Antepartum & Intrapartum Haemorrhage Guideline

(Including antenatal management of placenta praevia & placenta accreta)

Summary statement: How does the document support patient care?	By providing evidence based guidance in the management of antepartum and intrapartum haemorrhage.
Staff/stakeholders involved in development:	Labour Ward Leads (Obstetric and Midwifery), Consultant Obstetricians, Senior midwives, Joint Obstetric Guidelines Group.
Division:	Women and Children's
Department:	Maternity
Responsible Person:	Chief of Service
Author:	Consultant Obstetrician and Maternity Clinical Effectiveness team
For use by:	All medical, obstetric, midwifery and anaesthetic staff
Purpose:	To provide evidence based guidance on the management of antepartum and intrapartum haemorrhage.
This document supports:	CEMACH 2007, RCOG 2011, 2018, MBRRACE-UK 2019 NICE NG121 (2019)
Key related documents:	**UH Sussex (SRH&WH) Maternity Guidelines:** Postpartum Haemorrhage, Care of Severely Ill Pregnant Woman/Transfer to High Dependency Unit, Induction of Labour following Intrauterine Death/Fetal Abnormality, Venous Thromboembolism, Uterine Rupture, Anti D, Preterm Labour and Delivery
Approved by:	JOGG: 18th January 2023 Medicines Governance Committee: 13th June 2023
Date uploaded:	14th July 2023
Ratified by Board of Directors/ Committee of the Board of Directors	Not Applicable – Divisional Ratification only required
Ratification Date:	Not Applicable – Divisional Ratification only required
Expiry Date:	December 2023
Review date:	June 2023
If you require this document in another format such as Braille, large print, audio or another language please contact the Trusts Communications Team	
Reference Number:	CG12004

Version	Date	Author	Status	Comment
1.0	January 2021	Consultant Obstetricians & CNST Midwife	Archived	New Trustwide guideline
2.0	November 2014	N. Maguire and H. Clarke	Archived	Antenatal management of placenta praevia and accreta added
3.0	January 2018	A. Crocker	Archived	3 yearly review with addition of MBBRACE recommendations
3.1	September 2019	S. Davies	Archived	Minor update to reflect leaflet changes. For full review as planned September 2020
4.0	March 2021	A. Elgarhy, Obstetrician & J. Collard, Clinical Effectiveness Support Midwife	Archived	Name change to add Intrapartum Haemorrhage to title. 3 yearly review and NICE NG121 Intrapartum care for women with existing medical conditions or obstetric complications and their babies recommendations on Intrapartum haemorrhage added.
4.1	September 2022	J. Collard, Clinical Effectiveness Support Midwife	Archived	• Link to CG21008 Management of high risk maternal medicine conditions section on suspected cervical cancer add to 9.0 Local Causes. • APH & Intrapartum Haemorrhage proforma added. • Massive APH changed to Severe Major APH to avoid confusion with PPH terms.
4.2	January 2023	CE Team	LIVE	• 5.1 Screening team to be notified of significant or recurrent bleeds for FGR assessment purposes.

The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert.

Contents

Antepartum & Intrapartum Haemorrhage Guideline
(including antenatal management of placenta praevia & placenta accreta)

1.0 Aim

To provide evidence-based guidance and ensure that care is safe, effective and timely for the management of pregnant women/people with:

- Antepartum haemorrhage (APH)
- Intrapartum haemorrhage
- Placental abruption
- Placenta praevia
- Placenta accreta
- Vasa praevia

2.0 Scope

This guideline is for use by:

- Obstetricians
- Anaesthetists
- Midwives
- Sonographers

3.0 Responsibilities

Clinicians:

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

Management:

- To ensure the guideline is reviewed as required in line with Trust and National recommendations.
- To ensure the guideline is accessible to all relevant staff.

