 **Please refer to Trust Policy on 'Administration of Blood and Blood Products' for further guidance.**

9.2 Major obstetric haemorrhage is often unpredictable and can become life threatening in a short time. In most cases blood transfusion can save the woman's life and very few women refuse blood transfusion in these circumstances. If it is thought likely that a woman may do so, the management of major haemorrhage should be considered in advance.

9.3 Booking

9.3.1 All women are normally asked their religious beliefs, and should also be asked if they have any objections to blood transfusion. If a woman is a Jehovah's Witness or likely to refuse blood transfusion for other reasons, this should be noted in the case notes

9.3.2 All women who are likely to refuse a blood transfusion should make an informed choice with the risks clearly discussed and documented. Advice should be that if major haemorrhage occurs there is an increased risk that hysterectomy will be required. The woman should understand other non blood products are often accepted by Jehovah's Witnesses but it is imperative that they understand, if all else fails, and blood is needed, refusal at this stage could cost them their life

9.3.3 Women making an informed choice to refuse a blood transfusion in any circumstances should be advised to deliver in a unit which has all facilities for prompt management of haemorrhage, including hysterectomy

9.3.4 Women and their partners should be given written information about refusing a blood transfusion

9.4 Antenatal Care

9.4.1 Consultant obstetric and anaesthetic involvement is necessary during the antenatal period in order to develop an individualised care plan together with the woman, her husband and family, and, if necessary, religious advisors, should any difficulty occur

9.4.2 **ALL WOMEN REFUSING BLOOD TRANSFUSION AT BOOKING MUST BE REFERRED TO SEE A CONSULTANT OBSTETRICIAN AND ANAESTHETIST**

9.4.3 No **absolute** rules regarding blood products exist. Each woman / Jehovah's Witness decides whether she wishes to accept the following interventions as a matter of individual choice. It is therefore important to discuss with each woman whether or not any of these are acceptable:

9.4.3.1 Blood Cell salvage (intra and post-operative)

9.4.3.2 Blood 'fractions' of plasma or cellular components (e.g. albumin, immunoglobulins, clotting factors, novoseven)

9.4.3.3 Epidural blood patch

9.4.4 The woman's blood group and antibody status should be checked in the usual way and the haemoglobin and serum ferritin should be checked regularly. Haematinics should be given throughout pregnancy to maximise iron stores

9.4.5 An ultrasound scan should be carried out to identify the placental site

9.4.6 There are well-described procedures for elective surgery in Jehovah's Witness: some Witnesses will donate blood before surgery for subsequent auto-transfusion if necessary though others consider that this too is forbidden by their religion. Blood storage should not be suggested to pregnant women, as the amounts of blood required to treat major obstetric haemorrhage are far in excess of the amount that could be donated during pregnancy

9.4.7 If any complication is noted during the antenatal period the Consultant Obstetrician must be informed

9.4.8 A clear individual management plan should be documented in the maternal notes where blood products will be declined. This should be following a discussion with the consultant obstetrician and anaesthetist (and senior midwife as required) where a fully informed decision has been made by the woman. The woman must be supported in her informed choice.

9.5 Labour and Birth

9.5.1 All women who are known to have stated a wish not to receive blood products should be seen by a consultant obstetrician and anaesthetist

9.5.2 It is therefore important that, whenever possible, each woman in labour should have a Consultant Obstetrician as the lead professional, and that they are informed of and be involved in their care. Should an elective caesarean section or other operative delivery be required, this should be conducted by a Consultant Obstetrician and Anaesthetist

9.5.3 Experienced staff should provide care as per for all labour and births

9.5.4 Oxytocic's should be given when the baby is delivered (stat dose and subsequent infusion). The woman should not be left alone for at least an hour after delivery

9.6 Postnatal

9.6.1 An FBC should be performed prior to discharge home

9.6.2 When the mother is discharged from hospital, she should be advised to report promptly if she has any concerns about bleeding during the puerperium.

10 Intraoperative Cell Salvage

10.1 Early warning is required for set up and use during operative delivery. It can usually be organised for elective delivery but is more difficult for emergency procedures out of hours.

10.2 Cell salvage has a place for cases where major haemorrhage is predicted, when there is time to set up the kit and staffs (familiar with its use) are at hand.

10.3 If cell salvage is being considered the senior anaesthetist should contact the ODP on call or main theatre manager to discuss feasibility and availability of trained staff.

