Acknowledgments

Mater Mothers’ Hospital (MMH), Mater Health Services, Brisbane, works in partnership with Brisbane South PHN (Primary Health Network) and other key clinicians in the public and private sector, to develop a best practice model for General Practitioner (GP) Maternity Shared Care in South Brisbane, Queensland. Inclusive in this model is a uniform guidelines and protocols booklet for GPs and hospitals to assist them to care for women in accordance with current evidence based antenatal practice.

Sincere thanks are extended to the following for their dedication to the task:

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- Dr Bob Baade, Senior Staff Specialist Obstetrics and Gynaecology, MMH.

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1. Maternity shared care

Women wishing to attend the Mater Mothers’ Hospital (MMH) for their care during pregnancy and in childbirth have an option of GP shared care, which means most of their maternity care is managed by their General Practitioner (GP).

The most important principle underlying shared care is that the designation of high and low risk is a continuing process throughout the pregnancy, as more than one fifth of those designated as low risk on first antenatal visit will have their risk status changed during their pregnancy. A further percentage will have their risk status changed during labour. In certain circumstances a high risk woman may be accepted into a shared care program providing all health care providers are familiar with the stated risk factors and consequent management strategies. This would require close collaboration between GPs and the hospital. It is most important in all cases to demonstrate consistency in the approach between all caregivers and the pregnant woman.

The decision to enter into a shared care arrangement is a joint decision made by the woman, her GP and the consultant obstetrician at MMH, all of whom share responsibility. While it is not necessary that the GP wishing to conduct shared care holds the DRANZCOG (Diploma of the Royal Australian College of Obstetricians and Gynaecologists), or the CWH (Certificate of Women’s Health) he/she should have adequate knowledge and skill in obstetric care and be familiar with the policies of MMH. GPs undertaking maternity shared care are expected to meet the alignment requirements for maternity shared care.

**Shared care automatically implies that the responsibility for the health of the woman and her baby is shared.**

A referral to a consultant obstetrician at Mater Mothers’ Hospital should be submitted before 12 weeks gestation whenever possible.

The following guidelines and protocols are to help you as a GP undertaking shared care, and the staff at MMH, to care for women in accordance with current evidence based obstetric practice.

2. The Pregnancy Health Record

The aim of the Pregnancy Health Record is to facilitate women’s participation in their care and communication, and to promote early and appropriate use of antenatal services, particularly amongst disadvantaged groups.

**The Pregnancy Health Record must be used for all women involved in GP Shared Maternity Care.**

The Pregnancy Health Record includes:

- An antenatal pathway format and will act as a prompt to both General Practitioners and hospital professionals about the important issues to be covered at significant points in the pregnancy.

- Action oriented problems are designed to clearly identify concerns that may lead to an action above and beyond routine antenatal care e.g. past history of premature labour—admit if any contractions; APH repeated unexplained—serial growth measurements.

- A section entitled notes beneath each visit is designed to record concerns not necessarily requiring further action later in the pregnancy. This is a very important area for all members of the team to become aware of the individual woman’s experience of pregnancy.

- All care providers must record tests requested and the results when these are available. This process will enable rapid appreciation of timing and results of pathology tests ordered throughout the pregnancy. In addition this ensures that someone has checked the results of tests.

The Pregnancy Health Record is to be the substantive record of the woman’s pregnancy and MUST be completed at each visit. **Information is to be recorded in the Mater Shared Electronic Health Record, or Pregnancy Health Record at every visit or a printed copy of each appointment notes can be attached. Documentation must be sufficient to meet the care provider’s duty of care in diagnostic and treatment decisions.**

All pathology and ultrasound results are to be included in the Pregnancy Health Record.
The Pregnancy Health Record will be commenced by the midwife at the antenatal history appointment as an electronic record and a printed copy will be given to the woman at each subsequent appointment. This should be carried by her to all appointments during her pregnancy, including those with other health professionals. The woman should be made aware that the Pregnancy Health Record is the ONLY complete medical record maintained for her antenatal care and becomes part of the obstetric hospital’s health records.

As the substantive record, the Pregnancy Health Record will be scanned into the electronic health record at MMH. The Pregnancy Health Record is not to be destroyed under any circumstances.


3. Medical indemnity recommendations

The risk of litigation in the practice of obstetrics mainly relates to the conduct of labour.

Recently litigation has also occurred when antenatal screening tests have failed to be performed, or when serious medical problems or obstetric complications have not been detected during the pregnancy, or there has been a delay in management.

To be indemnified for the practice of maternity shared care the following guidelines must be adhered to:

1. Every GP should check with their MDO or professional indemnity provider as to the extent of cover provided. However in general terms it is the Mater’s understanding that GPs with non-procedural cover are covered for claims arising out of antenatal care (including any major antenatal complications) up until labour but are not covered for any planned (non-emergency) intrapartum care or treatment unless they have GP obstetric cover.

2. Request all appropriate tests after discussion and informed consent and follow up the results.
   a. any investigations requested by shared care GPs for any pregnant woman under their care must be followed up by the GP concerned.
   b. while part of appropriate follow up may be by communicating to the obstetrician/registrar at the shared care hospital the relevant results, it is still necessary for the GP to check that appropriate action has been taken. The GP will not be relieved of all liability by simply communicating the results in the assumption the hospital will act on the results.

3. Ideally the woman should be referred to an antenatal clinic before 12 weeks and triaged for consultation with an obstetrician/obstetric registrar at an appropriate time.
   a. If shared care is planned, then the consultant obstetrician/obstetric registrar or midwife should see the woman again at 36 weeks provided that the antenatal course is uneventful. Should any problems occur the consultant obstetrician should be advised. The 41 week appointment has been replaced by a phone call from a midwife to discuss induction of labour booking. Women who require an interpreter or have had a previous LSCS will have a 41 week appointment at MMH.
   b. GPs may continue to see pregnant women for antenatal visits or for intercurrent medical problems, but in shared care the responsibility for the obstetric care and the delivery of the baby must rest with the consultant obstetrician or with a GP who has obstetric insurance arrangements (not an option at MMH).

4. In an emergency situation, e.g. haemorrhage or preterm birth, any doctor irrespective of their cover must render whatever emergency assistance they can, and will be indemnified.

5. If an aligned GP is going to be away from his or her practice, then the woman’s care must be handed over to another aligned GP, or she must be referred back to MMH. It is not acceptable for GPs not in the shared care alignment program to provide back up.

6. Further details can be obtained from your indemnifier.
4. Alignment and CPD requirements

GPs that choose to join the Alignment Program will have access to:

- High quality educational events, including on-line education.
- A range of on-line resources and tools, including the Appointments Schedule, Guidelines for Referral and Consultation and referral templates.
- Improved lines of communication into MMH.

In return, GPs participating in the Alignment Program will commit to providing:

- Referrals with an agreed minimum amount of clinically relevant information to facilitate safe provision of care. Hard-copy or electronic templates have been created for GP use. Referrals are to include copies of pathology and radiology reports.
- MMH Antenatal clinic (ANC) to be copied in all pathology and radiology requests.
- Timely, clinically significant communication with the appropriate clinician/s.
- Attendance at a minimum of one education update per QI & CPD triennium or completion of online realignment.
- High quality care to their patients.

MMH is committed to supporting all GPs who wish to share care in maintaining their skills and familiarity with new protocols and approaches. The alignment program is designed to be as flexible as possible for busy GPs and to minimise time lost and risks inherent in delayed communication with the hospital, bookings and missing information.

To become an aligned Maternity Shared Care GP with MMH, a GP must fulfil the requirements listed below.

**Alignment**

GPs must be a registered medical practitioner with current medical indemnity insurance.

As previously stated on page three, while it is not necessary that the GP wishing to conduct shared care holds the DRANZCOG or CWH, they should have adequate knowledge and skill in maternity care. GPs undertaking maternity shared care are expected to meet the alignment requirements for maternity shared care and be familiar with the policies of MMH.

To provide maternity shared care GPs must attend the Mater Shared Care Alignment Program and complete the questionnaire satisfactorily or have completed the DRANZCOG, Women’s Health Certificate or RACGP Antenatal ALM in the current triennium and completed the online bridging program, or completed an affiliated alignment program and the online bridging program.

**To maintain your alignment**

In order to continue to provide maternity shared care with MMH you will need to re-align each triennium by one of the following means:

1. Attend a MMH alignment seminar and complete the questionnaire satisfactorily
2. Complete the MMH online re-alignment and complete the questionnaire satisfactorily
3. Attend a maternity alignment seminar with an affiliated provider and complete the MMH online bridging program
4. Attend three relevant two hour antenatal or postnatal/neonatal CPD events (category 2) AND complete the MMH online bridging program including Q&A.

*A copy of your attendance certificate/s from courses other than MMH is required to be forwarded to and accepted by the program administrator prior to recognition of re-alignment.

The three year cycle is run in parallel with the triennium set down by the RACGP and the Australian College of Rural and Remote Medicine (ACRRM) for GP Vocational Registration.
If the recommended best practice protocols are not followed and patient management problems occur accreditation may be withdrawn. This is monitored by reviewing patient records. GPs that have not been following protocols will be contacted, either by phone or letter to inform them of their protocol omission. Repeated omissions or serious management problems will be reviewed by the Maternity Shared Care Advisory Committee and may result in withdrawal of Alignment.

If alignment is not maintained a GPs name will be removed from the GP Maternity Shared Care Program database, which would preclude participation in MMH Maternity Shared Care.

5. Contraindications to shared care

Special arrangements can be made for shared care for most women, but it is not recommended for women with the conditions listed under Section 6. However, some GPs may have skills that enable them to manage women with some of these conditions. Discussion with a consultant obstetrician is recommended to clarify management in these situations.

In circumstances where a woman has one of the listed complications and requests shared care, please make this clear in your referral letter to the consultant obstetrician involved.

The basic philosophy in this approach is that these women may have ongoing or future health needs for which the GP is responsible. It may not necessarily be appropriate to interrupt that process in pregnancy and in some circumstances it may be better to establish a modified system of shared maternity care between the GP and the consultant obstetrician.
6. Antenatal guidelines for consultation and referral – Mater Mothers’ Hospital

6.1 Introduction

Purpose

The following guidelines provide an evidence-based, structured, decision-making framework, for Mater midwives and General Practitioners. They outline specific antenatal indications to facilitate discussion, consultation and/or referral to specialist obstetricians in the care of pregnant women and their families. The main purpose of the indication list is to provide a guide for risk assessment and referral decisions.

Scope and Context

This guideline applies to Mater medical and midwifery staff and General Practitioners caring for pregnant women planning to birth at Mater Health Services. At Mater Mothers’ Private Hospital Redland, women will always be managed under the care of a visiting medical officer. The guidelines are aligned with both the Australian College of Midwives and RANZCOG guidelines and we recognise all providers of maternity care will work collaboratively, recognising the knowledge, skills and experience that each professional group possesses, within a woman-centred, shared model of care.

Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Discuss</td>
<td>The primary carer (midwife or GP) will provide clinical care and, if necessary, call upon such qualified health professionals as may reasonably be expected to have the necessary skills and experience to assist them in the provision of care.</td>
</tr>
<tr>
<td>B - Consult</td>
<td>Consult with a Mater Mothers’ Hospital (MMH) specialist obstetrician or obstetric registrar.</td>
</tr>
<tr>
<td>C - Refer</td>
<td>Transfer responsibility for the woman’s care to a MMH specialist obstetrician.</td>
</tr>
</tbody>
</table>

6.2 Guidelines

Discuss (A)

a. The primary carer (midwife or GP) will call upon such qualified health professionals as may reasonably be expected to have the necessary skills and experience to assist in the provision of care.2

b. The primary carer (midwife or GP) will initiate a discussion with, or provide information to, another midwife or health care provider, in order to plan and provide optimal care.1,2

c. Following this discussion, the primary carer may recommend to the woman that consultation with another health care provider or medical practitioner take place because her pregnancy, labour, birth, postnatal period, or the baby may be affected by the condition or situation. Such a discussion does not transfer the responsibility for care. It is important that all parties are made aware of any recommended changes to care arrangements after the discussion.1,2

d. Any exchange of information or advice will be clearly agreed upon and will be clearly documented e.g. in the woman’s Pregnancy Health record or electronic health record.2

e. This discussion will include the need for, and timing of, any further review.2

Consult (requested with a specialist obstetrician or obstetric registrar) (B)

a. A consultation refers to the situation where a primary carer (midwife or GP) recommends the woman consult a specialist obstetrician or obstetric registrar or where the woman requests another opinion.

b. It will be the primary carer’s (midwife or GP) responsibility to initiate a consultation and to clearly communicate to the specialist obstetrician or other health care provider that they, and/or the woman, is seeking a consultation.2

c. The individual situation of the pregnant woman will be evaluated and agreements made about the responsibility for maternity care based on the Antenatal Guidelines for consultation and referral – MMH.
d. A consultation may include the following:
   - i. A face-to-face assessment with the woman and the medical practitioner or other health care provider. This can also be performed using telehealth technologies. The outcome will be clearly communicated to the primary carer and the woman and documented formally e.g. using the woman's hand held record, an electronic record, letter or email.
   - ii. The primary carer may seek advice directly from the specialist obstetrician or other health care provider on behalf of the woman. This consultation may occur in person, by telephone or using telehealth facilities. The primary carer will document this request for advice as well as the advice they receive so that the matter can be discussed with the woman.2

e. When a consultation occurs, the decision regarding ongoing clinical roles and responsibilities will involve a discussion between the specialist obstetrician or health care provider, the primary carer and the woman. The woman may choose to consent to or decline the consultation. Seeking a consultation does not transfer responsibility for care. If the medical practitioner or health care provider recommends a change to the responsibility of care, this will be clearly communicated to the primary carer and the woman involved. 2

f. The consultation involves addressing the issue that led to the referral and the prompt communication of the findings and recommendations to the woman and the referring professional. The primary carer or specialist obstetrician will not automatically assume responsibility for ongoing maternity care. Responsibility will depend on the clinical situation and the wishes and needs of the individual woman. After consultation with a specialist obstetrician, it should be clearly established whether maternity care and responsibility:
   - i. continues with the primary carer (midwife or GP), or
   - ii. is referred to the specialist obstetrician.2

g. Areas of discussion and involvement will be agreed upon and clearly documented.2

h. The specialist obstetrician may be involved in, and responsible for, a discrete area of the woman's care, with the primary carer maintaining overall responsibility within their scope of practice.

i. Where urgency, distance or climatic conditions make a face-to-face consultation between a woman and a specialist obstetrician impossible, the primary carer will seek advice from the specialist obstetrician by phone. The primary carer should document this request for advice in their records, and discuss with the woman the advice received.

j. Areas of discussion and involvement will be clearly agreed upon and clearly documented.

