



CLINICAL PRACTICE GUIDELINE

Antenatal care schedule

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

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## Initial Visit

### Aims

- To establish a collaborative relationship between the woman and the health care professionals involved in her care.
- To inform the woman about the models of care available for pregnancy and birth allowing her to make an informed choice.
- To assess the woman's level of social support, and her physical, psychological and emotional well-being.
- To provide baseline recordings of the woman's physical and psychosocial condition for later comparison.
- To identify risk factors for the pregnancy.
- To provide support and make appropriate referrals where necessary.
- To provide health education promoting and reinforcing healthy lifestyle habits in pregnancy

### Procedure

#### **Pregnancy health record MR 220**

- Commence documentation in the 'Pregnancy Health Record' at the initial visit.

A photocopy of the medical/surgical/obstetric history from the MR220 is filed in the woman's medical record. This copy will be discarded following postnatal discharge. The original copy is then filed in the woman's medical records.

- Explain the purpose and use of the MR220 'Pregnancy Health Record'.

Carrying her own health record improves the woman's sense of control and satisfaction, and the availability of the notes. There is insufficient evidence of additional benefits on health behaviours and clinical outcomes.

- Advise the woman to take the record
  - To all antenatal appointments
  - To appointments with her GP
  - On holiday if travelling away

## Health history

- Record the woman's health history including:
  - medical history
  - surgical history
  - gynaecological history
  - obstetric history
  - family history
  - psychosocial history
  - medications / drugs
  - complementary therapies
- Calculate / confirm the expected date of delivery (EDD)
 

A first trimester ultrasound EDD should be used in preference to the last menstrual period (LMP) if there is a difference of more than 5 days.

When there is a difference of more than 7 days from the LMP and the second trimester ultrasound, the EDD should be adjusted to the second trimester ultrasound EDD.

When there is a first trimester and second trimester ultrasound available the EDD is determined from the first trimester scan
- An accredited interpreter or the Telephone Interpreting Service (TIS) must be used if communication is limited due to language barriers.
 

Clinical, legal and ethnic consequences are avoided by use of the interpreting services.

See WNHS policy [Language Services](#)

## Physical assessment / examination

- Women attending a midwifery clinic may be referred back to the GP for the full physical examination. However, confirmation of a normal physical examination by the GP should be documented in the woman's 'Pregnancy Health Record'. Inform the woman of this management.
- All refugee women who have been in Australia less than 12 months should have a full physical examination performed by a doctor.

## Breasts

Observe and discuss:

- previous breast surgery or abnormalities
- breast changes in pregnancy
- breast self-examination. Provide verbal and written instruction as required.

**Skin**

- Note any rashes, scars, skin conditions or varicose veins.

**Pelvic assessment / examination**

- Offer a Papanicolaou (PAP) smear prior to 24 weeks gestation as required.

There is no evidence to suggest PAP smear in pregnancy is harmful

If a woman is due for a PAP smear but declines prior to 24 weeks gestation, it should be noted on the MR 004 'Obstetric Special Instruction Sheet' for follow-up post-partum.

- Note any abnormal vaginal discharge and obtain swabs as required.
- Determine if a woman has had female genital mutilation (FGM) performed. Identify the type, provide counselling, and discuss intrapartum management.

Women attending the low risk midwives clinic with FGM are referred to the medical obstetric clinic for review and counselling at 24 weeks gestation.

**Cardiovascular system**

- Refer women attending the low risk midwives clinic with a cardiac anomaly, arrhythmia, or cardiac disease to the medical obstetric clinic for review. If a GP has arranged previous cardiac tests request a copy of the results. Obstetric physician review may be required.

**Weight and height**

- Measure the height and weight of the woman and calculate their body mass index (BMI).
- Increased BMI is associated with increased risk of gestational diabetes gestational hypertension pre-eclampsia, caesarean section, labour and delivery complications including maternal death
- The fetus is at increased risk of congenital abnormalities, small-for-gestational age, macrosomia, pre-term birth and morbidity. Long term consequences include childhood obesity, diabetes, cardiovascular disease and fatty liver disease.

NOTE: Ideally BMI should be calculated from a pre-pregnancy weight and height, or at first opportunity during pregnancy.

**Formula for Calculating a BMI**

$$\frac{\text{Weight in Kilograms}}{\text{Height in metres} \times \text{height in meters}}$$

## Blood pressure

- Record the woman's blood pressure (BP)

Baseline recording of BP enables comparison and monitoring of BP changes in pregnancy. Early baseline measurement will differentiate chronic hypertension in the pregnant woman from gestational hypertension and pre-eclampsia. Correct cuff size allows a more accurate BP measurements.

