Obstetric Haemorrhage

Classification:	Guideline
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Guideline to be followed by (target staff): For use with all women during the antenatal, intrapartum and postnatal periods

To be read in conjunction with the following documents:

- Haematological Management of Major Haemorrhage in Adults
- Blood Transfusion Policy for Administration of Blood, Blood Components and Blood Products and the management of Transfused Patients
- Trust Platelet indication Guideline
- Fresh Frozen Plasma (FFP) and Cryoprecipitate Indication Guidance
- Women who decline Blood and Blood Products
- Treatment of Patients Refusing Blood and Blood Components
- Placenta Previa Guideline
- Prophylactic Anti-D Immunoglobulin

Are there any eCARE implications? No

CQC Fundamental standards:

Regulation 9 – person centred care
Regulation 10 – dignity and respect
Regulation 11 – Need for consent
Regulation 12 – Safe care and treatment
Regulation 13 – Safeguarding service users from abuse and improper treatment
Regulation 14 – Meeting nutritional and hydration needs
Regulation 15 – Premises and equipment

Regulation 16 – Receiving and acting on complaints Regulation 17 – Good governance Regulation 18 – Staffing Regulation 19 – Fit and proper

Disclaimer

Since every patient's history is different, and even the most exhaustive sources of information cannot cover every possible eventuality, you should be aware that all information is provided in this document on the basis that the healthcare professionals responsible for patient care will retain full and sole responsibility for decisions relating to patient care; the document is intended to supplement, not substitute for, the expertise and judgment of physicians, pharmacists or other healthcare professionals and should not be taken as an indication of suitability of a particular treatment for a particular individual.
The ultimate responsibility for the use of the guideline, dosage of drugs and correct following of instructions as well as the interpretation of the published material **lies solely with you** as the medical practitioner.

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Guideline Statement

This guideline is to assist all clinical staff with the effective management of Obstetric Haemorrhage within the antenatal, intrapartum and postnatal periods. This guideline is divided into two parts:

- Part One refers specifically to Antepartum Haemorrhage
- Part Two refers specifically to Postpartum Haemorrhage.

Executive Summary

PART ONE - ANTEPARTUM HAEMORRHAGE (APH)

Any vaginal bleeding during pregnancy is a potentially serious complication, which may lead to early labour or may be the presenting sign of either placental abruption or placenta praevia.

Massive haemorrhage from placenta praevia and placental abruption are important causes of maternal death. Placental abruption is associated with high rates of perinatal mortality and morbidity.

This guideline outlines the management of women who present with an APH before and after a confirmed diagnosis is made.

PART TWO - POSTPARTUM HAEMORRHAGE (PPH)

Postpartum haemorrhage is a common complication of birth and remains a significant cause of maternal mortality. PPH is the third most common direct cause of maternal mortality; complicated by interventions that are "too little done too late". Most PPHs occur in women with no known risk factors.

Primary postpartum haemorrhage is considered to be a blood loss from the genital tract equal to or >500mls (vaginal birth) or >1000mls (caesarean birth) within 24 hours of the birth of a baby. Secondary postpartum Haemorrhage is excessive' bleeding from the genital tract from 24 hours and up to 6 weeks in the postnatal period.

Postpartum haemorrhage may result from uterine atony, retained placental tissue, obstetric injury or coagulopathy. In women who are anaemic, losses of less than 500mls may cause symptoms.

This guideline outlines the management of Postpartum Haemorrhage including:

- Primary Postpartum Haemorrhage
- Secondary Postpartum Haemorrhage
- Major Obstetric Haemorrhage

Abbreviations

FBC	full blood count
PT	prothrombin time
APTT	activated partial thromboplastin time
FFP	fresh frozen plasma
DIC	Disseminated intravascular coagulation
APH	Antepartum haemorrhage
PPH	Postpartum haemorrhage

BMS	Biomedical scientist
MOH	Major obstetric haemorrhage
CTG	Cardiotocography
NHSBT	NHS blood and Transplant
FMH	Fetal maternal haemorrhage
EBL	Estimated blood loss
MCA	Maternity care assistant
ECG	Electrocardiography
ODP	Operating department practitioner
USS	Ultrasound scan
MKUH	Milton Keynes university hospital
IUGR	Intra uterine growth retardation
CVP	Central venous line
TXA	Tranexamic acid
EUA	Examination Under anaesthetic

Implementation and dissemination of document

This guideline is available on the Intranet and has followed the Trust's full Guideline review process prior to publication.

PART ONE – ANTEPARTUM HAEMORRHAGE (APH)

1.0 Roles and Responsibilities:

Doctors – decision making, discussion, planning and providing care
Midwives and nurses – Recognition, decision making and antepartum care

2.0 Implementation and dissemination of document

2.1 Definition of antepartum haemorrhage

Defined as bleeding from the genital tract after 24 weeks gestation and before birth. The management of APH depends on the estimated amount of bleeding and the impact on maternal and fetal well-being. All patients with vaginal bleeding at 18 weeks gestation or more should be seen and assessed on delivery suite.

Remember: Haemorrhage may be concealed within the abdominal cavity; the degree of shock may be more marked than the amount of revealed bleeding suggests.

- Minor- blood loss less than 50ml that has settled.
- Moderate - blood loss 50-1000ml with no signs of shock.
- Major- blood loss greater than 1000ml and or signs of clinical shock.

2.2 Initial assessment of APH

Aetiology of antepartum bleeding from the genital tract:

- Placentas lying partly or wholly in the lower uterine segment - "placenta praevia".
- Placental abruption
- Local causes e.g. cervical polyp
- Maternal coagulopathy
- Vasa Praevia (women with accessory lobe on USS, velamentous cord insertion and 3rd trimester placenta migration)
- Unknown cause (i.e. causes listed above have been excluded).

Initial assessment should include:

- Review of placental site
- Recent fetal movements
- Estimation of the amount of bleeding
- Degree and characteristics of any associated abdominal pain or other symptoms

Appropriate examination should include:

- Maternal observations (pulse, BP, respiratory rate and temperature)
- Fetal monitoring (appropriate for gestation and ultrasound as indicated)
- Abdominal examination
- Cardiovascular and respiratory system examination as clinically indicated
- Consider speculum examination in any antepartum haemorrhage.

The Obstetric Registrar should review all women presenting with antepartum haemorrhage. Never perform a vaginal examination in such women without prior discussion with the Obstetric Registrar.

Clinical features of shock in pregnancy related to the volume of blood loss

Blood Loss	Clinical features	Level of shock	
10% blood loss ~500 mL if 50 kg ~800 mL if 80 kg	Mild tachycardia Normal blood pressure	Compensated	
15% blood loss ~750 mL if 50 kg ~1200 mL if 80 kg	Tachycardia (> 100 bpm) Hypotension (systolic 90-80 mmHg) Tachynoea (21 – 30 breaths/minute) Pallor, sweating Weakness, faintness, thirst	Mild	
30% blood loss ~ 1500 mL if 50 kg ~ 2400 mL if 80 kg	Rapid, weak pulse (> 120 bpm) Moderate hypotension (systolic 80-60 mmHg) Tachynoea (>30 breaths/minute) Pallor, cold clammy skin Poor urine output (<30 mL/hour) Restlessness, anxiety, confusion	Moderate	PROMPT Course Manual (Third Edition)
40% blood loss ~ 2000 mL if 50 kg ~ 3200 mL if 80 kg	Rapid, weak pulse (> 140 bpm) or bradycardia (<60 bpm) Severe hypotension (<70 mmHg) Pallor, cold clammy skin, peripheral cyanosis Air hunger Anuria Confusion or unconsciousness, collapse	Severe	

2.3 Management of Antepartum Haemorrhage

For women with antepartum haemorrhage, consider informing Blood Bank early on 85774 as this is vital to ensure that they are aware of the urgency of the situation. Blood Bank can also be contacted via on call BMS on Bleep 1412.

