

# Clinical Directive: compliance is mandatory

South Australian GP Obstetric Shared Care Protocols 2017

**Policy developed by:** SA Maternal, Neonatal & Gynaecology Community of Practice

**Approved SA Health Safety & Quality Strategic Governance Committee on:**  
3 November 2017

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**Summary** The purpose of the protocols is to provide perinatal health care providers with the contemporary professional standards of care and outline the minimum standards of clinical practice required by General Practitioners providing maternity services in South Australia.

**Keywords** GP obstetric, antenatal, pregnancy, protocols, litigation, medial indemnity, accreditation, cpd, midwife coordinator, sa pregnancy record, diabetes mellitus, cardiac disease, renal disease, hypertension, respiratory, neurological, thrombo-embolic, haematological, anaemia, psychiatric, pre-eclampsia, placental abruption, cervical incompetence, intra-uterine growth restriction, haemoglobinopathy, anaemia, genetic, clinical guideline, sa gp obstetric shared care, South Australian GP Obstetric Shared Care Protocols 2015

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Does this policy amend or update an existing policy? **Y v2.0**  
Does this policy replace an existing policy? **Y**  
If so, which policies? **SA GP Obstetric Shared Care Protocols 2015**

**Applies to** All SA Health Portfolio

**Staff impact** All Clinical, Medical, Midwifery, Nursing, Allied Health, Emergency, Mental Health, Pathology, Pharmacy, Students, Volunteers, SAAS

**PDS reference** CD079

## Version control and change history

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2.0	30 June 2015	3 Nov 2017	Revised
3.0	3 Nov 2017	Current	

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# SOUTH AUSTRALIAN GP OBSTETRIC SHARED CARE PROTOCOLS

## A STATEWIDE MODEL

## AUGUST 2017



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Although the clinical material offered in this guideline provides a minimum standard it does not replace or remove clinical judgement or the professional care and duty necessary for each specific patient case. Where care deviates from that indicated in the guideline contemporaneous documentation with explanation should be provided.

This guideline does not address **all** the elements of guideline practice and assumes that the individual clinicians are responsible to:

- > Discuss care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary
- > Advise consumers of their choice and ensure informed consent is obtained
- > Provide care within scope of practice, meet all legislative requirements and maintain standards of professional conduct
- > Document all care in accordance with mandatory and local requirements

### **SA GP Shared Care Program Protocols**

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**Contact:** South Australian Perinatal Practice Guidelines Workgroup at:  
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## ACKNOWLEDGEMENTS

The GP Obstetric Shared Care SA Program (GP OSC SA) was established in 2002 as a result of an initiative by SA Health, facilitated by the Healthy Start Clinical Reference Group (now known as the SA Maternity & Neonatal Clinical Reference Work Group).

This document outlines the clinical protocols that support the GP OSC SA.

These protocols have been developed in accordance with contemporary professional standards of care and outline the minimum standards of clinical practice required by General Practitioners providing maternity services in South Australia.

The SA Perinatal Practice Guidelines underpin the SA GP Obstetric Shared Care Protocols outlined within.

The members of the group that participated in the review of the GP OSC SA Protocols 2017 were:

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SA Health has contracted GP partners Australia as the co-ordinating body for the statewide GP OSC SA as of September 2009. GP partners Australia is managing the statewide framework for the GP OSC SA. Contact details are listed below.

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## ADMINISTRATION SECTION

### 1 OBSTETRIC SHARED CARE

'Shared Maternity Care represents an opportunity to practise collaborative holistic obstetric care by combining the varied skills of Midwife, General Practitioner and Obstetrician to the benefit of the community and mutual understanding between colleagues'. RANZCOG statement WPI-July 2016.

Women wishing to attend a South Australian public hospital (in metropolitan Adelaide, and Gawler) for childbirth have the option of GP obstetric shared care (GP OSC) if they meet the designated criteria. In this model, the General Practitioner (GP) provides most of the antenatal and postnatal care, while the public hospital staff provides the inpatient and some outpatient obstetric care.

An obstetric shared care arrangement should be recommended for all low risk women who have access to an accredited GP and a participating public hospital.

A GP wishing to participate in an obstetric shared care arrangement must be accredited as competent in obstetric care and be familiar with the policies of the participating hospital.

A GP who is accredited for OSC can provide antenatal care in collaboration with the participating public hospital throughout the pregnancy in accordance with these protocols and the enclosed visit schedule. A shared care arrangement requires additional effort to be given to communication between all parties involved in the shared care arrangement, this should include the pregnant woman.

It is essential that the GP ensures that their current details are accurate and any changes are communicated to GP partners Australia, [www.gppaustralia.org.au/osc](http://www.gppaustralia.org.au/osc) and are updated on the SA Health Provider Registry <http://www.generalpracticesa.org.au/pages/hpry.html>

**The GP should ensure, the pregnant woman opting for GP OSC secures a reference number from the Pregnancy SA Referral Line (Ph: 1300 368 820) so she can be scheduled her first antenatal visit at participating public hospital.**

In a shared care arrangement, a woman who develops complications can be referred to the hospital for assessment at any time.

### 2 GP OSC SA PROTOCOLS

The GP OSC SA Protocols outline the framework for the provision of Obstetric Shared Care in South Australia. The protocols are updated every 3 years and the clinical practices outlined in these protocols have been developed in accordance with the **SA Perinatal Practice Guidelines** (SA PPG), which provide perinatal care providers with evidence-based standards to support clinical practice. The GP OSC SA Protocols are available on the website at: [www.gppaustralia.org.au/osc](http://www.gppaustralia.org.au/osc) and along with the SA PPGs on the SA Health website [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal)

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### 3 MEDICAL INDEMNITY

The risk of litigation in the practice of obstetrics mainly relates to the conduct during labour, although litigation has occurred when antenatal screening tests have been omitted, or when serious medical problems or obstetric complications have not been detected during the pregnancy.

While the responsibility for the health of the woman and her baby is shared in obstetric shared care, medical indemnity insurance related to this care remains the responsibility of the medical officer(s) involved. Medical insurers have specific requirements related to this care and it is recommended that GPs clarify these with their medical indemnity insurers.

**To be indemnified for the practice of obstetric shared care, the appropriately qualified GP must adhere to the requirements of their insurance provider.**

### 4 ACCREDITATION & CONTINUING PROFESSIONAL DEVELOPMENT (CPD) REQUIREMENTS

GP partners Australia facilitates the management of the GP accreditation for the GP OSC SA in liaison with SA Health.

#### 4.1 Initial Accreditation

All GPs undertaking obstetric shared care in South Australia are required to hold General or Specialist registration 'without any conditions' under the Australian Health Practitioner Regulation Agency (AHPRA). GPs are also required to meet the accreditation requirements of the GP OSC Program SA and be familiar with both the program protocols and the policies of the participating hospital.

Approval for full accreditation within the GP OSC Program is subject to both:

- Satisfactory obstetric experience, *and*
- Completion of an Accreditation Seminar.

Provisional accreditation may be approved for a period of up to 12 months on the basis that the GP attends and fulfils the requirements for a Category 1 Accreditation Seminar in that time. Provisional accreditation will usually be approved for GPs who have one of the following:

- DRANZCOG with current recertification, or equivalent qualification;
- Diploma Obstetrics RACOG, or CSCT in Women's Health, plus recent involvement in antenatal care provision;
- FRANZCOG, FRACOG or FRCOG;
- GPs who can demonstrate recent significant obstetric experience such as having spent a minimum 3-month placement in obstetrics at a teaching hospital.

GPs who do not meet the obstetric experience requirements may apply to undertake a supervised obstetric clinical attachment at one of the public metropolitan maternity hospitals. If subsequent satisfactory clinical performance is demonstrated, provisional accreditation will be granted.

## 4.2 Ongoing Accreditation

The ongoing accreditation of GPs for the GP OSC SA Program is managed within a 3-year accreditation cycle, which is conducted in parallel with the Continuing Professional Development (CPD) triennium as defined by the RACGP and ACRRM.

To maintain accreditation a GP must demonstrate over the 3 year period that they have engaged in CPD activities equivalent to a minimum of 12 CPD points specific to Obstetric Shared Care. Four (4) of these points are allocated for participation at the CPD events organised by GP partners Australia over the three years.

Assessment of CPD activities is a role undertaken by the GPOSC SA Advisors and the two (2) CPD points per hour will be allocated; (in accordance with RACGP QA & CPD Program). The records management of CPD accreditation points will be managed by the GPOSC SA Co-ordinator.

CPD activities could include:

1. GP OSC (SA) Accreditation Seminar
2. GP OSC (SA) CPD events
3. RANZCOG Diplomats Days
4. DRANZCOG Revision course
5. Online CPD activities eg GP learning
6. Women's health activities and other events conducted by GP Networks
7. Other educational activities that can be demonstrated to be relevant to OSC ie part of a 40 point Active Learning Module

Rural GPs unable to meet this requirement need to contact the GP Obstetric Shared Care Program Coordinator.

## 4.3 Compliance - Accreditation

The GP accredited to GPOSC SA program must ensure they remain current with perinatal practice as per the SA Perinatal Practice Guidelines and the GPOSC SA protocols.

The GPOSC SA Advisors facilitate the review of the accreditation status of a GP who is deemed to be non-compliant with the GP OSC SA accreditation.

## 5 GP OSC SA MIDWIFE CO-ORDINATORS

GP OSC SA Midwife Coordinators are available at five (5) public maternity hospitals across SA (listed below). Each GP OSC SA Coordinator is a Registered Midwife, who through experience and education is an expert clinical practitioner in antenatal/postnatal management.

The Midwife Coordinators will facilitate and liaise with a range of health workers to support antenatal/postnatal activities for women and staff involved in the GP OSC SA Program, ensuring that relevant professional standards and appropriate documentation are maintained.

The GP OSC SA Midwife Coordinators support antenatal clinics held at:

- Women's and Children's Hospital
- Flinders Medical Centre
- Lyell McEwin Hospital
- Modbury Hospital
- Gawler Health Service

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The GP OSC SA Midwife Coordinator acts as an advocate, both for women and the GP involved in the GP Obstetric Shared Care Program. The GP OSC SA Midwife Coordinator is also available to rural GPs who require information even if the woman is not giving birth at a metropolitan hospital.

The GP is encouraged to contact the GP OSC SA Midwife Coordinator for advice or information regarding the program.

A database of accredited GPs across South Australia is maintained by GP partners Australia and is available to the Midwife Coordinators.

**CONTACT DETAILS FOR THE GP OSC SA MIDWIFE COORDINATORS CAN BE FOUND ON Pg 4.**

## CLINICAL SECTION

### 6 SOUTH AUSTRALIAN (SA) PREGNANCY RECORD

SA Health has endorsed the SA Pregnancy Record as **the substantive record of a woman's pregnancy**. The aim of the SA Pregnancy Record is to improve continuity of care, involve the woman's family in the care, and promote early and appropriate use of antenatal services, particularly amongst disadvantaged groups. **The SA Pregnancy Record must be used to document the care provided for all women involved in GP Obstetric Shared Care.**

The perinatal care provider must record at each visit all relevant antenatal information in the SA Pregnancy Record. Information must be sufficient to meet the care provider's duty of care in diagnostic and treatment decisions.

Information need not be duplicated, but clinicians may do so by choice. If duplication is required, it is recommended that the SA Pregnancy Record be photocopied. Pathology and ultrasound results are to be filled in and included in the SA Pregnancy Record.