4.0 Abbreviations used within this guidance

APH - Antepartum Haemorrhage	**EPAC -** Early Pregnancy Assessment Clinic
A&E - Accident and Emergency	**TVS -** Transvaginal Scan
PAS - Placenta Accreta Spectrum disorder	**IR -** Interventional Radiology
PPH - Postpartum Haemorrhage	**BMI -** Body Mass Index

CTG - Cardiotocograph	**DIC -** Disseminated Intravascular Coagulation
HELLP - Haemolysis Elevated Liver Enzymes Low Platelets	**CS -** Caesarean Birth
IV - Intravenous	**MEOWS -** Modified Early Obstetric Warning System
Us&Es - Uraea & Electrolytes	**CCU -** Critical Care Unit
USS - Ultrasound Scan	**FH -** Fetal Heart
P - Pulse	**T -** Temperature
BP - Blood Pressure	

5.0 Introduction

Antepartum haemorrhage (APH) complicates 3-5% of pregnancies and is a leading cause of perinatal and maternal mortality worldwide.

The major causes for APH and intrapartum haemorrhage are placenta praevia (30%) and placental abruption (20%) but the majority are of unknown aetiology (40%). Five per cent of women have a low lying placenta at 20 weeks but only 0.5% persist past 37 weeks gestation. Placental abruption occurs in 0.65% of pregnancies.

All pregnant women/people 16 weeks or more with significant revealed vaginal bleeding or suspicion of concealed bleeding should be reviewed on triage/Delivery Suite.

If a pregnant woman/person in labour has any vaginal blood loss other than a ‘show’, they should be transferred to obstetric-led care and be reviewed by an obstetrician.

Pregnant women/people less than16 weeks should be referred to A&E or to EPAC as appropriate.

5.1 Definition

Bleeding from the genital tract between 24 weeks gestation and delivery, however, any pregnant woman/person with bleeding after 16 weeks of pregnancy should be assessed in the Delivery Suite/Labour Ward.

Classification of APH & intrapartum haemorrhage:

- Spotting – staining or streaking noted on underwear.
- Minor haemorrhage – blood loss less than 50 ml which has settled.
- Major haemorrhage – blood loss of 50-1000 ml, with no clinical signs of shock.
- Severe major haemorrhage - blood loss greater than 1000ml and/or signs of shock.

If a pregnant woman/person in labour has vaginal blood loss typical of a ‘show’, CG1196 Care in labour should be followed.

Please see Appendix 2: Antepartum/Intrapartum Haemorrhage Proforma.

If the bleed is assessed as being significant or recurrent by the obstetrician, a new plan will need to be decided. Once plan has been agreed and FGR risk amended please inform the Antenatal Clinic via email:
Worthing: uhsussex.wor.antenatalclinic@nhs.net
or
SRH: antenatalclinic1@nhs.net
to ensure the appropriate care planning is arranged.

5.2 Causes

- Placenta praevia
- Placental abruption
- Vasa praevia
- Local causes
- Undiagnosed
- Uterine rupture (CG1151 Uterine rupture guideline)

Pregnant women/people should be advised to report all vaginal bleeding to their health professional.

All patients presenting with significant vaginal bleeding or a suspicion of concealed bleeding must be admitted to hospital. The initial assessment should be carried out on the delivery suite. Priority must be given to assessing maternal and fetal well-being.

Haemorrhage should be considered when classic signs of hypovolaemia are present (tachycardia and/or agitation are late signs of hypotension) even in the absence of revealed bleeding. Recurrent bleeding, pain or agitation should be seen as 'red flags' in women/people with placenta accreta and they should be advised to remain in hospital.

Whilst significant haemorrhage may be apparent from observed physiological disturbances, young fit pregnant women/people compensate remarkably well. A tachycardia commonly develops but there can be a paradoxical bradycardia. Hypotension is always a very late sign, therefore ongoing bleeding should be acted on without delay.

5.3 Complications of APH & intrapartum haemorrhage

Maternal	Fetal
• Anaemia • Infection • Shock • Renal tubular necrosis • Consumptive coagulopathy • Postpartum haemorrhage • Prolonged hospital stay • Psychological sequelae • Complications of blood transfusion	• Hypoxia • Small for gestational age & growth restriction • Prematurity • Fetal death

6.0 Placenta praevia

(RCOG GTG 27a 2018)

Placenta praevia is defined as bleeding from a placenta implanted wholly or partly in the lower uterine segment and classified as:

- Placenta praevia: the placenta covers the internal os.
- Low lying placenta (previously minor placenta praevia): the leading edge is in the lower uterine segment, but does not cover the internal os. On transvaginal scan, low lying placenta praevia is confirmed when the placenta is less than or equal to 20 mm from the internal os.
- Placenta accreta: a morbidly adherent placenta (including accreta, increta and percreta).

