GP Maternity Shared Care Guideline

July 2022

mater mothers' hospital

matermothers.org.au

Acknowledgments

Mater Mothers' Hospital (MMH) 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:

- Dr Wendy Burton—GP Advisor, Brisbane South PHN
- Dr Margaret Robin—GP Advisor, Brisbane South PHN
- Dr Caroline Nicholson—Director, Integrated Care and Innovation, Mater
- Associate Professor Michael Beckmann—Medical Director, Mothers, Babies and Women's Health Services, MMH
- Maree Reynolds—Director of Nursing and Midwifery, Mothers, Babies and Women's Health Services, MMH
- Dr Sarah Janssens—Director of Obstetrics and Gynaecology, Mater Mothers' Hospital
- Kay Wilson—Director of Nursing and Midwifery Ambulatory and Birthing Services, Mater Mothers' Hospital
- Jane Pratt—Midwifery Unit Manager, Ambulatory Services
- Dr Glenn Gardener—Director of Maternal Fetal Medicine, Mater Mothers' Hospital
- Dr Treasure McGuire—Assistant Director of Pharmacy Practice and Development, Mater Hospital Springfield
- Professor David McIntyre—Director of Obstetric Medicine, Mater Mothers' Hospital
- Associate Professor Shelley Wilkinson–Principal Research Fellow Nutrition and Dietetics, UQ
- Anne Williamson and Erin Hutley—Clinical Midwives/GP Liaison, Mater Mothers' Hospital
- Dr Huda Safa—Senior Staff Specialist Obstetrics and Gynaecology, Mater Mothers' Hospital.

The MMH/GP Maternity Shared Care Program is managed by:

Department of Obstetrics
Mater Mothers' Hospital
South Brisbane, Qld 4101

Contact:
GP Liaison Midwife, MMH
Telephone: 07 3163 1861 Mobile: 0466 205 710
Email: GPL@mater.org.au
Website: materonline.org.au/sharedcare

We would like to acknowledge the South Australian Divisions of General Practice Inc (SADI) for providing information regarding the SA Statewide model and the use of the 'GP Obstetric Shared Care Protocols: A Statewide Model' (March 2006) document as a template for this publication.

Contents

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 Dr Sarah Janssens, the Director of Obstetrics and Gynaecology 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; antepartum haemorrhage 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 discussed, 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.
    i. **Any investigations requested by shared care GPs for any pregnant woman under their care must be followed up by the GP concerned.**
    ii. 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 the antenatal clinic before 12 weeks and triaged to an antenatal booking appointment at an appropriate time. The antenatal booking appointment at Mater Mothers' Hospital is a combined consultation with a midwife and an obstetrician/obstetric registrar.
    i. 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. All women who have not delivered will have a 40+week appointment at MMH with a midwife, in consultation with an obstetrician, to discuss and plan induction of labour.
    ii. 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 who 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 every three years 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 4, 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, Certificate of Women's Health program (CWH) in the last 3 years and completed the online bridging program, or completed an affiliated alignment program and the online bridging program, or be working as a GP obstetrician.

GPs with additional qualifications should contact mscadmin@mater.org.au and complete the short online bridging course.

To maintain your alignment (See flow chart page 56)

In order to continue to provide maternity shared care with MMH you will need to re-align every three years 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. Online realignment is allowed once every nine years.
3. Attend a maternity alignment seminar with an affiliated provider, complete the MMH online bridging program and complete the questionnaire satisfactorily

*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.

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 who 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 General Practitioners (GPs) providing shared antenatal care with Mater Mothers' Hospital. 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

The guidelines are aligned with both the Australian College of Midwives and RANZCOG guidelines.[3,4] We recognise all providers of maternity care will work collaboratively to facilitate communication, trust and appropriate referral pathways within a woman-centred, shared model of care and recognise the knowledge, skills and experience that each professional group possesses.[2,4,6]

This guideline applies to Mater medical and midwifery staff and GPs caring for pregnant women planning to birth at Mater Health. Private-funded women will have their care directed by their visiting medical officer (VMO) obstetrician.

6.2 Guidelines

6.2.1 Informed choice

a. The guidelines are underpinned by the principle of informed choice.[3,4,5,6]

b. If a woman requests care that is contrary to professional advice or the guidelines, the primary carer (midwife or GP) will direct the request to the consultant obstetrician.

c. Any exchange of information or advice will be clearly documented in the woman's Pregnancy Health Record or electronic health record.

d. Refer to Mater document Non-standard maternity care—consultation, informed choice and documentation. Also Qld Clinical Guideline Partnering with the woman who declines recommended maternity care. August 2020.

6.2.2 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.[2,4]

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.[1,4]

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.[1,4]

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 Mater health record.[4]

e. This discussion will include the need for, and timing of, any further review.[4]

f. The specialist obstetrician/health care professional will not routinely assume responsibility for

ongoing care; they will work collaboratively with the primary carer to safely meet the wishes of the individual woman.

6.2.3 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.
   i. 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.[4]

b. 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*.

c. 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 secure electronic messaging.
   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.[4]
   iii. 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.[4]

d. 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[4]
   iii. areas of discussion and involvement will be agreed upon and clearly documented.[4]

e. 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.

f. 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.

6.2.4 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.[4]

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.[4]

d. Specialist obstetricians/registrars 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.

6.3 Definitions

Term	Definition
A - Discuss	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.
B - Consult	Consult with a Mater Mothers' Hospital (MMH) specialist obstetrician or obstetric registrar.
C - Refer	Transfer responsibility for the woman's care to a MMH specialist obstetrician.

6.4 Medical conditions at commencement of pregnancy

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.4.1	Anaesthetic difficulties	
	Previous failure or complication (e.g. difficult intubation, failed epidural)	B
	Malignant hyperthermia or neuromuscular disease or family history of these conditions	C
6.4.2	Autoimmune disease	
	SLE/connective tissue disorder – Active or major organ involvement or hypertension or on medication or positive Ro/La	C
	SLE/connective tissue disorder – Inactive, no renal involvement, no hypertension, or only skin/joint problems	B
6.4.3	Body mass index (BMI)	
	BMI less than 18 and more than 35	B
	BMI > 40	B/C
6.4.4	Cardiovascular disease	
	Arrhythmia/palpitations; murmurs: recurrent, persistent or associated with other symptoms	B
	Cardiac valve disease	C
	Cardiac valve replacement	C
	Cardiomyopathy	C
	Congenital cardiac disease	C
	Hypertension	B
	Ischemic heart disease	C
	Pulmonary hypertension	C
6.4.5	Drug dependency and prescription medicine	
	Use of alcohol and other drugs	B
	Medicine use: the effect of drugs on the pregnant woman and the unborn child, lactation and/or neonate. (Information available from Mothersafe: 1800 647 848)	B
6.4.6	Endocrine	
	Addison's disease, Cushing's disease or other endocrine disorder requiring treatment	C
	Diabetes mellitus – Gestational diabetes in previous pregnancy	A
	Diabetes mellitus – Pre-existing Type 1 or Type 2 diabetes	C
	Hypothyroidism – stable treated hypothyroidism	B
	Hypothyroidism – new diagnosis	B
	Thyroid disease	B