**The SA Pregnancy Record should be given to the woman at her first antenatal visit after confirmation of pregnancy. She should be instructed to carry this with her to all appointments during her pregnancy, including those with other health professionals. The woman should be made aware that the SA Pregnancy Record is the ONLY complete medical record maintained for her antenatal care, and it is vital that it is used to record the care given to her at each visit. The woman should also be aware that the SA Pregnancy Record will become part of the hospital's medical records after the birth of her child.**

As the substantive record, the SA Pregnancy Record will be filed in the medical records at the hospital where the birth occurs. **The SA Pregnancy Record is not to be destroyed under any circumstances.**

The *Guidelines for the use of the SA Pregnancy Record* can be viewed at <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+programs/sa+pregnancy+record>

## 7 RELATIVE CONTRAINDICATIONS TO SHARED CARE

Obstetric shared care arrangements can be provided for most pregnant women. GPs should seek advice from the GP OSC SA Midwife Coordinator or an Obstetric Registrar / Consultant to clarify the recommended management of the women presenting with any of the relative contraindications listed below:

The following conditions, identified before or during pregnancy, present a relative contraindication for the woman to be managed in an obstetric shared care arrangement:

### From General History

- endocrine disease including diabetes mellitus
- cardiac disease
- renal disease
- hypertension
- respiratory disease
- neurological disease including epilepsy on medication
- thrombo-embolic disorders or antiphospholipid syndrome
- illicit drug use
- haematological disorders including haemoglobinopathy, thrombocytopenia, significant anaemia
- psychiatric disorders
- gastro-intestinal disease
- obesity – BMI > 35.9 kg/m<sup>2</sup> with co-morbidities
- obesity – BMI > 40 kg/m<sup>2</sup>

### From Obstetric History

- severe pre-eclampsia
- perinatal death
- placental abruption
- preterm birth at less than 34 weeks
- intra-uterine growth restriction
- recurrent pregnancy loss
- suspected cervical incompetence

### From Early Pregnancy Assessment

- Rh or other blood group antibodies
- anaemia
- multiple pregnancy
- haemoglobinopathy

### **Arising During Pregnancy *any of the above conditions and/or***

- antepartum haemorrhage
- fetal abnormality
- suspected intra-uterine growth restriction
- recurrent urinary tract infection
- gestational diabetes
- deep vein thrombosis or embolism
- placenta praevia
- non-cephalic presentation after 36 weeks
- gestational hypertension or pre-eclampsia
- threatened preterm labour
- cholestasis of pregnancy

## **8 BOOKING THE OBSTETRIC SHARED CARE WOMAN AT THE PARTICIPATING HOSPITAL**

The GP should ensure the GP OSC SA woman is referred to a participating hospital as soon as possible to ensure the 1<sup>st</sup> antenatal visit is scheduled before 20 weeks gestation and preferably in the 1<sup>st</sup> trimester.”

As with all pregnant women wishing to birth in a public hospital in metropolitan Adelaide (including Gawler, Mt Barker hospital and South Coast District Hospital), the pregnant woman opting for GP OSC is required to secure a reference number from the Pregnancy SA Referral Line before she can be scheduled her first antenatal visit. This first antenatal appointment will be undertaken by the GP OSC Midwife Co-ordinator at the participating hospital. (This does not always apply to rural women coming to a metropolitan hospital to birth)

**The Pregnancy SA Referral telephone number is: 1300 368 820. The service is available 9am-4pm Monday to Friday (excluding public holidays).**

The GP OSC Midwife Co-ordinator can assist with determining **a management plan for all pregnant woman, including those deemed to be ‘at risk’**.

## 9 OBSTETRIC SHARED CARE VISIT SCHEDULE

This is the suggested antenatal visit schedule for all 'normal' risk nulliparous and parous women who have been determined as suitable for GP OSC SA either at the first hospital visit or following obstetric review. Additional visits can be scheduled for the 'at risk' woman.

SCHEDULED VISIT	OUTLINE OF ASSESSMENT/TASKS REQUIRED										
<b>1<sup>st</sup> visit may be with GP Preferably before 10 weeks</b>	<input type="checkbox"/> Calculate EDC by dates and cycle. If uncertain, order dating ultrasound <input type="checkbox"/> Commence SA Pregnancy Record <input type="checkbox"/> Order routine blood and urine tests (copy to the hospital) <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Complete blood picture</td> <td><input type="checkbox"/> Hepatitis C</td> </tr> <tr> <td><input type="checkbox"/> Blood group and antibody</td> <td><input type="checkbox"/> HIV</td> </tr> <tr> <td><input type="checkbox"/> Rubella titre</td> <td><input type="checkbox"/> MSSU</td> </tr> <tr> <td><input type="checkbox"/> Syphilis serology</td> <td><input type="checkbox"/> Vitamin D (for at risk women)</td> </tr> <tr> <td><input type="checkbox"/> Hepatitis B</td> <td><input type="checkbox"/> Oral Glucose Tolerance Test (OGTT)</td> </tr> </table> <input type="checkbox"/> Screen for perinatal mental health as per the National Perinatal Mental Health Initiative <input type="checkbox"/> Discuss and Recommend prophylactic influenza vaccination <input type="checkbox"/> Commence Iodine supplement <input type="checkbox"/> Commence Vitamin D regimen (for at risk women) <input type="checkbox"/> Discuss breastfeeding and antenatal education <input type="checkbox"/> Offer first trimester Down syndrome screening if woman 11 – 13 <sup>6</sup> weeks <input type="checkbox"/> Discuss options of CVS or amniocentesis to women at increased risk <input type="checkbox"/> Offer second trimester Down syndrome and NTD screening if woman 14 – 20 <sup>6</sup> weeks if indicated <input type="checkbox"/> Book morphology ultrasound for 18-20 weeks.	<input type="checkbox"/> Complete blood picture	<input type="checkbox"/> Hepatitis C	<input type="checkbox"/> Blood group and antibody	<input type="checkbox"/> HIV	<input type="checkbox"/> Rubella titre	<input type="checkbox"/> MSSU	<input type="checkbox"/> Syphilis serology	<input type="checkbox"/> Vitamin D (for at risk women)	<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Oral Glucose Tolerance Test (OGTT)
<input type="checkbox"/> Complete blood picture	<input type="checkbox"/> Hepatitis C										
<input type="checkbox"/> Blood group and antibody	<input type="checkbox"/> HIV										
<input type="checkbox"/> Rubella titre	<input type="checkbox"/> MSSU										
<input type="checkbox"/> Syphilis serology	<input type="checkbox"/> Vitamin D (for at risk women)										
<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Oral Glucose Tolerance Test (OGTT)										
<b>20 weeks</b>	<input type="checkbox"/> Discuss prophylactic Anti-D with Rh (-) negative women <input type="checkbox"/> Discuss maternal blood screening, morphology & ultrasound results & refer as appropriate										
<b>28 weeks</b>	<input type="checkbox"/> Order (copy to the hospital) <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Complete blood picture (CBP)</td> <td><input type="checkbox"/> Blood group antibodies</td> </tr> <tr> <td><input type="checkbox"/> Oral glucose tolerance test (OGTT)</td> <td><input type="checkbox"/> Vitamin D (if previously deficient)</td> </tr> </table> <input type="checkbox"/> Administer prophylactic Anti-D to Rh negative women as per protocol for Rh negative women <input type="checkbox"/> EPDS Score – to be repeated if previous score >13 <input type="checkbox"/> Discuss and recommend Whooping Cough (Pertussis) vaccination for administration in third trimester	<input type="checkbox"/> Complete blood picture (CBP)	<input type="checkbox"/> Blood group antibodies	<input type="checkbox"/> Oral glucose tolerance test (OGTT)	<input type="checkbox"/> Vitamin D (if previously deficient)						
<input type="checkbox"/> Complete blood picture (CBP)	<input type="checkbox"/> Blood group antibodies										
<input type="checkbox"/> Oral glucose tolerance test (OGTT)	<input type="checkbox"/> Vitamin D (if previously deficient)										
<b>32 weeks</b>	<input type="checkbox"/> Check-up <input type="checkbox"/> Discuss breastfeeding										
<b>34 weeks</b>	<input type="checkbox"/> Administer prophylactic Anti-D as per protocol for Rh negative women										
<b>36 weeks</b>	<input type="checkbox"/> Discuss birthing plan <input type="checkbox"/> Repeat Complete blood picture if anaemic <input type="checkbox"/> Undertake Group B strep (GBS) screening (copy to GP if GP Shared Care)										
<b>38 weeks</b>	<input type="checkbox"/> Check-up										
<b>40 weeks</b>	<input type="checkbox"/> Discuss induction of labour										

## 10 FIRST APPOINTMENT WITH OBSTETRIC SHARED CARE

The GP managing the woman in an obstetric shared care arrangement should **commence documentation in the SA Pregnancy Record at the woman's first antenatal visit.** [www.sahealth.sa.gov.au/pregnancyrecord](http://www.sahealth.sa.gov.au/pregnancyrecord)

The GP should ensure the pregnant woman opting for GP OSC secures a reference number from the Pregnancy SA Referral Line (**Ph: 1300 368 820**) so she can be scheduled for her first antenatal visit at the participating public hospital.

The GP should book all required blood tests and ensure copies of results are addressed to the antenatal clinic at the participating hospital and give consideration to a 'dating' ultrasound if clinically necessary.

At the first appointment, the GP should also explain the obstetric shared care protocols, including the timing and nature of the antenatal visits shared between the participating hospital and GP. It is suggested that the GP also spends time early in the pregnancy discussing breastfeeding with the woman.

The following areas must be addressed in the early antenatal appointments.

### 10.1 History

Personal details and history should be obtained and must be recorded in the SA Pregnancy Record.

### 10.2 Family History of Genetic Condition

Wherever possible, appropriate genetic counselling is best undertaken prior to a pregnancy. An increasing number of genetic conditions can be screened for and/or diagnosed. If the woman has a relevant history, the GP should contact the GP OSC Midwife Co-ordinator at the participating hospital for advice before any testing.

### 10.3 Examination

A general examination must be performed in alignment with the South Australian Pregnancy Record. Blood pressure should be assessed (measured on the right arm with the woman seated, with appropriate size cuff. Weight (kg), height (cm) and BMI must be measured and calculated. The GP OSC Midwife Coordinator at the referring hospital should be contacted for advice upon presentation of any pregnant woman with a BMI > 39.9 kg/m<sup>2</sup> with co-morbidities or any pregnant woman with BMI > 40 kg/m<sup>2</sup> (at any time during the pregnancy).

The GP should immediately transfer the care of the pregnant woman with BMI > 60 kg/m<sup>2</sup> or who weighs 170kg to a level 6 maternity site with an adult intensive care unit. ie LMH or FMC. As per the SA Health's *Standards for the Management of the Obese Obstetric Woman in SA*; available at [www.sahealth.sa.gov.au/pregnancypolicies](http://www.sahealth.sa.gov.au/pregnancypolicies). All findings must be recorded in the SA Pregnancy Record.

The GP should refer to SA Health Perinatal Practice Guidelines for additional information, [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal). *Women with a high body mass index (care of)*.

## 10.4 Booking Tests

The GP ordering and booking the antenatal tests must ensure that copies of the woman's results are available at the participating hospital at the time of her first antenatal visit. The GP should ensure that any investigations requested are followed up and that there is no expectation that these results will be followed up and acted upon by the participating hospital.

## 10.5 Booking Investigations

The GP should provide appropriate counselling and secure consent before booking the following investigations for the woman as per the South Australian Pregnancy Record

- Complete blood picture
- Blood group and antibody screen
- Rubella titre
- Syphilis serology
- Hepatitis B screen
- Hepatitis C screen
- HIV test
- Mid stream sample of urine (MSSU)
- Vitamin D Screen for those identified at risk (i.e. women who have darker pigmentation, wear covered clothing, are housebound or are newly arrived refugees)
- Morphology ultrasound 19 – 20 weeks
- Pap Smear – within the recommended guidelines

**All women should be offered screening for chromosomal anomalies. If the woman presents in the 1st trimester nuchal translucency should be offered 11-13w6d and biochemistry at 9w0d – 13w6d. However, if the woman presents later in pregnancy at 14w0d – 20w6d the second trimester biochemistry screening should be offered.**

It should be remembered that the first trimester nuchal translucency ultrasound scan is not available at all maternity hospitals, and are mostly ordered by the GP through private medical imaging services.

The blood test is arranged through the SAMSAS (South Australian Maternal Serum Antenatal Screening) Program, which provides services accredited by the Maternal Fetal Medicine Foundation. SAMSAS uses the information from the blood tests and nuchal translucency scan to calculate the risk of chromosomal anomalies for a particular woman and sends the result to the referring doctor.