## Urinalysis

- Instruct women how to perform a urine reagent strip testing for proteinuria

Dipstick testing is useful for assessing for pre-eclampsia, urinary tract infection, and renal disease.

Clinical signs may warrant more detailed reagent strip testing, or collection of a mid-stream urine (MSU) collection.

- Collect a MSU for asymptomatic bacteriuria in *early* pregnancy.

Risk of ascending urinary infection increases during pregnancy. Identification of asymptomatic bacteriuria reduces the risk of pyelonephritis.

Persistent proteinuria and haematuria may indicate renal disease and further investigations may be warranted.

## Blood tests

- Blood tests are recommended for all antenatal patients.
- All bloods tests are ordered following counselling and verbal consent. Women should be advised of all results and post-counselling given.
- If a laboratory report or historical group suggests the woman is Du, D variant, Partial D, Weak D or any other anomaly, it should be repeated at the Path West KEMH site to determine the woman's correct blood group and whether RhD Immunoglobulin is appropriate.
- **Blood group and antibody screen.** Where the blood group has already been performed it does not need to be repeated, but the antibody screen should be repeated at the beginning of each pregnancy.
- **Full blood picture (FBP)**
- **Hepatitis B.** Women found to be chronic carriers of Hepatitis B should have an assessment of their antigen and viral replicative status with liver functions performed and be referred for specialist support
- **Hepatitis C.**
- **HIV screening.** The woman must be provided with appropriate counselling as to the limitations of screening for viral infections in pregnancy and the implications of both positive and negative results.
- **Syphilis serology** should be performed using a specific treponema pallidum assay e.g. TPHA or TPPT.
- **Rubella**

### **Additional blood tests according to individual clinical situations**

- Vitamin D serology
- Iron studies
- Haemaglobinopathies
- Vitamin B12 levels
- Varicella: consider when there is no history or uncertain history of previous illness
- Liver function tests

### **Chlamydia screening**

- Offer Chlamydia screening to all woman at the first antenatal visit, however screening is recommended for women with increased risk of sexually transmitted infection (STI).

Women at risk of STIs include:

- those less than 25 years
- women who have had a recent partner change
- women with more than one partner in the last 12 months
- women from STI endemic areas of WA such as the Kimberly, Pilbara and Goldfield areas.
- Women from STI endemic areas of Western Australia (WA) are recommended to be also tested concurrently for gonorrhoea.

### **Gonorrhoea screening**

- Women with increased risk factors are recommended to be screened in early pregnancy.
- All women living in STI endemic regions in WA i.e. the Kimberley, Pilbara and Goldfields should be offered screening. Other risk factors include women who have unprotected sexual activity with an infected partner or a partner with known high risk factors, women with previous known infection with an STI, or women from countries with a high prevalence.

### **Ultrasound screening**

- All women attending KEMH early in pregnancy should be informed of the availability of screening tests and offered prenatal screening for fetal abnormalities.
- Written and verbal information should be provided including advantages and disadvantages, limitations and consequences of screening.
- Screening tests include:
  - first trimester screening (FTS)
  - maternal serum screening (MSS)

The FTS includes blood collection at 9-13 weeks gestation (ideally 9-12 weeks) for biochemical analysis combined with ultrasound measurement of fetal nuchal translucency (between 11 to 13 weeks gestation).

Blood collected for MSS is obtained at 14 to 20 weeks gestation (ideally between 15-17 weeks) for biochemical analysis.

**Fetal morphology ultrasound**

- Offer a fetal morphology ultrasound to all women. Anatomy scans may be booked at the KEMH Diagnostic Imaging Department, however whenever practical refer the woman to her GP to arrange an ultrasound at another metropolitan service. Advise the woman to arrange to bring a copy to her next antenatal appointment, or arrange a copy to be faxed to KEMH.

**Genetic services**

- Offer genetic counselling to all women with risk factors. See KEMH Clinical Guideline: O&G: Referrals: [Genetic Services Referral to](#)

**Psychological assessment**

- Perform Edinburgh Post Natal Depression Scale (EPDS) assessment at the booking visit.
- Refer the woman (with their permission) to the Department of Psychological Medicine if
  - the EPDS score is 13 or above.
  - a woman scores 1,2 or 3 of EPDS question 10, assess her current safety and the safety of other children in her care and, acting according to clinical judgement, seek advice and / or refer immediately for mental health assessment
  - the anxiety scale is more than 6 (Q3+Q4+Q5 = 6)
  - there are current mental health disorders or significant symptoms
  - a personal history of diagnosed mental disorder is present
  - the woman is currently taking psychiatric medications
  - the woman is at risk of harming herself (or others) due to psychiatric disturbances.

