Sherwood Forest Hospitals
NHS Foundation Trust

TITLE: ANTEPARTUM HAEMORRHAGE GUIDELINE

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Scope/ Target Audience: (delete as applicable and/ or describe)	**Specialty/ Department** • Maternity
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Lead Division:	Women & Children's
Lead Specialty/ Department: (Or Division if 'divisionally' owned)	Maternity
Lead Author: (position/ role and name)	[redacted] – Obstetric Consultant
Co-Author(s): (position/ role and name if applicable)	Not Applicable
Sponsor (position/ role):	Service Director – Maternity and Gynaecology

Name the documents here or record not applicable *(these are documents which are usually developed or reviewed/ amended at the same time – ie a family of documents)*	
Associated Policy	N/A
Associated Procedure(s)	N/A
Associated Pathway(s)	N/A
Associated Standard Operating Procedure(s)	N/A
Other associated documents e.g. documentation/ forms	N/A

Consultation Undertaken:	V6.1 • Membership of Maternity & Gynaecology CG Group V6.0 • Consultants • Faye Eastwood • Members of the Maternity & Gynaecology CG Group

Template control:	v2.0 September 2023

Amendments from previous version(s)

Version	Issue Date	Section(s) involved (author to record section number/ page)	Amendment (author to summarise)
6.1	August 2024	Early review undertaken	• Emphasis added on clinical importance of recurrent bleeds in pregnancy and immediate assessment of fetal and maternal condition in context of even minor bleeding. Evidence base updated.
6.2	August 2024	Early review undertaken	• Whole document review, minor amends made to spelling and grammar.

CONTENTS

1 INTRODUCTION / BACKGROUND

Antepartum Haemorrhage (APH) is defined as bleeding from or in to the genital tract, occurring from 24+0 weeks of pregnancy and prior to the birth of the baby. The most important causes of APH are placenta praevia and placental abruption, although these are not the most common. APH complicates 3–5% of pregnancies and is a leading cause of perinatal and maternal mortality worldwide.

APH has a heterogeneous pathophysiology and cannot be predicted.

2 SCOPE OF DOCUMENT (including Related Trust Documents)

This clinical document applies to:

Staff groups

- Midwives
- Obstetricians
- Ultrasonographers

Clinical areas

- Community midwifery
- Antenatal Suite/Pregnancy Day Care (PDC) and Sherwood Women's Centre (SWC)
- Maternity Ward
- Sherwood Birthing Unit (SBU)

Patient groups

- Antenatal women

Exclusions

- None

Related Trust policies and guidelines and/or other Trust documents

- Management of placenta praevia and Placenta Accreta Guideline May 2023
- Post Partum Haemorrhage Guideline November 2023
- Stillbirth, IUFD and Termination of Pregnancy for Fetal Abnormality Guideline January 2024
- Maternity escalation policy: November 2021
- Antenatal free fetal DNA screening programme for fetal RhD status in RhD negative women SOP December 2021

3 DEFINITIONS/ ABBREVIATIONS

Trust	Sherwood Forest Hospitals NHS Foundation Trust
Staff	All employers of the Trust including those managed by a third party on behalf of the Trust
APH	Antepartum Haemorrhage
USS	Ultrasound Scan

SBU	Sherwood Birthing Unit
PDC	Pregnancy Day care
SWC	Sherwood Women's Centre (Newark)
CTG	Cardiotocograph
PV	Per vaginum
BP	Blood Pressure
FGR	Fetal Growth Restriction
SGA	Small for Gestational Age
MEWS	Maternity Early Warning Score
DIC	Disseminated Intravascular Coagulation

4 ROLES AND RESPONSIBILITIES

All staff involved with the care of pregnant women are responsible for:

- Keeping accurate, contemporaneous appropriate records.
- Practice according to the Trust guidelines.
- Assessing maternal and fetal wellbeing, including quantifying estimated blood loss over time, and reporting findings to the obstetrician to enable the management plan to be made.
- Alerting all necessary staff as soon as bleeding has been identified and downgrading urgency once assessment has taken place including after telephone contact.
- It is the responsibility of the obstetric team to assess a woman and ensure appropriate management plan is made and document in accordance with the maternity guidelines.