An MOH call would be activated via a 2222 call followed by an immediate call to BMS on Ext 85774. Blood bank can also be contacted on bleep 1412.

2.3.1 Management of Minor APH or Clinically stable patient with Major APH

Blood loss less than 1000ml blood loss (<15% of blood volume) and not clinically compromised. If haemorrhage is minor then management is as follows:

1. Establish history and read patient's notes. Check placental location at 20 week scan and later ultrasound scan for evidence of accessory lobe of placenta, velamentous cord insertion, 3rd

trimester placental migration. Previous cervical smear history is useful to assess for possibility of neoplastic lesion of cervix (may present as post coital bleeding).

2. Abdominal palpation (hard, tender uterus is suggestive of significant abruption) and auscultation of fetal heart.
3. Perform speculum examination once placenta praevia is ruled out, if any doubt about cervical; dilatation, perform vaginal examination.
4. If gestation is beyond 28 weeks, continuous CTG should be conducted whilst bleeding or pain persists, Consider CTG between 26-28 weeks gestation if significant bleeding. Intermittent fetal heart auscultation is indicated after 24 weeks gestation. If any evidence of fetal compromise, involve consultant obstetrician to decide about emergency caesarean section.
5. Insert 16 gauge IV cannula and take blood for:
    - FBC, clotting and fibrinogen
    - Take a Kleihauer. Please be aware that if the Kleihauer detects a bleed >2mls, this is checked by flow cytometry which requires sending away to NHSBT. This may result in a delay of confirmation of the size of the Fetal Maternal Haemorrhage (FMH) bleed. The Kleihauer is not diagnostic for a FMH but is to dose the Anti D required for an FMH in an Rh negative woman without immune Anti D.
    - Group and save
    - Cross match 2 units of blood and state it is Antepartum Haemorrhage on the paperwork
    - Consider second cannula
    -

NOTE – **THE KLEIHAUER TEST MUST NOT BE USED TO DIAGNOSE PLACENTAL ABRUPTION OR A FETO-MATERNAL HAEMORRHAGE**

6. Administer steroids (if not given prior) between 24-34 completed weeks of gestation. See guidance on steroid administration.
7. Consider magnesium sulphate (see preterm pre labour delivery guideline)

If bleeding has ceased, where there is no evidence of labour and maternal and fetal observations are satisfactory, then the woman may be transferred to the antenatal ward.

If significant bleeding, inform lead midwife, obstetrician and anaesthetist. Where there is significant bleeding or risk of further bleeding and emergency delivery, the anaesthetist must be notified to perform assessment to plan anaesthetic.

Flow Chart One - Management of Antepartum Haemorrhage

Call for help - Pull the Emergency Bell
Call 2222 'obstetric emergency' – Collect Obstetric Haemorrhage Trolley
4 units of emergency O Rh(D) Negative blood is available in phase 1 theatres (opposite labour ward)

Actions

Maintain Airway
Lie in left lateral
Give high-flow oxygen

***Intravenous access**
Two large-bore cannulae
Baseline bloods ;
FBC, clotting screen, Kleihauer, group and cross-match
2 units

Fluid Replacement
500mls N/saline (Mw's)
1000mls Plasmalyte

Fetal wellbeing
Auscultate fetal heart/ Ultrasound scan for FH (and placental site) Continuous CTG (if appropriate)

***Contact on call BMS on Ext 85774. Blood bank are also contactable on bleep 1412**
Advise of situation - Name/MRN/DOB

Assessment

Airway
Breathing
Circulation
Disability
Exposure

Observations
Respiratory rate, pulse, BP, O2 saturations

Clinical history/cause of bleeding
Placenta praevia
Abruption
Uterine rupture
Vasa PRAEVIA

Examination
Abdominal – uterine tone, abdominal tenderness/ peritonism
Vaginal – EBL, stage of labour
(DO NOT perform VE until placenta praevia excluded)

Continue to monitor blood loss (EBL)
Accurate fluid balance

Need for blood products
Consider: Cross matched blood (avoid emergency O-neg if possible), FFP, platelets, cryoprecipitate, factor VIIa

Stop the Bleeding

Should birth be expedited? (maternal or fetal compromise)

Expedite birth of baby

After birth
Be aware of significant risk of PPH
Active management of third stage
Commence oxytocin infusion after delivery
40 units syntocinon
IV infusion via pump
over 4 hours

2.3.2 Major Antepartum Haemorrhage

Blood loss of between 1000mls to 1500mls.
See Appendix 1 - Acute Major Blood Loss - A Template Guideline

Management involves four components

1: Communication (call for help)
2: Resuscitation
3: Monitoring and investigation
4: Arresting the bleeding- definitive treatment

1: Communication: Rapid assessment of situation (Airway, Breathing, Circulation and estimated loss)

- Pull emergency bell and request to call 2222 follow up with a call to blood bank on Ext 85774 and state obstetric emergency and location. Blood bank are also contactable on bleep 1412.
- If the call is made and it is then deemed that situation is under control, the senior midwife will liaise with the multi-disciplinary team and further action will be made accordingly.
- One midwife is assigned to record keeping (where possible)
- One midwife / MCA assigned to theatre preparation
- Identify a specific person responsible to liaise with the blood bank. This may be the Midwife in Charge, Labour Ward Coordinator, second Labour ward band 7 or any available midwife.
- MCA assigned for assistance.
- Keep the woman and her birth partner informed of what is happening.
- Immediate resuscitation of the mother is the first priority.
- Where massive haemorrhage occurs the viability of the fetus is compromised and is generally, secondary to resuscitation of the mother.

2: Resuscitation

- Airway maintenance and O2 via mask 10-15L /min.
- Keep patient warm and position flat with a wedge or in left lateral (use of warmed fluids and BAIR HUGGERS should be considered).
- Transfuse blood as soon as possible.
- Until blood is available infuse up to maximum volume of 3.5 L of clear fluids (up to 2 litres of ideally warmed Hartmann's followed by 1.5 litre of ideally warmed colloid (Consider the risk of coagulopathy, liaise closely with Anaesthetist and on call BMS)
- Blood transfusion: O negative or cross-matched group specific blood as advised by blood bank, depending on urgency. The first MOH "pack" will contain 4 units of red cells. The second pack will contain 4 more red cells and thawed FFP if advised and platelets and cryoprecipitate should be considered thereafter.

Note: Coagulopathy is common with placental abruption, consider FFP early.
It is important to inform the lab to stand down when no further blood components are required.

Follow the Trust's Haematological Management of Major Haemorrhage in Adults Protocol

3: Monitoring and investigations

- 16-G cannula (grey) x 2 inserted (Consider intraosseous management if IV lines are difficult). Note Intraosseous blood samples cannot currently be processes by pathology
- Take a full blood count (FBC) coagulation, fibrinogen, U&Es and LFTs. ABGs (when major haemorrhage) and crossmatch 2 units of blood
- Identify specific person responsible to liaise with the blood bank on ext 85774 or bleep to 1412 to ensure that they are aware of the urgency of the request.
- Perform observations including SaO2(oximetry) and document on MEOWS chart.
- Estimate blood loss and document running total.
- Have ECG machine available.
- Haemoglobin estimation by HAEMACUE; to be done by ODP.
- Consider central and arterial lines as indicated.
- Fluid balance chart and insert Foley catheter with urometer.

