



**CLINICAL PRACTICE GUIDELINE**

**Antepartum Haemorrhage**

This document should be read in conjunction with the [Disclaimer](#)

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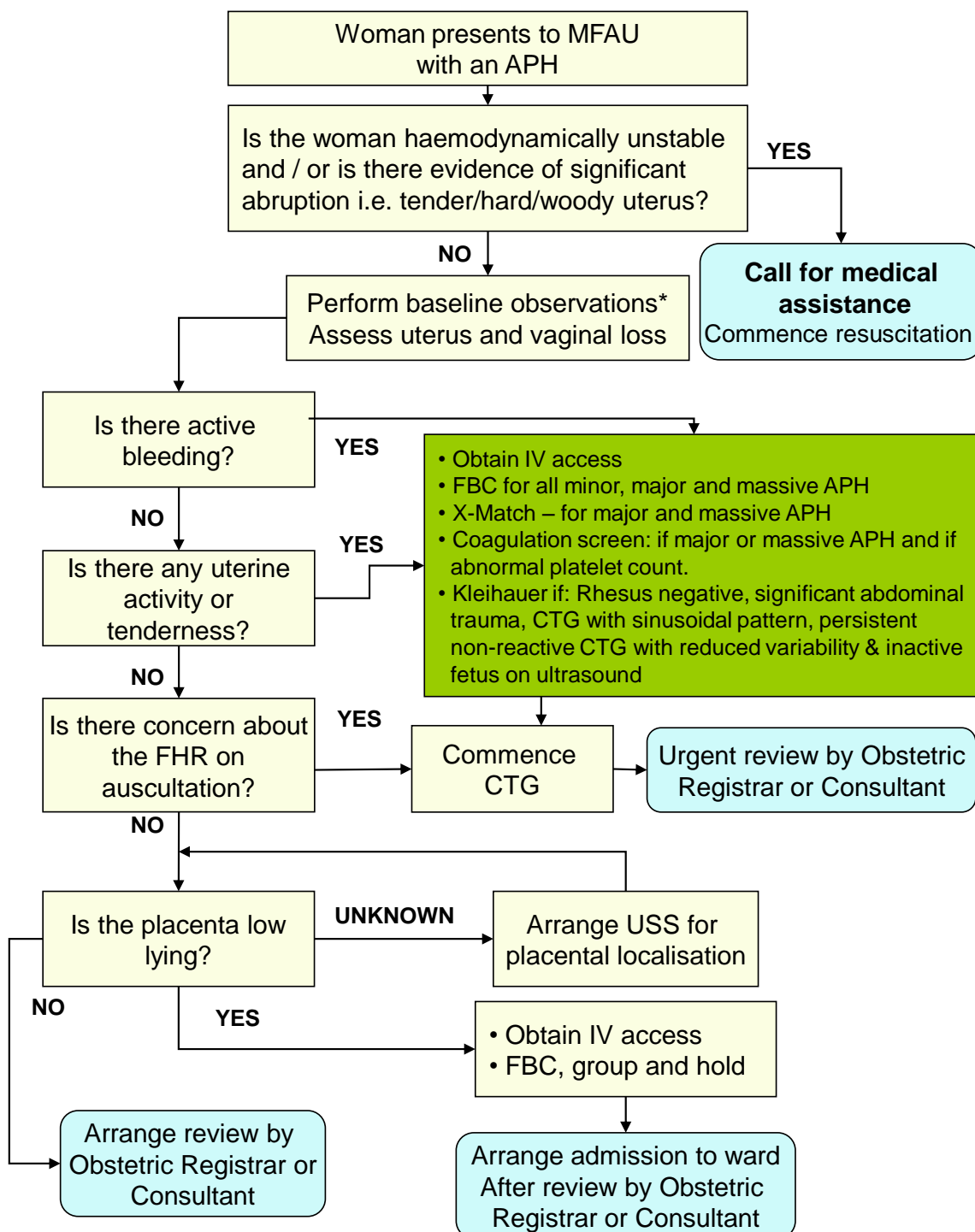
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## Initial management: MFAU antepartum haemorrhage (APH) QRG

This Quick Reference Guide must be used in conjunction with the full guideline. Medical and midwifery staff should be familiar with the contents of the full guideline.

