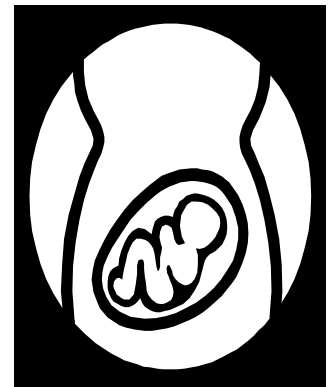


ANTENATAL SHARED CARE



A Resource
Document For The
Management Of
Pregnancy In
General Practice

2004



Shoalhaven Division of General Practice

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**On behalf of the Shoalhaven Antenatal Shared Care Program
Funded by the federal Department of Health and Ageing**

The document is a general guide to appropriate practice, to be followed only subject to the General Practitioners clinical judgement in each individual patient's case. The guidelines are designed to provide information to assist decision-making and are based on the best possible information at the time of publication.

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ANTENATAL SHARED CARE Resource Document

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INTRODUCTION / NEEDS ANALYSIS

In the Shoalhaven Division of General Practice area there is 84 active general practitioner members at the time of writing. Shoalhaven's population in 2001 was 83,548 (census data) and is currently estimated at over 90,000, with 49 different towns and villages. The region has a high population growth - 1.7% (2001 census) compared to 1.3% for NSW and 1.5% for the Illawarra. Total births in the Shoalhaven (statistical regions A & B) for 2002 were 906.ⁱ

In the main population area of Nowra, 3 specialist Obstetricians and 2 Paediatricians work with the midwives at Shoalhaven District Memorial Hospital to provide birthing services for the area. Private postnatal care (no birthing services) is also provided at Nowra Private Hospital. Further south, in Milton/Ulladulla, GPs provide more comprehensive obstetric care and GPs currently deliver at Milton Hospital.

In the 2003 annual survey of members, the Shoalhaven Division of General Practice sought specific information to assess the needs of local GPs regarding antenatal shared care. The vast majority of respondents stated that a guidelines document would be useful to their practice, and that they would be interested in continuing information / education regarding antenatal shared care.

This document was written after review of the available evidence, and then completed in consultation with the providers of antenatal care in the Shoalhaven. It forms part of the Shoalhaven Division of General Practice's General Practice Population Health Promotion Program. It is designed to enhance the quality of antenatal shared care provided by GPs in the Shoalhaven, in consultation with Obstetricians and midwives. The actual care provided by GPs will vary according to the skill level of the GP, the geographical location and the needs and wishes of the woman concerned. While this resource manual contains up to date information at the time of writing, it does not replace good clinical acumen and is not a prescriptive protocol document.

Various resources were used but in particular acknowledgement needs to be given to:

- Geelong Division of General Practice
- Central Sydney Division of General Practice
- King George V Hospital
- Hunter Area Health Service
- Royal Women's Hospital Brisbane
- South Australian Department of Health

Dr Lyndal Parker-Newlyn

Program Manager
Antenatal Shared Care Program

BACKGROUND RESEARCH

Approximately 250,000 babies are born annually in Australia. Overall, the General Practitioner's involvement in obstetric care has decreased in recent years due to workload and lifestyle issues, and due to changes in medical indemnity.ⁱⁱ Shared care, however, has been embraced by many GP's as a modified way to renew involvement in antenatal care and obstetrics. In 1995 in Victoria only 2% of women giving birth participated in shared antenatal care, by 2002 this figure had risen to 50%.ⁱⁱⁱ

Shared care provides GPs with a valuable role in maternity care and, furthermore, has extensive benefits for the expectant mother. The general practitioner's involvement and familiarity with the woman's antenatal care enables better provision of care in the postnatal period.^{iv} GP shared obstetric care for low risk pregnancies is viewed by many as a convenient and efficient model that streamlines the care process, and provides continuity and improved supervision of care in the antenatal period. The establishment of the patient – GP relationship throughout the pregnancy provides a foundation for ongoing family health care.^v

When this care involves other health professionals, it is further beneficial for the woman and the community. Shared antenatal care for low risk obstetric women represents an opportunity to practice collaborative holistic care by combining the varied skills of the midwife, the GP and the Obstetrician to the benefit of the community and mutual understanding between colleagues.^{vi}