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.4.7	Gastrointestinal	
	Hepatitis with positive serology (HBsAg+)	B
	Hepatitis C	B
	Inflammatory bowel disease (includes ulcerative colitis and Crohn's disease)	B
	Oesophageal varices	C
6.4.8	Genetic – any condition	B
6.4.9	Haematological	
	Anaemia at commencement of care irrespective of how treated or whether it responds to treatment: Anaemia defined as Hb less than 90 g/L	B
	Coagulation disorders	C
	Decline blood products	B
	Haemoglobinopathies	B/C
	Haemolytic anaemia	B
	Other antibodies detected	B/C
	Rhesus antibodies	C
	Rhesus negative blood group requiring RhD immunoglobulin	A
	Thalassaemia	B/C
	Thrombocytopenia < 150 (x 10 9/L)	B/C
	Previous Thrombo-embolic event and/or the presence of a positive family medical history	B/C
	Thrombophilia including anti-phospholipid syndrome—no previous obstetric complications, maternal thrombosis or MTHFR mutation (heterozygous)	B
	Thrombophilia including anti-phospholipid syndrome—on warfarin, previous obstetric complications or maternal thrombosis, hereditary thrombophilia	C
6.4.10	Infectious diseases	
	Chlamydia	A/B
	Cytomegalovirus	C
	Genital Herpes – primary infection	B
	Genital Herpes – recurrent infection	A/B
	Gonorrhoea	A/B
	History of pre pregnancy Cytomegalovirus, Rubella, Parvovirus, Toxoplasmosis, Varicella, or parasitic infection	A/B
	HIV infection	C
	Human Papilloma Virus (HPV)	A/B
	Listeriosis	B
	Parasitic infection	A/B
	Parvovirus infection	B/C
	Rubella	C
	Previous neonatal GBS	B
	Syphilis – positive serology and treated	B
	Syphilis – positive serology and not treated	B
	Trichomoniasis	A/B
	Toxoplasmosis	B
	Tuberculosis – active	C
	Tuberculosis – past history and treated	B
	Varicella zoster virus infection	B
6.4.11	Maternal age	
	Under 16 and over 40 years	B/C
6.4.12	Neurological	
	AV malformations	C
	Bell's palsy	A/B
	Epilepsy with medication or seizure in last 12 months	C

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
	Epilepsy without medication or in the past without treatment and no seizures in the last 12 months	B
	Multiple sclerosis	B
	Muscular dystrophy or myotonic dystrophy	C
	Myasthenia gravis	C
	Spinal cord lesion (paraplegia or quadriplegia)	C
	Subarachnoid haemorrhage, aneurysms	C
6.4.13	Organ transplant	C
6.4.14	Perinatal mental health problems	
	Care during pregnancy and birth will depend on the severity and extent of the mental health status:	A/B
	EPDS – score more than 12	A/B
	EPDS – positive response to Q10 re self-harm	A/B
	Psychiatric condition requiring medication	A/B
	Puerperal psychosis	B
6.4.15	Renal function disorders	
	Disorder in renal function, with or without dialysis	C
	Glomerulonephritis	C
	Pyelitis	B
	Previous kidney surgery with potential to impair kidney function during pregnancy i.e. removal of kidney etc.	C
	Urinary tract infections (recurrent)	B
6.4.16	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
6.4.17	Skeletal problems	
	These include conditions that may cause severe pain during labour:	
	History of developmental skeletal disorders	B
	Osteogenesis imperfecta	B/C
	Scheuermann's disease	B/C
	Scoliosis (with rods)	B
	Spondylolisthesis	B
6.4.18	System/connective tissue diseases	
	These include rare maternal disorders such as:	
	Anti-phospholipid syndrome (APS)	C
	Marfan's syndrome, Raynaud's disease and other systemic and rare disorders	C
	Polyarteritis nodosa	C
	Scleroderma, rheumatoid arthritis, Sjörgen's syndrome	C
	Systemic lupus erythematosus (SLE)	C
6.4.19	Dermatological disease requiring systemic therapy	B
6.4.20	Malignancy – any history or current	C

6.5 Pre-existing gynaecological disorders

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.5.1	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	A/B
	Cervical surgery without subsequent term vaginal birth	B
6.5.2	Female genital mutilation (FGM)	B
6.5.3	Fibroids	A/B
6.5.4	Infertility treatment	A/B
6.5.5	Intrauterine contraceptive device (IUCD) insitu	B
6.5.6	Pelvic deformities (trauma, symphysis rupture, rachitis)	B
6.5.7	Pelvic floor reconstruction	
	Colpo-suspension following prolapse, fistula and/or previous rupture	B/C
6.5.8	Uterine abnormalities	
	Myomectomy or hysterotomy	C
	Bicornuate uterus, unicornuate uterus or other congenital reproductive tract anomaly (includes vaginal septums)	B

6.6 Previous obstetric history

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.6.1	ABO incompatibility	B/C
6.6.2	Active blood incompatibility	
	Anti-Red Cell antibodies (including but not exclusively Rh, Kell, Duff, Kidd)	C
	Anti-Platelet antibodies (Neonatal alloimmune thrombocytopenia – NAIT)	C
6.6.3	Autoimmune thrombocytopenia	C
6.6.4	Caesarean section	B
6.6.5	Cervical weakness (and/or cervical suturing procedure)	C
6.6.6	Cholestasis	B
6.6.7	Congenital and/or hereditary disorder of a previous child	B
6.6.8	Forceps or vacuum extraction	A
6.6.9	Grand multiparity – defined as parity more than or equal to five	A/B
6.6.10	Hypertension	B
	Eclampsia/Severe preeclampsia (including HELLP)	C
	Gestational hypertension	B
	Pre-eclampsia	B
6.6.11	IUGR less than 10 percentile	B
6.6.12	Macrosomia more than 4.5 kg	B
6.6.13	Neonatal asphyxia (defined as an APGAR score of less than seven at five minutes	B
6.6.14	Perinatal death	B/C
6.6.15	Placental	
	Abruption	B
	Accreta	C
	Manual removal	B
6.6.16	Postpartum depression	A

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.6.17	Postpartum haemorrhage more than 500 ml requiring additional treatment and/or transfusion	B
6.6.18	Preterm birth (less than 35 weeks) in a previous pregnancy	B
6.6.19	Previous mid-trimester loss	B/C
6.6.20	Previous neonatal group B streptococcus (GBS) infection	B
6.6.21	Previous serious psychological disturbance	B
6.6.22	Recurrent miscarriage (three or more during the first trimester)	B
6.6.23	Rhesus isoimmunisation	C
6.6.24	Second trimester miscarriage (category will depend on the nature of the miscarriage)	B/C
6.6.25	Shoulder dystocia	B
6.6.26	Symphysis pubis dysfunction	A
6.6.27	Termination of pregnancy (TOP)	A
6.6.28	Trophoblastic disease: hydatidiform mole or vesicular mole, within last 12 months	C
6.6.29	Third or fourth degree perineal laceration	B
	Functional recovery	B
	Persistent pelvic floor dysfunction – dyspareunia, faecal or urinary incontinence or prolapse	B
6.6.30	Vulval/perineal haematoma requiring surgical treatment	B
6.6.31	Other significant obstetric event	A/B/C

6.7 Other indications from previous obstetric history

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.7.1	Current or previous child protection concerns	A

6.8 Clinical indications developed or discovered during pregnancy

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.8.1	Adoption – intended	A
6.8.2	Cervical weakness (cervical dilation prior to 37 weeks and/or cervical procedure)	C
6.8.3	Cervix cytology abnormalities	B/C
6.8.4	Ectopic pregnancy	C
6.8.5	Endocrine disorders	
	Diabetes mellitus – Gestational diabetes – diet controlled	B/C
	Diabetes mellitus – Gestational diabetes – requiring medication	B/C
	Thyroid disease – Hypothyroidism	B
	Thyroid disease – Hyperthyroidism	B
	Addison's disease, Cushing's disease or other endocrine disorder requiring treatment	C
6.8.6	Fetal anomaly	B/C
6.8.7	Fetal death in utero	C
6.8.8	Fetal size discrepancy	
	Polyhydramnios or oligohydramnios	B/C
	Small for gestational age (SGA) or large for gestational age (LGA) Fundal height variation > 3 cm from weeks of gestation.	B
6.8.9	Fibroids	A/B
6.8.10	Gastrointestinal and Hepatobiliary	