The GP should refer to SA Health Perinatal Practice Guidelines for additional information, [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal). *PAPP-A: Management of Women with a Low PAPP-A and Normal Chromosomes.*

### Non Invasive Prenatal Testing

Non-invasive prenatal testing (NIPT) is a test which uses cell-free fetal DNA of placental origin in maternal serum to screen for fetal aneuploidy. NIPT is now commercially available in Australia.. Due to public awareness of this technology and widespread advertising, many of the consultations regarding NIPT are likely to be initiated by pregnant women themselves. NIPT is offered as a second tier screen following a combined first trimester screen. NIPT is available from 10 weeks gestation. There is no upper gestational limit. However, consideration needs to be given should women wish to proceed to termination.

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cywhs.perinatalprotocol@health.sa.gov.au



### Important Points

- NIPT is a screening test during early pregnancy to detect Down Syndrome and other chromosome conditions
- The test is safe and does not pose any risk to mother or baby
- Currently only offered through specialist centres at a cost to the women. No Medicare rebate is available
- NIPT, like all prenatal tests is optional
- The accuracy of NIPT tests is high although not 100%
- A definitive diagnosis of a chromosome condition in the baby can only be made following an invasive prenatal diagnosis test like CVS or amniocentesis
- The NIPT does not replace the 12 week first trimester screening.
- Maternal weight >120kgs may not obtain a result due to insufficient fetal cells in the woman's blood sample.

A pregnant woman with an abnormal maternal serum screening result must be promptly referred to the participating hospital for counselling with a view to offering NIPT, Chorionic Villus Sampling (CVS) or Amniocentesis. This can proceed through the GP OSC Midwife Co-ordinator.

**It is suggested that GPs read and are familiar with the section 17.6 on “Risks and screening for Down Syndrome” and the table “Maternal Age and Risk”.**

It is suggested that the GP discusses Chorionic Villus Sampling (CVS) and Amniocentesis with any woman who has an increased risk of a chromosomal disorder or those with a family history of genetic disorder. This should be undertaken at 10w0d – 13w6d, and amniocentesis should be undertaken from 15w0d onwards. The GP should refer the woman to the participating hospital for appropriate counselling as soon as possible. This can proceed through the GP OSC Midwife Co-ordinator.

### 10.6 Medications in Pregnancy

The pregnant woman should be advised to only take medications that have been prescribed by a doctor. Likewise, she should not stop any necessary medication without prior discussion with the doctor concerned. The pregnant woman should only use paracetamol for the treatment of pain and fever, not aspirin or other non-steroidal anti-inflammatory drugs, e.g. ibuprofen.

The GP can seek advice regarding the woman taking long term medication in pregnancy from the Medicines and Drug Information Centre at the Women's and Children's Hospital Pharmacy (Phone (08) 8161 7222 Monday- Friday 9 am – 5 pm).

### 10.7 Immunisations in Pregnancy

The NHMRC recommends routine administration of 2 vaccines during pregnancy ie influenza and pertussis. The influenza vaccine is recommended as early as possible in pregnancy, the precise timing of vaccination will depend on the time of the year, vaccine availability, influenza seasonality, gestation of pregnancy and the likely duration of immunity.

The pertussis vaccine is recommended as a single dose during the third trimester of each pregnancy. The optimal time for vaccination is between 28 and 32 weeks gestation, but the vaccine can be given at any time during the third trimester up to delivery. Early third trimester vaccination is preferred because pertussis antibody levels do not peak until approximately 2 weeks after vaccination and active transport of maternal antibody to the fetus occurs predominantly from 30 weeks gestation onwards.

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The GP should refer to SA Health Perinatal Practice Guidelines for additional information [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal). *Vaccines Recommended in Pregnancy*.

## 10.8 Supplements in Pregnancy

The GP should consider the following suggestions regarding advice given to the woman for the use of vitamins in pregnancy:

- Calcium, vitamins and fluoride are not usually necessary
- Supplemental iron will be required if haemoglobin is below 110g/L before 12 weeks and if below 100g/L post 12 weeks.
- Folic Acid 0.4-0.5 mg ; although it is recommended to be taken at least one month prior to conception it is also recommended until 12 weeks gestation. If the woman is at increased risk of neural tube defect, on antiepileptic drugs, has diabetes or hyperhomocysteinaemia, a daily dose of 5 mg is recommended
- Vitamin D if required, as per the SA Perinatal Practice Guidelines
- Iodine 150mcg(µg)/day should be taken during pregnancy and for the duration of breastfeeding
- If Ferritin is less than 30mcg/L to recommend a supplement

The GP should refer to SA Health Perinatal Practice Guidelines for additional information, [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal).

- *Vitamin and mineral supplementation in pregnancy.*
- *Anaemia in Pregnancy*

## 10.9 Perinatal Mental Health

The recognition of depression and other mental health conditions in the antenatal period is important as it may require treatment during the pregnancy and is a strong predictor for post partum depression. It is appropriate to use the Edinburgh Postnatal Depression Scale (EPDS) to assess antenatal depression (see Section 17.5). The SA PPGs *Perinatal anxiety and depressive disorder (including postnatal depression)* recommend routine screening of all women in the antepartum and postpartum period using the Edinburgh Postnatal Depression Scale as well as psycho-social risk questions eg Antenatal Risk Questionnaire (ANRQ) or Post Natal Risk Questionnaire (PNRQ).

The SA PPGS outlines the guidelines for perinatal mental health, including screening for perinatal anxiety and depression. These guidelines should be referred to directly [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal), *Perinatal anxiety and depressive disorder*.

SA Health guidelines are consistent with National guidelines developed from collaboration between beyondblue and NHMRC. These guidelines and other resources may be downloaded via [www.beyondblue.org.au](http://www.beyondblue.org.au)

EPDS score	0-9	10-12	>13
<b>Likelihood of depression</b>	Considered low	Considered moderate	Considered high Very high scores can be suggestive of a woman in crisis or with a personality disorder. It warrants further investigation
<b>Referral – Tertiary &amp; Rural</b>	Mothers group for support. Child and Family Health Service for help with baby issues. Involve family and friends for support	GP Perinatal Mental Health Team Post natal Depression Group	GP ACIS – ph 13 14 65 Emergency Department Perinatal Mental Health Team Consider risk to child/ren
<b>Referral timeframe</b>	As needed	As soon as able	Immediate – especially if risk of suicide / infanticide
<b>Symptoms</b>	Normal anxiety, particularly about baby and mothering, possible transient lowered mood but also some ‘good days’	Anxiety, particularly about baby and mothering, overwhelmed, lowered mood, panic attacks, hopelessness and helplessness, life not worth living, lowered mood much of the time.	Anxiety - vague and not necessarily directed, overwhelmed, labile, low or elevated mood, preoccupied, vague and distracted, possible psychotic symptoms (delusions and hallucinations), suicidal ideation
<b>Risk assessment</b>	Risk of harm to self or others must still be inquired about	Risk of suicide but baby often protective. Neglect of baby and/or poor parenting secondary to the depression or underlying risk factors (e.g. history of child abuse leading to subsequent personality issues)	May be significant to self and baby due to poor judgement, severe depression, suicidal ideation, command hallucinations or delusional beliefs- needs urgent assessment of need for hospitalisation.
<b>Differential diagnosis</b>		Consider other causes for symptoms such as anaemia, poor sleep and lack of energy. Thyroid function, anaemia or bereavement should be excluded before diagnosing depression.	

Thirty six translated versions of the EPDS have been developed for use with non-English speaking women. Digital copies may be requested from the Western Australian Department of Health at [wapmhu@health.wa.gov.au](mailto:wapmhu@health.wa.gov.au) or phone (08) 9340 1795

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## Referral Services

There are a variety of services available for GP's seeking assistance with managing perinatal mental health issues. Specific services available may depend on geographic location, but these include:

- Emergency Mental Health Triage can undertake urgent assessments, telephone 13 14 65.
- Helen Mayo House (HMH) is a State-wide acute mother-baby unit which admits parents (usually mothers) and their children 3 years of age or younger, if the parent needs treatment for mental health problems such as depression, anxiety or psychosis following childbirth. Inpatient, outreach day patient and group treatment programs are available, as well as brief telephone consultations for advice regarding patient care. Contact telephone (08) 7087 1030.
- Mental health/perinatal mental health teams at the participating hospitals (see Section 18 for contacts).
- GP partners Australia (GPpA) delivers the Mental Health Shared Care Program. This program provides a **free** clinical service that focuses on people with low prevalence, severe and complex disorders. The aim of the program is to assist GP's to manage their patient's mental health concerns, to help them function effectively in the community and reduce the need for hospitalisation. **Referrals to** GPpA can be made via a mental health plan Fax 08 8227 2220 or phone 08 8112 1100 for further information. GP-PASA 291 offers psychiatrist advice to GPs on management of women with mental health problems, a one-off psychiatric assessment of the woman and a management plan in situations where the GP is prepared to continue management after this one-off option. Call **PASA 1800 721 899** Mon – Fri, 9am – 5pm to arrange an appointment.
- Access to Allied Psychological Services.- The mental health service enables General Practitioners to refer clients with high prevalence disorders (e.g. depression and anxiety) for six sessions of evidence-based mental health care, with an option of a further six sessions following a mental health review by the referring GP. The Program is directed towards clients who are financially disadvantaged eg: unemployed, health care card holder, pensioner, single parent, perinatal mental health and chronically ill), youth, children under 12 years and Aboriginal and Torres Strait Islander people. Referral occurs via a faxed Mental Health Treatment Plan. Primary Health Network Fax: 1300 580 249
- National Health Services Directory - available services at <http://www.nhsd.com.au/>
- Beyond Blue Infoline 1300 22 4636. Beyond blue is a national organisation working to address issues associated with depression & anxiety in Australia. [www.beyondblue.org.au](http://www.beyondblue.org.au)
- The Post and Antenatal Depression Association (PANDA) National Helpline 1300 726 306 provides information, support and referral to anyone affected by depression and anxiety during pregnancy and after childbirth [www.panda.org.au](http://www.panda.org.au)

## 11 SUBSEQUENT ANTENATAL APPOINTMENTS

### 11.1 Routine Assessment

All designated sections in the SA Pregnancy Record **must be completed and documented in the SA Pregnancy Record at each antenatal visit**, including the following:

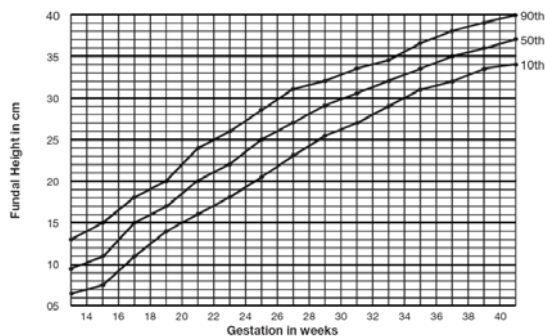
- gestation in completed weeks
- symphysis-fundal height in centimetres, **also recorded on chart in SA Pregnancy Record**
- blood pressure (measured on the right arm with the woman seated, with appropriate size at cessation of Korotkoff IV)
- presentation and descent (fifths of fetal head palpable) after 30 weeks gestation
- fetal heart and fetal movements
- laboratory test results
- smoking assessment
- use of illicit drugs

It is recommended that the GP refers the woman with any abnormalities of blood pressure, fetal growth or routine tests to the antenatal clinic at the participating hospital.

### 11.2 Guidelines for Measuring Symphysis-fundal Height

Accurate symphysis-fundal height will aid in antenatal assessment. The GP should ensure the following is undertaken to optimise an accurate symphysis-fundal height measurement.

- Lay the woman in the supine position with her head supported on a single pillow. The couch should be flat.
- Measure the highest point of the fundus to the top of the symphysis pubis. Begin measuring from the fundus since this is the more variable end point.
- Measure with the tape scale facing downwards so avoiding less influence by previous results.
- Record the measurements to the nearest 0.5 centimetre and enter them in the woman's SA Pregnancy Record.
- Plot the measurement against the gestation in weeks on the symphysis-fundal height chart.