More general benefits can also include:^{vii}

The Patient

- Care in the setting of an established therapeutic relationship
- Community based care in the GP's surgery
- Holistic Care
- More convenient / flexible consultation times
- Improved continuity and co-ordination of care

The GP

- Continuity of care and promotion of linkages with other professionals
- Improved opportunity to provide total care including postnatal care
- Access to antenatal care CPD

If the hospital is also involved, the community can further benefit by decreased hospital costs, better resource management for more complex cases and enhanced relationships.^{viii}

SUGGESTED VISITS SCHEDULE

WHEN?	WHO PROVIDES?	WHAT TO DO?	PAGE
PRECONCEPTION	GP	PAP, Smoking advice, Dietary advice, Serology +/- MMR, Genetic history.	5
INITIAL VISIT Ideally <12 weeks	GP	Confirm pregnancy, antenatal options, routine pathology, smoking advice, risk factors for early obstetric referral, discuss genetic testing PAP if needed, Fluvax if needed.	6
12-18 WEEKS or 4 Weekly	GP	Review pathology, consider referral to antenatal clinic for booking in visit, consider referral to Obstetrician for first O&G assessment, form for ultrasound.	7
BOOKING-IN VISIT 12-18 weeks	Midwives	Obstetric medical social surgical history screen for domestic violence, antenatal classes offered, referral to agencies if needed.	7
20-24 WEEKS or 4 Weekly	GP or Obstetrician	Review ultrasound results +/- genetic testing results. Routine review (BP fundal height movts foetal heartbeat presentation urinalysis).	8
24-30 WEEKS 4 weekly visits	GP or Obstetrician	Routine review at each visit 26-28 weeks – pathology 28 weeks – RhD for Rh negative primips	8
30-36 WEEKS 2 weekly visits	GP or Obstetrician	Routine review at each visit 34 weeks – RhD for Rh negative primips	9
36 WEEKS + weekly visits	GP or Obstetrician	Routine review at each visit 36 weeks - pathology	9
40 weeks +	GP or Obstetrician	Assess position, health of fetus Refer if concerned	9

This visits summary is a suggested schedule for a well woman. Obviously this will vary according to GP skill, patient request, geographical or social issues. In women where other co-morbidities are present, or complications arise, the visits schedule may be different. (see Risk Factors for Early Obstetric Referral Page 10)

Preconception (GP)

Preconception visits are not always common, but should certainly be encouraged. They provide the GP with opportunity to discuss important health issues regarding smoking cessation, alcohol, caffeine and drug consumption, the commencement of folic acid supplements, and routine MMR vaccination for 18-30 year olds.

Remember that approximately 33% of women are smokers when they fall pregnant.

It is also an opportunity to check a woman is up to date with Pap smears, and to elicit any history of genetic disorders to ascertain whether genetic counselling or testing is required.

Influenza Immunisation

Immunisation against influenza is recommended for all women who are pregnant with 2nd or 3rd trimester in the winter flu season. Influenza vaccine is safe to administer during pregnancy.

Initial Visit <12 Weeks (GP)

The timing of this visit varies according to booking policies and patient preference, but should occur ideally prior to 12 weeks pregnancy.

This visit includes:

- Confirm pregnancy (there is no evidence for a serum BHCG if urine BHCG is positive)
- Discuss antenatal care options
- Order routine antenatal pathology
- Advise to quit smoking
- Identify risk factors for early obstetric referral
- Discuss genetic testing- if screening requested consider referral for first trimester combined nuchal translucency ultrasound and biochemistry at 11-13 weeks
- Check PAP status
- Fluvax if indicated

Documentation

Clear documentation is essential for all carers of pregnant women during antenatal care. At the initial visit please commence record on the recommended "Yellow card" or, if computerised, a Medical Director file to be handed to the patient.