4: Definitive Management

- Assess fetal viability using USS and / or CTG (plan of management for delivery/ management made)
- Non-viable fetus: confirmed by USS: Vaginal delivery appropriate unless there is placenta praevia, where Caesarean section is still indicated)
- Viable fetus confirmed by CTG and / or USS: Caesarean section must be expedited for all cases of placenta praevia with active bleeding. In cases of placental abruption complicated by fetal compromise a caesarean section is indicated if vaginal delivery is not imminent.

A decision to proceed to caesarean section on a haemodynamically unstable patient should only be made by the Consultant Obstetrician and Anaesthetist following consultation.

2.3.3 Management of RhD-negative Mothers

In all RhD negative women, a Kleihauer test should be performed to gauge the dose of Anti-D immunoglobulin required

The national guidance recommends a minimum of 250IU given below 20 weeks and a minimum of 500IU given above 20 weeks for sensitising events.

However in MKUH we only stock 1500IU vials and as there is no risk associated with receiving a larger dose the patient should be given 1500IU so as to not split the vial.

RECOMMENDATION- 1500IU within 72hours of a sensitising event or when required for prophylaxis.

Where it is necessary to give additional or larger dosage of Anti D immunoglobulin the dose should be based on 125 IU per ml of fetal bleed given intramuscularly.

2.3.4 Expectant management

The aim is to allow the pregnancy to continue to ensure fetal maturity without increasing maternal morbidity or mortality. A decision to deliver prematurely should only be made after consultation with Consultant Obstetrician.

Maternal and fetal monitoring on Ward 9 or 10:

- Daily maternal observations
- Fetal monitoring appropriate for gestational age. Frequency is determined by clinical need.
- Weekly group & save if asymptomatic. If there are known antibodies, low Haemoglobin, high risk of accrete etc, then cross match.is recommended
- Routine iron supplementation as required
- Rhesus negative women will require a Kleihauer test with every episode of fresh bleeding and appropriate prophylactic anti D immunoglobulin should be administered at a minimum interval of 6 weeks in case of recurrent bleeding after 20 weeks. It is important to specify whether new sensitizing events have occurred or whether it is ongoing continuous bleeding. New sensitizing events will require a further dose of Anti D. The 28 week prophylactic Anti D should be given regardless of any dose of anti D given for a sensitizing event.
- A sensitive approach to the emotional and social implications of long term hospitalization

2.3.5 Bleeding of uncertain origin

Often women present with vaginal bleeding when no clear diagnosis is made

The management of these women includes:

- Full history, examination and investigations as outlined above
- Reconfirmation of the placental site and fetal wellbeing
- Hospital admission if clinically indicated
- Serial growth scans for significant recurrent unexplained APH (risk of IUGR)

PART TWO - POSTPARTUM HAEMORRHAGE

Definitions

Term	Definition
Primary Postpartum Haemorrhage	Blood loss from the genital tract equal to or >500mls (vaginal birth) or >1000mls (caesarean birth) within 24 hours of the birth of a baby.
Secondary Postpartum Haemorrhage	Excessive bleeding from the genital tract from 24 hours and 6 weeks in the postnatal period.
Major Obstetric Haemorrhage	Postpartum haemorrhage =/ >1500ml blood loss
EUA	Examination under anaesthetic
Subtotal Hysterectomy	Removal of the uterus without the cervix
Disseminated Intravascular Coagulation (DIC)	Proteins controlling clotting are used up resulting in an inability to form clots.
Haemorrhargic Shock	A life-threatening condition that results when you lose more than 20 percent of your body's blood or fluid supply.

1.0 Roles and Responsibilities

Doctors – decision making, discussion, planning and providing care.
Midwives and nurses – recognition, decision making, intrapartum and postpartum care.

2.0 Processes and procedures

This guideline adopts a pragmatic approach:

- An estimated blood loss of 500–1000mls (in the absence of clinical signs of shock) prompts **basic measures** of monitoring and 'readiness for resuscitation',
- An estimated loss of more than 1000 ml (or a smaller loss associated with clinical signs of shock, tachycardia, hypotension, tachypnoea, oliguria or delayed peripheral capillary filling) prompts a **full protocol** of measures to resuscitate, monitor and arrest the bleeding.
- A meticulous record of blood loss should be kept as it is usually **UNDER ESTIMATED**.

2.1 Risk factors and prevention of PPH

In situations where there is thought to be an increased risk of postpartum haemorrhage secondary to uterine atony, IV access should be in place and a full blood count and group and save should be obtained during labour.
Unless contraindicated (in people with epilepsy or severe pre-eclampsia), Carbetocin will be given after birth by caesarean section as PPH prophylaxis. Carbetocin is a long-acting oxytocin analogue

so further oxytocin is not required unless PPH occurs more than 4 hours after Carbetocin was given.

Prophylactic oxytocin infusion (40 units oxytocin in 500ml of 0.9% saline – 125ml hour via infusion pump) should be considered for other births e.g. with:

- Previous PPH
- Prolonged (>12 hours) or Rapid labour
- Generalised sepsis
- Chorioamnionitis
- Age >40 yrs
- BMI>35
- Grand multiparity (>para 5)
- Multiple pregnancy
- Polyhydramnios
- Large baby (>4kgs)
- Fibroids
- Anaemia (< 90g/l)
- Previous tocolytic therapy

PPH can also be precipitated by:

- Controlled cord traction prior to placental separation
- Physiological third stage after a long or augmented labour

Women are at a particularly high risk of haemorrhage with the following conditions:

- Placenta praevia
- Placental abruption
- Large or multiple uterine fibroids
- Ruptured uterus
- Emergency Caesarean
- Instrumental delivery
- Pre-existing bleeding disorders i.e. haemophillia
- All women on admission to maternity must have a pph risk assessment (appendix 5) completed.
- PPh risk assessment tool to be reviewed in labour and postnatally.

NOTE: Combinations of any of the above complications with a uterine scar (previous caesarean Section or myomectomy) are especially high risk.

- All women who have had a previous caesarean section must have their placenta site determined. If overlying the caesarean section scar, consider the possibility of placenta accreta or percreta and arrange an MRI

- Obstetric and Anaesthetist consultant presence is mandatory for major placenta praevia caesarean sections and for any caesarean sections where placenta accreta or percreta is suspected.

- Adequate intravenous access (2 large bore 14G -16G cannula) should be in place before surgery starts.

- **At least** 4 units of blood should be cross-matched and immediately available in theatre before elective surgery starts (Major Placenta Praevia or Placenta Accreta). This should be checked by the Obstetric team performing the surgery before transfer to theatre. Be aware that if the lab does not have a suitable sample, the initial issue of red cells will be emergency O negative.

- A CVP line should be considered either pre-operatively or whenever it is apparent that bleeding is excessive.