Transfer (to specialist obstetric care) (C)

a. When maternity care is referred (either permanently or temporarily) from the primary carer to a specialist obstetrician, the specialist obstetrician, in consultation with the woman and primary carer, assumes all responsibility for maternity care (secondary or tertiary). The woman will provide informed consent prior to a transfer. The obstetrician (or other medical specialist) will assume ongoing clinical responsibility and the role of the midwife or GP will be agreed between the specialist, the midwife or GP and the woman. This will include a discussion about the appropriate timing of a transfer of clinical responsibility back to the midwife or GP when the condition(s) permit.2

b. When maternity care is referred to a specialist obstetrician, the primary carer may continue to provide maternity care within the primary carer's scope of practice, in collaboration with the specialist obstetrician.

c. Areas of discussion, responsibility and involvement should be agreed upon and clearly documented and communicated to the woman.2

d. Specialist obstetricians/registrar will consult with other specialist medical officers as required, such as anaesthetics, obstetric medicine and neonatology.

e. NOTE: Where there are variations in the severity of a condition there may be more than one level recommended e.g. B/C; A/B/C Indications at booking history.

### 6.3 Medical conditions at commencement of pregnancy

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Key: A = Discuss; B = Consult; C = Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.1 Anaesthetic difficulties</td>
<td>Previous failure or complication (e.g. difficult intubation, failed epidural)</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Malignant hyperthermia or neuromuscular disease</td>
<td>C</td>
</tr>
<tr>
<td>6.3.2 Autoimmune disease</td>
<td>SLE/connective tissue disorder:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Active with major organ involvement on medication</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Inactive, no renal involvement, no hypertension, or only skin/joint problems</td>
<td>B</td>
</tr>
<tr>
<td>6.3.3 Body mass index (BMI)</td>
<td>BMI less than 18 and more than 35</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>BMI more than 40</td>
<td>B/C</td>
</tr>
<tr>
<td>6.3.4 Cardiovascular disease</td>
<td>Arrhythmia/palpitations; murmurs: recurrent, persistent or associated with other symptoms</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve disease</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve replacement</td>
<td>C</td>
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<tr>
<td></td>
<td>Cardiomyopathy</td>
<td>C</td>
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<tr>
<td></td>
<td>Congenital cardiac disease</td>
<td>C</td>
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<tr>
<td></td>
<td>Hypertension</td>
<td>B</td>
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<tr>
<td></td>
<td>Ischemic heart disease</td>
<td>C</td>
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<tr>
<td></td>
<td>Pulmonary hypotension</td>
<td>C</td>
</tr>
<tr>
<td>6.3.5 Drug dependency and prescription medicine</td>
<td>Use of alcohol and other drugs</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Medicine use. For information on the effect of drugs on the pregnant woman and the unborn child, lactation and/or/neonate contact Mothersafe 1800 647 848</td>
<td>B</td>
</tr>
<tr>
<td>6.3.6 Endocrine</td>
<td>Addison’s disease, Cushing’s disease or other endocrine disorder requiring treatment</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Diabetes mellitus:</td>
<td></td>
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<tr>
<td></td>
<td>• Gestational diabetes in previous pregnancy</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>• Pre-existing Type 1 or Type 2 diabetes</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Hypothyroidism:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• stable treated hypothyroidism</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• new diagnosis</td>
<td>B</td>
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<tr>
<td></td>
<td>Hyperthyroidism</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Thyroid disease</td>
<td>B</td>
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<tr>
<td>6.3.7 Gastro-intestinal</td>
<td>Hepatitis B with positive serology (HBsAg+)</td>
<td>B</td>
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<tr>
<td></td>
<td>Hepatitis C</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Inflammatory bowel disease:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• This includes ulcerative colitis and Cohn’s disease</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Oesophageal varices</td>
<td>C</td>
</tr>
<tr>
<td>6.3.8 Genetic – any condition</td>
<td></td>
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<tr>
<td>6.3.9 Haematological</td>
<td>Anaemia at commencement of care irrespective of how treated or whether it responds to treatment: Anaemia defined as Hb less than 90 g/L</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Coagulation disorders</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Decline blood products</td>
<td>B</td>
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<tr>
<td>Item</td>
<td>Description</td>
<td>Key: A = Discuss; B = Consult; C = Transfer</td>
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<tr>
<td></td>
<td>Haemoglobinopathies</td>
<td>B/C</td>
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<tr>
<td></td>
<td>Haemolytic anaemia</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Other antibodies detected</td>
<td>B/C</td>
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<tr>
<td></td>
<td>Rhesus negative blood group requiring Rh (D) immunoglobulin</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Thalassemia</td>
<td>B</td>
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<tr>
<td></td>
<td>Thrombo-embolic process of importance is the underlying pathology and the presence of a positive family medical history</td>
<td>C</td>
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<tr>
<td></td>
<td>Thrombophilia including anti-phospholipid syndrome:</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>• no previous obstetric complications or maternal thrombosis</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• on warfarin, previous obstetric complications or maternal thrombosis</td>
<td>C</td>
</tr>
<tr>
<td>6.3.10</td>
<td>Infectious diseases</td>
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<td></td>
<td>Cytomegalovirus</td>
<td>C</td>
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<tr>
<td></td>
<td>Genital Herpes:</td>
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<tr>
<td></td>
<td>• primary infection</td>
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</tr>
<tr>
<td></td>
<td>• recurrent infection</td>
<td>A/B</td>
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<tr>
<td></td>
<td>History of viral, or parasitic infection</td>
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<tr>
<td></td>
<td>HIV infection</td>
<td>A/B</td>
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<tr>
<td></td>
<td>Rubella</td>
<td>C</td>
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<tr>
<td></td>
<td>Parvovirus infection</td>
<td>B/C</td>
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<td></td>
<td>Previous neonatal GBS</td>
<td>B</td>
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<tr>
<td></td>
<td>Syphilis:</td>
<td></td>
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<tr>
<td></td>
<td>• positive serology and treated</td>
<td>B</td>
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<tr>
<td></td>
<td>• positive serology and not treated</td>
<td>B</td>
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<tr>
<td></td>
<td>• primary infection</td>
<td>B</td>
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<tr>
<td></td>
<td>Toxoplasmosis</td>
<td>B</td>
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<tr>
<td></td>
<td>Tuberculosis active or a history of</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Varicella zoster virus infection</td>
<td>B</td>
</tr>
<tr>
<td>6.3.11</td>
<td>Maternal age</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• over 38 years</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• under 14 and over 45 years</td>
<td>C</td>
</tr>
<tr>
<td>6.3.12</td>
<td>Neurological</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AV malformations</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Bell's palsy</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Epilepsy with medication or seizure in last 12 months</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Epilepsy without medication or in the past without treatment and no seizures in the last 12 months</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Multiple sclerosis</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Muscular dystrophy or myotonic dystrophy</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Myasthenia gravis</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Spinal cord lesion (paraplegia or quadriplegia)</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Subarachnoid haemorrhage, aneurysms</td>
<td>C</td>
</tr>
<tr>
<td>6.3.13</td>
<td>Organ transplant</td>
<td>C</td>
</tr>
<tr>
<td>6.3.14</td>
<td>Perinatal mental health problems – history of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care during pregnancy and birth will depend on the severity and extent of the mental health status:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• EPDS – &gt; 12 or positive response to Q10 re self-harm</td>
<td>A/B</td>
</tr>
<tr>
<td></td>
<td>• puerperal psychosis</td>
<td>B</td>
</tr>
</tbody>
</table>
6.3.15 Renal function disorders

- Disorder in renal function, with or without dialysis: C
- Pyelitis: C
- Previous kidney surgery with potential to impair kidney function during pregnancy i.e. removal of kidney etc.: C
- Urinary tract infections (recurrent): B

6.3.16 Respiratory disease

- Asthma – mild: A/B
- Asthma – moderate (i.e. oral steroids in the previous 12 months and maintenance therapy): B
- H1N1 (current): C
- Severe lung function disorder: C
- Sarcoidosis (can be exacerbated during pregnancy): C

6.3.17 Skeletal Problems

- These include conditions that may cause severe pain during labour:
  - history of developmental skeletal disorders: B
  - osteogenesis imperfecta: B
  - Scheuermann’s disease: B
  - scoliosis (with rods): B
  - spondylolisthesis: B

6.4 Pre-existing gynaecological disorders

6.4.1 Cervical abnormalities

- Abnormal PAP smear results requiring follow-up during pregnancy: B
- Cervical amputation: C
- Cervical surgery including cone biopsy, laser excision or LLETZ biopsy: B
- Cervical surgery with subsequent term vaginal birth: B
- Cervical surgery without subsequent term vaginal birth: B

6.4.2 Female genital mutilation (FGM)

- B

6.4.3 Fibroids

- A/B

6.4.4 Infertility treatment

- A/B

6.4.5 Intraterine contraceptive device (IUCD) insitu

- B

6.4.6 Pelvic deformities (trauma, symphysis rupture, rachitis)

- B

6.4.7 Pelvic floor reconstruction

- Colpo-suspension following prolapse, fistula and/or previous rupture: B/C

6.4.8 Uterine abnormalities

- Myomectomy or hysterotomy: C
- Bicornuate uterus, unicornuate uterus or other congenital reproductive tract anomaly (includes vaginal septums): B