**Symphysis-Fundal Chart**

Source: Taylor P, Coulthard AC, Robinson JS. Symphysis-fundal Height from 12 weeks Gestation. Aust NZ J Obstet Gynaecol 1984; 24 (3):189-91

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### 11.3 Schedule of Visits

It is recommended that the GP schedule the pregnant woman for antenatal assessment as per the guidelines provided in Section 9 of this document. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal)

## 12 HOW TO MANAGE ABNORMAL RESULTS

Any investigations requested by the GP for the pregnant woman under his/her care must be followed up by the GP concerned. It is the GP's responsibility to follow up all abnormal results irrespective of whether a copy has been sent to the participating hospital.

### 12.1 Complete Blood Picture

When a pregnant woman presents with a haemoglobin  $\leq 110$  g/L in the first trimester and  $\leq 100$  g/L in the second and third trimesters, or particularly if red cell abnormalities are present, iron studies folate and B12 studies are recommended as follow up for the woman.

The GP should also consider testing for thalassaemia (haemoglobin electrophoresis) where appropriate. Low white cell or platelet counts should prompt discussion with, and/or referral to the participating hospital. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal). -*Anaemia in pregnancy*

### 12.2 Blood Group and Antibody Screen

Any positive test for antibody levels should prompt immediate referral to the participating hospital.

### 12.3 Rubella Titre

In the instance that the pregnant woman shows a "non immune" level in a Rubella Titre, the GP should discuss with the woman the need for the measles, mumps, rubella (MMR) immunisation in the postnatal period. **Under no circumstances should the MMR immunisation be given in pregnancy. The pregnant woman should be advised to avoid contact with rubella.**

### 12.4 Syphilis Serology

In the instance that the pregnant woman shows a positive result to Syphilis, the GP should promptly refer the woman to the participating hospital.

### 12.5 Hepatitis B and C and HIV Tests

In the presence of complications, a pregnant woman with positive result to Hepatitis B, C or HIV may warrant referral to an Infectious Diseases Consultant and/or consultant obstetric advice at the participating hospital.

### 12.6 Maternal Serum Screening

A pregnant woman with an abnormal maternal serum screening results must be promptly referred to the participating hospital for counselling with a view to offering CVS or Amniocentesis.. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal)- *PAPP-A: Management of women with a low PAPP-A and normal chromosomes.*

### 12.7 Morphology Ultrasound

In the instance that an abnormality is noted on the Morphology Ultrasound the GP should seek obstetric advice from and/or referral to the participating hospital.

## 12.8 Oral Glucose Tolerance Test

A full 75gm Glucose Tolerance Test (GTT) is now required for all woman at 26- 30 weeks. If women meet the high risk criteria the GTT is to be performed early, 12- 16 weeks and if results are normal, repeated at 26-30 weeks. The diagnostic criteria are stated in the South Australian Pregnancy Record. An early GTT is required if a pregnant woman has 1 high risk factor or 2 moderate risk factors;

### High risk factors:

- Previous GDM
- Previously elevated BGL
- Maternal age  $\geq$  40 years
- Family history of DM (i.e. 1st degree relative with diabetes or sister with GDM)
- BMI  $>35$  kg/m<sup>2</sup>
- Previous macrosomic baby (birth weight  $>$  4,500g or  $>$  90th centile)
- Polycystic ovary syndrome
- Medication with corticosteroids or antipsychotics

### Moderate risk factors:

- Ethnicity (Asian, Indian subcontinent, Aboriginal, Torres Strait Islanders, Pacific Islander, Maori, Middle Eastern, non-white African)
- BMI 25-35kg/m<sup>2</sup>
- Note women with one moderate risk factor should have a serum random or fasting blood glucose level and proceed to an Oral Glucose Challenge Test (OGCT) if required.

### Diagnosis

If the diagnosis of Gestational Diabetes is confirmed, the need for dietary advice and home glucose monitoring is indicated if one or more of the following values are elevated:

- A fasting venous glucose  $\geq$  5.1mmol/L
- 1 hour venous glucose  $\geq$  10.0mmol/L
- 2 hour venous glucose  $\geq$  8.5mmol/L.

Further information and alternative diagnostic tests refer to the SA Perinatal Practice Guideline [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal)- **Diabetes Mellitus and Gestational Diabetes**.

The GP should diagnose gestational diabetes and immediately refer the pregnant woman to the OSC Midwife Coordinator at the participating hospital. A copy of all blood test results should be sent to the participating hospital, where diabetes education and monitoring will promptly be arranged.

A diagnosis of Gestational Diabetes does not necessarily preclude the woman from the Obstetric Shared care Program.

## 13 HOW TO MANAGE ABNORMAL FINDINGS/SYMPTOMS

While most women will have a normal pregnancy, it is imperative that thorough, comprehensive antenatal assessments are undertaken to ensure early and accurate detection of adverse clinical outcomes. The GP should, where required, contact the obstetric Registrar/Consultant at the participating hospital for additional management advice.

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### 13.1 Intrauterine Growth Restriction (Fetal Growth Restricted)

GPs should ensure they measure the woman's symphysis-fundal height (SFH), and plot this on the Growth Chart in the SA Pregnancy Record (Refer Section 11.2). It should be remembered if the SFH <10th percentile or serial SFH measurements are flattening, then the GP should refer the woman for an ultrasound and request at the earliest opportunity:

- fetal size/growth compared with previous ultrasound (BPD, abdominal circumference);
- Doppler of umbilical artery flow; and
- amniotic fluid index (ask for normal range).

The ultrasound results should be 'plotted' on the appropriate graph in the SA Pregnancy Record. Further to this, if any parameters are abnormal, the GP should contact the GP OSC Midwife Co-ordinator at the participating hospital for advice. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Fetal Growth Restricted**.

### 13.2 Large for Gestational Age (Fetal Growth Accelerated)

Management of the Large for Gestational Age fetus can be complex.

The ultrasound results should be 'plotted' on the appropriate graph in the SA Pregnancy Record. Further to this, if any parameters are abnormal, the GP should contact the GP OSC Midwife Co-ordinator at the participating hospital for advice. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Fetal Growth Accelerated**.

### 13.3 Reduced Fetal Movements/Fetal Wellbeing

Assessment of fetal movements is recognised as difficult. If concerned, the GP should refer the woman to the GP OSC Midwife Co-ordinator at the participating hospital for advice and appropriate assessment, including a Cardiotocograph (CTG). [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Fetal Movements - Reduced/Decreased**.

### 13.4 Hypertension

Hypertension in pregnancy requires careful assessment. Hypertension is defined when the systolic BP is greater than or equal to 140 mm Hg and/or diastolic BP is greater than or equal to 90 mm Hg. Chronic hypertension is diagnosed prior to pregnancy or before 20 weeks. Gestational hypertension is diagnosed after 20 weeks (without pre-existing hypertension). Pre-eclampsia is diagnosed in the presence of gestational hypertension that is also associated with any sign of a multi-system disorder including proteinuria and/or one of the following:

- persistent cerebral symptoms (headache, visual disturbances, increased reflexes);
- epigastric or right upper quadrant pain;
- intrauterine growth restriction; or
- thrombocytopenia or abnormal liver function tests (LFT's).

Before a diagnosis of pre-eclampsia is made it is recommended that the GP completes a comprehensive history and clinical assessment of the pregnant woman to identify symptoms and signs of neurological and other systematic manifestation specific to pre-eclampsia.

To assist in the diagnosis of pre-eclampsia it is recommended that the GP arranges the following laboratory investigations: Ultrasound, Urea & Electrolytes, Complete Blood Examination, LFT's, Urate and Urine Protein Creatinine Ratio. The GP should refer to the SA Perinatal Practice Guideline [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Hypertensive Disorders in Pregnancy**.

A diagnosis of pre-eclampsia dictates immediate referral to the participating hospital. It is recommended in this instance, the GP contact the participating hospital and discuss referral with the on call Obstetric Registrar.

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### 13.5 Vaginal Bleeding

Bleeding in pregnancy is recognised as a potential emergency. If there are any concerns in this regard, the GP should seek Obstetric advice from the participating hospital.

If the woman is Rh negative she will require Anti-D. The GP should refer to the SA Perinatal Practice Guideline [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal). **Anti-D Prophylaxis.**

### 13.6 Abnormal Presentation

If the woman presents at >36 weeks gestation and has a suspected breech or transverse lie, the GP should refer her to the participating hospital for an assessment as soon as possible.

## 14 CARE FOR WOMEN WHO ARE Rh D NEGATIVE

Pregnant women who are Rh D negative fall into two categories: those with and those without Anti-D antibodies. **Women with Rh D antibodies are not suitable for shared care.** The following information therefore relates **only to women who are Rh D negative and have no preformed antibodies.** The GP should refer to the SA Perinatal Practice Guideline. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Anti-D Prophylaxis.**

### 14.1 Testing for Anti-D Antibodies

The GP should test the woman for blood group antibodies at the first antenatal visit. If the woman is Rh negative and had no Rh D antibodies in early pregnancy, the GP should ensure she is tested again for the presence of antibodies at the end of the second trimester of pregnancy.

**Testing should precede administration of Anti-D. The GP should note that if antibody testing was undertaken at 26 or 27 weeks, there is no need to repeat this screening before Anti-D administration at 28 weeks.**

The GP should note that further testing later in pregnancy (after administration of Anti-D) is superfluous because the test cannot distinguish between endogenous and administered Anti-D.

### 14.2 Anticipating Prophylactic Anti-D Administration in Pregnancy

If the woman is Rh D negative and has no preformed Anti-D antibodies, the GP should inform her about the need to prevent Rh D sensitisation. This includes:

- Anti-D administration if a sensitising event occurs in pregnancy;
- Routine prophylaxis at 28 and 34 weeks gestation; and
- Further prophylaxis after birth if the baby is not Rh D negative.

If recurrent vaginal bleeding is apparent, the GP should contact the GP OSC Midwife Co-ordinator at the participating hospital for advice before administering doses of Anti-D.

The GP should note that informed consent for prophylaxis should be obtained early in pregnancy (as soon as the Rh D status has been determined). This is to cover any and all occasions on which Anti-D may become indicated during pregnancy. The woman's consent for prophylaxis must be documented in her South Australian Pregnancy Record.

### 14.3 Obtaining Informed Consent

The GP should ensure that the woman understands what Rh D sensitisation means and the consequences it may have, if not necessarily for the current pregnancy, then at least for future pregnancies. It is suggested that the pregnant woman be provided with an information leaflet to assist her understanding. Refer [www.nba.gov.au/pubs/pdf/glines-anti-d.pdf](http://www.nba.gov.au/pubs/pdf/glines-anti-d.pdf)

Antenatal administration of Anti-D to all Rh negative women is recommended by the NHMRC. Administration of Anti-D to all Rh negative women who give birth to an Rh positive baby has been practised for many years in Australia.

As Anti-D is a blood product and is made from human blood, there is a theoretical risk of transmission of blood borne diseases. However, the risk of transmission is extremely small because of the careful selection of blood donors and because of the way in which Anti-D is produced from the blood.

### 14.4 Anti-D Prophylaxis for Potentially Sensitizing Events

Potentially sensitising events are defined as any situation in which there is an increased likelihood of fetal red blood cells entering the maternal circulation. These include:

- any uterine bleeding in pregnancy ranging from (threatened) miscarriage to antepartum haemorrhage;
- any abdominal trauma in pregnancy; and
- any uterine or intra-uterine intervention (such as external cephalic version, amniocentesis, etc). However, the responsibility for prophylaxis rests with the hospital at which these interventions are performed.

If a sensitising event occurs before 13 weeks gestation the recommended prophylaxis consists of 250 IU (international units) Commonwealth Serum Laboratory (CSL) Rh D immunoglobulin.

If a sensitising event occurs at or after 13 weeks gestation the recommended prophylaxis consists of 625 IU (international units) CSL Rh D immunoglobulin.

If a woman has a sensitizing event after routine prophylaxis at 28 weeks, she should have a dose of Anti-D regardless of when the prophylactic dose was administered.