The term placenta praevia should be used when the placenta lies directly over the internal os. For pregnancies at more than 16 weeks of gestation the term low-lying placenta should be used when the placental edge is less than 20 mm from the internal os on transabdominal or transvaginal scanning (TVS).

6.1 Risk factors

- Previous caesarean section
- Previous placenta praevia
- Previous termination of pregnancy
- Multiparity
- Maternal age over 40 years
- Smoking
- Multiple pregnancy
- Assisted conception

6.2 Diagnosis

Usually made at the routine anomaly ultrasound examination, but should be suspected in any pregnant woman/person with vaginal bleeding and a high presenting part or abnormal lie, **irrespective of previous imaging results**. If images are available from the 20 week scan, these can be rechecked in the event of bleeding.

6.3 Antenatal screening and management of placenta praevia

- If placenta praevia is suspected at the anomaly scan, the diagnosis should be confirmed by transvaginal scan (TVS). 25-60% will be reclassified by use of TVS.
- Women/people diagnosed with a low lying placenta at the anomaly scan should be given the RCOG patient information leaflet: Placenta praevia, placenta accreta and vasa praevia should be given following the scan with appropriate counselling.

Follow up should be arranged for all women/people where the placenta covers or overlaps the os at the anomaly scan.

- Asymptomatic women/people with suspected low lying placenta should be rescanned at 32 weeks. If the leading edge of the placenta is greater than 20mm from the internal os, a vaginal delivery can be anticipated, however if the head fails to engage by term, Consultant review should be arranged. If a low lying placenta persists and the woman/person is asymptomatic, a further TVS at 36 weeks can be performed to inform discussion mode of birth (RCOG 2018).
- Asymptomatic women/people with suspected placenta praevia or a suspicion of placenta accreta should be rescanned at around 32 weeks to clarify the diagnosis and allow planning for further imaging and birth (See section 7.0 for management of suspected placenta accreta).
- Cervical length measurement may help facilitate management decisions in asymptomatic women/people with placenta praevia. A short cervical length on TVS before 34 weeks of gestation increases the risk of preterm emergency delivery and massive haemorrhage at caesarean birth (RCOG 2018).

6.4 Inpatient/outpatient management of placenta praevia

- Pregnant women/people with placenta praevia in the third trimester should be counselled about the risks of preterm birth and haemorrhage, and their care should be tailored to their individual needs.
- Outpatient management should take into consideration proximity to the hospital, transport, any communication issues, previous bleeding episodes, haematology laboratory results, and acceptance of receiving donor blood or blood products. Pregnant women/people should be advised to attend immediately on experiencing any bleeding, contractions or pain, including vague suprapubic period-like symptoms.
- Women/people with placenta praevia in the third trimester, or who have had bleeding, may be advised to avoid intercourse.
- Availability of blood — inpatients with bleeding, should have a current group and save (lasts 72 hours).
- Women/people with atypical antibodies are a high risk group and their care should be discussed with the Haematologist and blood bank.

6.5 Signs suggestive of placenta praevia

- The bleeding is usually fresh and painless and may vary from minimal to profuse.
- Abdominal examination reveals a soft non-tender uterus, though secondary uterine contractions may occur.
- Unengaged head-which may be difficult to palpate with the ‘boggy’ lower segment.
- Malpresentation.
- The definitive diagnosis usually relies on ultrasound imaging.

N.B: A digital vaginal examination is potentially an extremely dangerous procedure when placenta praevia is suspected and must never be carried out unless in theatre with the ability to perform an immediate caesarean section. A careful speculum examination may be indicated.

6.6 Acute management of placenta praevia

Management is dependent on:

- Amount of bleeding
- Condition of the mother and fetus
- Location of the placenta
- Stage of the pregnancy

On admission take a full blood count, U&Es and a group and save; and liaise with the haematologist.