2.2 Primary Postpartum Haemorrhage (PPH)

Arresting the bleeding (Consider the 4 T's - Tone, Tissue, Trauma, Thrombin)

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

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

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

- 'Rub up the fundus' to stimulate contraction.
- Ensure bladder is empty (Foley catheter, leave in-situ)
- Oxytocin 5 units by IM injection (can have repeat dose) unless Carbetocin has been given during a caesarean birth in the preceding 4 hours.
- Ergometrine 0.5mg by slow IV/IM injection – contraindicated in women with hypertension
- Oxytocin infusion (40 units in 500ml Normal Saline),125mL/h (unless fluid restriction is necessary)
- Consider Tranexamic Acid 1g IV over 10 minutes (This can be repeated after 30 minutes if the bleeding continues.)
- Carboprost (Hemabate) 0.25mg Intramuscular (repeated at intervals of not less than 15 minutes to a maximum of 8 doses)
- Bimanual Compression
- Misoprostol PR 1000mcg or 800mcg sublingual

Clinical features of shock in pregnancy related to the volume of blood loss

Blood Loss	Clinical features	Level of shock
10% blood loss ~500 mL if 50 kg ~800 mL if 80 kg	Mild tachycardia Normal blood pressure	Compensated
15% blood loss ~750 mL if 50 kg ~1200 mL if 80 kg	Tachycardia (> 100 bpm) Hypotension (systolic 90-80 mmHg) Tachynoea (21 – 30 breaths/minute) Pallor, sweating Weakness, faintness, thirst	Mild
30% blood loss ~ 1500 mL if 50 kg ~ 2400 mL if 80 kg	Rapid, weak pulse (> 120 bpm) Moderate hypotension (systolic 80-60 mmHg) Tachynoea (>30 breaths/minute) Pallor, cold clammy skin Poor urine output (<30 mL/hour) Restlessness, anxiety, confusion	Moderate
40% blood loss ~ 2000 mL if 50 kg ~ 3200 mL if 80 kg	Rapid, weak pulse (> 140 bpm) or bradycardia (<60 bpm) Severe hypotension (<70 mmHg) Pallor, cold clammy skin, peripheral cyanosis Air hunger Anuria Confusion or unconsciousness, collapse	Severe

PROMPT Course Manual (Third Edition)

Flow chart 2 - Management of PPH

Recognise PPH EBL > 500ml

Call for help - Pull the Emergency Bell

Call 2222 'obstetric emergency' – Collect Obstetric Haemorrhage Trolley

4 units of emergency O Rh(D) Negative blood is available in phase 1 theatres (opposite labour ward)

ACTION

- Rub up contraction
- Early bi-manual compression

- Lie flat
- Give high flow Oxygen

- Empty bladder
- Consider catheter

- IV Access x 2
- Large bore cannulae (14/16 G)

*Baseline Bloods
- FBC, U+Es, LFT, G&S
- Consider requesting 2 units

Fluid Replacement
- 500mls n/saline (MW's)
- 1000mls Plasmalyte

***Contact on call BMS on Ext 85774. Blood bank are also contactable on bleep 1412**
Advise of situation - Name/MRN/DOB

ASSESSMENT

Airway
Breathing
Circulation
Disability
Exposure

Causes (4T's)
- **Tissue** : Exclude RPOC, check placenta, remove clots
- **Tone** : Rub up contraction
- **Trauma** : Repair
- **Thrombin** : clotting

Maternal Observations
- Respiratory rate
- Pulse
- BP
- O^2 saturations

Monitor Fluid balance
- Urine output
- Fluid replacement

EBL
Weigh incos/swabs etc.

Is this a MOH? (EBL=/ > 1500mls) See flow chart 3

STOP BLEEDING

Ergometrine 500mcg
OR
Syntometrine* 1amp
OR
Syntocinon 10 units*

Oxytocin infusion*
40units in 500ml N/saline @ 125mls/hr

Consider Tranexamic acid
1g IV over 10min
(repeated after 30 minutes if bleeding continues)

Haemabate (carboprost)
250mcg IM every 15 min MAX 8 doses
DO NOT give where bleeding is caused by trauma

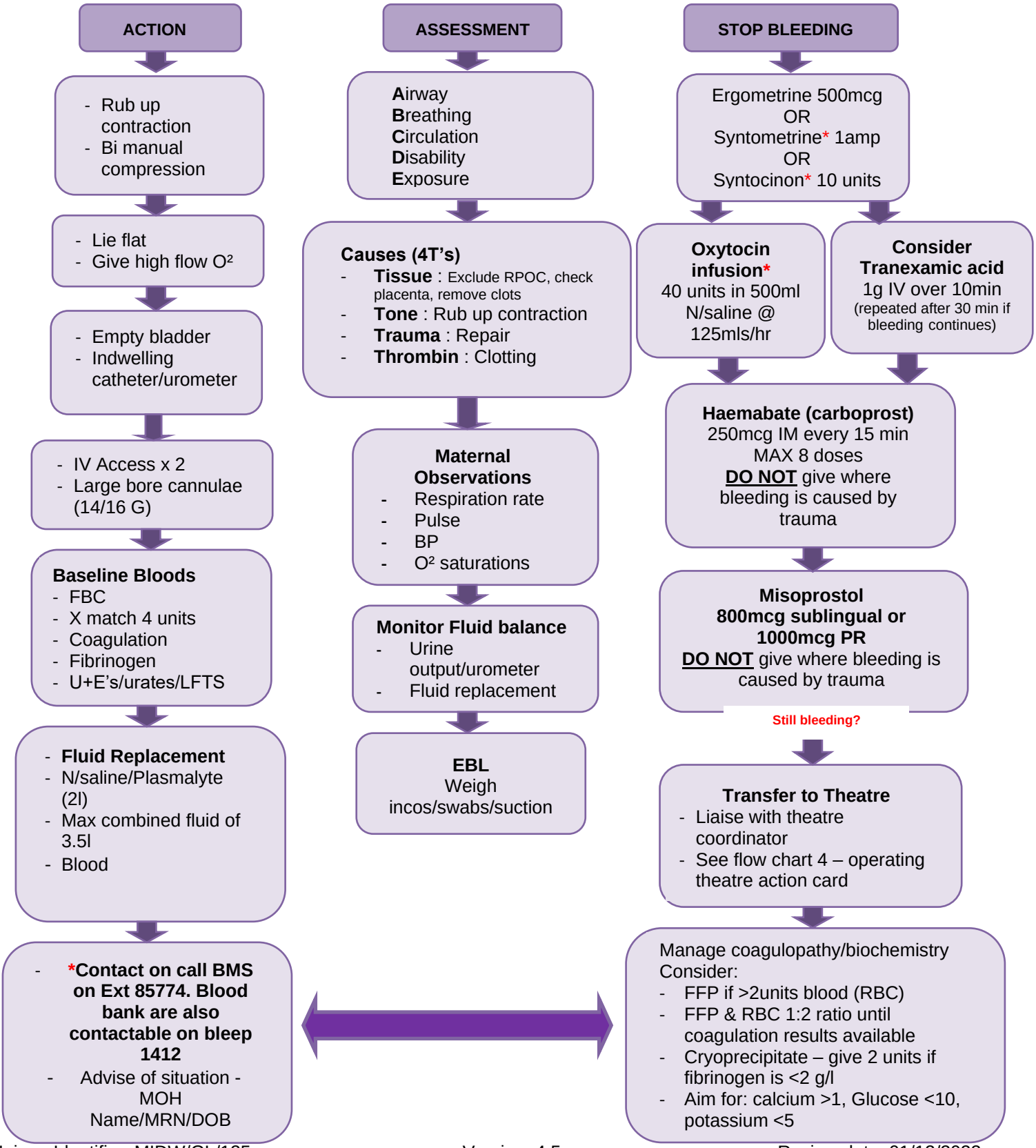
Misoprostol 800mcg sublingual or 1000mcg PR
DO NOT give where bleeding is caused by trauma

Still bleeding?