The GP should refer to the SA Perinatal Practice Guideline. [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Anti-D Prophylaxis.**

### 14.5 Routine Prophylaxis at 28 and 34 Weeks (with or without previous sensitizing events)

Rh D negative women without preformed Anti-D antibodies should receive 625 IU CSL Rh D immunoglobulin at 28 weeks (after or simultaneously testing for preformed Rh D antibodies) and again at 34 weeks.

Anti-D can be administered before the result of the test for endogenous Anti-D at 28 weeks becomes available provided that the woman had no Anti-D antibodies at the beginning of pregnancy.

Basic principles about the timing of the routine prophylaxis are:

- the Anti-D administration will provide cover for a minimum of 6 weeks
- the risk of sensitisation increases as pregnancy progresses

Thus, if the woman has received Anti-D slightly before 28 weeks, the 34 weeks injection should still be given as planned at 34 weeks.

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If the woman has missed out on receiving Anti-D at 28 weeks (for example because they did not attend) Anti-D should be given at the next visit (better late than never). In that case, the second injection should be planned 6 weeks later, provided that the woman is still pregnant.

If the woman has received Anti-D for a potentially sensitising event, e.g. antepartum haemorrhage or trauma, before 28 weeks, she should still receive Anti-D at 28 and 34 weeks as scheduled unless the Anti-D for the sensitizing event was administered less than 1 week before the prophylactic dose being due.

The GP should refer to the SA Perinatal Practice Guideline [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) **Anti-D Prophylaxis**.

## 14.6 Administration of Anti-D

Rh D immunoglobulin should be given slowly by deep intramuscular injection, using a 20 gauge needle. Administration of Anti-D must be documented in the woman's SA Pregnancy Record.

If the Rh D status of the woman is known at the time of her first visit at the participating hospital, the GP OSC Midwife Coordinator at the participating hospital will ensure that the shared care GP receives the Anti-D for routine administration at 28 and 34 weeks; provided that the woman has given her consent to the prophylaxis.

**Table: Summary of Dose Recommendations for Rh D Negative Women**

	Dose of CSL Rh D immunoglobulin
<b>Sensitising events</b>	
before 13 weeks	250 IU
at or after 13 weeks	625 IU
<b>Routine prophylaxis</b>	
at 28 and at 34 weeks	625 IU

## 15 LABOUR AND BIRTH

The care of the woman during labour and birth is the responsibility of the maternity team at the participating hospital.

The participating hospital is expected to provide a discharge summary of the pregnancy and birth outcome for the GP at discharge of the woman. Some hospitals perform this task electronically.

## 16 POSTNATAL CARE

Breastfeeding advice should be readily available during the immediate postnatal period whilst the woman is in hospital, and follow-up support post discharge is commonly arranged through the home visiting Midwifery Service.

A universal contact visit by Child and Family Health Services should occur.

Women should be advised to seek follow-up postnatal visits with their GP at 2 and 6 weeks, unless needed prior to this. Some women may be required to return to the participating hospital if they have experienced particular problems during pregnancy or childbirth. This appointment should be made for the woman prior to discharge.

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During the postnatal period, the GP may identify problems that require referral back to the participating hospital or to a Paediatrician.

## 16.1 Postnatal Visits

The GP should endeavour to see the woman and baby **two weeks** after the birth. This is an opportunity to check how the woman is coping, sleeping and what support is available to her, as well as the baby's health and development.

The GP should assess the **mother's obstetric and medical history and that of her baby** including:

- pregnancy, birth and delivery history including any complications
- recheck family history
- neonatal history, e.g. resuscitation needed, nursery admission
- feeding – breast/bottle/mixed; frequency; any difficulties
- feeding pattern – vomits/spills, “wind” colic, stools
- behaviour between feeds
- CYH contact/centre
- discuss the six week immunisations as per the Child Immunisation Schedule
- baby safety checks and SIDS advice, including sleeping (site, position), hygiene (bathing site, frequency), travel (pram, car)
- family and social supports
- any questions or concerns the mother/father/carer may have

The GP should **examine the baby** and review the following:

- weight, length and head circumference including percentiles
- head – shape, mobility, control
- eyes – movement, conjunctiva, cornea
- mouth – tongue, cheeks, ? thrush
- CVS – colour, heart sounds, murmurs, pulses (femoral)
- respiratory – effort, noises such as stridor or cough
- GIT/GUT – umbilicus, abdomen, groin (hernias), perineum, genitalia
- CNS – alertness/awareness, movement, tone
- MSS – jaundice, skin rashes, hips, feet position
- Observe parent's handling technique and attachment (confidence, interaction)

The GP should **document the visit**, including examination findings, in the baby's **My Health Record** (“blue book”).

At the **six-week visit** the GP should examine and review the **baby** as per the two week visit outlined above, as well as:

- check if any parental concerns about baby's hearing or vision
- recommend six week immunisations as per the Child Immunisation Schedule
- developmental screen/guidelines
- eyes – appearance, fixation, following

The six-week visit should also be documented in the baby's **My Health Record** (“blue book”)

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The GP should **consider referral** if appropriate for the mother or baby:

- Child and Family Health Services Paediatrician
- Community health centre
- Lactation consultant
- Australian Breastfeeding Association
- Social worker

## 16.2 Postnatal Visits – Mother

The GP should endeavour to assess the woman **two weeks** after the birth to examine the woman and review the following:

- lochia
- BP (if hypertension during pregnancy)
- examine perineum +/- abdominal wound (if caesarean section delivery)
- breastfeeding
- contraception
- administer the Edinburgh Postnatal Depression Scale, if necessary (see Section 10.9)

The GP should endeavour to assess the woman and baby again, **six weeks** after the birth. The GP should review the woman as per at the two week visit, as well as:

- intercourse
- urinary or faecal incontinence
- breasts, nipples
- abdomen – fundus, uterus involuted, caesarean section delivery scar
- perineum, vaginal examination, uterus involuted, Pap smear if due
- follow-up on pregnancy complications e.g. gestational diabetes, hypertension
- Discuss vaccination of the mother, and vaccinate if incompletely immunised. Ensure all family members are up to date with their vaccinations, particularly pertussis. Refer [www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home](http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home)
- administer the Edinburgh Postnatal Depression Scale, if necessary (see Section 10.9)

These visits can be documented on the [Postnatal Check Forms](#) that follow or that can be accessed from the GP partners Australia website. [www.gppaustralia.org.au/osc](http://www.gppaustralia.org.au/osc)

Consideration should be given to any referrals that may be appropriate (as per 10.9).

## 16.3 Two Week Postnatal Check Form (Mother)

General Practitioner to complete; also available: [www.gppaustralia.org.au/osc](http://www.gppaustralia.org.au/osc)

(Date of Consult)

..... Weeks postnatal

Mother's Last Name

Mother's First Name

D.O.B

**\* (Mother to fill in before seeing doctor)**

1. How are you feeling about yourself?  
.....
2. How are you feeling about the baby and how is baby going? .....
3. How are you sleeping?  
.....
4. How is your partner feeling? .....

**\* (Doctor to complete: this is a guide for assessing the mother)**

1. Review above questions with the mother .....
2. Lochia: Normal  Excessive
3. Breasts and Nipples: Breastfeeding  Cracks/Grazes   
Suppression  Pain/discomfort (? Mastitis)
4. Contraception: Yes  No
5. Perineum: (healing/sutures/pain).....
6. Family supports/relationships with: .....
7. National Perinatal Mental Health Initiative Tool: Yes  No   
Result: .....
8. Blood Pressure: .....
9. Abdominal Wound: (sutures left?) .....
10. Referral: Child & Family Health Service  Australian Breastfeeding Assoc.   
Lactation Consultant  Social Worker
11. Other Issues (e.g. headaches, backache, haemorrhoids, incontinence)  
Comments:.....

## 16.4 Six Week Postnatal Check Form (Mother)

General Practitioner to complete; also available: [www.gppaustralia.org.au/osc](http://www.gppaustralia.org.au/osc)

(Date of Consult)

Mother's Last Name

Mother's First Name

D.O.B

### 1. General Health / Comments

*How do you feel about yourself and your baby? How is your partner coping? Supports?*

.....

2. Feeding: Breast  Formula  Mixed
3. Rubella Status: Immune  Not Immune  Vaccinated: Yes  No
4. Pertussis Status Immune  Not Immune  Vaccinated: Yes  No
5. Intercourse: Resumed: Yes  No  Problems: Yes  No
6. Contraception: Yes:  No
7. Incontinence: Urinary: Yes  No  Faecal: Yes  No
8. Follow up complications: *eg gestational diabetes, hypertension* Yes  No

.....

9. Last Pap Smear: Date: ..... Result: .....

10. Menstrual Cycle has returned? Yes  No

11. B.P: .....

12. Breast/Nipples: Breastfeeding  Cracked/grazes   
 Suppressions  Pain/Discomfort

13. Abdomen ..... Wound (if C- section): .....

14. Perineum/Pelvic Examination: Vagina  Vulva  Pelvic Floor   
 Adnexae  Uterus  Perineum

15. National Perinatal Mental Health Initiative Tool  
 Yes  No

Result and action taken: .....

16. Referrals to other services:

- Child & Family Health Services  Community Health   
 Lactation Consultant  Australian Breastfeeding Assoc.   
 Social Worker  Other (please state).....

17. Other Issues (e.g. headaches, backache, haemorrhoids, incontinence) .....

Comments: .....

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## 17 FURTHER INFORMATION FOR THE GP

### 17.1 Perinatal Practice Guidelines

The SA Perinatal Practice Guidelines are available on the web at [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal), or via the APP 'Practices Guideline Reader' that can be downloaded for free to a smart phone or tablet. As they are continually being updated web access is the most appropriate means of accessing this information. The perinatal practice guidelines cover a broad range of topics that have not been repeated in these protocols.

### 17.2 Patient Assistance Transport Scheme (PATS)

The PATS is a subsidy program that provides money to pay for some travel, escort and accommodation costs when rural and remote South Australians travel over 100kms each way to see a specialist.

- The scheme is intended to subsidise the unavoidable financial costs for those residents of South Australia that have no option but to travel a long distance to receive essential medical specialist services from an approved medical specialist.
- The scheme is not intended to support choice of specialists. Patients should be treated as close to home as possible without compromising the safety and quality of the care provided. The scheme will not support the additional costs of travel if a patient makes a choice to travel beyond their closest specialist services.

Application forms are available from referring local doctors or online at [www.countryhealthsa.sa.gov.au/pats](http://www.countryhealthsa.sa.gov.au/pats)

PATS Guidelines for Assessment can also be available on the PATS website.

To optimise safety and birth outcomes, women who live more than a two hour drive from their maternity hospital should be advised to temporarily relocate closer to the hospital from 36 weeks of pregnancy. A PATS subsidy may be available to assist the woman with the costs associated with this relocation.

**NB: GPs and Specialist medical practitioners must register and be certified by PATS for portal access.** The GP must approve the online application or sign the paper based PATS form **before** the woman travels to see her specialist to ensure the woman can qualify to receive the reimbursement.

#### **Further Information:**

#### **Contact Country Health SA Local Health Network:**

**Phone: 1300 341 684**

Visit [www.countryhealthsa.sa.gov.au/pats](http://www.countryhealthsa.sa.gov.au/pats)

Email: [CHSAPATS@health.sa.gov.au](mailto:CHSAPATS@health.sa.gov.au) or contact your local PATS office.



### 17.3 Infections

A woman's pregnancy may be complicated by any common infection. There are however infections which can impact adversely on fetal well-being. Discussion with an Obstetric Registrar/Consultant is required where these infections are suspected or there is a history of exposure.

#### Infections include:

- Coxsackie (Hand, Foot and Mouth Disease)
- Cytomegalovirus
- Epstein-Barr virus (Glandular Fever)
- Genital herpes simplex (HSV)
- Hepatitis B
- Hepatitis C
- HIV/AIDS
- Listeria
- Measles and measles contacts
- Mycobacterium tuberculosis
- Parasitic diseases
- Parvovirus (Slapped Cheek syndrome)
- Rubella infection
- Syphilis
- Toxoplasmosis
- Varicella-zoster (Chicken Pox)

For more information refer to the SA Perinatal Practice Guidelines, [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) *Infection in Pregnancy*.