Gestation more than 37 weeks or if significant bleeding continues and delivery is indicated:

- Discuss with consultant on call. **Obstetric consultants and consultant anaesthetists should attend all caesarean sections for placenta praevia**.
- Prepare for theatre.
- Inform Blood Transfusion and request 4- 6 units of blood to be cross-matched. An O-negative paediatric pack for the baby is available from blood transfusion on request; should the baby require it.
- Proceed to caesarean section if diagnosis confirmed.
- If the diagnosis is in doubt, if possible perform an ultrasound scan or perform a careful examination in theatre. If fetal head is below a low lying placenta, perform artificial rupture of membranes to induce labour; commence continuous electronic fetal heart rate monitoring.
- If placenta praevia is confirmed proceed to caesarean section.
- Cell salvage should be set up for collection in all women with placenta praevia.
- A paediatrician should be present at delivery because of the risk of fetal haemorrhage.

Gestational age less than 37 weeks and/or not significantly bleeding:

- Maintain nil by mouth, and intravenous infusion until the clinical situation becomes clearer.
- Send group and save to laboratory, low threshold for cross matching blood
- Confirm diagnosis of placenta praevia by ultrasound scan.
- If contractions and bleeding have settled patient can be transferred to the antenatal ward.
- A plan for further management should be made by the Consultant Obstetrician.
- Late preterm (34+0 to 36+6 weeks of gestation) birth should be considered for women/people presenting with placenta praevia or a low-lying placenta and a history of vaginal bleeding or other associated risk factors for preterm birth.

- Delivery timing should be tailored according to antenatal symptoms and, for women/people presenting with uncomplicated placenta praevia, delivery should be considered between 36+0 and 37+0 weeks of gestation.
- Whenever possible, CTG monitoring should be performed where knowledge of fetal condition will influence the timing and mode of birth.

6.7 Corticosteroid prophylaxis

In women/people at higher risk of preterm birth, a single course of antenatal corticosteroid therapy is recommended between 34^{+0} and 35^{+6} weeks of gestation for pregnant women/people with a low-lying placenta or placenta praevia and is appropriate prior to 34^{+0} weeks of gestation (See CG20013 Preterm birth risk pathway).

7.0 Morbidly adherent placenta (including placenta accreta, increta and percreta

The highest risk factors for the development of a morbidly adherent placenta (including placenta accreta, placenta increta and placenta percreta) are placenta praevia and previous Caesarean birth (or uterine surgery). The risk in the presence of both of these risk factors is around 5-10%.

Placenta accreta should be suspected in any pregnant woman/person with an anterior placenta praevia and a previous scar.

7.1 Antenatal screening for morbidly adherent placenta (including placenta accreta, placenta increta and placenta percreta)

- If the pregnant woman/person has had previous uterine surgery (e.g. caesarean birth, myomectomy), a TVS should be performed at the next available routine appointment. The scan should be carried out by a consultant who is experienced in diagnosing placenta accreta spectrum disorder (PAS). The following should be assessed:
  - Placental lacunae.
  - Abnormal vessels on colour Doppler.
  - Loss of retro-placental clear space.
  - Bulging mass into the urinary bladder.
- If a consultant with the relevant experience is not available at Worthing ANC, a referral should be made to St Richard's ANC.
- If placenta accreta is confirmed or suspicion of placenta accreta continues after this repeat scan, a referral to a Tertiary unit should be made for 32 weeks or after to allow for birth planning.
- Women/people with uncomplicated placenta accreta, planned birth at 35+0 to 36+6 weeks of gestation provides the best balance between fetal maturity and the risk of unscheduled delivery.
- Consideration may be made for an antenatal MRI only if the local experience and expertise exists for making a diagnosis of placental morbid adherence.
- The referral to the St George's Fetal Medicine Unit should indicate if a second opinion is being requested and/or transfer of care if the diagnosis is confirmed.

7.2 Management of women/people with suspected morbidity adherent placenta:

- Discuss the interventions available for birth with women/person suspected to have morbidly adherent placenta.
- Discussion and consent should include possible interventions (such as hysterectomy, leaving placenta in situ, cell salvage and interventional radiology (IR)).
- A consultant obstetrician with appropriate experience should plan and directly supervise the birth.
- There should be multidisciplinary involvement in pre-operative planning.
- A plan should be made including which other healthcare professionals need to be present at birth.
- A consultant obstetric anaesthetist should plan and directly supervise anaesthesia at delivery.
- Ensure sufficient cross-matched blood and blood products are readily available.
- A senior haematologist is available for advice.
- An experienced paediatrician is present.
- There should be a level 2 critical care bed locally available.
- There should be a clear strategy for the management of unpredictable PPH within the department. Where IR services are not available locally or there is no continuous IR on call, it should be ensured that there is an agreed formal arrangement for the provision of these services either with a larger service nearby or through formation of a network with surrounding organisations.