ROUTINE ANTENATAL PATHOLOGY (12 wks)

- FBC
- Group and antibody screen
- Hep B Hep C serology
- HIV serology
- Rubella serology
- Syphilis serology

- Consider CMV
- Consider VARICELLA

- PRE AND POST TEST COUNSELLING RECOMMENDED FOR HEP C AND HIV SEROLOGY AND ALL GENETIC SCREENING

12 – 18 Weeks (GP)

- Review pathology results
- Consider referral to antenatal clinic for “Booking In Visit” -please include copies of pathology
- Consider referral to Obstetrician for first routine visit please include copies of pathology
- Form for ultrasound 18-20 weeks

Booking In Visit (Midwives) - 12-18 Weeks

This visit provides an opportunity for the pregnant woman to meet with the midwives, understand their role in maternity care and birth and to assess their health, and possible risks or issues. This assessment can include:

- Obstetric
- Medical
- Social and surgical history
- Screen for domestic violence
- Antenatal classes may be offered
- Referral to agencies arranged if needed

Consider referral for review by midwives throughout pregnancy where psychosocial issues or parenting problems are of concern, or case planning may assist. Remember to forward copies of pathology/radiology results to midwives throughout pregnancy.

20-24 Weeks (GP or Obstetrician)

If the woman has been referred to O&G, this next visit could be performed by either doctor, depending on timing, and alternated visits thereafter. If not referred, the GP would undertake these visits.

- Review ultrasound results and/or triple test results.
- Routine review:
 - BP
 - Fundal height
 - Movements
 - Foetal heart beat
 - Presentation
 - Urinalysis

24- 30 Weeks (GP or Obstetrician)

Visits should occur every 4 weeks during this time and may involve both the GP and Obstetrician, or undertaken by GP alone. Each visit should include:

- Routine review:
 - BP
 - Fundal height
 - Movements
 - Foetal heart beat
 - Presentation
 - Urinalysis
- At 26-28 weeks routine pathology (copies to Obstetricians and Watson House).
- If Rh negative requires antibody testing at 28 weeks and primiparous women require injection of 625 IU RhD . Make sure these antibody levels are done prior to the administration of Anti D injections Anti D injection can cause a slight rise in the Antibody level usually only to a titre of 1 or 2 and this is not important. *(see page 12 Management of Rh negative women)*

ROUTINE ANTENATAL PATHOLOGY (26-28 wks)

- FBC
- Glucose challenge
- Low vaginal swab for Group B strep
- If Rh neg then antibody screen

30 - 36 Weeks (GP or Obstetrician)

Visits should occur every 2 weeks during this time and may be alternated between the GP and Obstetrician, or undertaken by GP alone. Each visit should include:

- Routine review:
 - BP
 - Fundal height
 - Movements
 - Foetal heart beat
 - Presentation
 - Urinalysis

If Rh negative requires antibody testing at 34 weeks and primiparous women require a second dose injection of 625 IU RhD. Make sure these antibody levels are done prior to the administration of Anti D injections. Anti D injection can cause a slight rise in the Antibody level usually only to a titre of 1 or 2 and this is not important. In the last few years there have been a number of cases of late development of D antibodies at 34 weeks in women that were negative at 28 weeks. This last lot of testing is therefore highly important. (*see page 12 Management of Rh negative women*)

36 Weeks+ (GP or Obstetrician)

Visits at this stage should occur weekly and may be alternated or sometimes undertaken entirely by the Obstetrician, or entirely by GP. Routine checks continue and at 36 weeks routine pathology (copies to Obstetrician and midwives).

ROUTINE ANTENATAL PATHOLOGY (36 wks)

- FBC
- Antibody screen

40 Weeks+ (Obstetrician)

The post-dates pregnancy requires assessment as to the well being of the mother and child, the lifespan of the placenta, and the state of the cervix. There is a clearly increased risk of foetal demise. These factors need to be considered weighed against the risks and benefits of a caesarean birth or induction of labour.

This assessment can be performed by a GP, but is often performed by an Obstetrician, particularly if approaching 41 weeks.

Why So Many Dipsticks?

Asymptomatic bacteruria is defined as the persistent bacterial colonisation of the urinary tract in the absence of specific symptoms, and is usually diagnosed as $>10^6$ organisms/ml on a single MSU. It is estimated about 5-10% of all pregnant women have significant bacteruria at their booking in visit which, if untreated, can lead to serious episodes of acute urinary tract infection later in pregnancy, as well as pre term birth and low birth weight babies. High level evidence indicates that antibiotic treatment of asymptomatic bacteruria reduces the risk of pyelonephritis, preterm delivery and low birth weight.