**All women presenting to the Family Birth Centre with either a suspected or confirmed APH must be transferred immediately to MFAU for assessment.**

**FLOW CHART OF INITIAL ASSESSMENT OF WOMAN PRESENTING WITH APH**



\* Temperature, pulse, blood pressure, respiratory rate, oxygen saturation, conscious state, pain, urine output

## Criteria for referral

- Bleeding from the genital tract after 20 completed weeks gestation.
- All women with APH require medical review at Registrar level following initial assessment.

## Definitions

|                             |   |
|-----------------------------|---|
| <b>Spotting:</b>            | Staining, streaking, or blood spotting.                                 |
| <b>Minor haemorrhage:</b>   | Blood loss less than 50 mL, settled.                                    |
| <b>Major haemorrhage:</b>   | Blood loss 50-1000 mL, <b>no</b> signs of clinical shock                |
| <b>Massive haemorrhage:</b> | Blood loss greater than 1000 mL, <b>and/or</b> signs of clinical shock. |

## Assessment

**If the woman is haemodynamically unstable then dial 55 'CODE BLUE MEDICAL', initiate resuscitation & inform the Haematology Consultant.** See also KEMH Clinical Guidelines, Obstetrics & Gynaecology, Clinical Deterioration: Basic Life Support: Adult & Advanced Life Support.

1. Follow the flow chart on the previous page of this guideline for 'Initial assessment of a woman presenting with an APH'.
2. Document history to include reference to the following:
  - onset of vaginal bleeding e.g. spontaneous, post coital, following trauma
  - type of bleeding – fresh, old, watery, or mucoid
  - amount and rate of blood loss
  - pain and uterine activity – e.g. location and type of pain or strength and frequency of contractions
  - continued active bleeding
3. Perform baseline maternal observations (temperature, pulse, blood pressure, respiratory rate,<sup>1</sup> oxygen saturations, conscious state, pain, urine output), observe blood loss and gently assess the uterus/abdomen (e.g. contractions, tenderness, tone).
4. Fast the woman, and position her on her side during clinical assessment.
5. Auscultate the fetal heart rate (FHR). Commence cardiotocography (CTG) if >25 weeks gestation and:
  - Actively bleeding and / or
  - Any uterine activity or tenderness and / or
  - Concern about the FHR on auscultation

**Note:** If the woman is 23- 25 weeks gestation, consultation with the Obstetric Registrar is necessary before commencement of the CTG.

6. Insert a 16 gauge cannula for intravenous (IV) access:
  - if active bleeding continues
  - uterine activity or tenderness is present
  - for major haemorrhage and massive haemorrhage

**Note:** If massive haemorrhage, insert **2** large bore cannulas.
7. Order and perform the following blood tests:
  - **Minor APH** – Full blood picture (FBP), group and hold. If abnormal platelet count, perform a coagulation screen.
  - **Major or Massive APH** – FBP, Cross-match **4** units, coagulation screen, Urea and electrolytes (U&E's), liver function tests (LFT's).
  - **Placenta Praevia** – Management according to blood loss. A Group & hold should be performed weekly, and/or after each readmission to hospital
8. Request a Kleihauer on women in the following circumstances:
  - if Rhesus **negative**
  - if experienced significant abdominal trauma
  - have a CTG showing a sinusoidal pattern
  - have a persistently abnormal CTG with reduced variability and an ultrasound showing an inactive fetus. See KEMH Clinical Guideline, O&G: Fetal Surveillance: [Fetal Heart Rate Monitoring](#)
9. Check recent ultrasound reports for placental location.
10. Attend a speculum examination to assess vaginal bleeding. Note: No digital examinations should be performed.<sup>1</sup>
11. Arrange medical review at Registrar level.
12. Perform ultrasound for placental location, fetal wellbeing and presence of retroplacental clot.
13. Provide [maternal education](#) as appropriate (e.g. risks). See section in this document.
14. Discharge:
  - After assessment and medical review, women with spotting and no complications or presence of placenta praevia and no further bleeding may go home with a follow up antenatal clinic appointment.
  - Women with minor or major APH require hospitalisation. See section in this document for [discharge](#) criteria for these women.
15. Hospital admission (if appropriate):
  - Administer a course of corticosteroids if at risk of preterm birth between 24 - 36+6 weeks gestation.
  - Provide anti-embolic (TED) stockings
  - Encourage bed rest with toilet privileges until no bleeding for 24 hours