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
	Cholecystitis or biliary colic	C
	Cholestasis	C
	Hepatitis B with positive serology (HBsAg+)	C
	Hepatitis C	B
	Inflammatory bowel disease includes ulcerative colitis and Crohn's disease	B
6.8.11	Haematological	
	Anaemia – Hb less than 90 g/L and not responding to treatment	B
	Blood group incompatibility	C
	Coagulation disorders	B/C
	Mean corpuscular volume (MCV) less than 80	B
	Rhesus negative requiring Rh (D) immunoglobulin (anti-D)	A
	Thrombosis or thrombophilia (other than MTHFR mutation)	C
	Thrombocytopenia less than 150 x 10 9/L	B/C
6.8.12	Hernia nuclei pulposi (slipped disc)	B
6.8.13	High head at term	B
6.8.14	Hyperemesis gravidarum	B
6.8.15	Hypertension	
	Any type with proteinuria > 1+ or > 30 mg/mmol	C
	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.	B/C
	Eclampsia	C
	Gestational hypertension – any hypertension after 20 weeks gestation	B/C
	Pre-eclampsia – BP of more than, or equal to, 140/90 and/or relative rise of more than 30/15 mm/Hg from BP reading at commencement of care	C
	And any of:	
	Proteinuria more than 0.3 g/24 hours; or protein/creatinine ratio more than, or equal to, 30 mg/mmol or 2+ protein on dipstick	C
	Platelets less than 150 x 10 9/L	C
	Abnormal renal or liver function	C
	Imminent eclampsia	C
6.8.16	Infectious diseases	
	Cytomegalovirus	C
	Genital Herpes – late in pregnancy – active lesions	B
	Genital Herpes – primary infection	B
	Genital Herpes – recurrent	A/B
	HIV infection	C
	Parvovirus infection	C
	Listeriosis	B
	Rubella	C
	Sexually transmitted infections including syphilis, gonorrhoea, chlamydia, human papilloma virus	B
	Toxoplasmosis	B
	Tuberculosis – active tuberculous process	C
	Varicella zoster virus infection	B/C
6.8.17	Malpresentation/non-cephalic presentation at term Breech presentation(refer for ECV at 35 weeks)	B
6.8.18	Multiple pregnancy	C
6.8.19	No prior prenatal care (at term)	B

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
6.8.20	Perinatal mental health issues	
	EPDS score more than 12	A
	EPDS positive response to Q10 self-harm	A
	Mental health issue requiring medication	B/C
6.8.21	Placenta indications	
	Placental abruption	C
	Placenta accreta	C
	Placenta praevia confirmed	C
	Vasa praevia	C
6.8.22	Post-term pregnancy (amenorrhoea lasting longer than 42 completed weeks or 294 days)	B
6.8.23	Preterm labour (threatened or actual) and birth	B/C
6.8.24	Preterm rupture of membranes	C
6.8.25	Reduced fetal movement in third trimester	B
6.8.26	Renal function disorders	
	Haematuria or proteinuria (equal to or more than 2+)	B
	Urinary tract infections	A/B
	Pyelitis	C
6.8.27	Respiratory disease	
	Asthma	A/B
6.8.28	Surgery during pregnancy	C
6.8.29	Symphysis pubis dysfunction (pelvic instability)	A/B
6.8.30	Uncertain duration of pregnancy by amenorrhoea greater than 20 weeks	B
6.8.31	Vaginal blood loss	
	Recurring loss prior to 12 weeks	B
	At or after 12 weeks	B

6.9 Other indications during pregnancy

Item	Description	Key: A = Discuss; B = Consult; C = Transfer
5.9.1	Current or previous child protection concerns	A

6.10 References

1. AHPRA, Nursing and Midwifery Board of Australia. (2010) National competency standards for the midwife (2006).
2. AHPRA, Nursing and Midwifery Board of Australia. (2013) Scope of practice for registered nurses and midwives.
3. RANZCOG. (2015) Maternal suitability for models of care, and indications for referral within and between models of care.
4. Australian College of Midwives. (2014) National Midwifery Guidelines for Consultation and Referral 3rd Edition, Issue 2.
5. Australian Health Ministers' Advisory Council. Clinical Practice guidelines: Antenatal Care – Module 1. Australian Government Department of Health and Ageing: Canberra, Australia. (2012).
6. National Health and Medical Research Council. (2010) National Guidance on Collaborative Maternity Care. Canberra: National Health and Medical Research Council

7. Referral to MMH for public care

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, women whose baby will identify as indigenous and some women requiring a specialist drug and alcohol service.

The Mater Mothers' Antenatal referral form has been designed to facilitate access and support quality referral to the service by ensuring all essential information is included. This supports continuity across settings. There are a number of ways you can access the form and refer:

1. **Mater SmartForms:** This platform works seamlessly with GP software and as a cloud based solution that avoids the need for template updates and management. Visit Mater Online, select E-Health → E-Referrals → SmartForm Referrals
2. **RTF Templates:** These templates can be imported to your practice software letter writer. Current versions of the antenatal form are available at Mater Online by choosing Quick Referrals → Refer a public patient → Maternity then select Antenatal Clinic. These completed forms can be sent by:
   i. **Secure electronic messaging:** For more information visit Mater Online → E-Health → E-Referral → Secure Messaging
      - Medical Objects **HM4101000R8**
      - HealthLink EDI: **materref**
   ii. **Fax:** Antenatal Clinic - 07 3163 8053
   iii. **Post:** Mater Mothers' Antenatal Clinic Raymond Terrace, South Brisbane 4101
3. **PDF forms:** If your practice software system does not integrate with the rtf files or SmartForms you can access copies of the referral form from Mater Online or by contacting the GP Liaison Midwife on 3163 1861 or by email gpl@mater.org.au.

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 pathology results should be included in the referral or faxed to antenatal clinic when available.

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 weeks (CRL 10 mm)
- If CRL > 84 mm (13.6 weeks) EBD is based on head circumference (HC).

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

*LNMP must be 'normal' to be considered for calculating the estimated date of birth.

9. Screening for fetal chromosome and genetic conditions

Screening and diagnostic tests for fetal chromosomal abnormality and parental carrier screening for recessive genetic conditions are to be discussed and offered to all pregnant women.

Screening tests	**Appropriate timing—gestational age**
First trimester biochemistry Papp-A (pregnancy associated plasma protein-A) and β-HCG (β-human chorionic gonadotrophin)	10+0 to 13+6 weeks
NT scan	11+3 to 13+6 weeks
Second trimester maternal serum screening (triple test)—β-HCG, AFP, oestradiol	15 to 20 weeks (optimal time 16 weeks)
NIPT	From 10 weeks
Diagnostic tests	**Appropriate timing-gestational age**
Chorionic villus sampling (CVS)	11 to 14 weeks
Amniocentesis	From 16 weeks

Screening tests

Combined First Trimester Screen (CFTS)

CFTS uses maternal serum Papp-A and β-HCG combined with the fetal nuchal translucency (NT) ultrasound to adjust an individual's age-related chance of having a fetus affected by Trisomy 21 (Down syndrome), Trisomy 13 (Patau syndrome) or Trisomy 18 (Edward syndrome). The CFTS is undertaken between 11+3 and 13+6 weeks gestation. The Papp-A and β-HCG blood test can be undertaken from 10 to 13+6 weeks gestation and combined with a NT scan at 11+3 to 13+6 weeks gestation.

When requesting a NT scan, please indicate the pathology provider of the blood test on the scan referral so that a combined result can be calculated on the day of the scan.

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.

Triple Test

The Triple test consists of β-HCG, AFP (alpa fetoprotein) and oestradiol and is available in the second trimester at 15 to 22 weeks gestation. It provides an adjusted chance for having a fetus affected by Trisomy 21, 13 or 18 and also for a neural tube defect.

Non Invasive Prenatal Testing (NIPT)

The NIPT is a screening test for a limited number of chromosomal abnormalities including Down syndrome (Trisomy 21), Edward's syndrome (Trisomy 18) and Patau's syndrome (Trisomy 13). NIPT providers may also offer testing for other chromosomal abnormalities, including (but not limited to) Di George Syndrome (22q11 deletion) and sex chromosome abnormalities. Most NIPT providers offer testing from 10 weeks gestation. NIPT is also available for twin pregnancies. If NIPT is undertaken prior to CFTS, calculation of an individual's chance of Down syndrome is not required at the NT scan and first trimester serum screening is not required. Pathology services offering NIPT also provide genetic counsellors to discuss abnormal results.