### 17.4 Management of Minor Conditions

The GP may find the following information useful when advising the pregnant woman on the following minor pregnancy-related conditions.

#### Morning Sickness

Morning sickness can be managed by:

- Eating small, frequent meals and drinking plenty of fluids.
- Using acupuncture and ginger
- Taking Vitamin B<sub>6</sub>, 25mg three times daily.
- Taking Prochlorperazine /Metoclopramide if necessary.
- Receiving IV fluids (if the woman is becoming dehydrated)
- Ondansetron Hydrochloride administration orally.

For further information refer to the SA Perinatal Practice Guidelines, [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal) *Hyperemesis in Pregnancy*.

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### Heartburn

Heartburn can be managed by:

- Eating small, frequent meals.
- Avoiding fatty foods, coffee, tea, and alcohol.
- Sleeping propped by tilting head end of bed up.
- Avoiding eating prior to bedtime.
- Antacids or ranitidine may be used as necessary.

### Constipation

Constipation can be uncomfortable during pregnancy and after the birth, but can be helped by:

- Eating plenty of fresh fruits, vegetables and wholegrain breads and cereals.
- Drinking plenty of water and exercising regularly.
- Taking extra fibre if needed.
- Metamucil capsules or Docusate Sodium 50mg (ie Coloxyl) if needed

### Tiredness

Pregnant women may be more tired than usual in the first few weeks of pregnancy and need more rest than usual. The GP can recommend the pregnant woman tries:

- Lying down during the day or going to bed early.
- Lightening the load when doing household chores
- Sitting down while working, whenever possible.

### Body Temperature

Any febrile illness in pregnancy should be treated with Paracetamol (not Aspirin) in appropriate doses. Pregnant women who exercise in pools should be advised they ensure the water temperature is less than 30°C and to avoid hot spas and saunas. This is particularly important in early pregnancy.

### Leg cramps

Leg cramps can be alleviated by:

- Increasing fluid intake.
- Calcium supplementation.
- Magnesium 600mg nocte.

### Dental care

The GP should advise the woman to attend the dentist for a check up if she has not had a dental examination within the last six months or shows evidence of dental disease.

## 17.5 Edinburgh Postnatal Depression Scale (EPDS)

(Refer Section 10.9)

### Instructions for users

- The mother is asked to underline which comes closest to how she has been feeling in the previous seven days.
- All 10 items must be completed.
- Care should be taken to avoid the possibility of the mother discussing her answers with others.
- The mother should complete the scale herself unless she has limited English or has difficulty reading.

As you have recently had a baby, we would like to know how you are feeling now. Please underline the answer which comes closest to how you have felt in the past seven days, not just how you feel today.

Here is an example, already completed:

- I have felt happy
- Yes, most of the time
- Yes, some of the time
- No, not very often
- No, not at all

### In the past seven days

#### I have been able to laugh and see the funny side of things:

- As much as I always could
- Not quite so much now
- Definitely not so much now
- Not at all

#### I have looked forward with enjoyment to things:

- As much as I ever did
- Rather less than I used to
- Definitely not so much now
- Hardly at all

#### I have blamed myself unnecessarily when things went wrong \*

- Yes, most of the time
- Yes, some of the time
- Not very often
- No, never

#### I have felt worried and anxious for no good reason:

- No, not at all
- Hardly ever
- Yes, sometimes
- Yes, very often

#### I have felt scared or panicky for no good reason \*

- Yes, quite a lot
- Yes, sometimes
- No, not much
- No, not at all

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**Things have been getting on top of me \***

- Yes, most of the time I haven't been able to cope at all
- Yes, sometimes I haven't been coping as well as usual
- No, most of the time I have coped quite well
- No, I have been coping as well as ever

**I have been so unhappy that I have had difficulty sleeping \***

- Yes, most of the time
- Yes, sometimes
- Not very often
- No, not at all

**I have felt sad or miserable \***

- Yes, most of the time
- Yes, quite often
- Not very often
- No, not at all

**I have been so unhappy that I have been crying \***

- Yes, most of the time
- Yes, quite often
- Only occasionally
- No, never

**The thought of harming myself has occurred to me \***

- Yes, quite often
- Sometimes
- Hardly ever
- Never

**Scoring**

Response categories: 0, 1, 2, and 3 according to increased severity of the symptom.

Items marked with an asterisk \* are reverse scored (i.e. 3, 2, 1, 0). The total score is calculated by adding together the scores of each of the 10 items.

Mothers who score above 12 are likely to be suffering from a depressive illness of varying severity. The EPDS should not override clinical judgement. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt during the previous week and in doubtful cases, it may be usually repeated after two weeks.

The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

## 17.6 Risks and Screening for Down Syndrome

Most participating hospitals do not undertake First Trimester Screening to assess a woman's risk of her fetus having Down syndrome. The GP should make arrangements with the woman to have this screening between 11w0d – 13w6d. The following information as per SAMSAS is provided to assist with the process and is available from the website [www.wch.sa.gov.au/services/az/divisions/labs/geneticmed/samsas.html](http://www.wch.sa.gov.au/services/az/divisions/labs/geneticmed/samsas.html)

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## Requesting First Trimester Screening

Two request forms are required, one for the blood analysis and one for the nuchal translucency ultrasound scan.

### Blood Analysis

1. 5-10 mls clotted blood sample, taken between 9w0d – 13w6d is required. A list of collection centres is provided on the reverse of the SA Maternal Serum Antenatal Screening (SAMSAS) request form. Telephone (08) 8161 7285 to secure copies of the form
2. **Use a SAMSAS request form:**
  - (a) the test request is for **'first trimester screen'** – however, SAMSAS recommends ticking both the 'first trimester screen' and the 'second trimester screen' boxes on the request form. This will assist with provision of the appropriate screen if the gestation on ultrasound scanning is different to expected gestation.
  - (b) **Complete all information including the women's weight, ethnicity, EDD, IVF/egg donor**
  - (c) complete the gestational age information, the gestation must be between 9w0d – 14w0 for 1<sup>st</sup> trimester screening
  - (d) specify the ultrasound practice performing the nuchal translucency scan
  - (e) refer **woman to the Privacy Disclosure on the SAMSAS request form**
  - (f) give woman the SAMSAS pre-test information booklet
  - (g) send the blood specimen to Women's and Children's Hospital. **For interstate or remote areas check with SAMSAS on what services are available.**
  - (h) request a copy of the results to be sent to the booking/participating hospital

### Ultrasound

3. Book a Nuchal Translucency scan with the imaging group of choice. The fetus must be between 11w0d – 13w6d gestation or crown rump length (CRL) 45-84mm at the time of the scan.
4. Complete an ultrasound request form, specifying **"risk of fetal abnormality"**; and **"Copy to SAMSAS"** and also request a copy of the results to be sent to the booking/participating hospital. SAMSAS will coordinate the results with the ultrasound practice and you will receive a single report giving the risks calculated for the pregnancy. Post-test information booklets are provided with all reports issued by SAMSAS on pregnancies found at increased risk of fetal abnormality.

### Availability of first trimester screening

Combined ultrasound and biochemistry screening is not currently offered through all hospitals/clinics. Check with the hospital/clinic concerned. The GP will be expected to organise the screening through private radiology services.

### Costs

For privately insured women, SAMSAS continues its policy of accepting 'Medicare only' for the serum biochemistry analyses. There may be a gap payment for the ultrasound measurement. Check with the practice providing this service.

### Second trimester screening

Second trimester screening for Down Syndrome should only be offered if the woman presents too late for 1<sup>st</sup> Trimester screening and should be undertaken between 14w0d and 20w6d. The GP should remember that if a pregnancy is screened in first trimester then any request in second trimester should be confined to **neural tube defect (NTD) screening only**. First trimester screening does not include a risk assessment for fetal NTDs.

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## Prenatal Screening for Down Syndrome

**Table: SAMSAS Prenatal Screening for Down syndrome**

Maternal Age in years at time of screen	Maternal Age risk at 12 weeks 1:n	Maternal Age In years at time of screen	Maternal Age risk at 12 weeks 1:n	Maternal Age in years at time of screen	Maternal Age Risk at 12 weeks 1:n
20	1131	30	719	40	94
21	1118	31	636	41	72
22	1102	32	552	42	55
23	1081	33	468	43	42
24	1054	34	390	44	31
25	1020	35	318	45	28
26	978	36	256		
27	926	37	203		
28	866	38	159		
29	796	39	123		

Source: SAMSAS Program Update 15, [www.wch.sa.gov.au/services/az/divisions/labs/geneticmed/samsas.html](http://www.wch.sa.gov.au/services/az/divisions/labs/geneticmed/samsas.html) (abridged version)

### 17.7 Non Invasive Prenatal Testing

Non-invasive prenatal testing (NIPT) is a test which uses cell-free fetal DNA of placental origin in maternal serum to screen for fetal aneuploidy. NIPT is now commercially available. Due to public awareness of this technology and widespread advertising, many of the consultations regarding NIPT are likely to be initiated by pregnant women themselves. NIPT can be offered as a second tier screen following a combined first trimester screen. NIPT is available from 10 weeks gestation. There is no upper gestational limit. However, consideration needs to be given should women wish to proceed to termination.

#### Important Points

- NIPT is a screening test during early pregnancy to detect Down Syndrome and other chromosome conditions
- The test is safe and does not pose any risk to mother or baby
- No Medicare rebate is available and the total cost will need to be covered by the women
- NIPT, like all prenatal tests is optional
- The accuracy of NIPT tests is high although not 100%, however test failure is higher when maternal weight is >120kgs.
- A definitive diagnosis of a chromosome condition in the baby can only be made following an invasive prenatal diagnostic test like CVS or amniocentesis

## 17.8 Chorionic Villus Sampling and Amniocentesis

Chorionic villus sampling (CVS) and amniocentesis can be used early in pregnancy to detect whether the fetus has a chromosomal abnormality. CVS services are offered at FMC & WCH, whereas amniocentesis is offered at all 3 metropolitan public maternity units. Both techniques are based on obtaining some cells from the fetus for chromosomal analysis. With chorionic villus sampling, cells are obtained from the developing placenta (chorion); with amniocentesis cells are obtained from the amniotic fluid. The advantages and disadvantages of each technique can be summarised as follows:

- Overall the risk of miscarriage after the procedure is approximately 1:100 with chorionic villus sampling and 1:200 with amniocentesis.
- Chorionic villus sampling is performed between 10 weeks and 13w6d; amniocentesis after 15 weeks.
- Results from chorionic villus sampling and amniocentesis may not be available for up to 2 weeks. However,
- If a Fluorescence In Situ Hybridisation (FISH) has been performed, results may be available within 48 hours.
- The women may be required to cover the cost of a FISH. Because chorionic villus sampling detects an abnormality earlier than amniocentesis early termination of the pregnancy is possible.
- Rhesus negative women require Anti-D at the time of chorionic villus sampling or amniocentesis.

### Chorionic Villus Sampling (CVS)

CVS is performed as an outpatient procedure. A small sample of chorionic villi is obtained in a syringe, via either the abdominal wall or the vagina under ultrasound guidance.

The procedure can be uncomfortable and does not require fasting. After the procedure, women should be advised to rest for 48 hours, abstain from strenuous activity or exercise, including intercourse and contact their booking hospital if they experience any cramping pain, blood loss or loss of clear fluid. Women should be instructed to contact their participating hospital if they develop a fever, bleeding or loss of fluid.

### Amniocentesis

Amniocentesis is performed as an outpatient procedure after 15 weeks gestation, as there is an increased risk of fetal malformations if carried out earlier. A sample of amniotic fluid is obtained for chromosomal analysis via the abdominal route under ultrasound guidance. Sometimes the procedure may need to be postponed for up to a week if there is inadequate amniotic fluid.

The procedure can be uncomfortable and does not require fasting. After the procedure the woman should be advised to abstain from strenuous activity for about 48 hours and to avoid intercourse for a week. About 1 in 10 women experience some cramping after the procedure, which can usually be managed with simple analgesia. Women should be instructed to contact their participating hospital if they develop a fever, bleeding or loss of fluid.