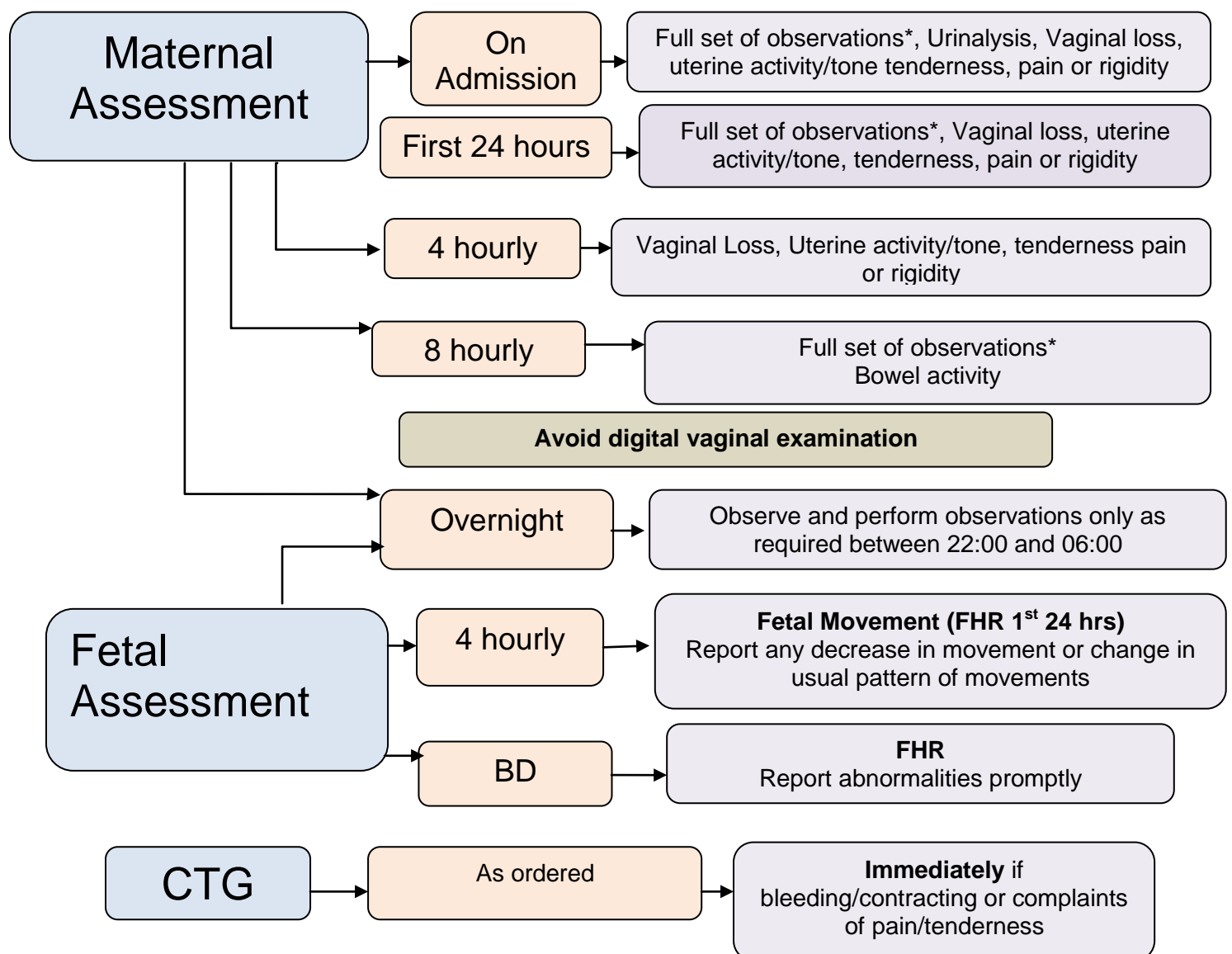
- Arrange paediatric consultation if preterm birth is expected.