Transfer to Theatre
- EUA
- MROP
- Repair trauma

2.3 Flow Chart 3 - Major Obstetric Haemorrhage

Diagnose MOH - Revealed blood loss > 1500mls with ongoing MOH or clinical shock
Call for help 2222 - Sate 'Major obstetric Haemorrhage' (MOH)
Obstetric Haemorrhage Trolley/Drugs /Alert theatre/ immediately ring blood bank on Ext 85774.
Blood bank are also contactable on bleep 1412
4 units of emergency O Rh(D) Negative blood is available in phase 1 theatres (opposite labour ward)



*Unless Carbetocin has been given at the time of caesarean in the preceding 4 hours.

2.3.1 Management in Theatre

See Flow Chart 4: Management of MOH – Theatre Protocol

1. Consider appropriate anaesthesia for Examination Under Anaesthetic (EUA)

2. **Failure to arrest bleeding at EUA** should be discussed with the Consultant Obstetrician who will decide whether a laparotomy is appropriate with the insertion of a Bakri Balloon, a B-Lynch suture, hysterectomy or ligation of the internal iliac artery.

Laparotomy

If the abdomen is not already open and the bleeding is continuing, a laparotomy may be needed so that surgical methods can be used in an attempt to stop the bleeding. NICE intrapartum guidelines state that no particular surgical procedure can be recommended above another in the treatment of Postpartum Haemorrhage.

B-Lynch Suture

The B lynch suture technique is simple and effective with successful outcomes. The original description of this technique requires the uterine cavity to be opened and explores and a bimanual compression test employed prior to insertion of the suture. If bimanual compression is ineffective in reducing the bleeding the B-Lynch suture is unlikely to be successful.

More recently modifications of the B-Lynch suture have been described. They all follow the principle of compressing the uterus to stop the bleeding.

Uterine packing

Uterine packing involves completely and uniformly packing the uterine cavity with mesh gauze. The pack can be inserted into a sterile plastic drape for easier removal.

Uterine balloon Tamponade

Uterine balloon tamponade (Bakri or Rusch balloon) can be used in preference to gauze packing. The balloon catheter is inserted into the uterine cavity and inflated with approximately 500ml of warm saline. An oxytocin infusion may be used to maintain uterine contraction.

This method is often described as the "tamponade test". A 'positive test' (control of PPH following inflation of the balloon) indicates that laparotomy is not required, whereas a 'negative test' (continued PPH following inflation of the balloon) is an indication to proceed to laparotomy.

The balloon can be left in place for up to 24 hours. The balloon should ideally be removed in daylight hours when senior staff are available in case bleeding recurs.

Uterine artery embolisation (UAE)

This is a procedure where an interventional radiologist uses a catheter to deliver small particles that block the blood supply to the uterine body.

Interventional radiology can be used as a prophylactic measure where there is a known or suspected case of placenta accreta, such as placenta praevia on previous caesarean section scar, or placenta accreta diagnosed by scan/colour Doppler or magnetic resonance imaging.

Under anaesthesia (local/regional/general) a balloon catheter is introduced into the femoral artery at the groin and advanced under radiographic control into the uterine artery. Balloons can be placed in the internal iliac or uterine arteries before delivery. The balloons can be inflated to occlude the vessels in the event of postpartum haemorrhage. Embolisation can be performed via the balloon catheters if bleeding continues despite inflation. The microparticules (spheres or beads) are released which will block the vessel. Due to collateral circulation the uterus will not necrose even if both arteries are occluded. The procedure is not a surgical intervention and allows the uterus to be kept in place.

Even if hysterectomy is still required, blood loss, blood transfusion and numbers of admissions to intensive care units can be reduced.

The logistics of performing arterial occlusion or embolisation where the equipment or an interventional radiologist may not be available mean that uterine balloon tamponade (which appears to have similar efficacy) is a more appropriate first-line treatment.

If interventional radiologist is unavailable and if medical management/ balloon tamponade fails, resort to hysterectomy sooner rather than later.

Uterine vessel and internal iliac artery ligation

The uterine and internal iliac vessels can all be ligated in an attempt to stem uterine bleeding. These potentially difficult procedures and the assistance of a vascular surgeon should be requested.

Hysterectomy

Hysterectomy may be required if bleeding persists with resorting to a hysterectomy sooner rather than later especially in cases of placenta accreta or uterine rupture. A second consultant Obstetrician and Gynaecologist should be involved in the decision for hysterectomy.

Flow Chart 4: Management of MOH – Theatre Protocol

Clinical Evidence of Uncontrolled Bleeding: >1500mls or Shocked Patient Active Major Obstetric Haemorrhage Protocol
Call for HELP 2222 and state: "MAJOR OBSTETRIC HAEMORRHAGE" and immediately ring Blood Bank on Ext 85774 to supply your contact details and patient information.
Blood Bank also carry Bleep 1412.
4 units of emergency O Rh(D) Negative blood is available in phase 1 theatres (opposite labour ward)

Manage Uterine Tone

- Oxytocin 10 units
- Ergometrine* 500mcg
- Syntometrine* 1amp
- Oxytocin Infusion 40 units in 500mls normal saline*

*Unless Carbetocin has already been given in the preceding 4 hours

- Haemabate (carboprost) 250mcg IM every 15mins MAX 8 doses
- Misoprostol 800mcg sublingual or 1000mcg PR

Manage Bleeding Surgically

- EUA
- Perineal Repair
- MROP
- Rusch Balloon
- B-Lynch Suture
- Uterine Artery Embolism
- Hysterectomy

Manage Coagulopathy

Blood products

- Cryoprecipitate
- Platelets
- FFP
- RBC

Tranexamic Acid

- 1g IV over 10mins
- Repeated after 30 mins if bleeding continues

Once bleeding is controlled aim for;

- Hb >80
- Platelets >50
- Fibrinogen >2g/l

CLOSE LIAISON WITH ON CALL BMS/BLOOD BANK VIA Ext 85774
Blood Bank also carry bleep 1412
CONSIDER CONSULTANT HAEMOTOLOGIST

Biochemistry

Aim for;

- Calcium >1
- Glucose <10
- Potassium <5

Adjuncts

Active Warming (Fluid warmer & Bairhugger)