MSU with culture is gold standard for diagnosis, but also impractical and expensive if performed on every visit.

More cost effective, but just as accurate diagnostically is a two step protocol – dipstick urine for blood, protein, nitrites and leukocytes using a reagent strip at each visit and send urine off for culture if any of the four categories result positive.

Mercy Hosp for Women-3 Centres Guidelines on Antenatal Care Project, Melbourne 2001

RISK FACTORS FOR EARLY OBSTETRIC REFERRAL

Certain risk factors necessitate a variance from this guideline and should prompt early obstetric referral. These include:

Medical and Social History

- Cardiac disease including hypertension
- Renal disease
- Endocrine disorder or insulin requiring diabetes
- Psychiatric disorder (on medication)
- Haematological disorder (including thromboembolic disease)
- Epilepsy requiring anticonvulsant drugs
- Malignant disease
- Severe asthma

- Chemical dependency
- HIV or HBV positive
- Auto-immune disorders
- Gross obesity or grossly underweight

Previous Obstetric History

- Recurrent miscarriage or midtrimester loss
- Grand multiparity
- Severe pre-eclampsia
- Rhesus isoimmunisation or other significant blood group antibodies
- Uterine surgery including LSCS
- Antenatal or postpartum haemorrhage
- Retained placenta
- IUGR
- Still birth or neonatal death
- Birth weight <2500 or >4500g
- Congenital abnormality
- Puerperal psychosis or postnatal depression

MANAGEMENT OF GROUP B STREPTOCOCCUS

An estimated 10-30% of pregnant women have vaginal carriage of Group B streptococcus; this may be considerably higher in the indigenous population. Transmission to the newborn may occur during labour resulting in pneumonia, septicaemia and, occasionally, infant death. About 1-2% of infants born to GBS colonised mothers will develop infection.^{ix} In this group there is a 6% fatal outcome, which is higher in preterm infants.^x

The administration of antibiotics to a mother intrapartum has shown to significantly reduce the incidence of GBS disease in the newborn.^{xi} Treatment of identified carriers during pregnancy is not effective.

Prenatal screening involves a swab taken from the lower vagina late in the third trimester of pregnancy. GBS protocols vary between resources, however, there is agreement that those at risk should be detected and offered prophylaxis. There is less agreement on how this is best achieved.

In Shoalhaven women should be routinely swabbed as per the recommendations in the third trimester (between 28 and 32 weeks). Women who have a positive swab, or women who have unknown status (no swab result) are treated with Ampicillin IV (or oral Erythromycin or Roxithromycin if penicillin allergic) during labour.

GPs need to ensure that the swab results are marked clearly on the antenatal record, and/or that when the swab is ordered pathology results are requested to be sent directly to Watson House midwives.

MANAGEMENT OF Rh NEGATIVE WOMEN

Haemolytic disease of the newborn, caused by Rh incompatibility between a woman and her baby, was previously a major cause of perinatal morbidity, long term disability and mental handicap and associated emotional and health costs were high. The introduction of Rh D immunoglobulin (anti D) for prophylaxis has been one of major medical achievements of the last decade.^{xii}

In March 1999 the National Health and Medical Research Council issued “Guidelines on the Prophylactic Use of Rh D immunoglobulin in obstetrics” which suggested ways to balance best practice in the use of Anti D with a limited national supply. Recently, however, supply problems have improved and routine antenatal prophylaxis for primigravidae can now be recommended. In the future there will be further recommendations for prophylaxis to all Rh negative women.