**Family and domestic violence (FDV) screening:** See Clinical Guideline [Family and Domestic Violence: Screening For](#)

- Explain to all women that asking about domestic violence is a routine part of antenatal care and enquire about all women's exposure to domestic violence.
- Screen the woman when she is alone, tailoring the approach to her individual situation.
- Document and file the result in the Medical Records, not in the woman's 'Pregnancy Health Record'.

**Diabetes screening:** see Clinical Guideline: [Diabetes in Pregnancy: Screening for](#)

- Assess gestation to determine if diabetes screening is due
- Screening for diabetes is recommended for all pregnant women.<sup>17</sup>



## **Methicillin Resistance Staphylococcus Aureus (MRSA) screening**

Screen women for MRSA who have been:

- hospitalised or worked in a hospital outside WA in the previous 12 months
- a room-mate of an active epidemic MRSA carrier during an outbreak occurring in the last 12 months, but were not screened prior to discharge.

## **Diet**

- Record and provide advice about any dietary practices which may impact the pregnancy.
- Advise women that taking vitamins A, C or E supplements is not of benefit in pregnancy and may cause harm.
- Advise women to take an iodine supplement of 150 micrograms each day. Women with pre-existing thyroid conditions should seek advice from their medical practitioner before taking a supplement.
- Women having a vegetarian diet or with barriers for gastric absorption may require additional nutritional supplements in pregnancy.

## **Oral health**

- Advise women to have oral health checks and treatment, if required, as good oral health protects a woman's health and treatment can be safely provided during pregnancy.

**Allocate an Antenatal Model of Care** See Clinical Guideline [Midwifery Led Care Exclusions](#)

Explain the options of antenatal care and allocate accordingly:

- Family Birth Centre
- Low risk midwives clinics
- Team midwifery
- Shared Care with the GP
- Medical team obstetric clinic

Inform the woman when medical management/consultation is required if she is attending low risk midwifery care.

## **Antenatal assessment**

- Assess maternal health and well-being:
  - BP
  - check for abnormal vaginal discharge

Note and provide information on health concerns/abnormalities in pregnancy.

- Assess fetal growth and well-being:
  - note fetal movements
  - assess fundal height / growth
  - estimate presence of adequate amniotic fluid as appropriate
  - auscultation of the fetal heart rate should be offered

## Initiate parent education

Provide information at the booking visit:

- when to phone or come to hospital
- parent education classes
- healthy dietary advice and dietician services
- minor discomforts in pregnancy
- exercise in pregnancy
- smoking and alcohol in pregnancy
- illicit drug use in pregnancy
- risk of food-acquired infections e.g. listeria, salmonella
- dental health
- breast feeding policy recommendations and breast care
- frequency of antenatal visits
- health services available including physiotherapy, psychological services, aboriginal liaison service, social worker services
- prevention of ligament/muscle strains
- life-style issues e.g. air travel, working, sexual intercourse, seat-belt safety.

## Pregnancy educational information

<b>Seat belts</b>	A seat belt reduces abdominal pressure and prevents contact with the steering wheel during low-impact collisions. Inform women the shoulder belt should be worn over the shoulder, across the chest between the breasts, and the lap belt is fastened as low as possible under the abdomen.
<b>Air travel</b>	Women should be advised to check with individual carriers for their travel restrictions, however in the absence of medical or obstetric complications women can use the same precautions as all other passengers e.g. wearing of seat belts, hydration, support stockings, loose clothing, leg exercises, and ambulation when possible.
<b>Travelling</b>	Women travelling aboard should discuss vaccinations with the midwife or doctor. Travel insurance is recommended. Inform women to take their 'Pregnancy Health Record' with them.
<b>Exercise</b>	See written information in the 'Pregnancy Health Record.'
<b>Hair products</b>	No teratogenic effects have been noted for occupational