Genetic carrier screening gives individuals and couples information about their chance of having a child with a genetic condition. Three common inherited conditions cystic fibrosis (CF), fragile X syndrome (FXS) and spinal muscular atrophy (SMA) can be tested for. Parental carrier testing for rarer recessive genetic

conditions is also available through pathology providers at greater cost. It is important to note that a carrier screening test will not detect every person who is a carrier of these conditions.

See additional information on NIPT at: https://protect-au.mimecast.com/s/HhwWC1WLr4TBAKwPsGo_1T?domain=ranzcog.edu.au

Diagnostic tests

Chorionic Villus Sampling (CVS) and amniocentesis are both diagnostic tests that can confirm whether or not a baby has a chromosome abnormality or a genetic condition such as cystic fibrosis. They involve sampling the placenta (CVS) or amniotic fluid (amniocentesis) and carry a risk of pregnancy loss of between 1 in 500–1000. Recent evidence supports that the procedure related risk of pregnancy loss from chorionic villus sampling and amniocentesis is lower than previously quoted. Women may choose to have a CVS or an amniocentesis if:

- the results from a screening test showed a high chance for a chromosomal abnormality
- they require certainty regarding the diagnosis of a chromosomal abnormality or genetic condition
- an ultrasound during their pregnancy has identified an abnormality in the fetus
- there is a known family history of a genetic disorder.

Chorionicvillus Sampling (CVS)

CVS is performed at 11 to 14 weeks of pregnancy by taking a small sample of placental tissue (chorionic villi).

Risks associated with CVS

- The risk of pregnancy loss due to a transabdominal CVS is between 1 in 500–1000 procedures. The risk of pregnancy loss due to a transcervical CVS is up to one per cent (one in 100 procedures).
- Light bleeding can occur after a CVS but usually settles without further problems.
- In one per cent of cases, a CVS result may be difficult to interpret due to a situation called placental mosaicism. This uncertainty can usually be resolved by performing an amniocentesis.
- In rare cases a result can not be provided from a CVS and amniocentesis may be required.

Amniocentesis

Amniocentesis is best performed from 16 weeks of pregnancy by taking a sample of amniotic fluid. Amniotic fluid contains cells from the fetus. Amniocentesis is performed by inserting a needle through the skin of the mother's abdomen while observing the needle at all times by ultrasound. Approximately 20 ml of amniotic fluid is collected.

Risks associated with amniocentesis

- The risk of pregnancy loss due amniocentesis is 1 in 500–1000 procedures.
- Infection following amniocentesis is very rare and occurs in less than 1 in 1000 procedures performed.
- In rare cases a result can not be provided from amniocentesis and repeat sampling may be required.

Results

A short term chromosome result is usually available after two working days. This result provides information about common chromosomal abnormalities including Down syndrome. A more comprehensive result looks at all the chromosomes and is usually available after two weeks. In rare cases the short term result may differ from the final result and further counselling regarding this discrepancy will be provided. The sex of the baby can be provided by the chromosome result, however this information will only be provided at the woman's request. For all results further counselling is available. It is important to note that not all conditions can be detected by CVS or amniocentesis. A normal result cannot guarantee that a baby will not have any abnormalities.

Information for women is available at :

http://brochures.mater.org.au/brochures/mater-mothers-hospital/testing-for-down-syndrome-and-other-chromosome-abn

http://brochures.mater.org.au/brochures/mater-mothers-hospital/chorionic-villus-sampling-(cvs)-and-amniocentesis

Routine morphology ultrasound screening

All pregnant women should be offered a morphology ultrasound scan, which is best performed at 20–22 weeks gestation. The routine morphology scan is not endorsed as a screening test for Down Syndrome. If testing for Down syndrome is requested by the woman in the second trimester, the options are NIPT or biochemical screening ('triple test') or diagnostic testing by amniocentesis.

Managing abnormal results

All abnormal or high risk prenatal testing results can be managed by referral to the Mater Centre for Maternal Fetal Medicine. materonline.org.au/quick-referrals/refer-an-uninsured- patient /maternity/maternal-fetal-medicine

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, pre-pregnancy and booking weight will be documented at the first antenatal visit and their pre-pregnancy BMI calculated. There is no evidence of effectiveness or need for subsequent recalculation of BMI.
   i. Women will be advised about appropriate gestational weight gain
   ii. Weight will be monitored regularly with appropriate tools to determine women's adherence to weight gain guidelines. Sustained deviation above or below guidelines can then be detected and acted upon.

d. Urine testing:
   i. for proteinuria (dipstick urinalysis) and asymptomatic bacteruria (MSU for microscopy, culture and sensitivity) are recommended at the first antenatal visit regardless of the stage of pregnancy
   ii. If age 30 or < first pass urine for chlamydia screening.[1]

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. Women over the age of 35 years:
   i. Women 38 years, or older, should have their first hospital visit at 13-14 weeks gestation (unless earlier review indicated) or within 2-3 weeks if late referral
   ii. Women aged 35-37 should have their first hospital visit at 16 weeks gestation (unless earlier review indicated) or within 4 weeks if late referral.

Routine antenatal assessment

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

a. Blood pressure (BP).

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 28 weeks.

f. Weigh and document weight; assess against recommended trajectory for pre-pregnancy BMI.

g. Reassess any risk factors.

h. Domestic violence screening. Assess emotional health and wellbeing and safety, including screening for domestic and family violence, at initial visit and all face to face appointments. Ask in a safe environment for disclosure, without the presence of partners, and include relationship changes,threatening or controlling behaviours and emotional, physical or sexual abuse. Provide support service information http://www.dvconnect.org.au or Phone: 1800 811 811 when safe to do so. GP support available at bdvslocallink@micahprojects.org.au or Phone: 07 3013 6035.

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. This will be scanned into the MSEHR at the next hospital 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. Non Mater pathology results and Mater pathology not ordered by a Mater clinician are not automatically reviewed at MMH. Results should be cc'ed to MMH and a printed copy of the result placed in the PHR.

1. https://www.health.gov.au/resources/pregnancy-care-guidelines (2020)

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.

6-12 weeks appointment with GP to confirm pregnancy

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. For the most accurate dating method, a dating scan between 7-8 weeks (CRL>10 mm) is recommended.

d. Discuss options for screening and diagnostic testing for fetal chromosome and genetic conditions with all women. Refer to page 19. Request all appropriate tests after discussion and informed consent and follow up results.

e. Order tests if requested

   i. Combined first trimester screening : PAPP-A and β–HCG biochemistry (9+0–13+6 weeks) and nuchal translucency screen at 11+3–13+6 weeks, or

   ii. NIPT from 10 weeks and anatomy scan at 13 weeks

   iii. Order a dating scan if presents too late for CFTS and requests triple test (15-20 weeks)

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

g. 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[1] (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
      - If age 30 or < first pass urine for chlamydia screening[2]

   viii. If BMI > 30 and or age ≥ 40, hypertension or previous pre-eclampsia request baseline ELFT and urine protein creatinine ratio.

   ix. TSH if age > 30 years or other risk factors.

h. Perform cervical screening, if due.

i. Discuss available models of care.

j. Indicate GP alignment status and woman's preferred model of care on referral (noting that low risk women with an aligned GP are encouraged to accept the GPSC continuity model).

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

l. Advise women at moderate-to high risk of preeclampsia that low dose aspirin from early pregnancy may be of benefit in its prevention.[3] Commence when pregnancy is confirmed (K6 onward).

m. Refer after first appointment or when due date is confirmed using the Mater Mothers Antenatal referral form. Referrals can be sent by secure electronic messaging via Medical Objects and Healthlink, by fax or post. See referral information on page 17.

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

o. Assess emotional health and wellbeing and safety including screening for domestic and family violence. See page 22 routine assessment.