The Commonwealth Chief Medical Officer, the Red Cross and College of Obstetricians now recommend the following doses of Anti D for Rh negative pregnant women:

- **1st trimester indications:** eg. Miscarriage, ectopic pregnancy, CVS during first trimester <12 weeks – 250 IU Rh D immunoglobulin (must be given within 72 hours of a bleeding indication).
- **2nd and 3rd trimester:** eg. Bleeding, uterine trauma, amniocentesis, version - 625 IU Rh D immunoglobulin, plus additional doses as indicated from the results of assessment of the extent of fetomaternal haemorrhage. (Must be given within 72 hours of a bleeding indication).
- **Antenatal prophylaxis** to Rh negative primigravidae who have no preformed anti D – 625 IU Rh D immunoglobulin at 28 and 34 weeks.
- **Postnatal prophylaxis** – WinRho SDF 600 IU Rh D immunoglobulin plus additional doses as indicated from the results of assessment of the extent of fetomaternal haemorrhage. (Unless the Kleihauer test indicates a higher dose is necessary).^{xiii}

Consent

As part of informed consent to medical treatment a patient must be given a clear explanation of potential risks and benefits of Hr D immunoglobulin as it is a human blood product. This discussion is to be clearly documented.^{xiv, xv}

Route

Anti D is given slowly by deep IM injection.

Contraindications

Rh D should not be given to individuals:

- With preformed anti D antibodies, except where the preformed anti D is due to antenatal administration of Rh D immunoglobulin
- Who are Rh D positive
- Who are immunoglobulin A deficient
- With severe thrombocytopenia or coagulation disorder that would contraindicate deep IM injection
- With a history of anaphylactic or other severe systemic reaction to immunoglobulins

In the Shoalhaven

Anti D is available through Shoalhaven hospital, also is being kept at Southern Pathology. Southern Pathology will deliver anti D via courier on the day it is needed. FAX a request on your letterhead or a Southern Pathology request form (FAX 44210107) giving the patient's personal details, gestation, indication and blood group as Southern Pathology have to keep a record for the Red Cross.

Note that Anti D can't be kept in the ordinary refrigerator for long as the Red Cross insists that it be kept in an alarmed set temperature refrigerator.

It is important that the Anti D feedback forms be returned to Southern Pathology as they need to keep records for Australian Red Cross as Rh D immunoglobulin is a human blood product.

GESTATIONAL DIABETES MELLITUS

Gestational diabetes mellitus (GDM) is defined as carbohydrate intolerance with onset or first recognition in pregnancy. It has been associated with adverse pregnancy outcomes such as increased incidence of maternal hypertension, pre-eclampsia and obstetric intervention. Babies of mothers with GDM may be macrosomic and suffer from birth trauma, hypoglycaemia and other metabolic disorders. Studies show that women who demonstrate glucose intolerance or GDM during pregnancy have an increased chance of developing type 2 diabetes in the future. Women diagnosed with GDM are considered at medium to high risk of pregnancy complications.^{xvi}

In Australia GDM is estimated to affect between 5.5 and 8% of pregnant women. Most Australian hospitals screen women between 24 and 31 weeks gestation for diabetes either using 50-75g oral glucose challenge or straight to OGTT. There are some proponents who suggest selective screening for GDM dependent on risk factors such as family history, obesity, etc. The evidence to support or refute such screening is not clear.^{xvii}

The general consensus however, supports screening for GDM by glucose challenge at 26-28 weeks. If this test shows positive or equivocal results (a positive result

defined as > 7.8 mmol/l at 1 hour), these women should be followed up by a formal 75g OGTT.^{xviii}

Women who are diagnosed with GDM on OGTT should be referred promptly for obstetric review, due to the increased complication risk if unmanaged. These women will also require endocrinology referral.^{vii}

HYPERTENSION IN PREGNANCY

Pre-eclampsia is a major cause of maternal and perinatal morbidity and mortality and elevated blood pressure is one of the first signs of the condition. Guidelines thus recommend the practice of recording BP at every antenatal visit as critical to the detection and management of hypertensive disorders of pregnancy. Early detection is important as the underlying conditions can progress rapidly.^{xix}

Current Australasian consensus guidelines suggest a diagnosis of hypertension when systolic blood pressure is 140mmHg and diastolic blood pressure is 90mmHg or if there is a rise of 30mmHg systolic or 15mmHg diastolic from previous readings. Both systolic and diastolic readings have been shown to be closely associated with foetal outcome.^{xx}

If hypertension occurs in the absence of proteinuria, this woman requires obstetric opinion.