	workers using products, but they are encouraged to wear gloves, avoid long standing times, and work in a well-ventilated room. There is minimal systemic absorption of hair products, therefore use by pregnant women 3-4 times in pregnancy is not considered harmful.
<b>Alcohol consumption</b>	Avoiding alcohol in pregnancy and while breastfeeding is the safest option. Harm to the fetus is highest with frequent high alcohol consumption. The risk to the fetus is low if a woman has consumed small amounts of alcohol before she knew she was pregnant, or during pregnancy. The level of risk influenced by maternal and fetal characteristics is hard to predict.
<b>Sexual intercourse</b>	Sexual intercourse in a pregnancy without risk factors is not known to be associated with any adverse outcomes.
<b>Working during pregnancy</b>	A woman without risk factors may safely work in pregnancy. Discussion should include risk factors relating to manual handling activities, occupational hazards, and occupational health and safety strategies e.g. rest breaks, ventilation, avoidance of heavy physical exertion.
<b>Prevention of infection from foods</b>	Discuss risk for listeria infection in pregnancy. Provide women with written information. Prevent risk of salmonella by avoiding raw/partially cooked eggs (including egg-based mayonnaise) and raw/partially cooked meat.
<b>Complementary therapies</b>	Limited complementary therapies have been established as safe and effective. <sup>5</sup> KEMH pharmacy can be contacted for advice. Staff should be aware of WNHS Policy <a href="#">Complementary Therapies</a> .

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## Subsequent visits

### Key point

1. All women who do not attend their antenatal appointment at 40 weeks gestation (and above) must be contacted the same day and requested to attend MFAU that day for assessment. The contact must be documented in the medical notes.

### Frequency of antenatal visits

See Clinical Guideline: [Midwifery Care Flowchart](#). The frequency of the antenatal visits is adjusted according to fetal and maternal wellbeing. Refer to individualised guidelines for specialised clinics and their schedule for antenatal visits.

### Maternal assessment

#### Weight

Monitor the woman's weight at each visit if at the booking visit she has an:

- increased Body Mass Index (BMI)
- decreased BMI

Refer to the dietician as appropriate.

#### Urinalysis

Document the reagent urinalysis test result at each visit for:

- protein
- glucose

Testing may indicate pre-eclampsia, urinary tract infection, renal abnormalities, or diabetes in pregnancy.<sup>4</sup>

The current (2015) [National Antenatal Guidelines: Clinical Practice Guidelines – Antenatal Care Module 2](#) does not support routine urinalysis at each antenatal visit. However, the expert opinion at KEMH is that the practice of routine urinalysis will continue at KEMH.

#### Blood pressure (BP)

Assess the BP each visit. If a woman is attending the low risk midwives clinic the midwife should consult with the woman's obstetric team during office hours, or contact the MFAU registrar after-hours regarding management of abnormal BP's.

#### Oedema assessment

Identify and document oedema including the site and degree. 50-80% of women experience oedema in pregnancy which is due to increased tissue fluid. If the BP and urinalysis is normal, reassure the woman.<sup>5</sup>

**Vaginal discharge**

Note at each visit:

- if any vaginal bleeding has occurred since the last visit
- signs of vaginal infection
- signs of premature rupture of membranes

Women should be informed that increased vaginal discharge is a normal physiological change in pregnancy, however if they experience an itch, soreness, offensive smell or pain with voiding they should inform the midwife or doctor.<sup>7</sup>

**Assess for abnormal symptoms**

Assess if the woman has any abnormal health symptoms e.g. headaches, epigastric pain, vomiting, visual disturbances.

These symptoms may be associated with pre-eclampsia and further investigations or evaluation may be required.<sup>1</sup>

**Abdominal palpation**

1. Assess fetal growth at each visit by:

- Measuring fundal to symphysis-pubis height. This should always be documented in cm
- The measurements are to be documented in cm at every scheduled antenatal visit.
- Estimated growth by clinical palpation.

Note: Consult with the Obstetric Team if discrepancy in fetal growth is suspected.

See clinical guideline [Fundal height measuring with a Tape Measure](#)

- Assess amniotic fluid volume
- Palpate for presentation from 36 weeks gestation.<sup>1</sup> Abnormal presentation is discussed with the Obstetric Team and a management plan is formulated.

**Medication compliance**

- Confirm the woman is taking recommended medications i.e. she is taking the appropriate dosage and at the correct time.
- Ensure the absence of side-effects.

**Fetal assessment****Fetal activity**

- Monitor the history of fetal activity at each visit.
- Discuss management with the Obstetric Team if the woman noticed a change in pattern or frequency of fetal movements.



There is not enough evidence to recommend or not recommend counting fetal movements by the mother as an effective assessment tool for fetal well-being.<sup>9</sup> Routine formal fetal-movement counting should not be offered.<sup>7, 10</sup>

### **Fetal heart rate (FHR) auscultation**

- Offer FHR auscultation at each visit.