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

a. Women will receive a link by text to an online form to be completed before the first hospital booking appointment. NB. Where women are unable to complete the booking online this will be attended to at the first appointment.

b. At the hospital booking appointment with a midwife and obstetrician, the history will be completed and documented in Matrix. The woman will be given the Pregnancy Health Record and a copy of the history will be posted to the GP. The obstetric consult will be by telehealth if the woman attends a midwifery clinic in the community.

c. Check BP: Record height, weight and BMI

d. The midwife and doctor will identify any risk factors and complete 'Issues and Plans' in Matrix for women requiring additional care.

e. The midwife and doctor will discuss model of

1. Hyperglycaemia in Early Pregnancy. McIntyre et al Diabetes Care October 2015.
2. https://www.health.gov.au/resources/pregnancy-care-guidelines (2020)
3. https://www.health.gov.au/resources/pregnancy-care-guidelines/part-d-clinical-assessments/risk-of-pre-eclampsia 2021

care and appropriate schedule of antenatal visits with the woman. If a planned obstetric review is required during the antenatal period, this will be identified on the schedule of visits. The schedule will be sent to the woman when appointments have been booked.

f. Confirm estimated date of birth (EDB).

g. Perform blood tests (as listed above) and MSU if not already obtained. Review and document available results. Results are to be scanned into the health record. Request that the woman bring copies of any subsequent scans/results to following appointments.

h. Check blood group.

i. Midwife and doctor to review, discuss and document plan for all abnormal results.

j. Dipstick urinalysis to screen for chronic renal disease. Check for blood, protein, nitrites and leucocytes.

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

l. Reinforce public health principles such as diet, exercise, smoking cessation. Ask about domestic abuse,drug and alcohol use and social circumstances. Provide information about safe side sleeping in pregnancy.

m. Perform the Edinburgh Postnatal Depression Scale (EPDS) and refer if required.

n. Provide information about allied health services and refer as appropriate.

o. Discuss parent education and recommend antenatal classes.

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

q. Discuss recommendations for pertussis vaccination from k20 and influenza and COVID vaccinations at any stage of pregancy.

r. Rh (D) negative women:

i. discuss antenatal prophylaxis and inform the woman of the importance of seeking advice following any potentially sensitising events.

ii. ensure that 28 and 34 week Rh (D) appointments are booked.

iii. if GP shared care send letter to GP advising current recommendations for Rh (D) prophylaxis and how to order Anti D.

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

a. Routine antenatal assessment. Refer to page 22.

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 by the GP between 34-36 weeks at a private ultrasound provider. The placental location scan should be requested at Mater MFM only if the placenta is anterior and the woman has had previous uterine surgery and is therefore at increased risk of placenta accreta.

d. Confirm estimated date of birth if required.

e. Offer pertussis vaccination. Recommended from k20.[1]

f. 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

a. Routine antenatal assessment (refer to page 22) and review domestic violence, drug and alcohol use and mental health. Repeat the EPDS to assess women for antenatal depression.[2]

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).

g. Provide request form for 26–28 week blood tests: FBC, OGTT, and blood group and antibody screen (for Rh (D) negative women). Consider repeating syphilis screen at k28.[3] During the COVID pandemic, QCG advised fasting BGL only to minimise the risk of community transmission. Check current recommendation

1. http://vaccinate.initiatives.qld.gov.au/pregnancy/
2. https://www.health.gov.au/resources/pregnancy-care-guidelines/part-e-social-and-emotional-screening
3. https://www.health.qld.gov.au/__data/assets/pdf_file/0035/736883/g-sip.pdf

at: https://www.health.qld.gov.au/qcg/publications

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

28 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment (refer to page 22) and review domestic violence, drug and alcohol use and mental health. Repeat the EPDS to assess women for antenatal depression.[3]

b. Reinforce aspects of health promotion, including pertussis and influenza and COVID vaccinations, and parent education. Provide information about safe side sleeping in pregnancy.

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

d. Review, discuss and document results of gestational diabetes screening (offered to all women at k26-28 excluding women with earlier diagnosis of gestational diabetes) FBC and blood group and antibody screen for Rh (D) negative women. Syphilis screening if at risk.[2] See how to manage abnormal results page 30.

   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. Discuss birth preferences.

i. Consider discharge planning.

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

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

a. Routine antenatal assessment. Refer to page 22.

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. Continue discussion of birth preferences.

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

34 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 22.

b. Order FBC to be taken prior to 36 week appointment. Consider repeat syphilis screening.[2]

c. If a woman is Rh (D) negative, recommend and administer 625 IU R (D) immunoglobulin IM.

d. For women not seen at 32 weeks complete actions b. and d. as per 32 week appointment.

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 preferences.

h. Repeat the Edinburgh Postnatal Depression Scale (EDPS), if applicable, to assess woman for antenatal depression.[3]

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

36 week appointment with midwife or midwife and obstetrician (e.g. if previous caesarian to discuss mode of birth).

a. Routine antenatal assessment (refer to page 22) and review domestic violence, drug and alcohol use and mental health. Repeat the EPDS to assess women for antenatal depression.[3]

b. Identify and document fetal presentation by palpation and portable USS. Clinical midwives who have been appropriately certified may perform presentation USS at 36 weeks gestation to determine fetal presentation as part of standard antenatal care.

c. If breech presentation, provide Mater's brochure Pregnancy—breech presentation at term, accessible via 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 39 weeks for nulliparous women aged 38 or older and at 40+0 weeks gestation for multiparous women aged 40 or older, to reduce the rate of late antenatal stillbirths and the maternal risks of an ongoing pregnancy, such as pre-eclampsia.

3. https://www.health.gov.au/resources/pregnancy-care-guidelines/part-e-social-and-emotional-screening 2020

e. Review or request 36 week Full Blood Count. If Hb < 105 refer to page 34 Management of Anaemia in pregnancy flowchart for further investigations and appropriate treatment.

f. Review or request syphilis screening if repeat required.[1]

g. Check follow-up ultrasound for placental position if low lying placenta at 18–20 weeks.

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 patient information brochure: Perineal Massage brochures.mater.org.au/brochures/mater-mothers-hospital/perineal-massage.

j. Discuss infant feeding and the benefits of breast feeding.

k. Discuss length of hospital stay and postnatal homecare.

l. Ensure awareness of Pregnancy Assessment Centre 24/7 for urgent assessment. See page 28.

m. Ensure copies of all results available in either Verdi or the hospital health record.

n. If elective caesarian section indicated,medical officer will obtain informed consent and book the procedure.

38 week appointment with primary carer (GP or midwife)

a. Routine antenatal assessment. Refer to page 22.

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) for primigravidas or multigravidas with identified risks

a. Routine antenatal assessment. Refer to page 22.

b. Provide additional information as required.

c. Advise woman she will receive notification of a K40+ appointment in antenatal clinic.

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

40+ week appointment with midwife and consultation with obstetrician.

a. Routine antenatal assessment. Refer to page 22.

b. Discuss implications of prolonged pregnancy and induction of labour with all women who have not given birth by 40+5 weeks. Book induction of labour by 40+6. To ensure patient safety and bed availability a limited number of inductions are booked each day. At the 40+week appointment the woman will be advised of the 4 day window within which her induction will occur. This allows induction bookings to be triaged daily and prioritised according to clinical need. If the induction is scheduled the next day, the woman will receive confirmation by phone 24 hours before, and notification by text message if the induction is not scheduled the next day.

1. https://www.health.qld.gov.au/__data/assets/pdf_file/0035/736883/g-sip.pdf

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 28 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

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

BSPHN: https://protect-au.mimecast.com/s/b2dQC3QN2wF9gVYyFDdWr4?domain=bsphn.org.au/

COPE: Centre of Perinatal Excellence supports the emotional wellbeing of parents during pregnancy and the first year. Visit: cope.org.au/

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

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

Families in Mind (FiM): Mater's Perinatal Mental Health Assessment and Support Service for new mothers and families from conception to 12 months post-birth.