If, however, proteinuria is present, then the woman should be referred to maternity unit and Obstetrician on call should be contacted. This is a clinical diagnosis of pre-eclampsia and has the potential to be a life threatening and rapidly progressing condition.^{xxi}

GENETIC TESTING OPTIONS FOR DOWNS SYNDROME

Downs syndrome (Trisomy 21) is the most common chromosomal disorder in our community with a live birth incidence of 1.2 per 1000 in Australia, and is the most common known cause of severe intellectual disability.^{xxii} The major risk factor for having a baby with Downs syndrome is advanced maternal age. Accordingly, as the average age of the pregnant population on average continues to rise, so does the birth prevalence of Downs syndrome.^{xxiii} Screening is appropriate to offer to pregnant women of all ages; offering screening only to women over 35 leaves half of all babies with Downs undetected.

For women who wish to proceed with testing in pregnancy for Downs syndrome there are two types of testing available: screening and diagnostic tests. Testing is voluntary and offered to give information to the woman, and her partner, about her pregnancy on which a decision can be made regarding further care of the pregnancy. Testing may be associated with heightened parental anxiety, particularly if performed without appropriate counselling. Prior to the offer of testing, therefore, women should be

given accurate and balanced information about Down syndrome and the tests available.

Midwives and doctors providing screening counselling need to remember that the majority of women who screen positive (at higher risk) do not go on to have a baby with Downs. Only 1 in 40 who screen positive carry a Downs syndrome foetus. It also should be noted that while screening can identify 70-90% of affected foetuses, that means 10-30% will remain undetected after screening.^{xxiv}

Screening Tests

Screening tests cannot diagnose Downs syndrome. They can identify a group of women who are at higher risk of having a baby with Downs syndrome to whom a diagnostic test can be offered. Screening tests are non invasive and have no associated risks to the foetus. Currently, combined first trimester nuchal translucency assessment and biochemical screening (performed at 10-13 weeks gestation) is the most reliable method for prenatal Downs syndrome screening. It provides approximately 90% detection in the hands of appropriately trained and accredited practitioners.^{xxv} The earlier results mean that high risk pregnancies can be offered karyotyping by CVS and if a foetal anomaly is determined, and the woman wishes to terminate the pregnancy, this can be also undertaken at an earlier stage. For women who present later the second trimester bicochemistry (triples test) performed at 14-18 weeks, still has a Downs syndrome detection rate of 60-70%.^{xxvi}

Diagnostic tests

Diagnostic tests give a foetal karyotype, defining whether this is normal or not and will identify Downs syndrome and other much rarer chromosomal abnormalities (eg: Turners syndrome, Klinefelters syndrome, etc). Diagnostic tests are invasive and have an associated increased risk of miscarriage of approximately 0.5-1.0%.

The two diagnostic tests available are chorionic villus sampling (CVS) and amniocentesis. CVS is commonly undertaken at 10-14 weeks pregnancy and amniocentesis after 15 weeks. CVS has a slightly higher rate of uninformative samples, however has the benefit of earlier results.

Both these procedures are performed under ultrasound guidance by an Obstetrician specialising in genetic testing.

WHEN TO CALL FOR HELP?

Further to the risk factors for early obstetric referral there are a number of situations along the way that may require prompt obstetric review, or urgent hospital presentation.

The clear directive is: **if in doubt, contact an Obstetrician for advice.**

Obstetric review required for:

1. Hypertension ie a reading >140/90 with no proteinuria on dipstick
2. Uterine growth unusually large or small

3. Increased uterine activity reported
4. Malpresentation (anything other than cephalic in 34-37 weeks)
5. Positive OGTT
6. Multiple pregnancy
7. Foetal abnormality on ultrasound
8. Recurrent UTI
9. Placenta praevia
10. Any other problems which represent a departure from normal antenatal course and require attention before the next scheduled O&G visit

Immediate assessment at hospital (Call midwives AND call Obstetrician on call)

1. Intractable vomiting
2. Threatened preterm delivery
3. Preterm rupture of membranes
4. Undiagnosed abdominal pain or severe backache
5. Antepartum haemorrhage
6. Unusual migraines or visual disturbances
7. Seizures or faints with no clear diagnosis
8. Malpresentation in pregnancy >37 weeks
9. Hypertension with proteinuria or neurological symptoms
10. Reduced foetal movements