Blood

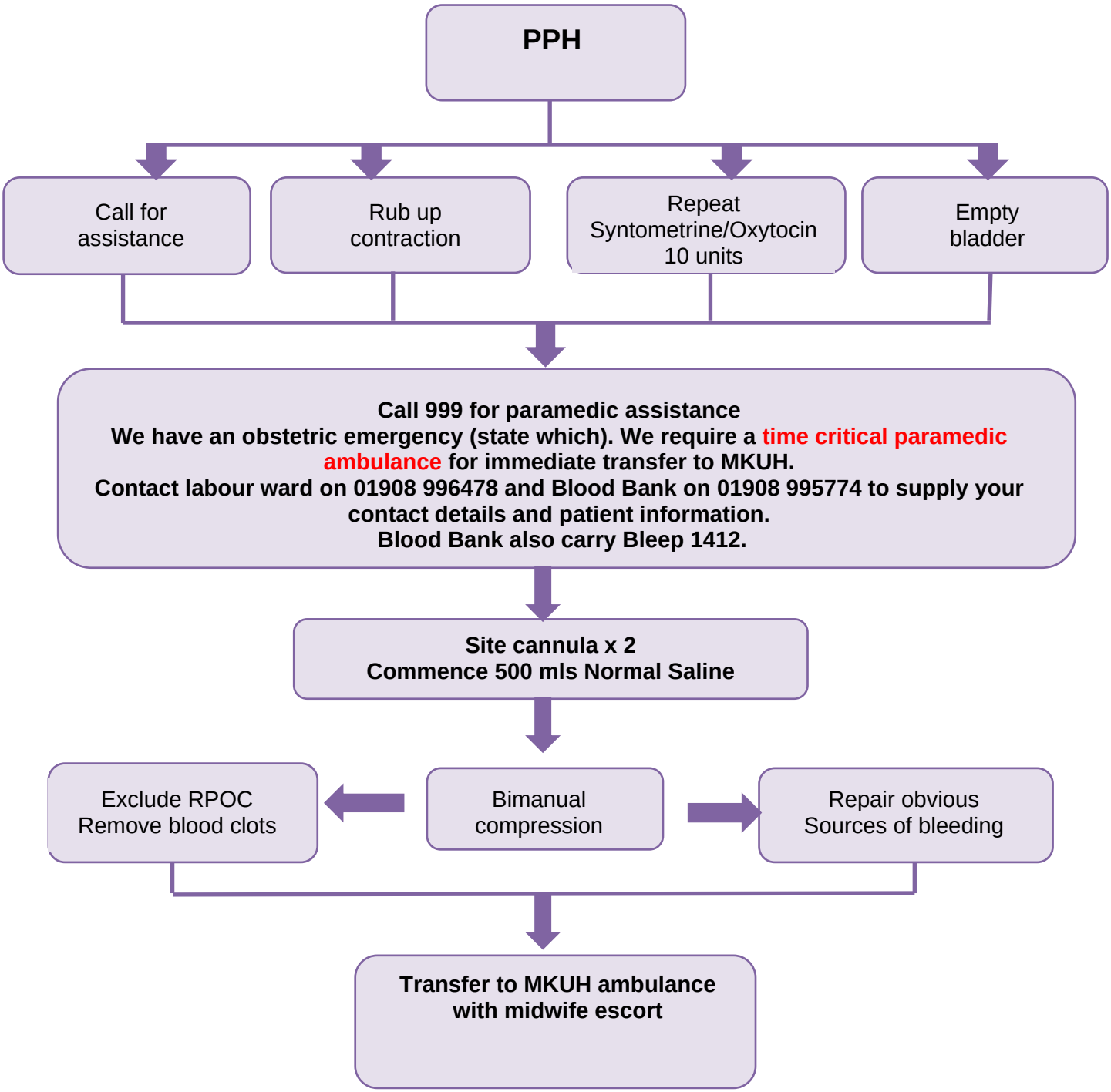
- FBC, clotting studies (inc fibrinogen), U&E, LFTs, G&S/X-match

Blood Products

- Give FFP if >2units RBC transfused
- Give FFP+RBC in a ratio of at least 1:2 until coagulation results are available
- Cryoprecipitate give 2 units if fibrinogen is < 2g/l

2.3.2 Management of PPH in the community

Flow Chart 5: Obstetric Management of PPH in the Community



3.0 Secondary Postpartum Haemhorrhage

Secondary PPH is often associated with endometritis. Where this is suspected appropriate clinical examination and a management plan should be implemented. When antibiotics are clinically indicated, a combination of ampicillin (clindamycin if penicillin allergic) and metronidazole is appropriate. In cases of endomyometritis (tender uterus) or overt sepsis, then the addition of gentamicin is recommended.

Surgical measures should be undertaken if there is excessive or continuing bleeding, irrespective of ultrasound findings.

A senior obstetrician should be involved in decisions and performance of any evacuation of retained products of conception as these women are carrying a high risk for uterine perforation.

4.0 Debriefing

Obstetric haemorrhage can be traumatic to the woman, her family and the birth attendants; therefore, debriefing is recommended by a senior member of the team who was involved at the time of events at the earliest opportunity. Women may also be referred to the Births Afterthoughts Service.

A formal follow-up meeting which analyses the case and addresses what could be done better in the future should be triggered for every significant PPH.

5.0 Documentation

Accurate documentation of a delivery with postpartum haemorrhage is essential. A structured pro forma is available on Labour Ward to aid accurate record keeping. All Postpartum Haemorrhages should be notified through **Datix.**

It is important to record:

- When the emergency bell was pulled
- the staff in attendance and the time they arrived
- the sequence of events
- the time of administration of different pharmacological agents given, their timing and sequence
- the time of surgical intervention, where relevant
- the condition of the mother throughout the different steps
- the timing of the fluid and blood products given

Complete the blood bank MOH proforma and return via internal post. This step is important so that the transfusion team can analyse the provision of blood and communication processes as an improvement tool.

6.0 Skills and Drills Training

It is mandatory that all birth attendants should attend the Annual 'skill drills' training for the management of postpartum haemorrhage. Regular skills and drills are in place to ensure all members of staff know how to work together to ensure prompt and efficient treatment in such an emergency.

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8.0 Governance

8.1 Document review history

Version number	Review date	Reviewed by	Changes made
3	12/2017		Reviewed and updated
4	12/2020	Julie Cooper/Terrie Perry/Caroline Lowe	Complete review
4.1	01/2021	Swati Velankar	Paragraph added on page 8
4.2	03/2021	Eleanor Tyagi	Amendment-TXA to be repeated after 30 minutes page 15,18 and 21
4.3	04/2021	PPH review group	PPH risk assessment tool added- Appendix 5.
4.4	04/2021	Terrie Perry/Caroline Lowe/Swati Velanker	Referenced 3 further guidelines. Agreed wording on use of Kleihauer test, reinstated banner headers on Flow Charts 2 and 3
4.5	01/2024	Ellie Tyagi	Addition of the use rof carbetocin

8.2 Consultation History

Stakeholders Name/Board	Area of Expertise	Date Sent	Date Received	Comments	Endorsed Yes/No
Julie Cooper	Head of Midwifery	24.8.20	24.8.20		Yes
Janice Styles	Midwifery Matron	24.8.20	24.8.20		Yes
Erum Khan	Obstetric Consultant	24.8.20	24.8.20		Yes

Caroline Lowe	Specialist Transfusion Practitioner	24.8.20	24.8.20	Comments received	Yes
Terrie Perry	Specialist Transfusion Practitioner	24.8.20	24.8.20	Comments received	Yes
Jasmine MBeHarry	Blood Transfusion Laboratory Manager	24.8.20	24.8.20	Comments Received	Yes
Women's Guideline Group	W&C	23/12/20	23/12/20	Comments received	Yes
Women's Health Guideline Review Group	Women's Health	03/01/2024	-	Version 4.5 approved as chairman's action	Yes

8.3 Audit and monitoring

This Guideline outlines the process for document development will be monitored on an ongoing basis. The centralisation of the process for development of documents will enable the Trust to audit more effectively. The centralisation in recording documents onto a Quality Management database will ensure the process is robust.