6.5 Previous obstetric history

6.5.1 ABO incompatibility

- B/C

6.5.2 Active blood incompatibility (Rh, Kell, Duff, Kidd)

- C

6.5.3 Autoimmune thrombocytopenia

- C
### 6.5 Other significant obstetric events

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Key: A = Discuss; B = Consult; C = Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5.4</td>
<td>Caesarean section</td>
<td>B</td>
</tr>
<tr>
<td>6.5.5</td>
<td>Cervical weakness (and/or cervical suturing procedure)</td>
<td>C</td>
</tr>
<tr>
<td>6.5.6</td>
<td>Cholestasis</td>
<td>B</td>
</tr>
<tr>
<td>6.5.7</td>
<td>Congenital and/or hereditary disorder of a previous child</td>
<td>B</td>
</tr>
<tr>
<td>6.5.8</td>
<td>Forceps or vacuum extraction</td>
<td>A</td>
</tr>
<tr>
<td>6.5.9</td>
<td>Grand multiparity – defined as parity more than five</td>
<td>A/B</td>
</tr>
<tr>
<td>6.5.10</td>
<td>Hypertension</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eclampsia</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Gestational hypertension</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Pre-eclampsia</td>
<td>B</td>
</tr>
<tr>
<td>6.5.11</td>
<td>IUGR less than 10 percentile</td>
<td>B</td>
</tr>
<tr>
<td>6.5.12</td>
<td>Macrosomia more than 4.5 kg</td>
<td>B</td>
</tr>
<tr>
<td>6.5.13</td>
<td>Neonatal asphyxia (defined as an APGAR score of less than seven at five minutes)</td>
<td>B</td>
</tr>
<tr>
<td>6.5.14</td>
<td>Perinatal death</td>
<td>B/C</td>
</tr>
<tr>
<td>6.5.15</td>
<td>Placental</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abruption</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Accreta</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Manual removal</td>
<td>B</td>
</tr>
<tr>
<td>6.5.16</td>
<td>Postpartum depression</td>
<td>A</td>
</tr>
<tr>
<td>6.5.17</td>
<td>Postpartum haemorrhage more than 500 ml requiring additional treatment and/or transfusion</td>
<td>B</td>
</tr>
<tr>
<td>6.5.18</td>
<td>Preterm birth (less than 35 weeks) in a previous pregnancy</td>
<td>B</td>
</tr>
<tr>
<td>6.5.19</td>
<td>Previous HELLP syndrome</td>
<td>C</td>
</tr>
<tr>
<td>6.5.20</td>
<td>Previous neonatal group B streptococcus (GBS) infection</td>
<td>B</td>
</tr>
<tr>
<td>6.5.21</td>
<td>Previous serious psychological disturbance</td>
<td>B</td>
</tr>
<tr>
<td>6.5.22</td>
<td>Recurrent miscarriage (three or more during the first trimester)</td>
<td>B</td>
</tr>
<tr>
<td>6.5.23</td>
<td>Rhesus isoimmunisation</td>
<td>C</td>
</tr>
<tr>
<td>6.5.24</td>
<td>Shoulder dystocia</td>
<td>B</td>
</tr>
<tr>
<td>6.5.25</td>
<td>Symphysis pubis dysfunction</td>
<td>A</td>
</tr>
<tr>
<td>6.5.26</td>
<td>Termination of pregnancy (TOP)</td>
<td>A</td>
</tr>
<tr>
<td>6.5.27</td>
<td>Trophoblastic disease: hydatidiform mole or vesicular mole, within last 12 months</td>
<td>C</td>
</tr>
<tr>
<td>6.5.28</td>
<td>Third or fourth degree perineal laceration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Functional recovery</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Persistent pelvic floor dysfunction</td>
<td>B</td>
</tr>
<tr>
<td>6.5.29</td>
<td>Vulval/perineal haematoma requiring surgical treatment</td>
<td>B</td>
</tr>
<tr>
<td>6.5.30</td>
<td>Other significant obstetric event</td>
<td>A/B/C</td>
</tr>
</tbody>
</table>

### 6.6 Other indications from previous obstetric history

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Key: A = Discuss; B = Consult; C = Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.6.1</td>
<td>Current or previous child protection concerns</td>
<td></td>
</tr>
</tbody>
</table>

### 6.7 Clinical indications developed or discovered during pregnancy

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Key: A = Discuss; B = Consult; C = Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7.1</td>
<td>Adoption – intended</td>
<td>A</td>
</tr>
<tr>
<td>6.7.2</td>
<td>Cervical weakness (cervical dilation prior to 37 weeks and/or cervical procedure)</td>
<td>C</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Key: A = Discuss; B = Consult; C = Transfer</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>6.7.3</td>
<td>Cervix cytology abnormalities</td>
<td>B/C</td>
</tr>
<tr>
<td>6.7.4</td>
<td>Ectopic pregnancy</td>
<td>C</td>
</tr>
<tr>
<td>6.7.5</td>
<td>Endocrine disorders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diabetes mellitus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gestational diabetes – diet controlled</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Gestational diabetes – requiring medication</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Thyroid disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hypothyroidism</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>• Hyperthyroidism</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Addison’s disease, Cushing’s disease or other endocrine disorder requiring treatment</td>
<td>C</td>
</tr>
<tr>
<td>6.7.6</td>
<td>Fetal anomaly</td>
<td>B/C</td>
</tr>
<tr>
<td>6.7.7</td>
<td>Fetal death in utero</td>
<td>C</td>
</tr>
<tr>
<td>6.7.8</td>
<td>Fetal size discrepancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyhydramnios or oligohydramnios</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Small for gestational age (SGA) or large for gestational age (LGA). Fundal height variation of more than 3 cm from weeks of gestation.</td>
<td>B</td>
</tr>
<tr>
<td>6.7.9</td>
<td>Fibroids</td>
<td>A/B</td>
</tr>
<tr>
<td>6.7.10</td>
<td>Gastrointestinal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cholestasis</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Hepatitis B with positive serology (HBsAg+)</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Inflammatory bowel disease includes ulcerative colitis and Cohn’s disease</td>
<td>B/C</td>
</tr>
<tr>
<td>6.7.11</td>
<td>Haematological</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anaemia – Hb less than 90 g/L and not responding to treatment</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Blood group incompatibility</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Coagulation disorders</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Rhesus negative requiring Rh (D) immunoglobulin (anti-D)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Thrombosis</td>
<td>C</td>
</tr>
<tr>
<td>6.7.12</td>
<td>Hernia nuclei pulposi (slipped disc)</td>
<td>B</td>
</tr>
<tr>
<td>6.7.13</td>
<td>High head at term</td>
<td>B</td>
</tr>
<tr>
<td>6.7.14</td>
<td>Hyperemesis gravidarum</td>
<td>B</td>
</tr>
<tr>
<td>6.7.15</td>
<td>Hypertension</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any type with proteinuria (&gt;1+ or 0.3 g/24 hours or ≥ or equal to 30 mg/mmol)</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Chronic hypertension – present during preconception or the first half of the pregnancy. It may be essential hypertension (no apparent cause) or secondary hypertension (hypertension is associated with renal, renovascular, endocrine disorder or aortic coarctation). Diastolic pressure should be recorded as point V Korotkoff (K5) i.e. the point of disappearance of sounds.</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Eclampsia</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Gestational hypertension – any hypertension after 20 weeks gestation</td>
<td>B/C</td>
</tr>
<tr>
<td></td>
<td>Pre-eclampsia – BP ≥140/90 (see page 26) and any of:</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• proteinuria (&gt;0.3g/24 hours or ≥ 30 mg/mmol or 2+ protein on dipstick)</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Platelets less than 150 x 10/9L</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Abnormal renal or liver function</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>• Neurological features: severe headache, persistent visual disturbances, hyperreflexia with sustained clonus, convulsions (eclampsia), stroke.</td>
<td>C</td>
</tr>
</tbody>
</table>
### 6.7.16 Infectious diseases

- **Cytomegalovirus**
- **Genital Herpes:**
  - late in pregnancy – active lesions
  - primary infection
  - recurrent
- **HIV infection**
- **Parvovirus infection**
- **Listeriosis**
- **Rubella**
- **Sexually transmitted infections including syphilis, gonorrhoea, chlamydia, human papilloma virus**
- **Toxoplasmosis**
- **Tuberculosis – active tuberculous process**
- **Varicella zoster virus infection**

### 6.7.17 Malpresentation/non-cephalic presentation at term

- **Breech presentation (refer for ECV at 35 weeks)**

### 6.7.18 Multiple pregnancy

### 6.7.19 No prior prenatal care (at term)

### 6.7.20 Perinatal mental health issues

- **EPDS > 12 or positive response to Q10 self-harm**

### 6.7.21 Placenta indications

- **Placental abruption**
- **Placenta accreta**
- **Placenta praevia confirmed**
- **Vasa praevia**

### 6.7.22 Post-term pregnancy (amenorrhoea lasting longer than 42 completed weeks or 294 days)

### 6.7.23 Preterm labour (threatened or actual) and birth

### 6.7.24 Preterm rupture of membranes

### 6.7.25 Reduced fetal movement in third trimester

### 6.7.26 Renal function disorders

- **Urinary tract infections**
- **Pyelitis**

### 6.7.27 Respiratory disease

- **Asthma**

### 6.7.28 Surgery during pregnancy

### 6.7.29 Symphysis pubis dysfunction (pelvic instability)

### 6.7.30 Uncertain duration of pregnancy by amenorrhoea 20 weeks

### 6.7.31 Vaginal blood loss

- Recurring loss prior to 12 weeks
- **At or after 12 weeks**

### 6.8 Other indications during pregnancy

### 6.8.1 Current or previous child protection concerns
7. Booking at MMH

MMH is a private hospital contracted by Qld Health to conduct an agreed number of public births per year. Due to high demand it is not currently possible to accept routine low risk referrals from outside the catchment area. Special consideration is made for women requiring tertiary care and indigenous women.

The GP should submit a referral on the Mater Antenatal referral form as soon as possible following the first appointment or, if the LNMP is uncertain, after confirmation of the due date by dating scan. The Mater Antenatal referral form can be accessed by:

1. Users of Medical Director, Best Practice, Practix or Genie can download the referral templates from www.materonline.org.au Go to: Quick referrals > Refer a public patient > Maternity > Antenatal Clinic

2. From the website www.materonline.org.au the form can be printed out (as a PDF) and completed by hand and then faxed or mailed, or completed using the interactive PDF document and then printed out and faxed or mailed.

3. A supply of paper copies of the referral form is available for those practices without computer or Internet access. Copies of this form can be obtained by contacting the GP Liaison Midwife on 07 3163 1861; by email GPL@mater.org.au

Completed referrals may be faxed to 07 3163 8053 or posted to Mater Mothers’ Antenatal Clinic, Raymond Terrace South Brisbane Qld 4101.

Referrals are triaged daily (Monday – Friday) and appointments are allocated according to urgency and due date.

A booking appointment with a midwife and obstetrician will be arranged at 12–20 weeks unless a medical condition or obstetric history dictate an earlier appointment.

Women who want diagnostic testing (CVS or amniocentesis) can be referred to Mater Maternal Fetal Medicine for counselling +/- procedure, in addition to the antenatal clinic referral.

Ultrasound reports and a copy of blood test results should be brought to the first antenatal clinic appointment.

8. Calculation of due date

EBD is based on the LNMP if:

- LNMP normal, cycle regular, women is certain of the first day of last LNMP, woman has not breastfed or taken OCP within the last three months, has not been on depo-provera within the last 9 months
- If LNMP doesn’t fulfil above criteria, use first ultrasound
- Crown-rump length is used for dating if CRL is >10 mm and < 84 mm
- If more than one 1st trimester USS, use earliest USS with CRL = to at least 7 wks (CRL 10 mm)
- If CRL > 84 mm (13.6 wks) EBD is based on head circumference (HC).

<table>
<thead>
<tr>
<th>Gestation</th>
<th>Best method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 14+0 weeks</td>
<td>Use LNMP* if within four days (less than four days) from the USS estimated due date.</td>
</tr>
<tr>
<td>14+0 to 22+6 weeks</td>
<td>Use the LNMP* if within seven days (less than seven days) from the USS estimated due date.</td>
</tr>
<tr>
<td>More than 23+0 weeks</td>
<td>Discuss with consultant if using LNMP* for dating and first scan performed at more than 23 weeks.</td>
</tr>
</tbody>
</table>

*LNMP must be ‘normal’ to be considered for calculating the estimated date of birth.
9. Screening for fetal chromosome abnormalities e.g. Down syndrome

Screening for fetal chromosome abnormalities should be discussed and offered to women of ALL ages:

Screening tests for fetal chromosome abnormalities are dependent upon accurate gestational age. If dates are uncertain, a dating scan is required to inform the correct timing of tests.

First trimester combined screening consists of Papp-A, β-HCG and nuchal translucency ultrasound.

The ‘triple test’ consisting of β-HCG, AFP and oestradiol, is performed in the second trimester. For optimal triple test screening a dating scan is required.

- Biochemical tests in first and second trimester are available at all pathology providers and the timing of tests is outlined in the table below.
- When requesting a nuchal translucency scan, please indicate the pathology provider on the scan referral so that a combined result can be calculated on the day of the scan.

<table>
<thead>
<tr>
<th>Screening Test</th>
<th>Appropriate timing—gestational age</th>
</tr>
</thead>
<tbody>
<tr>
<td>First trimester biochemistry—Papp-A, β-HCG</td>
<td>10+0 to 13+6 weeks</td>
</tr>
<tr>
<td>Nuchal translucency scan</td>
<td>11+0 to 13+6 weeks</td>
</tr>
<tr>
<td>Second trimester Triple test—β-HCG, AFP, oestradiol</td>
<td>15 to 20 weeks (optimal time 16 weeks)</td>
</tr>
</tbody>
</table>

When ordering the first trimester combined screen, the blood test should be performed before the nuchal translucency scan so that the result is available to be combined into a single adjusted risk on the day of the scan. The result should not be given with separate biochemistry and nuchal translucency risks but always as a ‘combined’ adjusted risk only.

What is NIPT?