5 GUIDELINE DETAILS (including Flowcharts)

5.1 Classification of APH:

There are no consistent definitions of the severity of APH. It is important therefore, when estimating the blood loss, to assess for signs of clinical shock.
Any bleeding antenatally and intrapartum needs thorough assessment including history and examination.

- Spotting – staining, streaking or blood spotting noted on underwear or sanitary protection.
- Minor Haemorrhage – blood loss less than 50 ml that has settled.
- Major Haemorrhage – blood loss of 50–1000 ml, with no signs of clinical shock.
- Massive Haemorrhage – blood loss greater than 1000 ml and/or signs of clinical shock.
- Recurrent APH is the term used when there are episodes of APH on more than one occasion.

5.2 Causes of APH:

Bleeding in pregnancy is not normal, it can be unpredictable and the causes include:

- Placenta Praevia) account for around 50% of cases
- Placenta abruption) of bleeding in late pregnancy
- Marginal bleed
- Local causes
- Heavy show
- Vasa praevia
- Uterine rupture
- unexplained APH

The occurrence of repeated bleeding in pregnancy should be documented in maternal pregnancy records to help with continuous assessments and risk assessment in pregnancy.

5.3 Complications of APH:

- **Maternal complications:** Anaemia, infection, maternal shock, Renal tubular necrosis consumptive coagulopathy, postpartum Haemorrhage, prolonged hospital stay, psychological sequelae, complications of blood transfusion (Rh sensitization)
- **Fetal complications:** Fetal hypoxia, small for gestational age and fetal growth restriction, prematurity (iatrogenic and spontaneous), fetal death.
  Consideration should be made of vasa praevia as a potential cause of APH (particularly if bleeding after SROM/ARM) - rare (1 in 1200- 1 in 5000 births) cause of fetal bleeding due to rupture of fetal vessels traversing the membranes. If any sudden abnormalities in the fetal heart rate need to expedite delivery, informing neonatal team that there is concern that the baby may be severely anaemic due to blood loss.

5.4 Management

5.41 Telephone Assessment

When taking a triage call and it is identified that a woman has PV bleeding please ensure that the appropriate sections in the electronic maternity pathway are used to assess blood loss and support classification.

Once assessment complete ensure appropriate decision making in response to classification including the potential requirement of the woman being transferred into hospital by ambulance.

Ensure the midwife in charge of rapid assessments in triage, the coordinator and all appropriate staff are aware of the pending admission of a woman with PV bleeding, making preparations for worse case scenario and de-escalate rather than treat as a benign cause and delay emergency treatment and escalation.

5.42. Initial Face to Face Clinical assessment

Initial clinical assessment in women presenting with APH is to establish whether urgent intervention is required to manage maternal or fetal compromise.

It is best practice to treat with expectation of worse case scenario and de-escalate rather than treat as a benign cause and delay emergency treatment and escalation.

Assess maternal wellbeing
Women presenting with acute persistent bleeding, or those who are unable to provide a history due to a compromised clinical state, should have an immediate assessment of maternal wellbeing and resuscitation should be started immediately.

All women presenting with APH should have their pulse, BP, Temperature Respiration, O2 saturation recorded on MEOWS chart.

If there is no maternal compromise a full history should be taken

- The clinical history should determine whether there is pain associated with the haemorrhage. Placental abruption should be considered when the pain is continuous. Labour should be considered if the pain is intermittent.
- Risk factors for abruption and placenta praevia should be identified.
- The woman should be asked about her awareness of fetal movements and attempts should be made to auscultate the fetal heart.
- If the APH is associated with spontaneous or iatrogenic rupture of the fetal membranes, bleeding from a ruptured vasa praevia should be considered.
- Previous cervical smear history may be useful in order to assess the possibility of a neoplastic lesion of the cervix as the cause of bleeding.

The process of triage includes:

- History-taking to assess co-existing symptoms such as pain.
- An assessment of the extent of vaginal bleeding.
- Potential causes of the bleeding.
- Cardiovascular condition of the mother.
- Assessment of fetal wellbeing.

Examination of the woman should be performed to assess the amount and cause of APH.

It is important to note that bleeding can be concealed.