10.4 Suction is used until baby and placenta are delivered The suction from the cell saver is used for the rest of the procedure. Cell saved blood should be re-infused through a leucocyte filter which minimises the risk of adverse reactions due to fetal cells (almost all will be filtered out)

10.5 In an Rh negative mother, if the cell salvaged blood has been transfused 1500iu of anti D needs to be administered and a Kleihauer test needs to be performed 1 hour post transfusion to confirm if further dosses are required. Please document on blood request form that cell salvage has been used.

11 Interventional Radiology

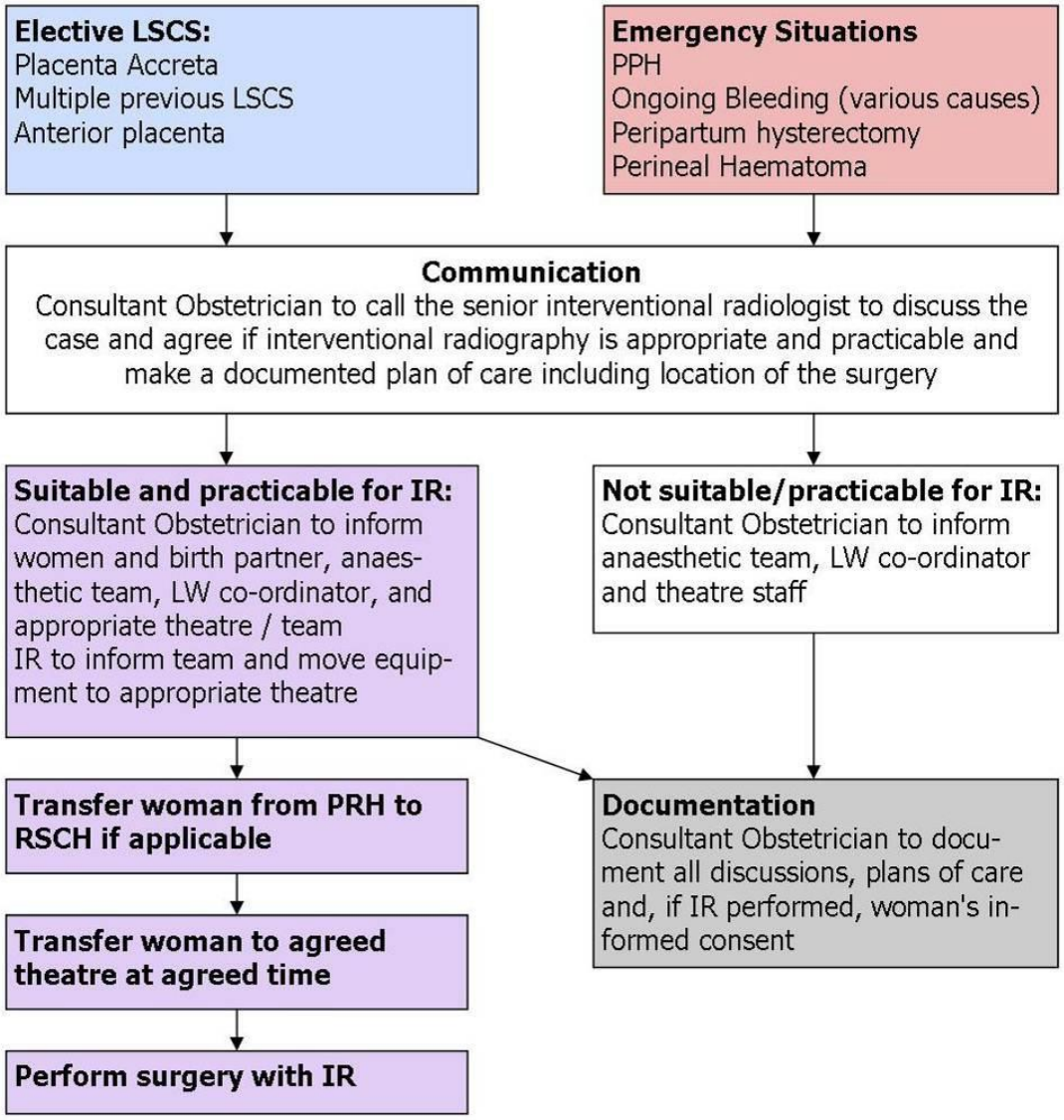
11.1 When it is used
Interventional radiology (IR) is used electively for women with suspected placenta accreta or multiple previous CS and an anterior placenta. On an emergency basis the cases would usually be PPH, peripartum hysterectomy and ongoing bleeding, or perineal haematomas. There are also numerous other rarer scenarios of ongoing bleeding where there is scope for using interventional radiology. This is always on a case by case decision between the obstetrician and the interventional radiologists and always at consultant level.