Audit/Monitoring Criteria	**Tool**	**Audit Lead**	**Frequency of Audit**	**Responsible Committee/Board**
Number of Women having APH	Stats	Will be nominated by maternity audit leads	Annually Maternity Clinical Governance Board Maternity CIG	Maternity CIG Risk Meetings
Appropriate communication including escalation	Tool designed by auditors	Will be nominated by maternity audit leads	All maternity records with a blood loss of greater than 2500mls	Maternity CIG Risk Meetings
a) Numbers of women having PPH >1000ml b) Numbers of women receiving blood transfusion following PPH c) Numbers of women requiring surgical intervention for PPH d) Numbers of women requiring postpartum hysterectomy	Continuous audit	Risk midwife	Monthly – Maternity CIG, Quarterly – Maternity Clinical Governance Board	Maternity CIG, Maternity Clinical Governance Board

8.4 Equality Impact Assessment

As part of its development, this Guideline and its impact on equality has been reviewed. The purpose of the assessment is to minimise and if possible remove any disproportionate impact on the grounds of race, gender, disability, age, sexual orientation, religion or belief, pregnancy and maternity, gender reassignment or marriage and civil partnership. No detriment was identified. Equality Impact assessments will show any future actions required to overcome any identified barriers or discriminatory practice.

Equality Impact Assessment			
Division	Women and children	Department	Maternity
Person completing the EqIA	Erica Puri	Contact No.	87153
Others involved:	Yes	Date of assessment:	04/2021
Existing policy/service	Yes	New policy/service	No

Will patients, carers, the public or staff be affected by the policy/service?	Yes
If staff, how many/which groups will be affected?	*All staff*

Protected characteristic	Any impact?	Comments
Age	NO	Positive impact as the policy aims to recognise diversity, promote inclusion and fair treatment for patients and staff
Disability	NO	
Gender reassignment	NO	
Marriage and civil partnership	NO	
Pregnancy and maternity	NO	
Race	NO	
Religion or belief	NO	
Sex	NO	
Sexual orientation	NO	

What consultation method(s) have you carried out?
meetings
How are the changes/amendments to the policies/services communicated?
email, meetings
What future actions need to be taken to overcome any barriers or discrimination?

What?	Who will lead this?	Date of completion	Resources needed
Review date of EqIA	12/2023		

Appendix 1: Acute Major Blood Loss – A Template Guideline

Goal	Procedure	Comments
Contact key personnel	• Consultant clinician in charge • Duty consultant anaesthetist • Blood transfusion biomedical scientist • Duty consultant haematologist • Labour Ward Co-ordinator	• A named senior person must take responsibility for communication and documentation • Arrange Intensive Care Unit bed
Restore circulating volume Average adult blood volume is 5L (70 mls/kg)	• Insert wide bore peripheral or central cannula • Give pre-warmed crystalloid or colloid as needed • Avoid hypotension or urine output <0.5 ml/kg/h	• 14 gauge • Monitor central venous pressure • Keep patient warm • Concealed blood loss is often underestimated
Arrest bleeding	• Early surgical or obstetric intervention • Interventional radiology	
Request laboratory investigations	• FBC, PT, APTT, Thrombin time, Fibrinogen (Clauss method); blood bank sample, biochemical profile, blood gases and pulse oximetry • Ensure correct sample identification • Repeat tests after blood component infusion	• Results may be affected by colloid infusion. • Ensure correct patient identification • May need to give components before results available
Maintain Hb >80 g/l	• Assess degree of urgency • Give red cells: Group O Rh D negative In extreme emergency Until ABO and Rh D groups known ABO group specific when blood group known Fully compatible blood Time permitting • Use blood warmer and/or rapid infusion device if flow rate >50 ml/kg/h in adult	• Further serological crossmatch not required after 1 blood volume replacement. • Transfusion laboratory will complete crossmatch after issue
Maintain platelet count >50 x 10^9/l	• Allow for delivery time from blood centre (minimum 60 mins). Blood Bank keep one platelet unit in stock for emergency use • Platelet support after 1-1.5l blood volume replacement and continued resuscitation.	• Order at 75 to allow margin of safety to ensure platelet count >50 x 10^9/l • Keep platelet count >100 x 10^9/l if multiple or CNS trauma or if platelet function abnormal
Maintain PT & APTT <1.5 x mean control	• Give FFP 15-20 ml/kg (four units for an adult) guided by tests • Anticipate the need for FFP after 2 red cells • Available within a maximum of 30 minutes.	• PT/APTT > 1.5 x mean normal value correlates with increased microvascular bleeding • Keep 34onized Ca^{2+} > 1.13 mmol/l
Maintain Fibrinogen >2.0 g/l	• If not corrected by FFP give cryoprecipitate (two packs of cryoprecipitate for an adult) • Available within 30 minutes.	• Cryoprecipitate rarely needed except in DIC
Avoid DIC	• Treat underlying cause (shock, hypothermia, acidosis)	• Although rare, mortality is high
Consider use Antifibrinolytic drugs	• Aprotinin/tranexamic acid	• If uncontrollable bleeding
Consider use of rVIIa	• Consultant to consultant referral	• If uncontrollable bleeding

Appendix 2: Major Haemorrhage Proforma

Patient Sticker	**Date:** **Time:** **EBL to date:** **Started by:**

Team Member	Name of Attending Staff	Time called	Time arrived
On call Obstetric Consultant			
On call Obstetric SpR			
On call Obstetric SHO			
On call Anaesthetic Consultant			
Blood Bank (on call BMS)			
On call Anaesthetic SpR			
Senior Midwife			
ODP			
Consultant Haematologist			
Porter (if required to collect blood)			

Observations

Time	Pulse	B/P	Resps

Drug	Dose	Time
Syntometrine	1 amp IM	
Ergometrine	500 mcg IM/IV (if normal BP)	
Syntocinon	40 units in 500 mls N/Saline	
Tranexamic Acid	1g IV over 10min	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate (Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Hemabate(Carboprost)	250 mcg/1 amp IM	
Misoprostol	200 mcg x 5 tablets PR	

EBL:

Need to transfer to theatre	**Yes**	**No**
EUA	**Yes**	**No**
Balloon tamponade	**Yes**	**No**
Surgery (see main notes)	**Yes**	**No**

Blood Products

Red Cells	Pack numbers	Volume	Time
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

FFP	Pack numbers	Volume	Time
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Platelets	Pack numbers	Volume	Time
1.			
2.			
3.			
4.			
5.			
6.			

Cryoprecipitate	Pack Number	Volume	Time
1.			
2.			
3.			
4.			
5.			
6.			

Factor VIIa	Pack Number	Volume	Time
1.			
2.			
3.			
4.			
5.			
6.			

Blood Loss

Time	Amount	Running Total

Obstetric Emergency "Stepped down" (ensure on-call BMS is contacted (Ext 85774 or bleep 1412)

Name of Clinician
Date
Time
Signature

Appendix 3: Transfusion Team Processes

What to send and when

Send group and save sample on all women
Send group and save sample and request 2 units of RBC on all women with an identified risk factor
Any women with positive antibody screen discuss with blood bank and consider cross-matching

Baseline Bloods
FBC, clotting studies including fibrinogen
Group and save/crossmatch sample (if no current sample available)

Communicate with Blood Bank
Phone Ext 85774 or bleep 1412 to confirm sample availability and requirements as early as possible

Initial PPH
Send a group and save sample FBC, clotting sample including Fibrinogen
Follow up phone call or bleep blood bank to make them aware of urgency of Group and Save

Continued PPH
Request 4 units crossmatched blood
Send FBC and clotting screen including fibrinogen
Follow up phone call or bleep blood bank to make them aware of the urgency of the crossmatch

Major Obstetric Haemorrhage (MOH)
4 units of emergency O Rh(D) Negative blood is available in phase 1 (opposite labour ward) theatre fridge. If women have antibodies, CHECK with Blood Bank before transfusion.