FAQ'S FOR THE GP^{xxvii}

These are some topics about which GPs are frequently asked:

Diet

- Should be sensible and well balanced
- Calcium and vitamins are not usually necessary providing dietary intake is adequate
- Supplemental iron is usually only required after diagnosed iron deficiency
- Folic acid 0.5mg daily should be taken as soon as possible (from 1 month prior to conception) until 12 weeks gestation. If the woman is at increased risk of neural tube defect, is on antiepileptic drugs the dose should be 5mg daily

Drugs

- DO NOT stop medication without prior discussion with your doctor
- Fever or pain should be treated with Paracetamol (not aspirin)

- Alcohol- abstinence or a minimal amount is desirable. There is no evidence of any safe level of alcohol in pregnancy
- Recreational drugs – abstinence
- Smoking – abstinence

Exercise

- A moderate exercise program is desirable
- Overheating should be avoided
- The peak heart rate should be less than 140 beats per minute
- Research has indicated that women who continue to exercise strenuously especially in the third trimester have an increased risk of IUGR and preterm labour, decrease exercise intensity by 30% always warm up and cool down
- Women should continue this advice for 3 months after delivery
- Breastfeeding women who exercise must ensure they have plenty of fluids, food and rest

Body temperature

- Any febrile illness should be treated with paracetamol in appropriate doses
- Women should not exercise in hot and humid conditions
- Women exercising in pools should ensure the water temperature is less than 30 deg C
- Women should avoid saunas and hot spas especially in early pregnancy

Morning sickness

- Eat small frequent meals and drink plenty of fluids
- Consider Acupuncture or ginger drops
- Vitamin B6 25mg three times daily
- Maxolon 10mg three times daily if needed
- Admission and IV fluids may be required if the patient is becoming dehydrated

Heartburn

- Eat small frequent meals. Antacids or Zantac may be used as necessary
- Avoid fatty foods, coffee, tea and alcohol
- Sleep propped up or tilt end of bed up

Sex

- Sexual activity can continue normally according to the couple's wishes
- If vaginal bleeding has occurred after intercourse, this should be assessed by speculum examination

RESOURCE AND REFERRAL GUIDE

SERVICE	CONTACT DETAILS
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Maternity Unit

Shoalhaven District Memorial Hospital.....	4421 3111
Milton/Ulladulla Hospital	4455 1333
Maternity - Nowra	4423 9240
Pre-natal bookings/classes - Nowra	4423 9207
Maternity - Milton.....	4455 1333
Pre-natal bookings/classes - Milton.....	4454 9122 or 0417 671 953

Obstetricians

Dr John Breen	4423 0744
Dr Brian Hoolahan.....	4421 7466
Dr Phil Paris-Browne	4423 5705

Pathology

Southern IML Pathology	<i>Nowra</i>	4423 3111
	<i>Nth Nowra</i>	4423 7829
	<i>Culburra</i>	4447 3020
	<i>Sanctuary Point</i> ...	4443 7049
	<i>Milton</i>	4455 7902
Mayne Laverty Pathology	<i>Ulladulla</i>	4455 4367
	<i>Nowra</i>	4421 8000
SDMH Pathology.....	<i>Sanctuary Point</i> ...	4443 8440
		4423 9235 or 4423 9236

Radiology

Shoalhaven Medical Imaging (SMI).....	4422 6622	
Whistlers Radiology.....	<i>Nowra</i>	4422 1500
	<i>Nowra (Weerona Pl.)</i> .	4421 8444
	<i>Sanctuary Point</i> ...	4443 7144
	<i>Ulladulla</i>	4455 5433

Genetic Testing

Dr Warren Davis (Wollongong).....	4228 9711
Dr Wendy Cox (Randwick)	9326 4001

Paediatricians

Dr Toby Greenacre.....	4421 3088 or 4423 9314
Dr Mark de Souza	4423 3888

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- ^{xv} Consumer information brochures regarding the use of anti D and haemolytic disease of the newborn are available at: <http://www.health.gov.au/nhmrc/publications/synopses/wh27csyn.htm>
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