(South West Thames Regional Protocol for Screening, Diagnosis and Management of Morbidly Adherent Placenta - St George's University Hospitals Foundation Trust 2014).

8.0 Placental abruption

Placental abruption is defined as bleeding due to the premature separation of a normally situated placenta. The bleeding is from maternal venous sinuses and may be revealed, partly revealed or concealed.

8.1 Risk factors

- Abruption in previous pregnancy (most predictive).
- Hypertension/gestational hypertension/pre-eclampsia.
- Smoking and drug misuse.
- Obesity and low BMI.
- Trauma (consider domestic violence).
- Fetal growth restriction.
- Polyhydramnios.
- Increased maternal age.
- Assisted conception.
- Multiparity.
- Premature rupture of membranes.
- Intrauterine infection.

8.2 Signs suggestive of abruption

- A tense, tender, irritable uterus.
- Co-existing pre-eclampsia.
- Maternal haemodynamic compromise (shock) out of proportion to vaginal loss.
- History of previous placental abruption.

8.3 Assessment on admission

- Full clinical history including whether pain exists with haemorrhage.
- Identification of any risk factors.
- Clinical examination.
- Observations-pulse, respirations, blood pressure and temp).
- CTG (if over 26 weeks).
- Fetal heart check (if under 26 weeks).
- Ultrasound if fetal heart not detected as above.

8.4 Management of minor or small placental abruption

- Pregnant women/people presenting with spotting who are no longer actively bleeding and where placenta praevia has been excluded, can go home if clinical assessments are reassuring.
- If abruption is small and the fetus is not compromised and the mother/person is well, a conservative approach is possible.
- Admit for at least 24 hours post bleed (or until bleeding has stopped), and consider an ultrasound scan is carried out to exude placenta praevia (if not previously performed) and assess fetal growth and wellbeing.
- Insert a grey venflon and take bloods for full blood count and group & save.
- Following single or recurrent episodes of APH from a cervical ectropion, subsequent antenatal care need not be altered.
- Following APH from placental abruption or unexplained APH, the pregnancy should be reclassified as high risk and subsequent antenatal care should be Consultant led. Serial scans for growth and fetal surveillance should be considered.

Consider delivery after 38 weeks gestation, especially if recurrent/significant bleeds.

8.5 Management of major placental abruption

The specific treatment for placental abruption causing major haemorrhage is rapid birth after adequate maternal resuscitation.

- If the fetus is alive and viable, caesarean birth is usually indicated unless a rapid vaginal birth is anticipated. The fetal heart should be carefully and continuously monitored.

- In cases where the fetus is dead or non-viable, labour should be induced unless the maternal/birthing parent condition indicates immediate birth by caesarean birth (See CG1120 Intrauterine death including induction for a fetal abnormality).
- Labour generally progresses well after induction. If this does not occur caesarean birth may be necessary even in the presence of a non-viable or dead fetus.
- Post-delivery a syntocinon infusion (40 international units in 500 mls normal saline at 125 mls per hour) should be commenced and continued for at least 4 hours due to risk of postpartum haemorrhage consider risk of disseminated intravascular coagulation (DIC).
- Monitor blood pressure closely for underlying pre-eclampsia/ HELLP syndrome.

9.0 Vasa praevia

Vasa praevia is defined as fetal blood loss associated with velamentous insertion of the umbilical cord where one of the fetal vessels crosses the membranes between the presenting part of the fetus and the internal os of the uterus. The vessel may be torn when the membranes rupture and a small amount of fetal bleeding will have a severe effect on the fetus causing bradycardia or death.

9.1 Diagnosis

In the antenatal period, in the absence of vaginal bleeding, there is no method to diagnose vasa praevia clinically. It can be accurately diagnosed with transvaginal colour Doppler ultrasonography. For cases identified in second trimester, imaging should be repeated in the third trimester to confirm persistence. Vasa praevia can resolve in up to 15% of cases with advancing gestation.