Activate Major haemorrhage protocol Dial 2222 and immediately ring blood bank

Midwife coordinator or designated other to call blood bank on Ext 85774 or bleep blood bank on 1412 and use the phrase Major Obstetric Haemorrhage. This will release:

- 4 units of RBC (Blood bank will issue emergency O negative blood if crossmatched or group specific blood is not available).
- Blood will be collected by the porters in a blood transport box
- Send goup and save sample if requested by blood bank and FBC, clotting screen (including fibrinogen) if not already done
- If Major Haemorrhage box 2 is requested 4 units of fresh frozen plasma (FFP) will be thawed. FFP will take a maximum of 30 minutes to thaw and issue.

When the MOH is called, the blood bank would issue the first "pack" of 4 units of red cells. Pack 2 contains 4 units of red cells, 4 FFP and platelets as requested. Subsequent "packs" will contain FFP, Cryoprecipitate as required or platelets in addition to the red cells, until Blood bank are told to stand down.

Availability of Blood components

Immediately

RBC
O RH D negative blood (2 units) is appropriate to use if crossmatched or group specific blood is not available, and transfusion indicated urgently. Please make blood bank aware on Bleep 1412

Clinical area **must** contact blood bank on bleep 1412 prior to use if mum has blood group antibodies to ascertain suitability for use.

Located in Fridge Phase 1 theatre (4 x O Negative)

Within 10 minutes

Electronically issued blood if a suitable sample is available and has been processed by the lab and if mum has no blood group antibodies
Clinical area to advise how many units required (normally 4) Major Haemorrhage pack 1.

Within 45 minutes

In circumstances where no suitable samples are available in the laboratory and no historical group is on the blood bank system, 2 group and save samples must be sent to blood bank
Fully crossed matched blood providing mum has not got any blood group antibodies (Approximately 45 minutes)

Fresh Frozen plasma (FFP)

If Box 2 is requested Give FFP and red cells in a ratio of 1:2 until laboratory results are available.
Available for collection from blood issue room within a maximum of 30 minutes from activation of MOH of box 2 being requested
Continue to give FFP and red cells in a ratio of at least 1:2 until coagulation results are available.
Further plasma should be guided by coagulation results.

Platelets

Normally available immediately
Request when platelet count falls below 75
Give if count falls below 50

Note; it is acceptable to use ABO incompatible platelets negative for high titre agglutinins in the management of patients with Major haemorrhage. RhD negative platelets should be used for females less then 51 years of age with an unknown group

Cryoprecipitate

Give 2 units if Fibrinogen is <2g/l
If bleeding continues and results are not available, do not delay cryoprecipitate supplementation if required
Allow 20-25 minutes for cryoprecipitate to be thawed and made available
Note: Do not refrigerate cryoprecipitate, it must be used within 4 hours of thawing and returned to blood bank for disposal if not used

*Obtain advice from the on call Haematology consultant via switchboard on clotting results and blood component replacement if bleeding continues despite receiving RBC, FFP, platelets and cryoprecipitate

Alert blood bank when MOH over.

Return any unused blood components to blood bank and inform BMS in blood bank.
Complete all traceability slips.
Refer to Major Haemorrhage guideline for further information.

Appendix 4: PPH Proforma

PPH Proforma

Patients name: ……MRN: …….
Drill: Yes ☐ No
Assigned Midwife:……Date:……Time haemorrhage commenced:……..…....

2222 OBSTETRIC EMERGENCY Time of call……..

Called for help	Name	Time called	Time arrived
On call BMS – fast bleep 1412 or call Ext 85774. The blood bank will need a name and number for contact and updates			
Senior Midwife			
Registrar			
SHO			
Anaesthetist			
ODP			
Consultant Obstetrician			
Scribe			
Haematologist			
Others (Please list)			

	Yes	Performed by	Time performed
Laid flat			
Oxygen administered			
Ventilation required			
IV access 2 x 16g venflons			

BLOODS TAKEN:

FBC ☐ **G&S** ☐ **Clotting** ☐ **U&E** ☐ **LFT** ☐

Xmatch ☐ **Number of units……..** **Kleihauer** ☐

MANAGEMENT			
	Yes	Performed by	Time performed
Placenta & membranes removed			
Rub up a contraction			
Indwelling catheter inserted			
Placenta & membranes complete			
Perineal trauma identified			
Blood clotting on bed/floor			
Bimanual compression			

DRUGS			
	Yes	Given by	Time given
Syntometrine 1amp IM (1st dose)			
Ergometrine 500mcg IV/IM			
Oxytocin 10 units IM (if BP high)			
Syntocinon IV infusion 40 units in 500ml Normal Saline 125ml/hr			
Tranexamic Acid 1g IV over 10 minutes			
Haemobate 250mcg IM (max 8 doses every 15 mins)			
Misoprostol 800mcg sublingual or 1000mcg PR			

OBSERVATIONS								
Time								
BP								
Pulse								
Oxygen sats								
Resp rate								

IV FLUIDS/BLOOD			
Specify	Volume	Given by	Time given

Time transferred to theatre:……. Major Haemorrhage Policy activated:…….Total EBL……..

Datix form completed by:……Datix number……Document and Debrief: ☐ Yes ☐ No

Appendix 5: PPH Risk Assessment

PPH Risk Assessment

To be completed on admission in labour, prior to second stage and following delivery for all women

Addressograph Date……

Antenatal	Score	Individual Score
Placenta Praevia/Accreta	10	
Placental Abruption – significant	10	
Multiple Pregnancy	6	
Current Hb<85	6	
Intrauterine death	2	
Pre-ecalmpsia / gestational hypertension	4	
Maternal Clotting Disorder	3	
Previous history of PPH /MOH or retained placenta	3	
Parity >4	3	
Parity ≥ 6	6	
BMI ≥ 40	2	
Uterine Fibroids	2	
Recurrent APH (minor)	2	
Elective caesarean Section/ Recurrent Caesarean Section	2	
Total		
Intrapartum Risk Factors		
Induction of labour / Augmentation of labour	2	
Sepsis / Pyrexia in labour	2	
Prolonged 1st stage of labour > 12 hours (active)	2	
>12 hours of Syntocinon	2	
Prolonged 2nd stage of labour > 4 hours	2	
Total		
Total Antenatal and Intrapartum Score		
Postnatal Risk Factors		
Retained Placenta	6	
Emergency Caesarean Section	6	
Baby >4 kg	2	
Operative vaginal Delivery	2	
Total		
Total Antenatal plus Intrapartum plus Postnatal Risk Score		

Management for third stage and following birth. Alternative plans must be documented in eCare		
Score 1-5	Score 6-9	Score 10 or more
Oxytocin 10iu IM with delivery of the anterior shoulder or as soon as possible before the cord is clamped and cut **(do not wait for delayed cord clamping)** Measure **all** blood loss Routine maternal postnatal observations Consider physiological mgt at maternal request if appropriate	**Follow green actions PLUS** IV access, grey cannula (16g) Group and Save, FBC Oxytocin infusion, 40iu in 500mls in Normal Saline at 125mls per hour	**Follow Amber actions PLUS** Second Grey Cannula (16g) Cross match 2 units of blood
On recognition of PPH commence MEOWS **Maternal observations at least every 30 minutes for 2 hours** **Activate early use of PPH protocol:** **TXA 1gm IV / Ergometrine 500mcg IM/IV / Haemabate 250mcg / Misoprostol 800 mcg sublingual or 1000mcg PR**		