## 18 INFORMATION RELATING TO INDIVIDUAL HOSPITALS

While the participating hospitals maintain the GP OSC Program in accordance with agreed standards and protocols, each unit has some specific services that the GP may wish to discuss with the pregnant woman and/or her family.

### 18.1 Flinders Medical Centre (FMC)

The Flinders Medical Centre (FMC) provides a comprehensive perinatal service for women, neonates and their families, catering for most pregnancy and neonate conditions. Some of the perinatal services provided at FMC include:

#### **Obstetric Clinics**

Clinics are conducted mornings and afternoons at FMC and afternoons and evenings at the Noarlunga Health Service.

#### **Maternal Fetal Medicine (MFM) Unit**

MFM is a multi-disciplinary service with a diverse medical and midwifery faculty providing expert diagnosis, ongoing surveillance and discerning management for women whose pregnancies are significantly complicated by maternal and/or fetal conditions.

#### **Medical Complications of Pregnancy Clinics**

Clinics are conducted jointly by obstetric registrar/consultants and other medical specialists for women with complicated pregnancies.

#### **Childbirth and Parenting Education**

This program offers a wide range of childbirth classes designed to meet the woman's needs.

#### **Perinatal Mental Health Service**

All pregnant women are assessed in the antenatal period for anxiety and depression. Follow-up care in the antenatal period can be offered with a Mental Health Nurse for women booked in to deliver at FMC. A referral is required.

#### **Southern Midwifery Group Practice**

FMC offers a community based midwifery model of care where midwives lead the continuity of care throughout pregnancy, labour and the postnatal period for pregnant women assessed as low risk of complications. Women are supported through pregnancy, birth and the postnatal period by a primary midwife team of midwives.

#### **Maternity Outreach Service**

Through this service, midwives provide a home visiting service for women during their pregnancy and after the birth.

#### **Postnatal Support Service**

This service is conducted by a lactation consultant/midwife and is designed to help with unexpected feeding and settling difficulties that may arise in the early days after birth.

#### **Multiple Birth Support Service**

Through this service, a midwife is available to support and educate families with multiple births.

#### **DASSA Clinic**

FMC conducts a registered nurse led weekly drug and alcohol clinic to support women during their perinatal period.



### **Baby-Friendly Hospital Initiative (BFHI) Accredited**

A World Health Organisation (WHO) initiative to promote, support and encourage breastfeeding. FMC has been accredited as a BFHI hospital since 2003.

### **Telephone and fax lists for Flinders Medical Centre**

Flinders Medical Switchboard	(08) 8204 5511	Fax: (08) 8204 5450
Birthing & Assessment (BAS) Unit	(08) 8204 5511	– ask for BAS
Childbirth Education	(08) 8204 4680	
Continence Nurse	(08) 8204 4680	
Maternity Outreach	(08) 8204 5189	
Mental Health Nurse	(08) 8204 5511	Pager: 38903
Multiple Birth Co-ordinator	(08) 8204 4680	Pager: 2761
Obstetric Bookings	(08) 8204 5197	Fax: (08) 8204 5210
Obstetric Clinic Appointments	(08) 8204 5197	
Postnatal Support Service	(08) 8204 4216	
Radiology (Ultrasound appointments)	(08) 8204 5367	
Shared Care Midwife Coordinator	(08) 8204 4650	
Noarlunga Health Service	(08) 8384 9222	
Noarlunga Health Service Maternity	(08) 8384 9454	

## **18.2 Lyell McEwin Hospital (LMH)**

The Lyell McEwin Hospital (LMH) provides a comprehensive perinatal service for women, neonates and their families, catering for 'normal' and 'high' risk pregnant women > 32 weeks gestation, including care for most pregnancy related illnesses. The service also accommodates care for singleton and/or twin babies > 1500g. The management model is multidisciplinary and provides for the holistic needs of mothers and babies. LMH has been accredited as a Baby-Friendly Hospital since 2000.

### **Antenatal Clinics**

Registered midwives manage the low-risk antenatal clinics in the birthing and assessment unit at LMH. This is a midwifery led model of care.

The obstetric registrar/consultants conduct the medium/high-risk antenatal clinics in conjunction with medical staff in training programs. In addition, a midwife clinic is undertaken in the family clinic attending to those women who are scheduled for an elective caesarean section delivery, or are planning to have an epidural in labour or do not wish to birth with the assistance of the team midwifery model of care.

### **Northern Area Midwifery Group Practice Program**

LMH offers a community based midwifery model of care where midwives lead the continuity of care throughout pregnancy, labour and the postnatal period.

### **Pregnancy Complications Clinic**

High Risk pregnancy clinics are conducted jointly by obstetric consultants/registrars and obstetric medical specialists for women with complicated or 'high risk' pregnancies. This includes a specific "DANCE" clinic which caters exclusively to gestational/insulin dependent Diabetes.

### **DASSA Clinic**

LMH conducts a weekly drugs and alcohol clinic managed by a Medical Officer and Registered Nurse experienced in this field, who liaise with the Obstetricians and Registered Midwives to support women during their perinatal period.

### **SA GP Shared Care Program Protocols**

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cywhs.perinatalprotocol@health.sa.gov.au

### **Northern Aboriginal Birthing Program**

A comprehensive, community based care midwifery model of care for Aboriginal Women. Care is facilitated by a Registered Midwife who coordinates the multidisciplinary team.

### **Childbirth and Parenting Education**

A wide range of childbirth classes designed to meet the woman's needs, lifestyle and information preference are provided. Includes a tour of the maternity unit.

### **Perinatal Mental Health Service**

A mental health team consisting of a mental health midwives plus a psychiatrist provide support for women during and after their pregnancy. Women may self-refer to the service. The midwife also provides in-patient and home visits. Support groups are also run by the team 'You Are Not Alone' (YANA).

### **Booking Procedures for Shared Care:**

To book a woman for Shared Care, the GP should send a fax to the Family Clinic on (08) 8282 1612 marked "Attention Shared Care"; or alternatively, as early as practical and especially before 12 weeks gestation, telephone the appointments number (08) 8282 0255 and ask for an appointment for "shared care new" (currently these are on Monday, Wednesday, and Friday). Prompt appointments can be arranged at short notice via a phone call to the Midwife Coordinator on (08) 8182 9000, pager 6470 or mobile: 0417 840 062.

### **Birth Centre/Team Midwifery**

This is an option for women assessed as low risk of complications and who prefer a more natural approach to childbirth with little intervention. Women and their families are supported through pregnancy and birth by a team of midwives who support active birth in a relaxed, homely environment.

Women wishing to use the birth centre and have shared care with their GP ideally should make their wishes known at the shared care booking visit. If undecided at this time, later bookings can be made by negotiation. An initial visit to the team midwives should be made at 30 weeks so that the woman can be allocated a birthing team. Women usually continue to see their GP until the 36 week consultant visit then transfer to the team midwives for remaining visits. This plan is negotiable.

### **Complex Case Multidisciplinary Meeting**

A weekly forum presents complex cases and discusses antenatal and postnatal management for women with complex medical and/or psychosocial problems.

This multidisciplinary team consists of obstetricians, paediatricians, shared care liaison midwife, midwives, mental health midwives, social workers, CYH, Families SA, Anglicare, Drug and Alcohol Services (DASSA) representative and invited care providers, as the need arises.

### **Continence Clinic**

Coordinated by a team of continence nurse advisors, to assess, educate and support women with continence issues (both faecal and urinary). All women who have had previous 3<sup>rd</sup> or 4<sup>th</sup> degree tear or significant perineal trauma are referred to this team during the antenatal period for support and advice regarding the mode of delivery for the current pregnancy. This clinic interlinks with the colorectal and urodynamic team.

### **Mothercarer Program**

The LMH is the only metropolitan maternity service in Australia to offer the Mothercarer Program. Women who are discharged after a 'short stay' are eligible for the Program which provides a carer in the home for up to 6 hours per day for up to 6 days, and a daily visit by the domiciliary midwife. The Mothercarer, trained in mother and baby basic health, will link with the home visiting midwives and also assist with normal household duties.

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### **Breastfeeding Day Assessment and Support Unit**

Available to all breastfeeding mothers of babies of up to 8 weeks. The unit is staffed by experienced midwives. The unit is operational Tuesday & Friday by appointment only. Phone (08) 8182 9380 for an appointment.

### **Baby Friendly Hospital Initiative (BFHI) Accredited**

A World Health Organisation (WHO) initiative to promote, support and encourage breastfeeding.

### **Telephone list for Lyell McEwin Hospital**

Hospital number	(08) 8182 9000
O&G Department Office Tel	(08) 8182 9306
O&G Department Office Fax	(08) 8182 9337
Birthing Centre Low/Team Midwives	(08) 8182 9326
Clinic Midwife	(08) 8282 1613
Clinic Receptionist	(08) 8282 1611
Contenance Midwife	(08) 8282 9000 Pager 6187(Mon-Fri)
High-risk pregnancies	(08) 8182 1607
Mental Health Midwife	(08) 8182 9000 Pager: 6006 (Mon-Fri)
Phone appointments	(08) 8282 0255
Shared Care Midwife Coordinator	(08) 8182 9000 Pager: 6470 Mobile 0417840062 <a href="mailto:jennifer.niven@sa.gov.au">Email: jennifer.niven@sa.gov.au</a>
Ultrasound appointments	(08) 8182 9999
Antenatal Educator	(08) 8182 9431
Birthing Assessment Unit High	(08) 8182 9111
Women's Assessment Unit	(08) 82821301
Home Visiting Midwifery Service	(08) 8182 9252 <a href="mailto:bronwyn.klaer@sa.gov.au">Email: bronwyn.klaer@sa.gov.au</a>

## **18.3 Modbury Hospital (MH)**

Modbury Hospital only provides antenatal services.

### **Antenatal Clinics**

Currently antenatal clinics are conducted 3 mornings per week, Tuesday to Thursday by consultants/registrars. Midwives clinic is conducted Tuesday to Thursday mornings.

Shared care bookings are conducted on Tuesday and Thursday.

Normal clinic booking visits are conducted daily.

### **Antenatal Classes**

Classes are held in conjunction with the antenatal educator from Lyell McEwin and are held at Modbury in the evenings. A dedicated breast-feeding education session is held fortnightly on Friday afternoons. For bookings phone (08) 8161 2154.

### **Telephone and Fax lists for the Modbury site**

Hospital Number	(08) 8161 2000 or Fax: 8161 2227
Antenatal Appointments	(08) 8161 2593, 8.30am - 4.30pm
Shared Care Coordinator	(08) 8182 9000, Pager 6470 or Mobile 0417 840 062 <a href="mailto:jennifer.niven@sa.gov.au">Email: jennifer.niven@sa.gov.au</a>
Antenatal Educator	(08) 8182 9431

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## 18.4 Women's and Children's Hospital (WCH)

The Women's and Children's Hospital (WCH) provides a comprehensive obstetric service, providing all levels of care. The initial visit to the hospital is 90 minute Midwifery Triage appointment when an assessment is made by a midwife to determine the appropriate referral pathway and model of care. This is offered at approximately 12 weeks gestation. All models of care are discussed with woman at this visit.

WCH has been accredited as a Baby-Friendly Hospital since 2012.

### Community Midwifery Outreach Clinics

Midwifery care is delivered by the Women's and Children's Hospital midwives in 7 community based locations. Low risk woman will see the same midwife for most of the visits. The birth will occur in the hospital delivery suite, and care will be provided by the duty medical and midwifery team.

### Midwives Clinic

Low risk women who attend the midwives clinic will see the same midwife for most visits. Women may ask to see a doctor at any time during their pregnancy. The birth will occur in the hospital delivery suite, and care will be provided by the duty medical and midwifery team.

### Midwifery Group Practice (MGP)

Also known as "Caseload Midwifery", Midwifery Group Practice (MGP) enables women to be cared for by the same midwife (primary midwife) supported by a small team of midwives throughout their pregnancy, during childbirth and in the early weeks at home with a new baby.