Non-invasive prenatal testing (NIPT) refers to testing of the fetal genome (DNA) through a sample of the mother’s blood, hence it is ‘non-invasive’ and poses no risk to the pregnancy. The major benefit for NIPT is a significant reduction in the need to perform invasive testing e.g. chorionic villous sampling (CVS) or amniocentesis which carries a risk of fetal loss of up to 1%. For further information see: http://www.materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Routine morphology ultrasound screening

All pregnant women should be offered a morphology ultrasound scan, performed between 18 weeks and 20 weeks + 6 days. The routine morphology scan is not endorsed as a screening test for Down Syndrome. If screening for Down syndrome is requested by the woman in the second trimester, the options are NIPT or biochemical screening (‘triple test’).
10. GP shared care antenatal appointment schedule

Specific instructions

a. Throughout the entire antenatal period, practitioners will remain vigilant to the signs and symptoms of any conditions which affect the wellbeing of the mother and unborn baby.

b. Healthy pregnant women, with uncomplicated singleton pregnancies, will be offered continuity of care through GP Shared model of care or midwifery models.

c. Women’s height and weight will be measured at the first antenatal visit and their body mass index (BMI) will be calculated. Women will be provided with advice about appropriate weight gain during pregnancy. Women are to be weighed at each appointment.¹

d. Urine testing for proteinuria (dipstick urinalysis) and asymptomatic bacteriuria (mid-stream urine (MSU) for microscopy, culture and sensitivity (MC&S)) are recommended at the first antenatal visit regardless of stage of pregnancy.²

e. Screening for gestational diabetes mellitus should be offered to all women who are not known to have Type 1 or Type 2 Diabetes.

f. Pregnant women over the age of 35 years require obstetric review by 14 weeks.

Routine antenatal assessment

A routine antenatal assessment will be performed, at each appointment, and includes the following, as specified:


b. Fetal growth measurement—fundus to symphysis pubis (from 24 weeks gestation).

c. Fetal movement.

d. Fetal heart rate (from 16 weeks gestation).

e. Presentation/position from 36 weeks gestation.

f. Weight

g. Reassess any risk factors.

Documentation at each antenatal appointment

a. Midwives will document in the Mater Shared Electronic Health Record (MSEHR). A printout will be included in the PHR.

b. GPs will document in the Mater Shared Electronic Health Record (MSEHR), Pregnancy Health Record (PHR), or provide a printout for the PHR at each appointment.

c. All other health professionals will document in the PHR (or MSEHR).

d. Electronic test results will be reviewed in Verdi if ordered by a Mater clinician and performed at a Mater Pathology collection centre. Tests performed at QML or S&N are not automatically reviewed at MMH. Results should be CC’ed to MMH and a printed copy of the result placed in the PHR.

e. The antenatal history will be completed in Matrix at the first hospital antenatal appointment. Additional information will be added to Matrix during pregnancy, as appropriate e.g. changes to ‘issues and plans’.

f. All internal and allied health referrals will be documented in the women’s health record.

² Clinical Practice Guidelines Antenatal Care – Module 1. Australian Government. Dept. of Health and Ageing
Appointment with GP to confirm pregnancy between 6 and 12 weeks

a. Obtain medical and obstetric history.

b. Measure BP, record height and weight, and calculate BMI.

c. Order βHCG, if required. Order dating scan if LNMP uncertain.

d. Discuss screening and testing options including NIPT for fetal chromosome abnormalities with all women irrespective of age. Request all appropriate tests after discussion and informed consent and follow up results.

e. Order first trimester combined screen, if requested:
   i. PAPP-A biochemistry at 9+0–13+6 weeks
   ii. Nuchal translucency screen at 11+0–13+6 weeks.

f. Order dating ultrasound scan, if requests serum screening for Down syndrome (triple test performed between 14–20 weeks) and presents too late for first trimester combined screen.

g. Discuss and provide referral for the 18–20 week morphology scan.

h. Request and review routine bloods after discussion and informed consent, and ensure all results are copied to Mater Mothers’ Hospital:
   i. full blood count (FBC)
   ii. blood group and antibodies
   iii. rubella antibody titre
   iv. hepatitis B, hepatitis C, human immunodeficiency virus (HIV)
   v. syphilis
   vi. request first trimester HbA1c (or early OGTT if presents after 12 weeks gestation) for women at risk of diabetes
   vii. urine:
      • mid-stream urine (MSU) for microscopy, culture and sensitivity (MC&S)
      • dipstick urinalysis for proteinuria
   viii. If BMI more than 30 and/or aged 40 years or older, baseline ELFT, urine protein/creatinine ratio. Request first trimester HbA1c (or OGTT if presents after 12 weeks gestation).
   ix TSH if age >30 years or other risk factors.

i. Perform Pap smear, if due.

j. Discuss available models of care.

k. Indicate GP alignment status and woman’s preferred model of care on referral (including GP Share Care option).

l. Known Rh (D) negative women—discuss antenatal Rh (D) prophylaxis and the importance of seeking advice following any potentially sensitising events.

m. Fax or post Mater Mothers’ Hospital’s Antenatal referral form and include above information.

n. Reinforce aspects of health promotion, including pertussis and influenza vaccinations, and parent education.

12–20 weeks routine booking appointment with midwife and obstetrician (earlier if high risk)

a. Booking history completed and documented in Matrix.

b. Identify any risk factors and those women requiring additional care. Consult and refer if necessary. Check BP; record height and weight; calculate BMI.

c. Dipstick urinalysis to screen for chronic renal disease (check for blood, protein, nitrites and leucocytes).

d. Review results of all pathology tests and ultrasound scans and action as appropriate, ensuring a copy of any results provided by the woman are included in the health record. Request that the woman brings a copy of any subsequent scans and results to following appointments

e. Confirm that each woman understands the screening tests and answer any questions raised. If required, refer to appropriate professional for ongoing management

f. Rh (D) negative women
   i. Discuss Antenatal Rh (D) prophylaxis & advise medical review following any potentially sensitising events.
   ii. Ensure that 28 and 34 week Rh (D) appointments are booked.
   iii. If for GP-shared care, send letter advising the current recommendations for Rh (D) prophylaxis to the GP.

g. Order blood tests and MSU if not already obtained. Initiate triple test, if appropriate. CC results to GP.

h. Ask the woman to complete the Edinburgh Postnatal Depression Scale (EDPS). Provide information about allied health services and refer as appropriate.

i. Obstetrician to confirm due date.

j. Obstetrician to make the final recommendation regarding model of care, after consideration of any risk factors.

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k. Discuss and commence the planned schedule of antenatal visits. Identify the midwifery clinic code on schedule of visits (if applicable). 24 and 31 week appointments may be omitted for multiparous women unless they have a BMI ≥ 35, maternal age ≥ 38, a previous history of pre-eclampsia, a pregnancy interval > 10 years or other concerns including psycho-social risk factors. Indicate if obstetric review is required at 36 weeks (e.g. previous caesarean section, or maternal age 38 or more).

l. Reinforce public health principles: diet, exercise, smoking cessation, domestic abuse, drug and alcohol use, social circumstances.

m. Discuss parent education—recommend early booking of antenatal classes.

n. Provide information about length of hospital stay and postnatal homecare visits.

o. Give the Pregnancy Health Record to the woman.

18–20 week morphology ultrasound scan followed by an appointment with the GP as soon as possible

a. Routine antenatal assessment. Refer to page 17.

b. Review morphology USS results and triple test result if taken, and provide a copy for the PHR. Notify antenatal clinic of abnormal results and refer if necessary to Maternal Fetal Medicine.

c. If the placenta is less than 2 cm from the os a follow up scan to check placental location should be requested at 34 – 36 weeks.

d. Confirm estimated date of birth if required.

e. Document in MSEHR, PHR or print antenatal summary for PHR.

24 week appointment with primary carer (GP or midwife) for primigravidas and multigravidas with risks identified. (see k. above)

a. Routine antenatal assessment. Refer to page 17.

b. Begin assessment of fundal height to measure fetal growth and include at each antenatal assessment.

c. Discuss and provide written information about normal fetal movements during the antenatal period.

d. Reinforce aspects of health promotion and parent education.

e. Reassess planned schedule of care and identify women who need additional care.

f. Gestational diabetes screening will be offered to all women: fasting 75 g two-hour oral glucose tolerance test (OGTT)

28 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 17.

b. Reinforce aspects of health promotion, including pertussis and influenza vaccinations, and parent education.

c. For women not seen at 24 weeks repeat as above.

d. Review, discuss and document results of tests taken at 26–28 weeks (or obtain if not yet taken) and action as required.

i. If Hb is less than 105 initiate further investigation and/or appropriate treatment

ii. If woman is Rh (D) negative, take antibody screen before offering administration of 625 IU Rh (D) immunoglobulin IM.

e. Discuss infant feeding and benefits of breastfeeding.

f. Discuss neonatal vitamin K, and hepatitis B vaccination, for baby at birth.

g. Reassess planned schedule of care and identify women who need additional care.

h. Repeat the Edinburgh Postnatal Depression Scale (EDPS), if applicable, to assess woman for antenatal depression.¹

i. Discuss and commence birth plan.

j. Consider discharge planning

k. Document in MSEHR, PHR or print antenatal summary for PHR.

31 week appointment with primary carer (GP or midwife) for primigravidas and multigravidas with risks identified.

a. Routine antenatal assessment. Refer to page 17.

b. Review, discuss and document results of tests taken at 28 weeks and action as required.

c. Reassess planned schedule of care and identify women who need additional care.

d. Discuss neonatal vitamin K, and hepatitis B vaccination, for baby at birth. Obtain verbal consent (Vitamin K) and written consent (hepatitis B), if form available.

e. Continue discussing birth plan

f. Document in MSEHR, PHR or print antenatal summary for PHR.

¹ Clinical Practice Guidelines Antenatal Care – Module 1. Australian Government. Dept. of Health and Ageing
34 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 17.
b. Order FBC to be taken prior to 36 week appointment.
c. If a woman is Rh (D) negative, recommend and administer 625 IU R(D) immunoglobulin IM.
d. For women not seen at 31 weeks, review as above.
e. Repeat ultrasound scan if low lying placenta at morphology scan.
f. Reassess planned schedule of care and identify women who need additional care.
g. Discuss birth plan.
h. Repeat the Edinburgh Postnatal Depression Scale (EDPS), if applicable, to assess woman for antenatal depression.1
i. Document in MSEHR, PHR or print antenatal summary for PHR.

36 week appointment with midwife (or obstetrician e.g. previous caesarean birth, to discuss mode of birth).

a. Routine antenatal assessment. Refer to page 17.
b. Identify and document fetal presentation.
c. If breech presentation, provide Mater’s brochure Pregnancy—breech presentation at term, accessible via http://brochures.mater.org.au, and refer for discussion regarding external cephalic version (ECV).
d. Reassess planned schedule of care and identify women who need additional care. Discuss and book induction of labour at term for women aged 38 or older.
e. Review blood test result (or obtain blood for FBC if not yet taken). If Hb less than 110 for further investigation and appropriate treatment.
f. Check follow-up ultrasound for placental position if low lying placenta at 18–20 weeks.
g. Review result of k34 EDPS or perform EPDS if not done at k34.
h. Discuss birth preferences, active birth/labour and pain relief, especially if woman has not attended parent education. Confirm Birth Preferences Awareness statement has been signed.
i. Discuss and provide Mater’s perineal massage brochure. Provide opportunity/access for woman to watch the perineal massage video.
j. Review infant feeding discussion.
k. Discuss length of hospital stay and postnatal homecare.
l. Ensure awareness of contact number for urgent telephone advice.
m. Ensure copies of all results available in either Verdi or the hospital health record.

38 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 17.
b. Review any outstanding blood results.
c. Confirm understanding of signs of labour and indications for admission to hospital. Provide additional information as required.
d. Document in MSEHR, PHR or print antenatal summary for PHR.

40 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 17.
b. Provide additional information as required.
c. Request 41 week appointment if woman needs interpreter, has previous LSCS or other high risk factor.
d. Advise low risk women that a midwife will call them at 40+6 to discuss induction of labour.
e. Document in MSEHR, PHR or print antenatal summary for PHR.

41 week phone call from midwife

Women who have not given birth by 41 weeks will receive a phone call from a midwife to discuss the implications of prolonged pregnancy and book an induction of labour. Membrane sweep will also be offered.

11. MMH Antenatal support

11.1 Mental Health

Perinatal mental illness is a significant cause of morbidity and mortality, affecting maternal and neonatal outcomes, the health of families and of the community. The recognition of depression in the antenatal period is important, as it may require treatment during the pregnancy and is a strong predictor for postpartum depression.

The Edinburgh Postnatal Depression Scale (EPDS) is a screening tool for postnatal depression that is also useful in identifying symptoms of depression and anxiety in the antenatal period. It is completed at the hospital booking appointment and should be repeated by the GP at 34 weeks and at 6 weeks postpartum or if there are any ongoing concerns. It is the GP’s responsibility to arrange appropriate referrals if needed, document in the PHR and notify MMH if concerns are identified or medication commenced.

1300 MH CALL Phone: 1300 64 22 55 Triage and assessment service for severe and complex presentations and urgent or crisis situations. Medication advice. Not counselling. Diverts to local service e.g. Metro South Acute Care Services

The MMH Risk Planning Midwife co-ordinates the maternity care of women with complex mental health concerns and social risk factors. Phone 07 3163 7917; Fax 07 31638053


Eligible psychologists: Visit: www.psychology.org.au

Beyondblue.org.au: information, factsheets, support resources


CYMHS – (under 18) Acute Response Team Crisis Line. Phone: 07 3068 2555

Headspace: 12 –25yrs Mental and physical health services, work and study support, alcohol and drug counselling Woolloongabba, 182 Logan Rd, Phone: 07 3249 2222.