## Subsequent management of APH: QRG

This Quick Reference Guide must be used in conjunction with its respective section in this document: **Antepartum Haemorrhage (APH)**. It pertains to care of women who have had an APH and are no longer actively bleeding.

Assessments and care recommended in this guideline must be re-evaluated and adjusted if required, in **the event of a change in maternal or fetal condition**.

Document and report any change to the medical team.



\* Full set of observations includes Blood Pressure, Temperature, Respiration, Oxygen Saturation, pulse and conscious state.

**Procedures to be considered**

- IV bung with 6 hourly normal saline flushes until no fresh bleeding for 24 hours. Medical review prior to removal.
- Blood taken for group and hold OR cross-match 4 units
- Corticosteroids
- Anti- D

**Education**

- Antepartum Haemorrhage
- Plan of care, tests and procedures
- Caesarean birth
- Preterm birth
- Special Care Nursery
- Breastfeeding

**Activity**

- Rest in bed with toilet privileges until there is no fresh bleeding for 24 hours.
- Encourage compression stocking until fully mobile.

**Documentation**

- MR 004- Obstetric Special Instruction Sheet
- MR 285 - Observation Chart
- MR 810 - Medication Chart
- MR 250 - Progress Notes
- MR 410 - Neonatal History Sheet
- Baby notes prepared
- Perinatal Database record (Stork) updated

**Referrals to be considered**

- Neonatologist
- Anaesthetic department
- Psychological Medicine
- Dietician
- Physiotherapist
- Social Worker
- Diabetes Educator
- Parent Educator
- Aboriginal Liaison Officer
- Activities Coordinator

## Management of an APH

### Key points

1. On admission the Triage Midwife in the Maternal Fetal Assessment Unit (MFAU), the Co-ordinator of the Labour and Birth Suite and the Obstetric Registrar/Consultant should be advised of any women who present with an APH which may lead to maternal or fetal compromise.
2. A '**CODE BLUE – MEDICAL**' call should be initiated if a woman presents with an APH and is haemodynamically unstable, or if significant haemorrhaging is occurring which can lead to clinical shock.
3. Speculum examination shall be used to assess the vagina and cervix and identify cervical dilatation. Digital examination should be avoided for women with an APH until placenta praevia is excluded.
4. All women presenting with an APH should not be discharged home until review by the Registrar or Consultant.

### Background information

Antepartum haemorrhage (APH) complicates 2-5% of pregnancies and is defined in some literature as any bleeding from the genital tract after the 20<sup>th</sup> week of pregnancy and before labour.<sup>1, 2</sup> An APH may also be retained in the uterus.<sup>3</sup> Identifiable causes of APH are recognised in 50% of cases, and in the other 50% of cases the cause for the APH is indeterminate or unknown.<sup>4, 5</sup> Blood loss is often underestimated and the amount visible may only be a portion of the total volume of the haemorrhage (e.g. with a concealed placental abruption), therefore clinicians immediately need to assess not only the amount of blood loss, but also observe for signs of maternal clinical shock and fetal compromise or demise.<sup>2</sup>

Women with a history of APH are at increased risk for adverse perinatal outcomes including small for gestational age and growth restricted fetuses, therefore initiation of serial ultrasounds is recommended. Other risk factors include increased risk for oligohydramnios, premature rupture of membranes, preterm labour and increased rates of caesarean section. Women diagnosed with placental abruption<sup>2, 4</sup> or placental praevia<sup>2</sup> are at increased risk for postpartum haemorrhage.<sup>1, 2</sup>