A Clinical Nurse Consultant provides:

- Initial mental health assessment
- Information and education regarding mental health concerns e.g. postnatal depression, anxiety, attachment and bonding issues, adjustment issues, coping with stressful situations etc
- Advice on treatment options
- Referral for specialist support e.g. community psychologists, parent aide, parenting programs, mother-baby inpatient programs
- Co-ordinated care with midwifery/obstetrics/GP and other community stakeholders
- Counselling and brief interventions
- Access to psychiatric specialists
- Telephone advice for patients, GPs, and other health care workers

FiM OUTPATIENT CLINIC: FiM also offers a limited number of perinatal outpatient sessions for women living within the Mater catchment who need mental health assessment and treatment.

REFERRAL: Phone: 07 3163 7990 (Monday–Friday 0800-1630), or email: materinmindintake@mater.org.au

Please include: Patient details, contact information, risk assessment, MMH booking status, current medical problems, past psychiatric history, reason for referral (clinical question to be answered), relevant additional information, whether the request is for the patient to be seen antenatally, postnatally, or during their in-patient stay and that the patient is aware and has consented to the referral.

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

Mater brochures: Antidepressant medication during pregnancy and breastfeeding.

brochures.mater.org.au/brochures/mater-mothers-hospital

Mater Mothers' Parenting Support Centre Phone: 07 3163 2229 Email: parentsupportcentre@mater.org.au
By appointment only. 8 am to 4 pm Monday to Friday (excluding public holidays)

Mater Mothers' Parenting Support Centre offers support and guidance for parents of babies up to six months of age who were born at Mater Mothers Hospital, Mater Mothers Private, and Mater Redlands Private. Women may self refer for assistance with breast feeding and other feeding issues, sleep and settling, emotional wellbeing, infant interaction and adjustment to parenting, and psychological support including a postnatal wellness group. There is no cost for Medicare eligible families

MothertoBaby: (medications and more during pregnancy and breastfeeding—American Teratology Specialist advice. Visit: mothertobaby.org/

PANDA: Perinatal Anxiety and Depression Australia. Resources: www.panda.org.au/
Phone support: 1300 726 206

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

Pregnancy Support Counselling: 3 Medicare funded visits. No Mental health Plan required.
Visit: www.health.gov.au/internet/main/publishing.nsf/content/health-pcd-pregnancy-support.htm

Queensland Transcultural Mental Health Centre: Phone 3317 1234 QTMC@health.qld.gov.au

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

11.2 CHAMP Drug and Alcohol Service

Continuity of care by **H**ealth Professionals attending **A**lcohol and drug problems and meeting **M**other's needs for **P**ositive family outcomes

Mater Mothers' CHAMP Clinic provides antenatal care for pregnant women who:

- continue to use recreational drugs including alcohol and tobacco and are having difficulty with stopping
- recently quit recreational drug use and have ongoing risk factors
- are on opioid replacement therapies
- are prescribed regular opioid analgesia.

CHAMP Clinic provides an environment of acceptance and offers midwife antenatal check-ups, preparation for birth, access to specialist doctors when needed, health education, alcohol & drug use interventions, relapse prevention and support, social worker support, referral to other health or support services, parenting information and advice and discharge planning.

CHAMP Clinic staff have knowledge and experience in: opioid replacement therapies, current treatment options for drug dependence, blood-borne viral infections, e.g. hepatitis C, supporting women who can't quit their alcohol or drug use, supporting women with other psychosocial problems, and advocating for women with special needs.

Refer using the standard Mater Mothers' Antenatal Referral form.

Contact: 07 3163 2417; Mobile: 0434 189 444 (in hours only)

11.3 Pregnancy Assessment Centre

The Pregnancy Assessment Centre (PAC) is open 24 hours, seven days a week, for women who live in the Mater catchment or are booked to give birth at Mater Mothers' Hospitals or Mater Mothers' Private Brisbane who are in need of urgent assessment at any stage of pregnancy and up until six weeks postpartum. Women who live outside the Mater catchment should be referred to their local hospital pregnancy assessment centre or Emergency Department.

Early Pregnancy Assessment (EPA) is located within PAC. EPA is for the care of women with problems in the first 20 weeks of pregnancy. Women who are acutely unwell can present at any time and will be seen by a midwife and/or doctor. If ongoing care or follow up is required they will be referred back to their GP or local hospital if they reside outside the Mater Mothers' catchment.

For women requiring non urgent assessment of miscarriage fax a referral , ultrasound reports and pathology results to Fax 07 3163 6120 for allocation of an appointment. Women who live outside the Mater catchment should be referred to their local hospital.

PAC also provides 24/7 assessment of conditions arising in the second half of pregnancy e.g. decreased fetal movements, hypertension, ruptured membranes, contractions, bleeding etc. Women should present for assessment. They cannot call for advice. GPs can contact the ANC Obstetric Consultant for clinical consultation or advice or to notify acute presentations Phone: 3163 1330 (Monday-Thursday 8.30 am to 4 pm, Friday 8.30 am to 12.30 pm). After hours call the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

12. Supplements

Vitamin and mineral supplements

See RANZCOG College Statement C-Obs 25.
https://protect-au.mimecast.com/s/5iR5C4QORLF92GADFVI0zL?domain=ranzcog.edu.au

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. nhmrc.gov.au/about-us/publications/iodine-supplementation-pregnant-and-breastfeeding-women

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. https://protect-au.mimecast.com/s/5iR5C4QORLF92GADFVI0zL?domain=ranzcog.edu.au

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.

NIPT, nuchal translucency or triple test

Notify antenatal clinic promptly of abnormal results. Referrals for counselling and diagnostic tests (CVS or amniocentesis) can be faxed with a copy of all results including NIPT if performed to MFM fax 07 3163 1890.

Morphology ultrasound

Notify antenatal clinic promptly of abnormal results. Fax scan report and previous results e.g. CFTS and a cover letter to antenatal clinic Fax: 07 3163 8053. For consultation or advice phone the Obstetric Consultant 07 3163 1330 or Maternal Fetal Medicine 07 3163 1899. After hours call the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

Full Blood Count

Refer to page 34, Management of anaemia in pregnancy flow chart. 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.

Iron replacement[1]

Women can be iron deficient with or without the presence of anaemia. There are three distinct classifications:

1. Iron deficiency without anaemia
2. Iron deficiency with anaemia
3. Anaemia of chronic disease.

In Australia, 1 in 10 people are iron deficient, and up to 30% of patients undergoing elective surgery have low iron or are anaemic.[1]

i. Women who are iron deficient should have iron stores replenished using oral supplementation.
ii. IV iron should only be considered in patients with confirmed iron deficiency or IDA when there are intolerance issues or side effects to oral iron and rapid restoration of haemoglobin and iron stores is a clinical requirement to prevent physiological decompensation.

Iron infusion

IV iron infusion may be seen as a safe treatment option, but is not without risk .There is a risk of anaphylaxis and iron extravasation which can result in permanent skin staining (tattooing). Prolonged and symptomatic hypophosphatamia has been reported in patients receiving parenteral iron. It is related to the rapid increase of serum iron levels. Changing to another IV iron solution will not prevent severe hypophosphatemia. Correction of coexisting vitamin D deficiency may mitigate hypophosphatemia. Post infusion phosphate levels should be monitored in those with pre-existing disorders in phosphate homeostasis e.g. hyperparathyroidism and when patients become symptomatic. Hypophosphatemia is often asymptomatic, but presenting symptoms can be neuromuscular, cardiorespiratory, haematological.

1. Iron deficiency: prescribing wisely to improve patient outcomes. Alana Delaforce and Diana Moore, Quality Coordinators, Mater Health Services. August 2018

Actions

1. Assess iron stores. Use laboratory findings and patient history to determine cause. FBC and iron studies.
2. Replete iron stores. Use iron rich food sources and oral supplementation as first line. Consult pharmacy for oral dosing options. Manage side effects e.g. treat constipation.
3. IV iron is administered only when rapid restoration of iron stores is required. Careful vein selection avoiding the cubital fossa veins and patient education re immediate notification of side effects, reduce the risk of extravasation. The most important severity indicator of extravasation is pain.