### Home Birth

Accredited MGP midwives can facilitate home birth for low risk women who meet the criteria.

### Aboriginal Family Birthing Program

Any woman who identifies as Aboriginal and/or Torres Strait Islander or whose unborn baby identifies as Aboriginal and /or Torres Strait Islander can have their care provided in partnership with Aboriginal Maternal Infant Care Practitioners (AMIC) and a designated Midwife. This decreases cultural and communication barriers in providing maternity health care. The AMIC program provides antenatal and postnatal service for Aboriginal woman and their babies for up to 4 weeks post birth.

### Shared Antenatal Care with a General Practitioner

Low risk woman can see their GP who is accredited with the GP Obstetric Shared Care Program. Women will need to visit the hospital at least once before the 20<sup>th</sup> week of their pregnancy and again at 36 and 40 weeks. From 40 weeks all visits will be at the WCH. The WCH encourage women to see their GP two weeks and again six weeks after the birth of their baby.

### Medical Antenatal Care (Public Patients)

Women with medical conditions or complications of pregnancy can be seen in the public antenatal clinic by Consultant Obstetricians as well as Consultant Physicians and Anaesthetists as needed. The clinic is also staffed by training registrars and RMO's.

### Medical Antenatal Care (Private Patients)

Women may be referred for private antenatal care at the Women's and Children's Hospital. Patients will require a letter of referral addressed to one of the participating obstetricians by name. Further information can be obtained by phoning (08) 8161 7633.

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### **Maternal Fetal Medicine Unit**

The Maternal Fetal Medicine Unit at the Women's and Children's Hospital in Adelaide provides a sub-specialist referral centre to women who are experiencing complicated pregnancies and problems with their unborn babies.

### **Drug and Alcohol Service SA (DASSA clinic)**

DASSA clinic is available to women who are drug dependent or have had previous problems with drugs and/or alcohol. The Women's and Children's Hospital can provide antenatal care for pregnant women attending the clinic if required.

### **Parent Education**

Tours of the obstetric facilities are available Monday to Friday mornings (with the exception of public holidays). Women should be at the Women's Outpatient Clinic, 1<sup>st</sup> Floor Queen Victoria Building, prior to 9am on the day of their choice. There are also classes on specific topics. Classes are offered in different languages as demand requires.

### **Pregnancy to Parenting Group Antenatal Care**

Young women less than 20 years can have midwifery care provided in a group setting in partnership with the MY Health Community Liaison Midwife. Antenatal care is provided together with pregnancy labour and birth education in multiple two hour group sessions during pregnancy.

### **Diabetic education**

Women who develop Gestational Diabetes Mellitus (GDM) are referred to the Diabetic Educator at WCH for an information session and ongoing monitoring.

### **Strengthening Links Program and Perinatal Mental Health Program**

All women are screened using the Antenatal Risk Assessment Questionnaire (ANRQ) and Edinburgh Postnatal Depression Scale (EPDS). Women and psychosocial needs and/or mental health issues are referred to the Woman Social Work team and Perinatal Mental Health team for assessment and coordination of services.

### **Breast feeding Support**

Lactation consultants dedicated to breastfeeding support are available whilst women and babies are inpatients. Support continues with LCs will visit at home as part of the domiciliary home visiting service or MGP.

### **Domiciliary Midwife**

The postnatal domiciliary care service is offered to all women who live within a 20km radius of the WCH, when they leave the Hospital after their baby is born. WCH provides a midwifery home visiting service for up to 5 days.

### **Criteria Led discharge**

Women are likely to be discharged from hospital 4-24 hour after a normal birth, this is criteria led. Women are offered home visiting through the domiciliary service for the first week depending on clinical needs and the baby can be referred to the postnatal baby clinic if needed in the first 7 days.

### **Neonatal Clinic**

Babies who have been admitted to the WCH nurseries or who have other complications will be seen in the neonatal outpatient clinic for up to 12 months.

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### Perinatal Clinic

Women who have had difficult births or complications can have a postnatal assessment at the WCH outpatient clinic. This is arranged prior to discharge. Generally, women are encouraged to attend their GP for their routine postnatal 6-week check with their babies. The Women's and Children's Hospital is unable to accommodate any postnatal checks that have not previously been arranged prior to discharge.

### Allied Health Physiotherapy

Physiotherapists provide services within Allied Health's Paediatric and Women's Health Programs. Services include assessment, diagnosis and management of children and women in the areas of neonatology, perinatal medicine, gynaecology, obstetrics and paediatrics.

### Contact Numbers for the Women's and Children's Hospital

Admissions	(08) 8161 7508	
Antenatal Bookings	(08) 8161 7590	
Antenatal/Gynaecology Ward	(08) 8161 7726	
Core Laboratory	(08) 8161 6704	
Cytogenetics (Amnio/ CVS results)	(08) 8161 7413	
Day Assessment Unit	(08) 8161 7530	
Director of Obstetrics & Gynaecology	(08) 8161 7000	
Drug Information	(08) 8161 7222	
Maternal Fetal Medicine (MFM)	(08) 8161 9263	Fax: (08) 8161 9264
Medical Genetics	(08) 8161 6281	
Midwifery Group Practice	(08) 8161 8406	
Multiple Births Co-ordinator	(08) 8161 7520	
Parent Educator	(08) 8161 7571	
Physiotherapy	(08) 8161 7579	
Private Referrals	(08) 8161 7633	
Shared Care Midwife Co-ordinator	(08) 8161 7000	Pager 4259 (8am-4.00pm M - F) Fax: (08) 8161 8189
Social Work	(08) 8161 7580	
South Australian Maternal Serum Antenatal Screening Program (SAMSAS)	(08) 8161 7285	Fax: (08) 8161 8085
Ultrasound Bookings	(08) 8161 6055	
Ultrasound Results	(08) 8161 7391	
Women's Assessment Service (Emergency)	(08) 8161 7530	

### Booking Procedures for Obstetric Shared Care

1. Patient to obtain Pregnancy Referral Number from 1300 368 820
2. GPs may send a referral via fax to the midwife coordinator's office on (08) 81618189; **or**
3. GPs may wish to contact the Midwife Coordinator directly on (08) 8161-7000, pager 4259 to arrange appointments; **or**
4. GPs may wish to advise their patients to contact the midwife coordinator directly on (08) 8161 7000, pager 4259 prior to 12 weeks to schedule an appointment convenient to the patient. Antenatal clinic days are held on Tuesday, Wednesday and Friday.

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## 18.6 Gawler Health Service (GH)

Gawler Health Service provides comprehensive care of women deemed to be 'low risk', whereby the woman delivers her baby at a gestation greater than or equal (i.e.  $\geq$ ) to 37 weeks and the newborn weight is greater than or equal to (i.e.  $\geq$ ) 2500gms.

### Antenatal Service

Midwives manage many low risk ante-natal women in 'Zadow Suite'. For GP Shared Care women, a triage appointment with a midwife is the woman's first contact. GP Shared Care clients may be seen by a consultant either at this visit or an additional appointment is made for this prior to 20 weeks gestation, if required. Obstetric clinics are held in Zadow Suite and the Women's Health Centre. GP clinical attachments are offered at these clinics as well.

### Midwifery Group Practice (One 2 One)

This One 2 One midwifery service enables women to be cared for by the same midwife (primary midwife) supported by a small team of midwives throughout their pregnancy, during childbirth and in the early weeks at home with a new baby.

### Postnatal Service

For most normal births women are discharged within 3 days of admission. Each woman will be visited by a community midwife at least once (and more if needed) within the first week of discharge.

Women who are experiencing difficulties with breastfeeding after discharge, or have any other concerns, are encouraged to contact GH or to see their GP at the first instance.

### Baby Friendly Hospital Initiative (BFHI) Accredited

A World Health Organisation (WHO) initiative to promote, support and encourage breastfeeding. GH has been accredited as a BFHI hospital since 2007.

### Childbirth and Parenting Education Sessions

Various programs are available, including condensed sessions and breastfeeding sessions. Alternatively, 1:1 sessions are available through the community midwifery service.

### Community Midwifery Service

A home visiting program operates Monday – Saturday, with women being visited in their homes for care and support. Breastfeeding is supported by this service.

### Postnatal Clinic

This is run in the Zadow Suite and the Women's Health Centre on a weekly basis. All women who undergo caesarean section delivery are seen at 2 and 6 weeks. Women can choose to have their routine 6 week check with their GP, or at the health service.

### Booking Procedures

GPs may send new patient referrals via fax to Zadow Suite on (08) 8521 2069. The referrals are reviewed by a consultant and an appropriate appointment time arranged. Please indicate 'shared care' on the referral to enable the midwife coordinator to be advised.

### Contact Numbers for GHS

Hospital switchboard	(08) 8521 2000	
Antenatal Clinic (Zadow Suite)	(08) 8521 2369	Fax: (08) 8521 2069
Forgie Ward (Inpatients)	(08) 8521 2060	
Community Midwives	(08) 8521 2011	

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## 19 SUPPORT SERVICES FOR WOMEN

The GP may wish to provide the pregnant woman with the contact details for the following services upon request.

### 19.1 Breastfeeding Day Services and Support Services

National Breastfeeding Helpline provides 7 day a week service for advice: 1800 686 268  
[www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)

Women's and Children's Health Network 24 hour Parent Helpline: 1300 364 100 <a href="http://www.cyh.sa.gov.au">www.cyh.sa.gov.au</a>				
Location	When	Staffed by	Available to	Contact
<b>Child &amp; Family Health Services</b> Venues throughout S.A	Mon to Fri	Child & family Health Nurses (At some venues may also be a Lactation Consultant )	<u>Day Services</u> metro & country venues. Parents of babies 0-12 months old <u>Clinic Services</u> B/F support for any age	1300 733 606 Essential to book

Location	When	Staffed by	Available to	Contact
<b>Lyell McEwin Hospital</b>	Tues & Fri	Midwife	All breastfeeding mothers of babies up to 8 weeks old	(08) 81829380 Essential to book
<b>Gawler Health Service</b>	Arrange via Midwife	Midwife	All breastfeeding mothers of babies up to 6 weeks of age	(08) 8521 2011
<b>Flinders Medical Centre</b> Postnatal (Ward 4C)	Tues/Thurs/Fri & Alt Monday	Midwife/Lactation consultant	All breastfeeding mothers and babies where bay born at FMC and < 8 weeks old	(08) 8204 4216 Essential to book
<b>Mt. Barker Hospital</b>	Tues 9.00 - 4.00pm	Midwife/Lactation Consultant	All breastfeeding mothers and babies – no age limit	(08) 8393 1777 Essential to book
<b>Gilles Plains Primary Health Care Services</b>	Mon-Fri	Midwife	All mothers & babies including referral to Aboriginal Health Services – no age limit	(08) 8334 8400 Essential to book
<b>Parks Community Centre</b>	Mon-Fri	Midwives & Doctors	Anyone living in area with a Health Care Card *Wed is 'Nunga' clinic only	(08) 82435611 Walk in or appointment available

### 19.2 Private Practice Lactation Consultants

Details available through [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)



## 20 WEB BASED INFORMATION FOR WOMEN

<b>Chorionic Villus Sampling and Amniocentesis</b>	<a href="http://www.cyh.com">www.cyh.com</a>
<b>Folic Acid and the Prevention of Neural Tube Defects</b>	<a href="#">Folic Acid and the Prevention of Neural Tube Defects</a>
<b>Healthy Eating and Pregnancy</b>	<a href="#">Eat for health</a>
<b>Listeria and Pregnancy</b>	<a href="#">Food Standards – Australia/New Zealand</a> <a href="#">Listeria in Pregnancy - Clinical Guideline</a>
<b>Mothers – Benefits of Breastfeeding</b>	<a href="http://www.breastfeeding.asn.au">www.breastfeeding.asn.au</a> <a href="http://www.health.gov.au/breastfeeding">www.cyh.com</a> <a href="http://www.health.gov.au/breastfeeding">http://www.health.gov.au/breastfeeding</a>
<b>Smoking and Pregnancy</b>	<a href="#">Smoking - Pregnancy, babies and children</a>