APH from unknown causes before 34 weeks gestation is associated a 60% risk of birth within a week if accompanied by contractions. Without accompanying contractions the risk is still 13.6%, therefore administration of corticosteroids is important.<sup>4</sup>

### Causes of APH

Causes include:

- Placental site bleeding<sup>1</sup>

- Local causes from the genital tract<sup>1</sup>
- Unknown causes<sup>5</sup>

| Placental site causes   | Local genital tract and other causes  | Cord insertion cause  |
|---|---|---|
| <ul style="list-style-type: none"> <li>• Placenta praevia<sup>1, 4</sup></li> <li>• Placenta abruption<sup>1, 4</sup></li> <li>• Marginal<sup>1</sup>: Sinus rupture<sup>4</sup></li> </ul> | <ul style="list-style-type: none"> <li>• Show<sup>1, 4</sup></li> <li>• Cervical - Cervicitis<sup>1, 4</sup>, cervical polyp, cervical ectropion, carcinoma of the cervix<sup>6</sup></li> <li>• Trauma<sup>1</sup> (e.g. sexual intercourse)<sup>4</sup></li> <li>• Vulvovaginal varicosities<sup>1, 4</sup></li> <li>• Genital tract tumours<sup>1</sup> – benign and malignant<sup>4</sup></li> <li>• Genital infections<sup>1, 4</sup></li> <li>• Haematuria<sup>1</sup></li> </ul> | <ul style="list-style-type: none"> <li>• Vasa Praevia<sup>1, 4</sup></li> </ul> |

### Defining the severity of an APH

There are no consistent definitions of severity of an APH, however RCOG defines blood loss by a combination of volume and signs of clinical shock to guide management<sup>2</sup>:

**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

### Initial assessment

**If a woman presents with an APH and is haemodynamically unstable call 'CODE BLUE MEDICAL' – prevents delay in management.**

**Initiate immediate resuscitation measures.**

**Inform the Haematology Consultant.**

Initial assessment will indicate if urgent intervention is required<sup>1</sup> and includes:

- emergency management
- blood loss; presence of pain or contractions; uterine tone



- maternal cardiovascular condition (observe pulse, blood pressure, respiratory rate, oxygen saturation, temperature, conscious state)<sup>7</sup>
- fetal wellbeing
- triggering factors
- pathology or ultrasound results which may indicate probable cause

### Emergency management

If initial assessment indicates the woman is haemodynamically unstable or the blood loss indicates potential maternal and fetal compromises initiate a 'CODE BLUE MEDICAL'.

See KEMH Clinical Guideline Clinical Deterioration

Resuscitation may include:

- Insertion of two large bore 16gauge cannula<sup>8</sup>
- Monitoring of O<sub>2</sub> saturation levels<sup>7</sup> and application of oxygen as required<sup>9</sup>
- Collection of venous blood samples e.g. full blood picture(FBP)<sup>2</sup>, group & cross-match 4 units (or more if required)<sup>2, 8</sup>, coagulation studies<sup>8</sup>, urea & electrolytes (U&Es) and liver function tests (LFTs)<sup>2</sup>, and may include arterial blood gases<sup>10</sup>
- Commencement of fluid replacement e.g. intravenous therapy / blood products / plasma expanders<sup>8</sup>
- Analgesia
- Insertion of an indwelling catheter (IDC)<sup>8</sup>
- Preparation for theatre & birth.<sup>8</sup> Severe bleeding requires immediate caesarean birth regardless of the placental location.<sup>1</sup>
- Informing the haematologist<sup>8</sup>
- Inform the paediatrician if birth is anticipated

### Maternal well-being

Perform baseline observations on admission:

- Temperature, blood pressure (BP), pulse, respiratory rate,<sup>1</sup> oxygen saturations, conscious state
- Blood loss<sup>1</sup>
- Uterine activity / abdominal tone<sup>1</sup>
- Observe for pallor / restlessness<sup>1</sup>
- Pain
- Urine output – perform urinalysis, and commence measurement of output if significant blood loss. An indwelling catheter may be considered if accurate hydration and elimination measurements are required.