11.2 The process
It will always be consultant led decision and process and as there is no formal on call service for obstetrics from the radiologists it is limited by availability. Consultant obstetrician and interventional radiologist (via radiology dpt) must discuss each case on an individual basis and agree a management plan.

11.3 Where it will happen
IR is only available at RSCH and can be carried out in the interventional radiology suite in the Barry Building or in main theatre or in obstetric theatre depending on the case. If it can be anticipated that IR may be used then PRH women should ideally be delivered at RSCH with a multidisciplinary plan. In some emergencies there may be scope to transfer a woman from PRH (if

woman is stable and after discussion with consultant obstetrician and interventional radiologist)

11.4 Interventional radiology management flow chart:



12 Documentation

Accurate documentation is essential. All staff involved should provide written documentation of actions undertaken within the maternity notes. The Obstetric haemorrhage form within the maternity notes should be used as a summary of events.

12.1 It is important to record:

12.1.1 The staff in attendance and the time they arrived

12.1.2 The sequence of events

12.1.3 The time of administration of different pharmacological agents given, their timing and sequence

12.1.4 The time of surgical intervention, where relevant

12.1.5 The condition of the mother throughout the different steps

12.1.6 The timing of the fluid and blood products given

12.1.7 Fluid balance chart

12.2 Use the MEOWs chart to document maternal observations

13 Thromboprophylaxis

Once the bleeding is arrested and the coagulopathy corrected, thromboprophylaxis is essential due to the high risk of thrombosis. The timing of thromboprophylaxis administration should be considered in conjunction with the anaesthetic team, with consideration of the timing of removal of an epidural/spinal. Pneumatic compression devices should be used in addition in the HDU/ITU setting, and where thromboprophylaxis is contraindicated.

14 Debriefing

This is recommended to be performed by a senior member of the team who was involved at the time of events at the earliest opportunity.
Women should routinely be offered a 6 week follow-up appointment to discuss the events in more detail, and to discuss any implications for future pregnancies.

15 DATIX

A datix needs to be completed for all MOHs >1500ml

16 References

17 Appendix A – Refusal of Blood or Blood Products for any reason (Including Jehovah's Witness)

Unit Number:

Patient Surname:

First Names:

Date of Birth:

Address:

Postcode:

The following form is to be read and signed by the Woman (Patient):

1 The clinician is here to help you. Please ask any questions and seek any further information you want
2 You can refuse treatment. You have the right to change your mind at any time, including after you have signed this form.
3 You may ask for a relative, friend or nurse to be present when you are talking to the clinician.

I am the Woman (Patient). I have told the Clinician that my consent: *(* Delete as necessary)*

A. <u>EXCLUDES</u> transfusion of blood or blood products such as fresh frozen plasma and platelets
B. <u>EXCLUDES</u> the use of cryoprecipitate, anti-D and human albumin solution (HAS*)
C. <u>INCLUDES</u> administration of non-blood volume expanders such as saline, dextran, Haemaccel, hetastarch and Hartman's solution*
D. <u>INCLUDES</u> re-infusion of my own blood or blood products*

I agree:	to what is proposed, which has been explained to me by the clinician names on Consent Form 1, subject to the exclusions above.
I understand:	that the procedure(s) I have **<u>excluded</u>** (i.e. that I **<u>do not</u>** wish to have carried out) as listed on this form, will not be performed even if the clinician believes this is necessary to save my life or prevent irreversible damage.
I acknowledge:	a) that these restrictions on my consent will remain in force and bind those treating me unless and until I expressly and formally revoke or modify it b) that my express refusal will not be over-ridden by purported consent from a relative or other person. My refusal will be regarded as remaining in force even though I am unconscious and/or affected by medication, stroke or other conditions, rendering me incapable of expressing my wishes.
I accept:	full legal responsibility for my decisions and release Brighton & Sussex University Hospitals NHS Trust and all those treating me from any liability for adverse consequences arising out of these restrictions on my consent.

Woman / Person (patient) Signature:…….. Date: ……..

PLEASE ENSURE THIS REFUSAL IS REFERRED TO ON CONSENT FORM 1, WHICH YOU ARE ALSO ASKED TO SIGN IF YOU ARE GOING TO HAVE A SURGICAL PROCEDURE

Countersigned by Health Professional: …….. Date: ……..

Print Name: …… Job Title: …… ……