How much iron is required in deficiency?[1]

Dose: 100-200mg of elemental iron daily as ferrous(not ferric) salts i.e. sulphate, gluconate, fumarate, HCl.

Ideally smaller doses taken several times per day provides less nausea and increased absorption or a single dose on alternate days.

Avoid taking iron supplements with dairy foods as calcium disrupts absorption.

Take iron supplements with vitamin C e.g. orange juice one hour before food.

Additional information: Red Cross Life Blood Haemoglobin Assessment and Optimisation Action Plan and flowcharts https://transfusion.com.au/node/2234

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 Queensland Clinical Guideline Syphilis in Pregnancy December 2018 or the Australian STI Management Guidelines www.sti.guidelines.org.au and http://disease-control.health.qld.gov.au/Condition/779/syphilis. Notify obstetrician 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 %** 41 mmol/mol (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.[2]

The diagnosis of gestational diabetes requires prompt notification to the Antenatal Clinic by fax to 07 3163 8053 with a copy of the results, or by phone to the GP Liaison 07 3163 1861 or Antenatal Clinic Team Leader 07 3163 8611. Previously the diagnosis of gestational diabetes required transfer from GPSC to MMH obstetric care. The introduction of the Mother App (a remote App to portal based monitoring

1. Iron deficiency: prescribing wisely to improve patient outcomes. Alana Delaforce and Diana Moore, Quality Coordinators, Mater Health Services. August 2018
2. Hyperglycaemia in Early Pregnancy. McIntyre et al Diabetes Care October 2015.

system) in January 2021 allows women with gestational diabetes to continue GP Shared Care. Once notification has occurred the woman will receive a video link to online education https://matermothers.org.au/journey/pregnancy/gestational-diabetes and on receipt of a glucometer by courier, she is to commence BGL monitoring as per the instructions on the video. She will be notified of appointments with a Diabetes Educator and Dietitian at MMH at 7 and 14 days after diagnosis.

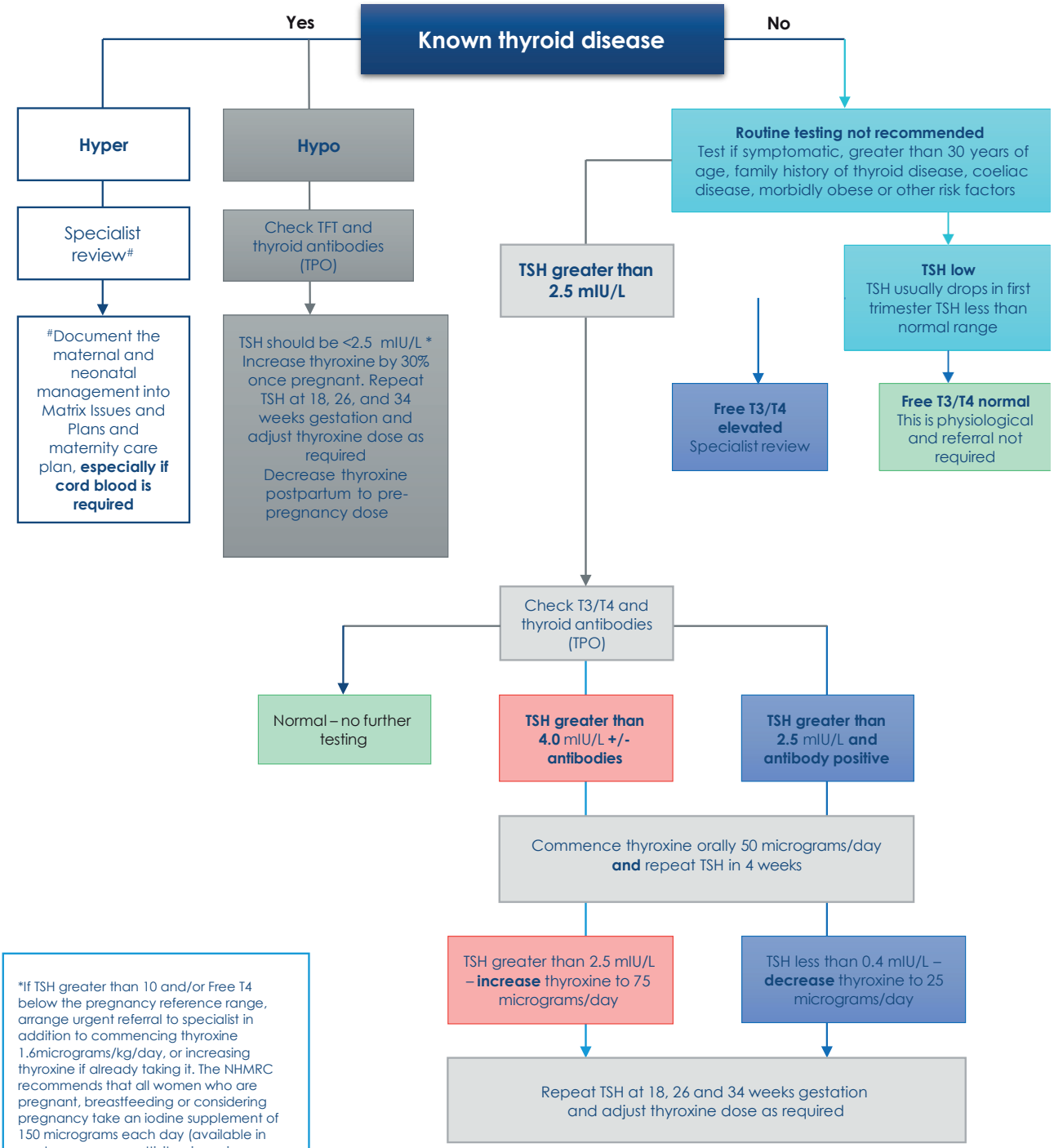
The Mater Mothers' Hospitals Diabetes Team will monitor the woman's BGLs via the Mother App while the GP continues routine antenatal check-ups. The MMH diabetes team will communicate with the woman via the App regarding results and recommendations.

Growth scans will be requested at MMH at 28 to 30 weeks and 34 to 36 weeks.If medication is required it will be prescribed by the Mater Mothers' Hospitals obstetric team.

If a GP identifies a woman who has difficulty using the App please contact the GP Liaison on 07 3163 1861 . If the woman has abnormal BGLs please contact the Antenatal Clinic Consultant on 07 3163 1330. (Mon to Thurs from 8.30 am to 4.30 pm from Friday 8.30 am to 1 pm).

The targets for blood glucose levels are ≤ 5.0 and ≤ 7.4 at 1 hour after meals. Women with diagnosis of gestational diabetes < k24 will see an obstetric physician and women diagnosed with DIPS (diabetes in pregnancy)HbA1c ≥ 48mmol/mol or 6.5% or on GTT FBGL ≥ 7.0 and 2 hour ≥ 11.1 will receive obstetric and midwifery care at MMH and will see an obstetric physician.