## History taking

### Blood loss

- Documentation should include the amount,<sup>1</sup> colour, consistency, and pattern of bleeding.<sup>11</sup>
- Apply a clean sanitary pad. Weighing the pad before use and following changing the pad provides a more accurate measurement of ongoing blood loss
- Note absence of blood clots in the presence of significant bleeding– can indicate clotting abnormalities.<sup>6</sup>

### Pain assessment

- Note the pattern of pain including the site, time of commencement, frequency, strength and duration.
- Assess if contractions are present.<sup>1</sup>

### Uterine tone

- Note the uterine tone<sup>1</sup> – a soft, non-tender uterus may suggest a lower genital tract cause, bleeding from the placenta or vasa praevia.<sup>2</sup> Increased uterine tone (e.g. tense, rigid or ‘woody’) may indicate placental abruption.<sup>4, 6</sup> Only gentle abdominal pressure should be used,<sup>1</sup> to prevent stimulating further bleeding or uterine activity.<sup>6</sup>

### Triggering factors

- Note any triggering factors e.g. sexual activity, trauma, exertion.
- If bleeding occurs with rupture of the membranes then a ruptured vasa praevia should be considered.<sup>2</sup>

### Fetal wellbeing

- On admission assess the fetal heart rate (FHR) with a doptone as soon as possible. Assess history of fetal movements.<sup>1</sup>
- Commence continuous fetal cardiotocograph (CTG) monitoring<sup>2</sup> if greater than 25 weeks gestation when:
  - signs of fetal compromise are noted from initial auscultation with doptone<sup>11</sup>
  - there is active bleeding
  - uterine activity is present
  - uterine tenderness is present
- If the gestation is 23 – 25 weeks consult with the Obstetric Registrar prior to commencing CTG monitoring.
- The decision for duration and frequency of CTG monitoring is dependent on maternal and fetal condition. Liaise with the Registrar or Consultant for ongoing management.

- In the above gestations, if unable to auscultate the fetal heart externally, an ultrasound can be used to assess fetal viability.<sup>2</sup>

### Review of ultrasounds and pathology tests

Ensure all ultrasound and pathology results are available as soon as possible – this may require contacting other facilities or medical practitioners and faxing of results. The results should include blood tests, ultrasounds, and cervical pap smears.

## Ongoing management

### Maternal and fetal observations

**The frequency of maternal and fetal observations is determined by the maternal and fetal condition, ongoing bleeding or other problems. Perform more frequently as required.**

### Maternal observations

If ongoing bleeding, or signs of maternal or fetal compromise:

- Maintain 4 hourly observations (adjust frequency as per maternal and fetal condition, Maternal Observation and Response Chart MR285.01 escalation actions or observation modifications). See also KEMH Clinical Guidelines, Obstetrics & Gynaecology, Standard Protocols: Recognising and Responding to Clinical Deterioration.

If no ongoing bleeding or signs of maternal or fetal compromise:

- Blood pressure (BP), pulse, temperature, respirations, oxygen saturation & conscious state:
  - 4 hourly for 24 hours, then 8 hourly.
- Vaginal discharge/loss, uterine activity, abdominal tenderness/pain or rigidity:
  - 4 hourly for 24 hours, then continue 4 hourly (omit between 2200 and 0600 if the woman is sleeping).
- Urinalysis – perform weekly.
  - If there is significant blood loss, measure and record the urinary output until the maternal condition is stable and medical review determines it is no longer required. Insertion of an indwelling catheter may be considered in some cases.

- Bowels – monitor daily. Significant blood loss may cause dehydration and lead to constipation.

### Fetal observations

If no ongoing bleeding or signs of maternal or fetal compromise:

- FHR - 4 hourly in the first 24 hours (omit between 2200 and 0600 if the woman is sleeping), then perform twice daily thereafter.
- Fetal movements – 4 hourly (omit between 2200 and 0600 if the woman is sleeping)
- CTG monitoring – as ordered by the Medical Obstetric Team.