MothertoBaby (medications and more during pregnancy and breastfeeding) – American Teratology Specialist advice. Visit: www.mothertobaby.org.au

PANDA Perinatal Anxiety &Depression Australia resources & phone support. Phone: 1300 726 306

Peachtree – website, factsheets, perinatal peer support groups. Visit: peachtree@peachtree.org.au


Queensland Transcultural Mental Health Service. Phone: 07 3167 8333.

11.2 Early Pregnancy Assessment Unit

Early pregnancy assessment unit is for the non urgent care of women < 20 weeks with threatened or confirmed miscarriage, molar pregnancy, stable (pain free) ectopic pregnancy, pregnancy of unknown location (stable and requiring follow up).

Refer to the emergency department if haemodynamically unstable or heavy bleeding (<30 minutes to soak a pad), pulse rate >100 or postural drop, pain that exceeds normal period pain or is unrelieved by simple analgesia

EPAU is by appointment only Monday – Friday 8:30 am – 1:30 pm. Phone: 07 3163 5132 or Fax: 07 3163 6120.

In March 2017 EPAU will combine with PAOU and become a 24 hour Pregnancy Assessment Centre (PAC) for pregnant women from conception to six weeks postpartum.
11.3 Pregnancy Assessment and Observation Unit (PAOU)

PAOU is open 24 Hours, 7 days a week. Self referral or GP referral. For women from 20 weeks of pregnancy with conditions requiring immediate assessment e.g. reduced fetal movements, hypertension, ruptured membranes, contractions, bleeding etc. Please call prior to presentation.

Contact details
Telephone: 07 3163 6577 Fax: 07 3163 2281.
For clinical consultation or advice phone the obstetric registrar Telephone: 07 3163 6611.
Patients Telephone: 07 3163 7000.

12. Supplements

Vitamin and mineral supplements
see RANZCOG College Statement C-Obs 25
http://www.ranzcog.edu.au/college-statements-guidelines.html#obstetrics

Iodine
As iodine requirements increase during pregnancy, the NHMRC recommends dietary supplementation of 150 mcg iodine daily, prior to or as soon as possible after diagnosis of pregnancy and continuing through pregnancy and lactation.

Folate
Folic acid supplementation of 0.5 mg daily is recommended for at least one month preconception until 12 weeks gestation, to reduce the risk of neural tube defects. 5 mg daily is recommended if the woman has pre-existing diabetes, obesity, is on anticonvulsant medication, a previous child with, or family history of neural tube defects.
http://www.ranzcog.edu.au/college-statements-guidelines.html#obstetrics
13. How to manage abnormal results

Any investigations requested by a GP for any pregnant woman under their care must be followed up by the GP concerned. It is the GPs responsibility to follow up all abnormal results irrespective of whether a copy has been sent to the hospital.

**Nuchal translucency scan or triple test**

Notify antenatal clinic promptly of abnormal results. Requests for diagnostic tests (CVS or amniocentesis) can be faxed with a copy of the USS report to Maternal Fetal Medicine fax 07 3163 1890.

**Morphology ultrasound**

Notify antenatal clinic promptly of abnormal results. Fax scan report and previous results e.g. nuchal translucency and a cover letter to antenatal clinic Fax: 07 3163 8053. For consultation or advice phone the Obstetric Registrar: 07 3163 6611 or MFM: 07 31631899.

**Full Blood Count**

Consider iron studies if the haemoglobin is 105 g/L or less and the MCV is low or red blood cells are microcytic. Check B12/folate levels if the red blood cells are macrocytic.

Testing for thalassaemia (haemoglobin electrophoresis) should also be considered where appropriate. Low white cell or platelet counts should prompt discussion with obstetric registrar, and/or referral to MMH Antenatal Clinic.

**Blood group and antibody screen**

Any positive test for antibody levels should prompt immediate referral to MMH Antenatal Clinic.

**Rubella titre**

A “non immune” level should prompt a note to discuss immunisation with the woman postnatally. Under no circumstances should immunisation be given in pregnancy. Contact with rubella should be avoided.

**Syphilis serology**

Refer to the Australian STI Management Guidelines and provide treatment as required.

**Hepatitis B and C, and HIV tests**

A positive result should prompt immediate referral to MMH Antenatal Clinic. The obstetrician will refer to Mater Brisbane infectious diseases/gastrology clinic.

**Oral glucose tolerance test**

Diagnosis of gestational diabetes is based on:

- Fasting glucose ≥ 5.1 mmol/L and/or
- 1 hour glucose ≥ 10.0 mmol/L and/or
- 2 hour glucose ≥ 8.5 mmol/L.

Or HbA1c > 5.9 % (first trimester only). HbA1c is the preferred test in the first trimester as the fasting glucose has not yet fallen to pregnancy levels and the 5.1 mm threshold has proven too low for diagnosis of GDM In the first trimester a fasting glucose ≥ 5.5 mm (as for outside pregnancy) is evidence of impaired fasting glucose.1,2

The diagnosis of gestational diabetes should prompt immediate referral to the Antenatal Clinic and transfer from GP shared care to MMH Obstetric care.

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Known thyroid disease?

Routine testing not recommended (test if symptomatic, > 30 years old, family Hx thyroid disease, coeliac disease)

Repeat TSH, add T3 | T4 + antibodies

No further testing

50 μg thyroxine

TSH should be < 2.5*#

↑ thyroxine by 30% once pregnant
↓ thyroxine post partum

Hyper or hypo?

Hyper

Specialist review

TSH > 2.5

Free T3 | T4 normal

This is physiological, referral not needed

Specialist review

Hypo

Check TFT 6-8 weekly

Normal

Repeat TSH, add T3 | T4 + antibodies

TSH < 2.5

antibody +ve

50 μg thyroxine

TSH > 2.5* +/- antibodies

No further testing

Repeat TSH in 4 weeks

↑ to 75 μg/d

↓ to 25 μg/d

Repeat TSH @ 18, 26 + 34 weeks and adjust dose prn

Thyroid Management in Pregnancy by Mater Mothers Hospital Alignment is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

The NHMRC recommends that all women who are pregnant, breastfeeding or considering pregnancy, take an iodine supplement of 150 micrograms each day (available in most pregnancy multivitamins or in combination with folate)

* If TSH >10 and/or Free T4 below the pregnancy reference range, arrange urgent referral to specialist in addition to commencing/increasing thyroxine

# TSH levels are laboratory and gestational age specific, the recommendation < 2.5 is for use in the first trimester

Thyroid management in pregnancy
Anaemia

Hb 110 or above*
- Routine iron supplementation is not indicated
- Encourage iron rich diet
- May use a low-dose iron supplement
- If MCV low (less than 80), suspect thalassemia & perform Hb electrophoresis

Hb less than 110*

MCV normal (80–100)
- Iron deficiency anaemia likely

MCV low (less than 80)
- Iron deficiency anaemia likely
  - Perform iron studies
  - Iron studies normal
  - Iron deficient

MCV high (greater than 100)
- Likely vitamin B12 deficiency
  - Perform iron studies, vitamin B12, red cell folic acid

Confirmed iron deficiency:
+ Hb less than 70
+ Intolerant of oral iron
  - Consult medical officer
  - Consider iron infusion

Treat with oral iron supplement

Consult medical officer
Perform Hb electrophoresis

Imminent delivery
Consider blood transfusion

Not responding to treatment
Check compliance
Iron studies
Consult medical officer
Tests normal
Consider other causes & treat as appropriate

Thalassemia or Sickle cell anaemia
- Folic acid 5 mg
- Treat iron deficiency if present
- Genetic counselling/test partner
- May need blood transfusion
- Individualise treatment

Perform serum methylmalonic acid if vitamin B12 low

Vitamin B12 deficiency:
- Hydroxocobalamin 1 mg IM daily for one week, then weekly for four weeks
- Folic acid deficiency:
- Folic acid 5 mg/day

* Note: It is recognised that during second trimester haemoglobin concentrations diminish approximately 5 g/L.12
14. How to manage abnormal findings/symptoms

**Intrauterine growth restriction (IUGR)**

Measure symphysial-fundal height (SFH):

- Ensure mother is comfortable in a semi-recumbent position, with empty bladder.
- Use the unmarked side of a non-elastic tape measure.
- Measure from fundus to top of symphisis pubis.
- Measure longitudinal axis of the uterus, do not correct to midline.
- Record measurement.
- On a growth chart the emphasis is on the slope of serial measurements.

Other considerations include transverse lie, multiple pregnancies and obesity.

If the fundal height is > 3 cm under the expected measurement refer the woman for an ultrasound and request:

- fetal size/growth compared with previous ultrasound (BPD, abdominal circumference)
- doppler of umbilical artery flow
- Amniotic fluid volume – deepest vertical pocket.

If any parameters are abnormal refer to MMH by contacting the obstetric registrar or consultant in Antenatal Clinic 07 3163 8611 (8.30 am – 5 pm Monday – Friday) or after hours the Obstetric Registrar on 07 3163 6611 or consultant 07 3163 6009.

**Decreased fetal movements**

If fetal movements are decreased check fundal height and fetal heart rate and refer to Mater Mothers’ PAOU for assessment of fetal wellbeing.

Maternal concern of decreased fetal movements overrides any definition of decreased fetal movements based on number of movements. If fetal movements are decreased, refer to PAOU for assessment of fetal well-being by calling the Obstetric Registrar on 07 3163 6611 or consultant 07 3163 6009.
Hypertension

Definition: systolic blood pressure greater than or equal to 140 mmHg and/or diastolic blood pressure greater than or equal to 90 mmHg (Korotkoff V).\(^1\)

Essential hypertension is diagnosed prior to pregnancy or before 20 weeks. Gestational hypertension is diagnosed after 20 weeks (without pre-existing hypertension).

Pre-eclampsia is a multi-system disorder unique to human pregnancy characterised by hypertension and involvement of one or more other organ systems and/or the fetus. Raised blood pressure is commonly but not always the first manifestation. Proteinuria is the most commonly recognised additional feature after hypertension but should not be considered mandatory to make the clinical diagnosis.\(^1\) (A relative rise in systolic ≥30 mmHg and diastolic ≥15 mm Hg may be significant in some women but is not included in the definition. Assess for clinical and laboratory features of preeclampsia).\(^2\)

A diagnosis of pre-eclampsia can be made when hypertension arises after 20 weeks gestation and is accompanied by one or more of the following:

- Renal involvement:
  - Significant proteinuria—dipstick proteinuria confirmed by urine protein/creatinine ratio ≥ 30 mg/mmol.
  - Serum or plasma creatinine > 90 micromol/L
  - Oliguria

- Hematological involvement
  - Thrombocytopenia
  - Hemolysis
  - Disseminated intravascular coagulation

- Liver involvement
  - Raised serum transaminases
  - Severe epigastric or right upper quadrant pain.
  - Neurological involvement
  - Severe headache
  - Persistent visual disturbances (photopsia, scotomata, cortical blindness, retinal vasospasm)
  - Hypereflexia with sustained clonus
  - Convulsions (eclampsia)
  - Stroke

- Pulmonary edema
- Fetal growth restriction
- Placental abruption

Pre-eclampsia investigations

Maternal: urine protein/creatinine ratio, full blood count, liver function test.
Fetal: USS for fetal growth, umbilical artery flow, amniotic fluid volume (deepest vertical pocket) and CTG (>24 weeks)

Assessment of Hypertension

Women with signs and symptoms of pre-eclampsia, BP ≥ 140/90, abnormal pathology or signs of fetal growth restriction should be referred immediately to PAOU by communicating with the obstetric registrar on 07 3163 6611 or consultant 07 3163 6009.


If the woman is asymptomatic without proteinuria, confirm non-severe hypertension by repeat measurement. For non-urgent advice or consultation call Antenatal Clinic Phone: 07 3163 8611, 0800-1700 Monday – Friday and ask to speak to an obstetric registrar or consultant.


Vaginal bleeding >– 20 weeks (See EPAU advice for bleeding < 20 weeks)

• Perform a physical assessment of the woman and record a fetal heart rate.
• Review ultrasound reports for placental location. Refer for USS if the woman’s condition is stable and there is no previous USS. Speculum can be performed with placenta praevia but avoid digital exam.
• Speculum to view cervix and PAP if no normal PAP result in last two years.
• Consider need for Anti–D if rhesus negative and Kleihauer count to ascertain amount to give.
• If spotting ceased and exam normal reassure and encourage observation at home.
• For ongoing bleeding or anything other than light spotting refer woman to PAOU at MMH ext. 07 3163 6577
• If heavy blood loss and or patient appears clinically compromised IV access, arrange urgent transfer to hospital and contact on call obstetric registrar/consultant.