Abdominal palpation

The woman should be assessed for tenderness or signs of an acute abdomen.

The tense or ‘woody’ feel to the uterus on abdominal palpation indicates a significant abruption.

Abdominal palpation may also reveal uterine contractions.

A soft, non-tender uterus may suggest a lower genital tract cause, bleeding from the placenta or vasa praevia.

Assessment of the fetal wellbeing

Assessment of fetal heart rate should be performed, usually with cardiotocograph (CTG) Ultrasound, if fetal viability cannot be detected using external auscultation.

Speculum examination

A speculum examination can be useful to identify cervical dilatation or visualise a lower genital tract cause for the APH. It can allow for quantifying blood loss and identify ongoing active bleeding.

Digital vaginal examination

A digital vaginal examination should not be performed until an ultrasound has excluded placenta praevia (usually 20 weeks anomaly scan confirmed placental localization). Digital vaginal examination can provide information on cervical dilatation if APH is associated with pain or uterine activity.

Investigations

- FBC.
- Blood group +/- crossmatch.
- Urea, Creatinine and Electrolytes (in compromised state).
- Consider Coagulation screen.
- Kleihauer–Betke test in rhesus D (RhD)-negative women in order to gauge the dose of anti-D immunoglobulin (anti-D Ig) required.

5.5 Subsequent management:

Should be based on initial diagnosis and refer to more detailed management plan contained within the relevant Trust guidance identified in Section 2.

- Where bleeding has been spotting and has settled, and the tests of fetal and maternal well-being are reassuring, the woman can go home. She should be encouraged to contact the maternity unit if she has any further bleeding, pain or alteration in fetal movements
- All women with APH heavier than spotting and women with ongoing bleeding should remain in hospital at least until the bleeding has stopped.
- If there is a risk of preterm delivery antenatal corticosteroids should be given to women between 24+0 and 34+6.
- Consider admission if low lying placenta, abnormal findings or major bleeding noted (50ml to 1000ml with no signs of shock).
- If the woman is currently under midwifery led care, ensure a referral to maternity team care is completed to the clinic of the obstetrician on call at time of their assessment.
- If admission is not indicated, advice on re-attendance should be provided and documented within the electronic patient record, along with a plan for any required follow-up appointments.
- Following single or recurrent episodes of bleeding from a cervical ectropion, subsequent antenatal care pathway need not be changed.
- Women with unexplained APH more than spotting and recurrent episodes should be

transferred to consultant care. Serial ultrasound scans of fetal growth and LV should
- be performed as the fetus is at risk of adverse outcomes including fetal growth restriction (FGR) and small for gestational age (SGA).
- Optimum timing of delivery of women presenting with unexplained APH and no associated maternal or fetal compromise is not established. A senior obstetrician should be involved in determining the timing and mode of delivery.
- Anti-D Ig should be given to non-sensitised RhD-negative women with a Rhd positive fetus predicted from NIPT, or if fetal Rh genotype is unknown 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 if needed at a minimum of 6-weekly intervals following advice from haematologist/blood bank.

5.6 Intrapartum management

- Women in labour with active vaginal bleeding require continuous electronic fetal heart monitoring.
- For women who have experienced one episode of minor APH during the pregnancy, in which there have been no subsequent concerns regarding maternal or fetal well-being, intermittent auscultation is appropriate.
- Women with minor APH with evidence of placental insufficiency (i.e. FGR or oligohydramnios) should have continuous fetal heart monitoring.
- A senior paediatrician/neonatologist should be involved in the counselling of women when extreme preterm birth is likely.
- Women with APH and associated maternal and/or fetal compromise are required to be delivered immediately.
- If the fetus is compromised, a caesarean section is the appropriate method of delivery with concurrent resuscitation of the mother.
- The optimum timing of delivery of women presenting with unexplained APH and no associated maternal and/or fetal compromise is not established. A senior obstetrician should be involved in determining the timing and mode of birth of these women.
- If fetal death is diagnosed, vaginal birth is the recommended mode of delivery for most women (provided the maternal condition is satisfactory), but caesarean birth will need to be considered for some, taking into account maternal choice.
- The postnatal management of pregnancies complicated by major or massive APH should include active management of the third stage of labour, assessment for thromboprophylaxis, debriefing and clinical incident reporting.