Vasa praevia should not be routinely screened for at the anomaly scan, as it does not fulfil the criteria for a screening programme.

During labour, in the absence of vaginal bleeding, vasa praevia can occasionally be diagnosed clinically by the palpation of fetal vessels in the membrane during vaginal examination.

9.2 Management

In cases of vaginal bleeding, especially associated with membrane rupture and fetal compromise, delivery should not be delayed to try and diagnose vasa praevia. In these cases, delivery should be by category 1 caesarean birth.

In confirmed cases of vasa praevia at term, timely delivery should be carried out by elective caesarean birth (CS). Remember use of corticosteroids where elective caesarean birth is planned before 39 weeks.

10.0 Local causes

This is bleeding from the cervix or vagina.

- Usually due to ectropion or polyps but cervicitis and vaginitis also described.
- Cervical cancer is an uncommon cause of APH, but must be excluded by inspection of the cervix (speculum examination) in all women/people with recurrent bleeding in pregnancy. If any concerns, refer to senior obstetrician.
- Pregnant women/people with recurrent admissions for persistent bleeding of unknown origin, should be reviewed by an experienced obstetrician and a speculum examination should be performed to exclude cervical cancer.
- Please see CG21008 Management of high risk maternal medicine conditions section on 'Suspected cervical cancer'.

11.0 APH of unknown origin

In many cases, the cause of bleeding is undetermined as it was assumed that these bleeds are as a result of a minor degree of placental separation, they were commonly known as "marginal bleeds".

Pregnancies complicated by an unexplained APH are also at increased risk of adverse maternal perinatal outcomes. Whether or not this is the case, the decision for timing, place and mode of birth should be at consultant level.

12.0 Intrapartum haemorrhage

If a woman/person in labour has any vaginal blood loss other than a 'show', possible causes of bleeding should be considered:

- Placental abruption.
- Placenta praevia.
- Uterine rupture.
- Vasa praevia.

Take a history of the bleeding, asking about:

- Associated symptoms, including pain.
- Specific concerns the woman/person may have.
- Previous uterine surgery.
- Check previous scans for placental position.
- Assess the volume of blood loss and characteristics of the blood, such as colour, and presence of clots or amniotic fluid.

Obstetrician to review and carry out a physical examination, including:

- Vital signs.
- Abdominal palpation.
- Speculum examination.
- Vaginal examination if placenta praevia has been excluded.
- Fetal heart auscultation and commence CTG if more than 26 weeks.
- Bloods for full blood count, U&Es blood group.

A plan of care should be documented following a review by a senior obstetrician and after discussion with the pregnant woman/person and their birth partner. The labour ward co-ordinator and senior obstetric anaesthetist and paediatrician should be informed of admission. If stable this should include:

- Establishing venous access.
- Maternal monitoring.
- CTG monitoring.

If a woman/person with intrapartum bleeding has a large blood loss or her condition causes concern, management should include:

- IV fluids and ensure fluid balance monitoring is performed.
- Fetal monitoring.
- Taking blood for clotting studies and blood gases.
- Cross matching blood.
- Triggering the local major haemorrhage protocol.
- Use of amniotomy or oxytocin.
- Expediting the birth.
- Obstetric consultant support.

13.0 Emergency management of acute antepartum & intrapartum haemorrhage (see appendix 1)

The management will usually be led by the Obstetric Registrar and include the following measures:

- **Early involvement of anaesthetist if resuscitation required.**
- If woman/person unstable call for help: **'2222' Obstetric Haemorrhage**, (and **Neonatal Emergency** - if indicated).
- If the woman/person is in a compromised state, rapid assessment and resuscitation should be commenced. In this situation, the woman/person is the priority and should be stabilised prior to establishing the fetal condition. If woman/person is unstable they should be immediately transferred to theatre for stabilisation.
- Fluid resuscitation and blood transfusion should not be delayed because of false reassurance from a single haemoglobin result.
- In a woman/person who is bleeding and is likely to develop a coagulopathy or has evidence of a coagulopathy, it is prudent to give blood components before coagulation indices deteriorate. This decision should be sanctioned by the consultant haematologist.
- Regular observations of maternal/birthing parent pulse, blood pressure, respirations, oxygen saturation and urine output, vaginal blood loss and uterine activity based on the clinical situation, every 15 minutes or more if acute; every 30 minutes to hourly if more stable. Document these on MEOWS chart and refer if indicated.