### Intravenous access

- Site at least one large bore 16 gauge intravenous (IV) cannula if:
  - active bleeding continues
  - uterine activity or tenderness is present
  - a major haemorrhage
- **Two** large bore cannulas should be inserted in the event of massive haemorrhage.
- Commence monitoring and documentation of fluid intake/output when IVT is commenced, if ongoing blood loss, or if a significant blood loss has occurred.

### Removal of the IV cannula

If there is no fresh blood loss and IVT has not been administered, the IV cannula should remain in situ for 24 hours. Discuss with the medical obstetric team prior to removal of the IV cannula. Timing of removal or replacement will depend on the cause and the clinical situation. See also KEMH Clinical Guidelines Parenteral Therapy: IV Cannula: Flush, Monitoring and Removal

### Blood tests

For **all** women with an APH:

- If a woman is **Rhesus negative** a Kleihauer test should be performed to quantify the magnitude of the fetomaternal haemorrhage, and ensure an adequate dose of RhD immunoglobulin has been given.<sup>2, 12</sup>
- Do not perform a Kleihauer for an APH in a **Rhesus positive** woman, except in the following circumstances:
  - Significant abdominal trauma
  - A CTG with a sinusoidal pattern
  - Persistently abnormal CTG with reduced variability and an ultrasound showing an inactive fetus.

Note: the Kleihauer test is not sensitive for diagnosing placental abruption.<sup>2</sup>

- Ensure copies of all booking blood results are available. If the blood test results are not able to be sourced, then collect additional blood for these tests.

#### **Minor APH:**

- Perform a FBP and Group and Hold. If the platelet count is abnormal, perform a coagulation screen.<sup>2</sup>

#### **Major or massive APH:**

Perform:

- FBP<sup>2</sup>
- Cross-match 4 units<sup>2</sup>
- Coagulation Screen<sup>2</sup>
- U&Es, LFTs<sup>2</sup>

#### **Placenta praevia:**

- May require a cross-match to be done weekly depending on the clinical situation.

**Note:** If a woman has been given a blood transfusion the cross-match and group and hold sample will expire after 72 hours.

#### **Fasting**

Women with a major or massive APH shall be fasted until medical review. Women with a known placenta praevia or abruption who have had a minor APH should also be reviewed by medical staff prior to allowing diet and fluids.

#### **Ultrasound assessment**

- Check recent ultrasound reports for placental location.
- Perform ultrasound examination<sup>1</sup> to determine placenta location, fetal well-being and presence of retroplacental clot.
- Serial ultrasound appointments for fetal growth should be commenced for women with an APH caused by placental abruption or unexplained APH.<sup>2</sup>
- Note: Sensitivity of ultrasound for detection of retroplacental clot is poor. However, when the ultrasound suggests abruption, the likelihood is high.<sup>2</sup>

#### **Vaginal assessment**

- Speculum examination may be used to assess vaginal bleeding.<sup>1</sup>
- No vaginal or rectal digital examination, or suppository administration, should be performed on a woman with an APH as severe haemorrhage may occur.<sup>1</sup>
- Digital examination to assess the vagina and cervix must only be performed after placenta praevia is excluded.

**Corticosteroid administration**

- Administer a single course of antenatal corticosteroids to women at risk of preterm birth between 24 and 34 (consider to 36+6) weeks gestation.
- See Clinical Guideline Complications of Pregnancy: [Antenatal Corticosteroids to Reduce Neonatal Morbidity and Mortality](#)

**Maternal position and activity**

- On admission position the woman on her side during clinical assessment.
- Clinically stable women - advise maternal bed rest with toilet privileges until there has been no fresh bleeding for 24 hours.
- Initiate measures to prevent thrombosis e.g. wearing knee high compression stockings continuously until fully mobile.<sup>13</sup> Promote frequent leg exercises until fully mobile.