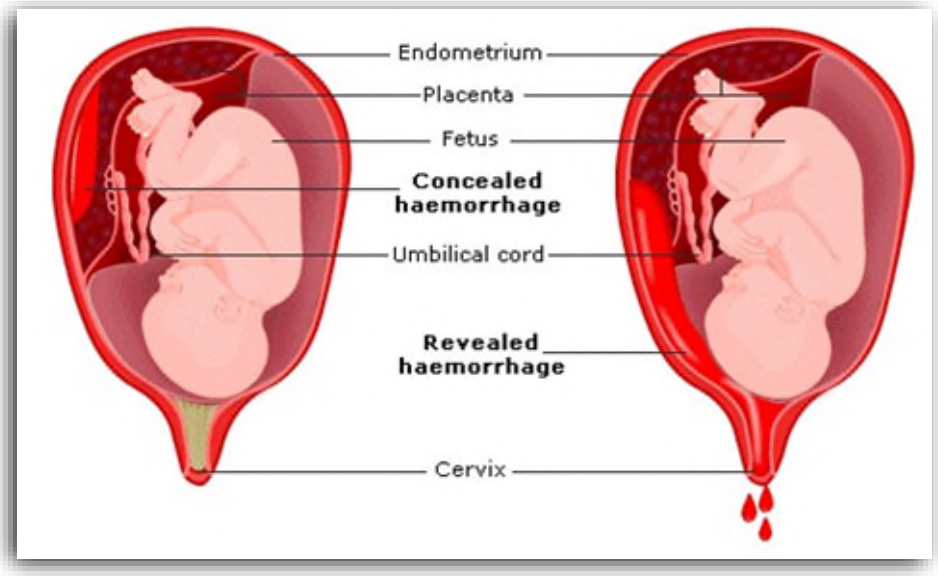
5.7. Placental abruption

Placenta abruption is defined as the premature separation of the normally-sited placenta from the uterus.

The lower limit of gestational age to define placental abruption has changed over a period of years, from 28 weeks down to 20 weeks' gestation.

Abruption is usually an unanticipated emergency. Bleeding is often concealed,

Pathophysiology of placental abruption:



Clinical presentation of placental abruption:

- Placental abruption is a clinical diagnosis on examination of the placenta post-delivery.
- Ultrasound should not be used in the diagnosis of placental abruption, but is useful to confirm fetal viability/death and exclude a placenta praevia.

The features of placental abruption:

- Vaginal bleeding (70–80%) – usually dark blood; however, the bleeding can be concealed, revealed or mixed.
- Abdominal pain (50%) – usually constant, in contrast to uterine contractions due to infiltration of blood into the myometrium.
- Uterine tenderness (70%).
- Uterine contractions (35%) – abruptions can occur in labour or stimulate labour to begin.
- Fetal distress (65%) or intrauterine death (15%).
- Evidence of a disseminated intravascular coagulopathy – non-clotting vaginal bleeding, bleeding from drip sites and skin bruising.
- Maternal circulatory shock (depends on volume of blood loss, which can be concealed).

Risk factors for placental abruption:

Abruption in a previous pregnancy
Smoking
Pre-eclampsia
FGR
Polyhydramnios
Premature ROM
Drug misuse (cocaine and amphetamines)
Abdominal trauma

Management of placental abruption

The management of placental abruption will depend on gestation, the signs and symptoms, the mother's cardiovascular status and any evidence of fetal compromise.

When it occurs at or near term and maternal and fetal condition is reassuring, conservative management is reasonable. This involves induction of labour by amniotomy and syntocinon infusion with the goal of achieving a vaginal delivery.

If there is evidence of fetal compromise and delivery is not imminent, delivery by caesarean section is recommended. If there is haemodynamic compromise of the mother and evidence of DIC, a multidisciplinary approach is essential with the use of blood products to correct coagulopathy.

6 EDUCATION AND TRAINING

Management of a major obstetric haemorrhage element and antepartum haemorrhage of the annual mandatory emergency skills drills day. Mandatory attendance for midwives and obstetricians is required and recorded.