Abnormal presentation

If abnormal presentation is suspected after the 36 week hospital appointment refer to antenatal clinic for assessment as soon as possible. The GP Liaison can assist with arranging an appointment (phone 07 3163 1861).

15. 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.

Testing for Anti-D antibodies:

• All women should be tested for blood group antibodies at the first antenatal visit.
• Women who are Rh negative and had no Rh (D) antibodies in early pregnancy should be tested again for the presence of antibodies before administration of Anti-D at K28.
• Ideally testing should precede administration of Anti-D. However, if both are done at the same clinic appointment, the sequence in which they occur does not matter. It takes some time (2–4 hours) before the Anti-D that has been injected can be detected in the circulation.
• Further testing later in pregnancy (after administration of Anti-D) is superfluous because the test cannot distinguish between endogenous and administered Anti-D.

Anticipating prophylactic Anti-D administration in pregnancy

• All women who are Rh (D) negative and have no preformed Anti-D antibodies should be informed 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
  – further prophylaxis after birth if the baby is Rh D positive.
• Recurrent vaginal bleeding requires discussion with/or referral to MMH before administering doses of Anti-D.
• 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 Pregnancy Health Record.

Notes in aid of obtaining informed consent

Ensure that the woman understands what Rh D sensitisation means and the consequences it may have, if not necessarily for this pregnancy, at least for any future pregnancies.

• Provide the woman with information.

• 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 a Rh positive baby has been practiced for many years in Australia.

• Anti-D is a blood product. As it 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.

• More than 1.5 million doses of Anti-D have been given in Australia without a single viral transmission thus far.

• The risk of HIV transmission, for example, is currently estimated to be less than one in five million Anti-D ampoules administered. Thus far, HIV has never been transmitted through Anti-D injections.

• One case has been reported of transmission of Hepatitis C attributed to Anti-D administration. This occurred overseas.

Anti-D prophylaxis for potentially sensitising events

RhD immunoglobulin must be given within 72 hours of the sensitizing event. 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. However, there is insufficient evidence to suggest that a threatened miscarriage before K12 necessitates Anti-D

• any abdominal trauma in pregnancy

• 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 12 weeks gestation, the recommended prophylaxis consists of 250 IU (international units) CSL Rh D immunoglobulin

• at or after 12 weeks gestation, the recommended prophylaxis consists of 625 IU (international units) CSL Rh D immunoglobulin

• after routine prophylaxis at 28 weeks, she should have a dose of Anti-D regardless of when the prophylactic dose was administered.

Routine prophylaxis at 28 and 34 weeks (with or without previous sensitising 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:
  1. the Anti-D administration will provide cover for a minimum of six weeks
  2. the risk of sensitisation increases as pregnancy progresses.

1. RANZCOG COLLEGE STATEMENT FOR GUIDELINES for the use of RH(D) Immunoglobolin (Anti-D) in Obstetrics in Australia.
• Thus, if someone has received Anti-D slightly before 28 weeks, the 34 weeks injection should still be given as planned at 34 weeks.

• If someone 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 six weeks later, provided that the woman is still pregnant then.

• If a 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 sensitising event was administered less than one week before the prophylactic dose being due.

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 Pregnancy Health Record.

• RhD immunoglobulin can be obtained from the following pathology companies upon receipt of a signed and completed request form. It will be delivered by their routine courier service.
  a. Mater Blood Bank Fax 07 3163 8179
  b. QML Blood Bank Fax 07 3371 9029

If your practice has an immunization fridge you may be able to order and keep a small supply.

Dosing recommendations for Rh D negative women—Australian Red Cross Blood Service
(as at 16/8/13)

<table>
<thead>
<tr>
<th>Dose of CSL Rh (D) immunoglobulin</th>
</tr>
</thead>
<tbody>
<tr>
<td>First trimester sensitising events (&lt; 12 weeks)</td>
</tr>
<tr>
<td>First trimester sensitising events (multiple pregnancies &lt; 12 weeks)</td>
</tr>
<tr>
<td>Second and third trimester sensitising events</td>
</tr>
<tr>
<td>All Rh (D) negative women without preformed Anti-D—at 28 and 34 weeks gestation</td>
</tr>
<tr>
<td>Postnatal prophylaxis</td>
</tr>
</tbody>
</table>
16. Birth and Postnatal Care

The care of the woman during labour and birth will be the responsibility of the health care team at MMH. At discharge, a summary of the pregnancy and birth outcome will be sent to the GP.

**Mater Mothers’ Parenting Support Centre** (Phone: 07 3163 2229 or Email: parentsupportcentre@mater.org.au) offers support and guidance for parents up to six months after the birth of their baby, for breast feeding and other feeding issues, sleep and settling, emotional wellbeing, infant interaction and adjustment to parenting. An appointment is required and self referrals are accepted. There is no cost for Medicare eligible families. A postnatal appointment with the GP is advised for mother and baby at 5–10 days and 6 weeks. Some women may be offered a postnatal outpatient appointment at MMH if they have experienced specific problems during pregnancy or birth e.g. third or fourth degree tear. This appointment will be made prior to discharge. During the postnatal period, the GP may identify problems that require referral back to MMH or to a paediatrician.

**Postnatal GP appointment at 5–10 days**

**Mother**

Early contact to assess wellbeing, social risk factors, and level of support. Apply Edinburgh Postnatal Depression Scale if indicated. Review:

- BP
- lochia
- perineum
- abdominal wound if LSCS
- feeding—refer section 15.5 for breastfeeding information and advice
- contraception.

Referral (prn):

- Child Health Centre
- lactation consultant Mater Breastfeeding Support Centre Telephone: Phone: 07 3163 2229 or Email: parentsupportcentre@mater.org.au
- Australian Breastfeeding Association
- social worker.

**Baby**

Review by GP between five and ten days if baby discharged from hospital < 72 hours of age (Queensland Health, Personal Health Record book):

- age, weight, head circumference
- feeding
- examination: signs of jaundice; fontanelle/sutures; eyes and red reflexes; face/palate/ears; limbs; spine; genitalia; anus; meconium within 24 hours; urine output, abdomen and umbilicus; respiratory; cardiac (auscultation and femoral pulses); hips; neurological/reflexes
- health promotion safe sleeping, SIDS prevention, benefits of breastfeeding, vaccinations, role of child health nurse.

Referral (prn):

- child health clinic
- paediatrician.

**Postnatal GP appointment at 6 weeks**

**Mother**

Assess wellbeing, social risk factors, and level of support. Apply Edinburgh Postnatal Depression Scale. Examination:

- BP
- breasts, nipples
- abdomen—palpate uterus unless LSCS, check wound if LSCS, refer to physio if abdominal diastasis
- examine perineum if tear or episiotomy. Pap smear if due; ask re urinary or faecal incontinence
- family planning /intercourse.

Follow-up for mother e.g. gestational diabetes, hypertension.

Discuss: bowel habits, vaccinations, SIDS awareness.

**Baby**

As for initial visit and including the following:

Examination:

- weight, length, head circumference—plot on growth charts
- vision profile—eyes tracking (red light reflex)
- facial symmetry—smiling
- hearing profile
- cardiovascular
- femoral pulses
- hip testing
- genitalia—testes fully descended?
- development.
17. Further information for GPs

17.1 Infections

Pregnancy may be complicated by any of the common infections. There are however infections which can impact adversely on fetal wellbeing. Discussion with a consultant obstetrician is required where these infections are suspected or there is a history of exposure. Obstetric Consultant: 07 3163 6609 Obstetric Registrar: 07 3163 6611

- Coxsackie virus (hand, foot and mouth disease)
  - In adults, most diseases caused by coxsackie B viruses are mild. However coxsackie B viruses may cause an inflammation in the fetal heart or lungs and increase the chance of spontaneous miscarriage, infection in the fetus or stillbirth. Referral for discussion of confirmed infection during pregnancy is appropriate.

- Cytomegalovirus
  - Primary infection and reactivation in pregnancy can both result in congenital CMV. Up to 20% of infants born to mothers who have primary infection in pregnancy will be symptomatic with mortality in this group of 9% and severe neurological sequelae in 80%.

- Epstein-Barr virus (Glandular Fever)—Primary EBV infection during pregnancy is rare. Only 3–3.4% of pregnant women are susceptible (Arvin and Maldonado 2001)
  - Only 50% of pregnant women infected will develop clinical infectious mononucleosis.
  - The low frequency of maternal EBV in pregnancy makes it difficult to assess the risk to the fetus.
  - Early studies have reported that infants occasionally suffer damage due to maternal primary EBV infection just before conception or during pregnancy.
  - In other studies, EBV infection was not transmitted to the fetus and there were no adverse effects.
  - The risk of intrauterine transmission of EBV infection is considered to be low, even when the mother is symptomatic clinically (Fleisher and Bolognese 1984; Sumaya 1998; Arvin and Maldonado 2001).

- Genital herpes simplex (HSV)
  - 50% risk of transmission if primary infection with active lesions at time of vaginal birth. 3% risk of transmission if recurrent infection with active lesions at time of vaginal birth
  - If primary infection in second half third trimester refer for advice about delivery. Prophylactic valacyclovir offered to reduce incidence of recurrence to facilitate decisions around vaginal delivery.

- Hepatitis B
  - Infection rate 90% and infection occurs typically at time of birth.
  - Neonatal vaccination protects 95% of at risk newborns. HBIG and HB vaccine for the baby at birth.
  - Presence of HBeAg confers high risk fetal transmission.

- Hepatitis C
  - Obstetrician will refer to specialist clinic.
  - Order hepatitis C RNA, LFTs, and screen for STIs
  - Avoid invasive tests (has implications for discussion around Nuchal Screening).
  - Vaginal birth and breastfeeding are not discouraged.
  - Baby is screened at 18 months for HCV antibody.

- HIV/Aids
  - Risk of transmission during pregnancy and postnatal period 25%. This can be reduced to close to 1% with antiretrovirals and elective caesarean section for birth. More recent data suggests, for women with a nondetectable viral load, a vaginal birth may not confer any increased risk.
  - Screening for other STIs is important.
  - Avoid invasive tests (has implications for discussion around Nuchal Screening).
  - Refer to antenatal clinic. MMH obstetrician will refer to Infectious Diseases consultant.
  - Breastfeeding confers a risk of transmission and is not advised in Australia.
• Parvovirus (slapped cheek syndrome)
  – Up to 50% pregnant women have pre-existing IgG and therefore are not considered at risk of infection.
  – B19 infection in pregnancy is associated with fetal loss and hydrops fetalis.
  – Fetal hydrops is amenable to treatment with intrauterine transfusion after 20 weeks.
  – Check for maternal IGM and IGG. If IgG positive and IgM negative reassure and referral not required.
  – If IgG negative or IgM positive refer to consultant obstetrician.

• Rubella infection
  – German measles outbreaks are rare secondary to effective immunisation campaign in Australia.
  – Heterogenous spread fetal infection rates are 80% first trimester, 25% second trimester, 35% early third trimester and 100% of fetuses exposed after 36 weeks.
  – Risk of congenital rubella is limited to the first 16 weeks of pregnancy. May result in sensorineural deafness, ophthalmic abnormalities, cardiac malformation and neurological sequelae.
  – Infection later in pregnancy is associated with intrauterine growth restriction.
  – Diagnosis is by four fold rise in IgG or the presence of IgM or positive rubella culture.

• Syphilis (Treponema Pallidum)
  – Perinatal transmission rate is 50% in primary or secondary syphilis. Reduced risk if latent or tertiary disease.
  – Risk of fetal anomaly, growth restriction, congenital infection, prematurity, stillbirth, neonatal death.
  – Adequate treatment of mother in pregnancy can reduce fetal infection rate from 70 to 100% down to 1%.
  – High risk women should be rescreened at 26 – 28 weeks, 34 weeks and post birth.

• Toxoplasmosis
  – Mononucleosis like illness.
  – Infection confirmed if demonstrate seroconversion IgG or IgM negative to positive.
  – Avidity testing helps interpret results as IgM can remain positive for up to 13 months.
  – Risk of fetal transmission increases with increasing gestational age (15% first trimester, 44% second trimester, 71% third trimester).
  – Amniocentesis with PCR for T. gondii is undertaken to diagnose fetal infection and enable optimal medical treatment or discussion about pregnancy continuance.

• Varicella-zoster (chicken pox)
  – Risk of maternal compromise e.g. pneumonia. Give Acyclovir if seen within 24 hours of symptoms.
  – Risk for the fetus is before 20 weeks (2% risk of Varicella Zoster syndrome) and five or less days before birth as baby can develop infection without maternal antibodies.
  – Refer any woman with varicella in pregnancy, but liaise by phone to reduce risk to other pregnant women.

17.2 Edinburgh Postnatal Depression Scale (EPDS)

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.