- Insert 2 intravenous infusion lines (16 gauge grey cannula) and start IV Hartmanns.
- Send a serum group and save and order **immediate** cross-matching of 4-6 units (depending on clinical picture).
- Request urgent haemoglobin, platelet, clotting studies and U&E's.
- Give acid aspiration prophylaxis.
- The paediatric registrar and Special Baby Care Unit should both be informed if delivery of a compromised or premature baby seems likely.
- CTG should be performed (greater than 26 weeks).
- Ultrasound evaluation of placental site and liquor volume should be performed on delivery suite if possible by the registrar. If fetal size assessment or a more expert opinion is required this may have to wait until an ultrasonographer or obstetrician with appropriate skills is available.
- Actively bleeding or unstable women/people should not be moved to the ultrasound department.
- Anti D should be given to rhesus negative women/person if delivery not imminent (independent of whether routine antenatal prophylactic Anti D has been given).
- Consider steroids and magnesium sulphate if significant bleed or if bleed precipitates pre-term labour (see CG20013 Preterm birth risk pathway).

Tocolysis is contraindicated in the presence of a bleed.
Discuss with obstetric consultant.

14.0 Management of extremely preterm (24-26 weeks) pregnancy with APH

- Regardless of gestation, the woman/person's life should take priority. They should be stabilised and resuscitated before any decision is made regarding birth.
- A **senior** paediatrician/neonatologist **should** be involved in the counselling of women/people at risk of extremely preterm birth.

15.0 Post-delivery management of major APH or intrapartum haemorrhage

Following a major APH or intrapartum haemorrhage women/people are at an increased risk of postpartum haemorrhage, DIC (30%), ARDS and renal and liver failure.

- Prescribe and administer thromboprophylaxis; as there is increased risk of venous thromboembolism as soon as risk of haemorrhage is reduced.
- Consider the most appropriate place for patients to be nursed e.g. delivery suite, CCU.
- Consider CCU if large blood loss or co-morbidities.
- Patients are often anaemic and may require further transfusions.
- Renal function recovery may be slow and should be closely monitored by hourly urine measurement and daily U&E's.
- Transfer to postnatal ward should only occur after obstetric review and when 4 hourly observations are required.

- Patients should be seen by their consultant before discharge. A debrief should take place allowing discussion of events with the woman/person and their partner with the opportunity to ask questions.
- Offer 'Birth Afterthoughts' service and 6/52 consultant postnatal appointment for thrombophilia screening and planning of future pregnancies.
- Where the APH has resulted in fetal demise, good communication between the maternity unit and the woman/person's general practitioner and community midwife is crucial. These issues are addressed in RCOG GTG55 Late intrauterine fetal death and stillbirth (2010). It may be appropriate for the consultant to contact the general practitioner by telephone.
- Management of a major APH should be included in obstetric skills drills.

16.0 Audit

Suggested auditable standards (RCOG):

- Evidence of consultant attendance at all CS for placenta praevia.
- Evidence that women/people with APH and less than 34+6 weeks gestation receive corticosteroids.
- Documented management plan by consultant obstetrician if placenta praevia or placenta accreta suspected or confirmed.

References

Confidential Enquiry into Maternal and Child Health. (2007). Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer - 2003-2005. London: CEMACH.

MBRRACE-UK (2019). Saving Lives, Improving Mothers' Care: Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015-17. MBRRACE-UK 2019

NICE (2019) NG121 Intrapartum care for women with existing medical conditions or obstetric complications and their babies

RCOG (2018) Placenta praevia, placenta accreta and vasa praevia. Diagnosis and management. (Green-top 27a) RCOG 2018

RCOG (2011) Antepartum Haemorrhage. Greentop Guideline No. 63.