7 MONITORING COMPLIANCE AND EFFECTIVENESS

All cases of antepartum and postpartum haemorrhage will be reported to Datix and reviewed through the MDT weekly meeting any learning from this should be shared.

8 EQUALITY IMPACT ASSESSMENT

- Guidance on how to complete an Equality Impact Assessment
- Sample completed form

Name of service/policy/procedure being reviewed: Management of Antepartum Haemorrhage Guideline			
New or existing service/policy/procedure: Existing			
Date of Assessment: March 2023			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?	b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?	c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality
The area of policy or its implementation being assessed:			
Race and Ethnicity:	None	N/A	N/A
Gender:	Female only	N/A	N/A
Age:	None	N/A	N/A
Religion:	None	N/A	N/A
Disability:	None	N/A	N/A
Sexuality:	None	N/A	N/A

Pregnancy and Maternity:	None	N/A	N/A
Gender Reassignment:	None	N/A	N/A
Marriage and Civil Partnership:	None	N/A	N/A
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation):	None	N/A	N/A

What consultation with protected characteristic groups including patient groups have you carried out?

- None

What data or information did you use in support of this EqIA?

- None

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

- No

Level of impact

From the information provided above and following EqIA guidance document please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment:

Signature: Sharon Tao

Date:
March 2023

9 EVIDENCE BASE/REFERENCES

- RCOG Green top guideline No 63 *Antepartum haemorrhage.* Nov 2011 [accessed online 1.7.15 https://www.rcog.org.uk/globalassets/documents/guidelines/gtg63_05122011aph.pdf]
- Navati, O. B. and Konjie, C. (2011) Bleeding in late pregnancy. In James, D (ed) et al *High Risk Pregnancy management options.* St Louis: Elsevier.
- Knight M, Nair M, Tuffnell D, Shakespeare J, Kenyon S, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2013–15. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2017.https://www.npeu.ox.ac.uk/mbrrace-uk/reports]
- NICE Clinical guidance 62 Antenatal Care 2014. [accessed 1.7.15 http://www.nice.org.uk/guidance/cg62/resources/guidance-antenatal-care-pdf]

10 APPENDICES

Appendix 1 – Principles of management of massive APH (blood loss greater than 1000 ml and/or signs of clinical shock)

Appendix 2 – Basic measures for Haemorrhage up to 1000 ml with no clinical shock

APPENDIX 1

Principles of management of massive APH (blood loss greater than 1000 ml and/or signs of clinical shock)

Personnel required:

- Call experienced midwife (in addition to midwife in charge).
- Call obstetric middle grade and alert consultant.
- Call anaesthetic middle grade and alert consultant.
- Designate one member of the team to record events, fluids, drugs and vital signs.
- Major Obstetric Haemorrhage (MOH) protocol should be triggered through Switchboard on 2222.

Initial management:

Initial management should follow the ABCD pathway.

- **A and B – assess airway and breathing**

  A high concentration of oxygen (10–15 litres/minute) via a facemask should be administered.

- **C – evaluate circulation**

  Establish two 14-gauge intravenous lines; a 20 ml blood sample should be taken and sent for diagnostic tests, including full blood count and assessment of FMH if RhD-negative, coagulation screen, urea and electrolytes and cross match (4 units)

- **D – assess the fetus and decide on delivery**

APPENDIX 2

Basic measures for Haemorrhage up to 1000 ml with no clinical shock:

- Intravenous access (14-gauge cannula x 1).
- Commence crystalloid infusion.

Full protocol for massive Haemorrhage (blood loss > 1000 ml or clinical shock):

- Assess airway.
- Assess breathing.
- Evaluate circulation.
- Oxygen by mask at 10–15 litres/minute.
- Intravenous access (14-gauge cannula x 2).
- Position left lateral tilt.
- Keep the woman warm using appropriate available measures.
- Transfuse blood as soon as possible.
- Until blood is available, infuse up to 3.5 litres of warmed crystalloid Hartmann's solution (2 litres) and/or colloid (1–2 litres) as rapidly as required.
- The best equipment available should be used to achieve rapid warmed infusion of fluids.
- Special blood filters should *not* be used, as they slow infusions.