How are you feeling?
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 all

In the past seven days

1. 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

2. 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

3. I have blamed myself unnecessarily when things went wrong *
Yes most of the time
Yes, some of the time
Not very often
No, never

4. I have felt worried and anxious for no good reason:
No, not at all
Hardly ever
Yes sometimes
Yes, very often

5. I have felt scared or panicky for no good reason *
Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

6. 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

---

7. 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

8. I have felt sad or miserable *
   Yes, most of the time
   Yes, quite often
   Not very often
   No, not at all

9. I have been so unhappy that I have been crying *
   Yes, most of the time
   Yes quite often
   Only occasionally
   No, never

10. 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.

If referral required see page 21.
17.3 Gestational Diabetes screening and diagnosis

17.3.1 Key recommendations

As of January 1, 2015 the diagnosis of GDM is to be based on an oral glucose tolerance test (75 g carbohydrate load) or first trimester Hb A1c. There has also been a change to the threshold for diagnosis of GDM. This is in line with recommendations from the International Association Diabetes in Pregnancy Study Group (IADSPG) and the World Health Organisation (WHO) and is endorsed by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG).

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Diagnostic testing | • Diagnosis of GDM is based solely upon an oral glucose tolerance test (75 g carbohydrate load) or first trimester Hb A1c.  
  • The two step Glucose Challenge Test (GCT) followed by an Oral Glucose Tolerance Test (OGTT) will no longer be performed  
  • The GCT will not be available for GDM diagnosis (do not order this test) |
| All women | • Require a two hour OGTT (after overnight fasting)  
  • Should maintain a normal diet until 10 hours before the OGTT and then FAST  
  • During fasting, advise the woman to drink water to prevent dehydration and to continue any usual medications  
  • The three day high carbohydrate diet is no longer required |
| High risk women | • Request early OGTT/HbA1c (first trimester only) for women at high risk of diabetes as per the Qld Clinical Guidelines for screening and diagnosis of gestational diabetes.  
  • If normal, repeat at 26-28 weeks |
| Women having maternal steroids | • Do not perform an OGTT within one week of maternal steroids (betamethasone/dexamethasone).  
  • Monitor blood glucose levels if the woman is receiving steroids |
| Diagnostic threshold for GDM | • Diagnosis of GDM is based on:  
  c. Fasting glucose of greater than or equal to 5.1 mmol/L and/or  
  d. 1-hour glucose greater than or equal to 10.0 mmol/L and/or  
  e. 2-hour glucose greater than or equal to 8.5 mmol/L, Or HbA1c > 5.9% (first trimester only)  
  • If a fasting glucose test has been performed for other reasons and shows an elevated value, this may be accepted as diagnostic of GDM |
| Diabetes in pregnancy | • Women with first trimester Hb A1c of > 6.4 % or markedly elevated OGTT values may be classified as having Diabetes in Pregnancy  
  a. Fasting glucose greater than or equal to 7.0 mmol/L and/or  
  b. 2-hour glucose greater than or equal to 11.1 mmol/L  
  • Women with diabetes in pregnancy:  
    a. Require urgent care  
    b. May have undiagnosed “overt” diabetes and associated complications such as retinopathy and nephropathy  
    c. Are at higher risk of pregnancy complications  
    d. Manage in a centre/clinic with experience in the management of pre-existing diabetes in pregnancy  
    e. May require confirmation of diagnosis in the postpartum period |

17.3.2 Flowchart for Gestational Diabetes Mellitus

**Risk factors for GDM**
- BMI > 30 kg/m² (pre-pregnancy or on entry to care)
- Ethnicity (Asian, Indian subcontinent, Aboriginal, Torres Strait Islander, Pacific Islander, Maori, Middle Eastern, non-white African)
- Previous GDM
- Previous elevated BGL
- Maternal age ≥ 40 years
- Family history DM (1st degree relative or sister with GDM)
- Previous macrosomia (birth weight > 4500 g or > 90th percentile)
- Previous perinatal loss
- Polycystic Ovarian Syndrome
- Medications (corticosteroids, antipsychotics)
- Multiple pregnancy

**GDM diagnosis**
OGTT (preferred test for diagnosis)
One or more of:
- Fasting ≥ 5.1 mmol/L
- 1 hour ≥ 10 mmol/L
- 2 hour ≥ 8.6 mmol/L

HbA1c (if OGTT not suitable)
- 1st trimester only
- Result ≥ 41 mmol/mol (or 5.9%)

OGTT advice for women:
- Fast (except for water) for 8-14 hours prior to OGTT
- Take usual medications

**Assess all women for risk factors**

- **Risk factors?**
  - **No**
    - First trimester 2 hour 75 g OGTT (or HbA1c)
  - **Yes**

- **First trimester 2 hour 75 g OGTT (or HbA1c)**
  - **No**
    - OGTT (or HbA1c) abnormal?
  - **Yes**
    - GDM care
  - **No**
    - OGTT normal?
      - **No**
        - GDM care
      - **Yes**
        - Routine antenatal care

---

Queensland Clinical Guideline: Gestational diabetes mellitus. Guideline No: MN15.33-V1.2-20
### 17.4 Pregnancy Management Plan BMI > 35

<table>
<thead>
<tr>
<th>BMI 35–39</th>
<th>BMI 40–44</th>
<th>BMI ≥ 45</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preconception</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage weight loss</td>
<td>Consider referral to a dietitian</td>
<td></td>
</tr>
<tr>
<td>Recommend screening for glucose intolerance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inform women of the health risks of obesity in pregnancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 mg Folate daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>History and booking at 14 weeks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietician referral and weight tracker</td>
<td>Routine booking bloods plus LFTs, HBA1c (first trimester) or OGTT, urine protein/creatinine ratio</td>
<td>Commence customised growth centiles chart (when available)</td>
</tr>
<tr>
<td>Routine model of care with shared GP or midwifery model</td>
<td>Modified care including Cons/Registrar visits K36 K41</td>
<td>Modified care including Cons/Registrar visits K24 K30 K36 K41</td>
</tr>
<tr>
<td><strong>Second trimester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider low dose aspirin if additional risk factors for pre-eclampsia</td>
<td>Consider LMWH if additional risk factors for DVT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repeat 75 g OGTT if previous testing negative</td>
<td></td>
</tr>
<tr>
<td><strong>Third trimester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional scan for growth in third trimester if unable to assess clinically</td>
<td>Scan growth at 28 and 34 weeks</td>
<td>Consider notification of wards and theatre of the need for bariatric equipment if required for patients perinatal care</td>
</tr>
<tr>
<td><strong>Intra-partum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify anaesthetic and obstetric medical staff of patient’s admission</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post-partum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider LMWH if operative birth or mobility compromised by BMI and TEDS</td>
<td>Dietician referral</td>
<td>OGGT 6 weeks postpartum if GDM</td>
</tr>
</tbody>
</table>
17.5 Breastfeeding

Breastfeeding is the normal method of feeding infants and positively influences both their immediate and long-term health.

**GPs have a very important role in encouraging and supporting women to breastfeed.**

- The initial antenatal interview between a woman and her doctor or midwife should include a careful assessment of the woman’s (and her partner’s) attitudes, beliefs, expectations, knowledge and experience in relation to infant feeding.
- Women are more likely to breastfeed if: they are committed to breastfeeding prior to birth, their husband/partner and mother supports breastfeeding, they attend antenatal classes, and if they have access to support in the postnatal period.

**Recommendations for breastfeeding**

- Exclusive breastfeeding for the first six months. The infant receives only breast milk by mouth, no other liquid or solids, with the exception of medication for the first six months of life.
- Continued breastfeeding until 12 months of age, with introduction of solids around 6 months of age.
- Breastfeeding continued beyond 12 months as desired by mother and child.

**Benefits of breastfeeding**

**Mother**

- Accelerated weight loss and return to pre-pregnancy body weight
- Protection against premenopausal breast cancer, and ovarian cancer.
- Promotes a loving bond between mother and baby.
- Convenient and inexpensive.
- Prolonged period of postpartum infertility.

**Infant**

- Increased protection against bacteraemia, meningitis, urinary tract infection, otitis-media, and SIDS.
- Possible reduced risk of developing obesity, coronary vascular disease, cancer, type two diabetes, asthma and delayed onset of coeliac disease.
- Reduced incidence and duration of diarrhoeal illnesses.
- Improved cognitive development.
- Reduced malocclusion due to better jaw shape and development.

**GPs have a very important role in supporting women to overcome any breastfeeding problems.**

- Some women cease breastfeeding too early because they encounter problems, do not have support, or mistakenly feel they do not have an adequate supply of breast milk.
- Timely support and management is the key to overcoming these problems to ensure continued breastfeeding.
- Refer to services providing breastfeeding support (see end of section).

**Common problems with breastfeeding and where to go for help:**

- Is my baby getting enough milk?
- Is my baby feeding enough? Too frequently?
- Breastfeeding is painful—sore or cracked nipples.
- Engorgement or mastitis.
- Oral infant pathology i.e. tongue tie.
- Flat or inverted nipples.
- My baby is unsettled, particularly in the early evening. Does my baby have colic?

**Australian Breastfeeding Association: 1800 686 2686**

**Mater Breastfeeding Support Service** is a specialist service within the Mater Mothers’ Parenting Support Centre staffed by lactation consultants experienced in the care of newborn, preterm and special needs babies up to the age of 6 months. Phone: 07 3163 2229 or Email: parentsupportcentre@mater.org.au

17.6 Smoking during pregnancy

- Effective smoking cessation intervention should be offered to pregnant smokers at the first antenatal visit and throughout pregnancy and postpartum.
- Extended psychosocial interventions that exceed minimal advice to quit should be made available for pregnant women.
- Consider lowest dose intermittent nicotine replacement therapy after the first trimester using a risk/benefit approach.

Pregnant and lactating women

- Cigarette smoking by pregnant women causes adverse fetal outcomes including stillbirth, spontaneous abortion, reduced fetal growth, premature rupture of membranes, preterm birth, low birth weight, placental abruption, sudden infant death, cleft palate, cleft lip and childhood cancers.
- Maternal smoking increases the risk of poor health outcomes in infants and children including sudden infant death syndrome, respiratory infections, asthma, and middle ear disease.
- Although abstinence early in pregnancy will produce the greatest benefits to the mother and fetus, smoking cessation at any point during the pregnancy will be beneficial.
- The health benefits of breastfeeding whilst smoking outweigh the risk of formula feeding in a smoking household. Mothers who smoke whilst breastfeeding should be encouraged and supported to stop smoking; and concurrently educated about the benefits of continuing to breastfeed their babies.

Smoke Free Pregnancy Project
Call the Quitline on 13 78 48 for help

17.7 Resources for GPs

See Shared Care Alignment on the Mater website www.materonline.org.au for:

Alignment and Realignment options
www.materonline.org.au/alignment

Antenatal appointment schedule
http://www.materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Antenatal referral form

Guidelines for Consultation and Referral
http://www.materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Pregnancy Health Record
www.materonline.org.au/pregnancy-health-record

Pregnancy Health record additional pages
www.materonline.org.au/pregnancy-health-record

Shared care guidelines
http://www.materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Mater Doctor Portal

Mater Shared Electronic Health Record
www.mater.org.au/mater-shared-ehr

Therapeutic Advice & Information Service
www.nps.org.au
18. Additional information for women


Information On Having Your Baby At The Mater Mothers: brochures.mater.org.au/having-your-baby-at-mmh

Child Health Line/Parent Line Queensland (QLD): Telephone Information Support Service
Telephone: 07 3862 2333 (Brisbane metro area) or 1800 177 279


13HEALTH—Queensland Health help-line: Telephone: 13 43 25 84

Medicines Line Medicines information line for consumers. Telephone: 1300 888 763


Mater Patient Portal: patientportal.mater.org.au
19. Mater Mothers’ Hospital antenatal shared care process flowchart

Pre-Conception Unique role for GPs!
- Folate and iodine supplementation
- Rubella serology +/- vaccination
- Varicella serology if no history +/- vaccination
- Cervical cytology if due
- Smoking cessation
- Alcohol cessation
- Consider preconception clinic MMH if medical conditions

First GP Visit(s) (May take more than one consultation)
- Confirm pregnancy and dates
- Scan if uncertain dates or risk of ectopic (previous ectopic, tubal surgery)
- Folate and iodine supplementation for all
- Review medical/surgical/pysch/family history, medications, allergies etc. – update GP records
- Identify risk factors for pregnancy
- Discuss aneuploidy screening vs diagnostic testing
- Discuss diet and drug avoidance – Listeria, alcohol, cigarettes etc.
- Complete Mater referral
- Indicate if you wish to share care and confirm you are aligned

First Trimester Screening Tests (cc to MMH ANC on pathology and radiology request form please)
- FBE, blood group & antibodies, rubella, Hep B, Hep C, HIV, syphilis serology, MSU (treat asymptomatic bacteriuria) Pap smear if due
- Discuss and offer aneuploidy screening:
  1. Nuchal translucency scan = first trimester screen (free hCG, PAPP-A) K11-13” or
  2. Triple test (AFP, Oesriol, hCG) K15-18 if desired or if presents too late for first trimester testing. (Not if twins or diabetic)
  3. Non-invasive Prenatal Testing > K9 (Not if multiple pregnancy, not Medicare funded, first trimester scan still recommended)
- Varicella serology (if no history of varicella or vaccination)
- OGTT (or HbA1c if GGT not tolerated) if high risk for Diabetes
- ELFT, TFTs, Vit D for specific indications only