Routine listening of the FHR provides confirmation of a live fetus, but does not give a predictive value. However, if the woman would like auscultation of the FHR it may provide reassurance.<sup>7</sup> The current (2015) [National Antenatal Guidelines Clinical Practice Guidelines – Antenatal Care Module 2](#) states that fetal heart auscultation may be undertaken with either a Doptone (from 12 weeks) and a Pinnard's from 28 weeks. KEMH recommends that a Doptone be used for all antenatal visits.

### **Blood tests**

#### **Blood group and antibody screen**

See Clinical Guideline [RhD Negative Blood Group: Management: Blood Group and Antibody Screening / Management during Pregnancy & RhD Immunoglobulin](#)

All Rh (D) negative women are recommended to have prophylactic Rh Immunoglobulin at 28-30 weeks and 34-36 weeks gestation.

#### **Full blood picture (FBP)**

Repeat FBP at:

- 28 weeks gestation.
- 36 weeks gestation as required.

All women with anaemia, treated for anaemia, with low ferritin levels or at an increased risk of, should have a FBP repeated at 36 weeks.

The most common form of anaemia in pregnancy is iron deficiency. Order iron studies as required. Assess anaemia risk factors for anaemia e.g. history for haemoglobinopathies, dietary restrictions, multiple pregnancy, and hyperemesis.<sup>11</sup>

#### **Repeat STI screening**

Repeat screening is recommended for women at high risk for blood-borne viruses and STIs in the third trimester.

Repeat screening should include:

- HIV serology
- Hepatitis C serology
- Hepatitis B serology
- Chlamydia screening
- Gonorrhoea screening



All women living in STI endemic areas of Western Australia (WA) i.e. the Kimberley, Pilbara and Goldfields should have:

- Repeat testing for HIV and syphilis serology between 28 and 36 weeks gestation<sup>12</sup>
- Repeat testing for chlamydia and gonorrhoea at 36 weeks.<sup>12</sup>

Women treated for syphilis in the current pregnancy should be advised the RPR status will be monitored frequently in future pregnancies.<sup>12</sup> Treatment for syphilis is considered adequate in pregnancy if it is completed at least 30 days prior to birth & there is a documented four-fold drop in RPR titre.<sup>13</sup>

Women with clinical hepatitis B should be retested at the time of admission for birth.<sup>12</sup>

### Diabetes screening

Screening is recommended for all pregnant women.<sup>14</sup> See Clinical Guideline [Diabetes: Screening in Pregnancy](#) for screening advice:

- before 24 weeks gestation
- between 24-28 & 29-32 weeks gestation

### Ultrasound

- Arrange a repeat ultrasound for placental location if a woman has a low lying placenta (LLP) in the second trimester.
- Repeat the USS at 34 weeks for women with LLP at anatomy USS (i.e. 20mm or less from the internal os) without any other risk factor for morbidly adherent placenta
  - Consider repeating earlier (30-32 weeks) if previous caesarean section, antepartum haemorrhage or complete overlapping of the os (to write on the scan form request)
- Women from the country may have the ultrasound ordered later in the third trimester to coincide with an antenatal visit.

### Psychological assessment

- Repeat the Edinburgh Postnatal Depression Scale after 32 weeks.

### FDV screening

- Repeat the FDV screening tool in the third trimester if the woman is alone.

### Group B streptococcus screening

- Screening for GBS is recommended for women between 35-36 weeks.<sup>15</sup>  
See clinical guideline [GBS Screening for](#)

Offer interventions/strategies to cease smoking or prevent resumption of smoking.

### **Tobacco smoking assessment**

Assess smoking habits each visit for women who smoke or have ceased in pregnancy.

See Clinical Guideline [Nicotine Dependence](#): Assessment & Intervention

### **Parent education**

Provide ongoing pregnancy education including:

- Discharge planning.
- Pain relief options.
- Birth plan.
- Neonatal auditory screening.
- Newborn Screening Test.
- Consent for Vitamin K & Hepatitis B vaccination.
- Visiting Midwifery Service.
- Child Health Services.
- Breastfeeding- incl. KEMH Breastfeeding Centre & community resources.
- Family Planning.
- Sudden Infant Death Syndrome and Co-Sleeping.
- Use of capsules & car seats.
- Community resources.
- GP follow-up & Post-partum screening tests e.g. PAP smears.
- Health issues e.g. hepatitis, vitamin D deficiency.

Education may include both verbal and available written brochures.

### **Increased surveillance for women age 35 years or over**

Refer to Advanced Maternal Age guideline.

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