RCOG (2018) Placenta praevia, placenta accreta and vasa praevia. Information for you. https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi- placenta-praevia-placenta-accreta-and-vasa-praevia.pdf

Appendix 1: Acute management of significant APH & intrapartum haemorrhage

ON ADMISSION

- Inform obstetric registrar/consultant of admission.
- Assess blood loss & maternal general condition - Airway, Breathing, Circulation.
- Cannulate - X2 grey venflon & bloods for FBC, U&Es, clotting. Cross-match 4-6 units.
- Give acid aspiration prophylaxis.
- Determine cause of bleeding.
- Determine gestation clinically +/- USS.
- Abdominal palpation.
- CTG if greater than 26 weeks gestation (FH if under 26/40).
- If Rhesus negative, Kleihauer required and request Anti D.
- Consider steroids & magnesium sulphate (See CG20013 Preterm birth risk pathway)

PLACENTAL ABRUPTION

Without maternal or fetal **compromise**	**With** maternal or fetal **compromise**
• Inform & discuss with consultant. • Consider induction of labour if appropriate. • Observe closely for signs of DIC. • Once stable transfer to ward with 4 hourly BP, T, PR & PV loss.	• Call for HELP • '2222' Obstetric Emergency & Neonatal Emergency calls. • Proceed to immediate CS unless vaginal delivery is imminent. • Call consultant. • Observe closely for DIC.

PLACENTA PRAEVIA

Without maternal or fetal **compromise**	**With** maternal or fetal **compromise**
• Inform & discuss with consultant. • Once stable transfer to antenatal ward with 4 hourly BP, TPR and PV loss. • Daily CTG and review by consultant for ongoing plan.	• Call for HELP. • 2222 Obstetric Emergency & Neonatal Emergency calls. • Prepare for Category 1 caesarean section. • Summon on-call consultant obstetrician.

INTRAPARTUM HAEMORRHAGE

Without maternal or fetal **compromise**	**With** maternal or fetal **compromise**
• Inform & discuss with obstetrician. • Consider amniotomy. • Consider oxytocin augmentation. • Observe closely for signs of DIC.	• Call for HELP • '2222' Obstetric Emergency & Neonatal Emergency calls. • Proceed to immediate CS unless vaginal delivery is imminent. • Call consultant. • Manage risk of PPH. • Observe closely for DIC.

Appendix 2: Antepartum / Intrapartum Haemorrhage Proforma

PLEASE DO NOT PRINT FROM GUIDELINE

Antepartum / Intrapartum Haemorrhage Proforma

Name Hospital number D.O.B *ATTACH PATIENT LABEL*	Date: Time: *(Using main wall clock)* **Booking weight below 60kgs: Yes or No**		
	Time help summoned		
	Emergency Bell:		
	2222 Obstetric Haemorrhage(if unstable):		
	2222 Neonatal Emergency (if indicated):		
	Early involvement with anaesthetist required		

Spotting Staining or streaking noted on underwear.	**Minor** Less than 50mls which has settled.	**Major** 50-1000mls with no clinical signs of shock.	**Severe Major** Greater than 1000mls and/ or signs of shock.

ABC approach	Action	Completed (Tick ✓)	Time	By whom +/-Signature
Airway	Maintain airway Keep Warm			
Breathing	Check breathing Administer high flow oxygen via non-rebreather mask 15L/Min			
	Oxygen saturations %			Transfer to observation bundle (MEOWS)
	Respiration rate			
Circulation	Lie flat with manual uterine displacement or left tilt or leg raise if indicated			
	Maternal pulse rate			Transfer to observation bundle (MEOWS)
	Blood pressure			
	Insert cannulas x 2 (16g grey)			Document in observation bundle (VIP score)
	Take bloods for FBC - U&E - Clotting studies			
	Cross match 4 units			
	Administer crystalloid 1st Litre			Transfer to observation bundle (fluid balance chart)
	Administer crystalloid 2nd litre			
	Consider: O negative blood transfusion			
Assess Fetal wellbeing	Commence CTG (if greater than 26 weeks)			
	Consider USS on CLS/DS for FH, placental site			
	Administer Anti D to resus negative person (even if they have received antenatal prophylactic Anti-D)			
	Consider Steroids			
	Consider magnesium sulphate infusion (for significant bleed or bleed precipitates preterm labour)			

Blood loss (preferably weighed)	Time: Initial amount:	Time: On-going amount:	Time: On-going amount:	Time: On-going amount:
Plan for birth				**Obstetrician's signature**

APH & Intrapartum Haemorrhage Proforma v1.0 Sept 2022 Page 1 of 2