High Risk for Diabetes in Pregnancy?
- Previous GDM or baby > 4500g, polycystic ovarian syndrome, strong family history, glycosuria, BMI > 35, maternal age ≥ 40, ethnicity
- OGTT by 12 weeks (or HbA1c if OGTT not tolerated) Urgent Hospital ANC referral if abnormal (Feeding <5.1 mmol/l or 1-hr <10 mmol/l or 2-hr ≥ 8.5 mmol/l)
- If positive, refer promptly, specify the reason and include the results Fax 3163 8953

Medical Disease or Obstetric Complications? EARLY/URGENT Hospital ANC referral:
- GP referral letters are triaged by consultant within the same week
- Please specify urgency and reasons in the referral letter and fax in 3163 8953
- Be sure to cc MMH ANC on pathology and radiology

Rh Negative Mothers
- If antibody negative, offer 625 IU anti-D at 28 and 34 weeks

For Urgent Referral or Advice Contact Mater Mothers’ Hospital:
- GP Liaison Midwife: 3163 1601
- O & G Registrar on call: 3163 6611
- MMH Consultant on call: 3163 6609

Early Pregnancy Assessment Unit (EPAU)
- For cases of early pregnancy (< 20 weeks) complications e.g. bleeding, pain, threatened or incomplete miscarriages: 3163 5132
- By appointment only, Mon – Fri 8:30 -12:30
- Haemodynamically unstable women should be directed to MAH ED: 3163 8465

Pregnancy Assessment and Observation Unit (PAOU)
- For urgent obstetric related care ≥20 weeks: 3163 8577 open 24/7, please call first

Uncomplicated Pregnancy
- Send referral to Mater ANC fax 3163 8953
- Refer privately for detailed scan (dating, morphology) to be done at 18-20 weeks
- Arrange to see patient after morphology scan
- First MMH ANC visit with midwives and obstetric doctor K18-20
- You will be responsible for care until she is seen by a doctor in the hospital

GP Visits: 14, 24, 28, 31, 34, 38, 40 weeks (more frequently if clinically indicated)
- Record in Pregnancy Health Record (blue folder)
- GTT, FBC, blood group / antibody screen at K26-28, if Rh Neg, 625 IU anti-D offered
- K34, if Rh Neg, 625 IU anti-D offered
- K30, FBC
- Be sure to cc MMH ANC on pathology and radiology

For more information, resources & education: www.materonline.org.au (Click on Shared Care Alignment) May 2016

Mater Mothers’ Hospital visit: 36 weeks (more frequently if clinically indicated)
Women who have not given birth by 41 weeks will receive a phone call from a midwife to discuss the implications of prolonged pregnancy, book an induction of labour and offer a membrane sweep. If an interpreter is required or the woman has had a previous LSCS, she will be offered a 41-week antenatal clinic appointment
20. Mater Mothers’ Hospital shared care alignment and re-alignment options

First alignment: Required for MMH shared care

- **Alignment option A**
  - MMH alignment one
  - 6 hour / 40 CAT 1

- **Alignment option B**
  - Affiliated alignment
  - Redland, Logan, Beaudesert, RBWH, Caboolture, Redcliffe, Ipswich, Nambour and Emerald Hospitals
  - 6 hour / 40 CAT 1

  AND

  MMH online bridging 30 mins

- **Alignment option C**
  - Other path
  - DRAZCOG
  - RANZCOG Certificate in Women’s Health or RACGP Women’s Health ALM within last three years

  AND

  MMH online bridging 30 mins

Subsequent requirements: Re-alignment required once each triennium for MMH

- **Re-alignment option A**
  - MMH Path
  - MMH alignment two
  - 6 hour / 40 CAT 1
  - *Can undertake before required

  OR

  MMH online re-alignment
  - 2 hours / 4 CAT 2

  OR

  Repeat MMH alignment one
  - 6 hour / 40 CAT 1

- **Re-alignment option B**
  - Affiliated path
  - Redland, Logan, Beaudesert, RBWH, Caboolture, Redcliffe, Ipswich, Nambour and Emerald Hospitals
  - 6 hour / 40 CAT 1

  AND

  MMH online bridging 30 mins

- **Re-alignment option C**
  - Other Path
  - Attend three relevant 2 hour antenatal or postnatal/neonatal CPD events
  - CAT 2

  OR

  DRAZCOG
  - RANZCOG Certificate in Women’s Health or RACGP Women’s Health ALM within last three years

  AND

  MMH online bridging 30 mins
## 21. Pregnancy checklist

<table>
<thead>
<tr>
<th>Pregnancy Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decide on where and how you wish to have your child—do you wish to be looked after privately or a publicly? Do you wish to have midwifery, general practitioner (GP) or obstetric care?</td>
</tr>
<tr>
<td>Screening for depression during and after pregnancy is recommended for all women. Depression is a common, significant complication both during pregnancy and after baby is born.</td>
</tr>
<tr>
<td>When was your last Pap Smear—it should be up to date.</td>
</tr>
<tr>
<td>The following tests are recommended: Full Blood Count (for anaemia); Blood Group and antibodies; Rubella immunity, Hepatitis B, Hepatitis C, HIV and Syphilis serology and a urine test for kidney disease and infections. If you have a high risk of diabetes, you are advised to have a first trimester glucose tolerance test or HbA1c.</td>
</tr>
<tr>
<td>Chicken Pox, thyroid, chlamydia, iron stores or vitamin D levels may need to be checked, depending upon your history.</td>
</tr>
<tr>
<td>Supplements of folic acid and iodine are recommended.</td>
</tr>
<tr>
<td>Reliable information on safe use of drugs and alcohol, diet, exercise and lifestyle activities in pregnancy can be found on the following websites: <a href="http://www.matermothers.org.aujourney">www.matermothers.org.aujourney</a> <a href="http://www.thewomens.org.au">www.thewomens.org.au</a> health-information/pregnancy-and-birth and <a href="http://healthinsite.gov.au">http://healthinsite.gov.au</a> (follow the links to pregnancy and parenting) which has a useful link to Listeria information as well as a multitude of other useful articles/Information.</td>
</tr>
<tr>
<td>Smoking during pregnancy is associated with significant health problems and if you are a smoker, we would like to work with you to help you to stop during this pregnancy.</td>
</tr>
<tr>
<td>It is recommended that alcohol be stopped as it is known to cause problems for your baby. If you are having difficulty stopping, we would like to advise you to help you to stop drinking alcohol.</td>
</tr>
<tr>
<td>It is recommended that you have a free* influenza vaccine from your GP when they are available, regardless of your stage in pregnancy.</td>
</tr>
<tr>
<td>There is a blood test (b HCG and PAPP-A) and an ultrasound test (the Nuchal translucency scan) that can be done between 11 and 13 weeks of pregnancy. This test assists to determine your risk of having a child with conditions including Down’s Syndrome, as well as dating the pregnancy and providing other useful information. There is also a newer blood test, the nPT, which gives information about a limited range of chromosomal abnormalities, including Down’s Syndrome. It does not have any Medicare funding and costs ~ $500. This should be discussed further and these or other tests may be recommended.</td>
</tr>
<tr>
<td>An ultrasound test, the morphology scan, is recommended and usually done between 18 and 20 weeks of pregnancy to check on well being, size and development of the baby.</td>
</tr>
<tr>
<td>It is recommended that you have a visit with your GP, midwife or obstetrician to follow up the results of any blood test, ultrasound scan or the nPT as soon as practical after the test. Don’t just assume everything is OK if you have not been contacted.</td>
</tr>
<tr>
<td>If you have a Rhesus negative blood group, it is recommended that you have an injection, commonly called AntiD, if you have vaginal bleeding during pregnancy and routinely at 28 and 34 weeks. If you have any vaginal bleeding, you must let us know as soon as possible and you may need to have an injection within 72 hours of the bleeding commencing. This significantly reduces the risk of you developing antibodies which could harm your baby.</td>
</tr>
<tr>
<td>At 26-28 weeks of pregnancy there are four recommended blood tests: a repeat test for anaemia and blood group antibodies, a glucose tolerance test, unless it is already known that you have diabetes and a repeat syphilis test, if you are at high risk.</td>
</tr>
<tr>
<td>It is recommended that you have a free* whooping cough booster from your GP from 28 weeks gestation in each and every pregnancy, even if the pregnancies are less than two years apart.</td>
</tr>
<tr>
<td>Visits are generally done as per the following schedule—every four weeks from week 12 until 28 weeks, every three weeks until 34 weeks and every two weeks until 40 weeks, with follow up at 41 weeks if you have not yet had your baby. If you have special needs or other health concerns, you may be asked to come in more often or you can choose to be seen more often.</td>
</tr>
<tr>
<td>If you choose to have Shared Antenatal Care with your GP, you will usually be seen at the hospital for a booking in appointment at 16-20 weeks (earlier if you are at higher risk) and 36 weeks.</td>
</tr>
<tr>
<td>A blood test for anaemia is recommended at 36 weeks of pregnancy.</td>
</tr>
</tbody>
</table>

*There may be a fee to see your GP*
22. Contact list

Mater Mothers’ Hospital

Aboriginal and Torres Strait Islander Liaison Service
Telephone: 07 3163 1528 or 07 3163 1853 or 07 3163 8111
Pager: 4845 or 0918

Breastfeeding Support service
Telephone: 07 3163 2229
Email: parentsupportcentre@mater.org.au

CHAMP (recent or current drug/alcohol use)
Telephone: 07 3163 2417
Mobile: 0434 189 444 (in hours only)

CNC Diabetes—contact ANC
Telephone: 07 3163 1988
Fax: 07 3163 8053

Dietician
Telephone: 07 3163 6000
Fax: 07 3163 1671

Early Pregnancy Assessment Unit (EPAU) nurse co-ordinator
Management of non urgent miscarriage or ectopic < K20 Monday to Friday morning appointment required.
Telephone: 07 3163 5132
Fax: 07 3163 6120

Fertility Services at Mater
Telephone: 07 3163 8437
Fax: 07 3163 6000

GP Liaison Midwife
Telephone: 07 3163 1861
Email: GPL@mater.org.au
Mobile: 0466 205 710
Antenatal Clinic Team Leader: 07 3163 8611

Health & Wellness Clinic
Private Allied Health
Telephone: 07 3163 6000
Fax: 07 3010 5745

Mater Adults Hospital Emergency Department
Urgent miscarriage, ectopic, hyperemesis < K20
Telephone: 07 3163 8434
Fax: 07 3163 1661

MMH Antenatal Clinic
Staff access telephone: 07 3163 8611
Fax: 07 3163 8053
Appointments phone: 07 3163 8330

Mater Centre for Maternal Fetal Medicine (MFM)
Staff access telephone: 07 3163 1899
Fax: 07 3163 1890
Appointments phone: 07 3163 1896
Tertiary ultrasound referrals. For genetic counselling refer to Genetic Health Qld

Mater Doctor Portal and Mater Shared Electronic Health Record
Telephone: 1800 228 470
Email: MaterSharedEHR@mater.org.au

Parent Support Centre
Telephone: 07 3163 2229
Email: parentsupportcentre@mater.org.au

Perinatal bereavement and support
Telephone: 07 3163 3467
Fax: 07 3163 2137
Mobile: 0414 828 724

Physiotherapy Department
Telephone: 07 3163 6000
Fax: 07 3163 1509

Preconception Care Clinic
Telephone: 07 3163 8611
Fax: 07 3163 8053

Pregnancy Assessment & Observation Unit (PAOU) > K20
Telephone: Team Leader: 07 3163 6577
PAOU Registrar: 07 3163 6610
患者: 07 3163 7000
Consultant: 07 3163 6009

Refugee Maternity Service
Telephone: 0434 189 102
Fax: 07 3163 8053
How can we help you?
We offer a range of comprehensive testing for expectant mothers including, but not limited to, NIPT, Bile Acids, Placental Growth Factor, FISH testing, Karyotyping and Microarrays.

*Mater Pathology supports expectant mothers at every stage.*

What makes us different?
As Mater Mothers’ Hospital is a tertiary referral centre for mothers and babies, we are vastly experienced in perinatal pathology. This is due to the high volume and complexity of work received at the Mater campus.

*We have provided Brisbane with great healthcare for over 95 years.*

Want to get in touch?
Please contact Mater Pathology for more information or to request an information pack. Lab tours and meetings can also be arranged. See contact details below.

*Our laboratory at Mater Hospital Brisbane is available 24 hours, 7 days a week.*

Want to know more?
Visit pathology.mater.org.au, call 07 3163 8500 or email pathology.enquiries@mater.org.au.