**Paediatric consultation**

- Arrange Paediatric consultation if preterm birth is anticipated.

**Discharge**

All women prior to discharge should be informed to contact KEMH immediately if any further bleeding or abnormalities present.<sup>2</sup> Provide advice as discussed in ' [Maternal Education](#)' within this document.

All women with an APH - diagnosed placental abruption<sup>2</sup>, unexplained APH<sup>2</sup>, placenta praevia, or a cervical abnormality are not suitable to attend a low risk midwives clinic. Future antenatal appointments should be adjusted accordingly.

**Spotting**

- Provided the clinical assessment reassures there are no complications or the presence of a placenta praevia, and the woman is no longer bleeding, she may return home.<sup>1</sup>
- Ensure a follow-up antenatal clinic appointment is made.

**Minor APH**

- Women with ongoing bleeding should remain in hospital.<sup>2</sup> If there is no bleeding for 24 hours the woman may usually be discharged home with antenatal clinic follow-up. However, the decision for timing of discharge is made on an individual basis with obstetric team Consultant review.

**Major or massive APH**

- Timing of discharge depends on diagnosis and the individualised clinical situation. The obstetric team Consultant shall review the woman and decide timing for discharge. Follow-up arrangements will depend on the outcome of the APH e.g. GP or antenatal clinic follow-up.

## Maternal education

- If KEMH is contacted by a woman experiencing an APH, the telephone assessment should include evaluation of the risk of maternal and fetal compromise. If it is determined the risk is significant, she should be advised to come to hospital by ambulance. Advise her to bring any soiled clothing or sanitary pads with her. This will enable a more accurate assessment of the volume of blood loss.<sup>6</sup>
- Women who smoke, use cocaine or amphetamines should be counselled as to their increased risk for placental abruption when using these substances.<sup>2</sup> Intervention strategies and referrals to support services should be offered.
- Arrange for 'Parent Education' staff to provide antenatal education for women with long term hospital admission or as required.
- Advise women with placenta praevia to avoid penetrative sexual intercourse, and that vaginal and rectal examinations should be avoided.<sup>2</sup>
- Inform all women who are discharged home to immediately contact KEMH if:
  - further bleeding occurs<sup>2</sup>
  - abdominal pain occurs<sup>2</sup>
  - reduced fetal movements occur<sup>2</sup>
  - any abnormalities or concerns
- Confirm follow-up arrangements. Antenatal appointments may need to be readjusted if review is required earlier or if the woman has been attending a low risk midwives clinic.
- Women should be informed that APH is an antenatal risk factor for fetal compromise and therefore intrapartum CTG will be recommended.<sup>14</sup>

## Documentation

- Prepare 'Baby Notes' if birth is expected. Update the perinatal database record (STORK).
- Complete documentation on the:
  - MR 004 Obstetric Special Instruction sheet
  - MR 250 Progress Notes
  - MR 285.01 Observation Sheet and Response Chart
  - MR 810.05 Medication Chart
  - MR 410 Neonatal History

## Related policies



1. Crafter H, J B. Common problems associated with early and advanced pregnancy. In: Marshall J, Department of Health WA: MP 0086/18. [Recognising and Responding to Acute Deterioration Policy v1.1 \(2018\)](#) p. 221-42.
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## Related WNHS policies, procedures and guidelines

### KEMH Clinical Guidelines, O&G:

- Clinical Deterioration: Recognising and Responding
- Medical Disorders in Pregnancy: Abdominal Pain: MFAU QRG; Abdominal Trauma
- Admission: Antenatal Admission
- Fetal Surveillance: Fetal Heart Rate Monitoring

|   |   |                   |           |
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| Author / Reviewer:  | Head of Department- Obstetrics  |                   |           |
|   | <b>July 2018:</b> Evidence on this topic was reviewed and overall guidance remains unchanged. Minor changes and formatting have been made.  |                   |           |
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| NSQHS Standards (v2) applicable:  | 1  Governance, 8  Recognising & Responding to Acute Deterioration   |                   |           |
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