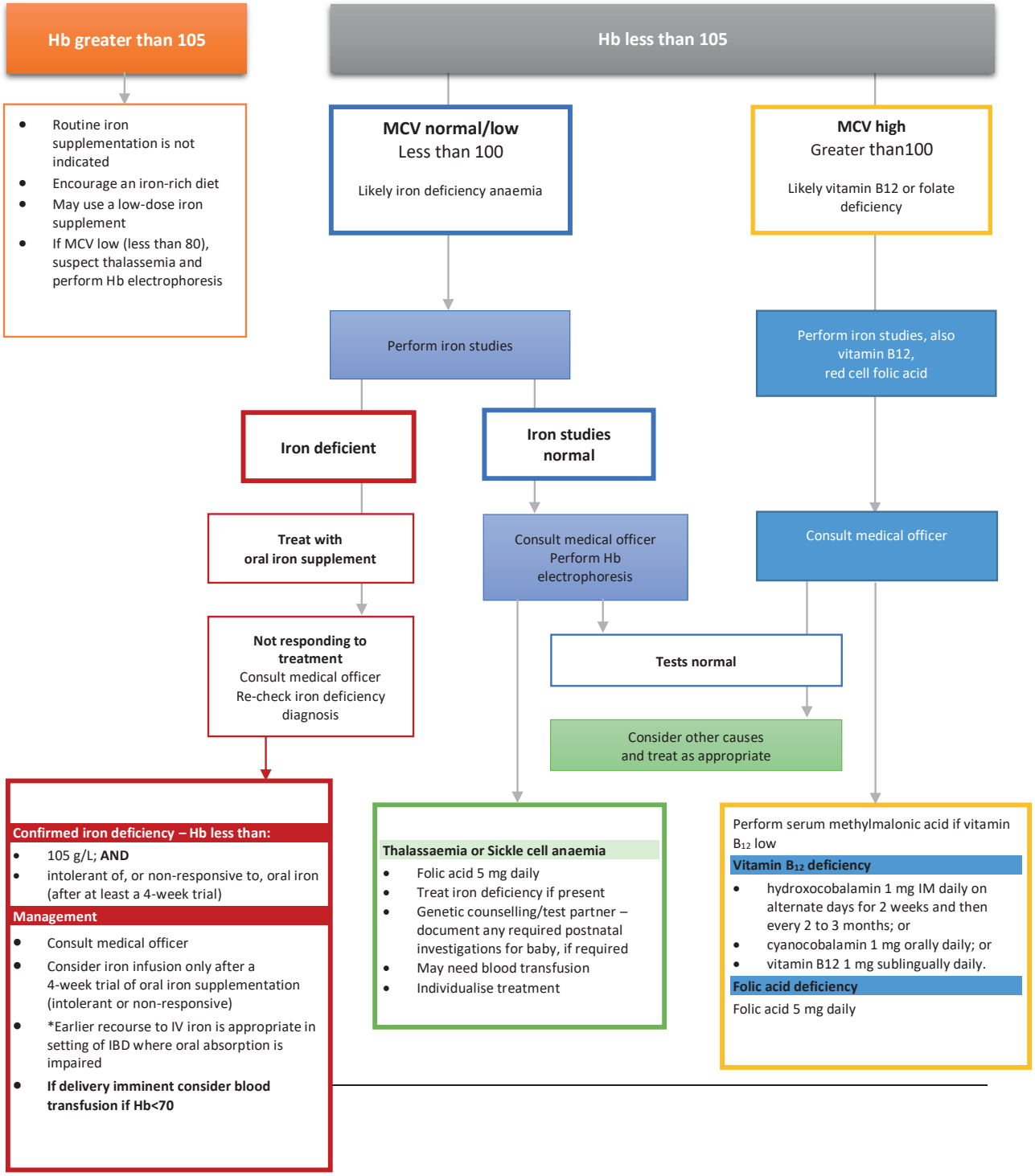
Thyroid management in pregnancy



*If TSH greater than 10 and/or Free T4 below the pregnancy reference range, arrange urgent referral to specialist in addition to commencing thyroxine 1.6micrograms/kg/day, or increasing thyroxine if already taking it. 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)

Ensure pregnancy specific ranges as determined by your local laboratory are used.

Management of anaemia in pregnancy flowchart (March 2022)



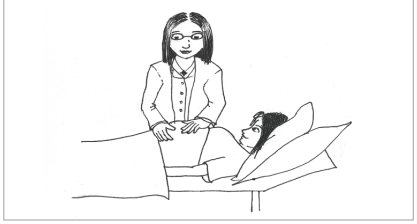
14. How to manage abnormal findings/symptoms

Intrauterine growth restriction (IUGR)

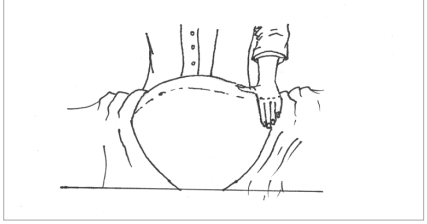
Measure symphysial-fundal height (SFH):

- 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.

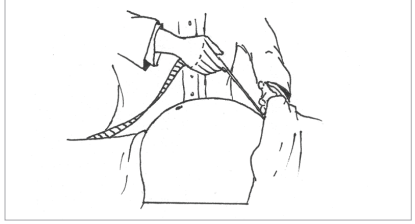
1. Mother semi-recumbent with an empty bladder



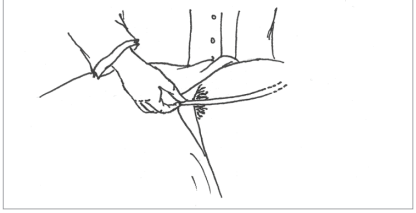
2. Palpate to determine the fundus with two hands



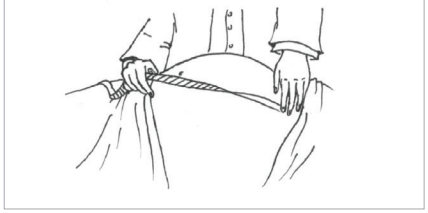
3. Secure tape with hand at the top of the fundus



4. Measure to top of the symphysis pubis



5. Measure along longitudinal axis of uterus



Other considerations include transverse lie, multiple pregnancies and obesity.

If the fundal height is 3 cm above or below the expected measurement for the gestational age refer the woman for an ultrasound and request:

- fetal size/growth compared with previous ultrasound
- doppler of umbilical artery flow
- amniotic fluid volume—deepest vertical pocket.

Depending on the findings either fax a copy of the ultrasound report with a request for a review appointment in antenatal clinic to Fax: 07 3163 8053 or contact the Obstetric Consultant on 07 3163 1330 (Monday to Thursday from 8.30 am to 4 pm, Friday 8.30 am to 12.30 pm). After hours: contact the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

Decreased fetal movements

If fetal movements are decreased, check fundal height and fetal heart rate and refer immediately to PAC 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, the woman should attend Mater Mothers' Pregnancy Assessment Centre promptly for assessment of fetal well being. Contact the Obstetric Consultant on 07 3163 1330 (in hours). After hours call the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

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 and ELFT. Coagulation profile if platelets < 100.
- 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 PAC. Contact the ANC Obstetric Consultant on 07 3163 1330 (in hours) After hours contact the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

If the woman is asymptomatic without proteinuria, confirm non-severe hypertension by repeat measurement. Contact the ANC Obstetric Consultant on 07 3163 1330 (in hours).

For information related to the management of hypertension during pregnancy refer to the Queensland Clinical Guideline: Hypertensive disorders of pregnancy. www.health.qld.gov.au/qcg/documents/g-hdp.pdf

1. Lowe SA, Brown MA, Decker G, Gatt S, McLintock C, McMahon L, Mangos G, Moore MP, Muller P, Paech M, Walters B. 2008. Guidelines for the management of hypertensive disorders of pregnancy. SOMANZ.
2. Qld Clinical Guideline Hypertensive Disorders of Pregnancy, www.health.qld.gov.au/qcg/documents/g-hdp.pdf

Vaginal 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 cervical screening if no normal cervical screening 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 PAC 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 to assist in 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:
  - » the Anti-D administration will provide cover for a minimum of six weeks
  - » the risk of sensitisation increases as pregnancy progresses.
- 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.
- 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.
  i. Mater Blood Bank Fax 07 3163 8179
  ii. QML Blood Bank Fax 07 3371 9029

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

Dosing recommendations for Rh D negative women[1]

Dose of CSL Rh (D) immunoglobulin	
First trimester sensitising events (< 12 weeks)	250IU
First trimester sensitising events (multiple pregnancies < 12 weeks)	625IU
Second and third trimester sensitising events	625IU
All Rh (D) negative women without preformed Anti-D—at 28 and 34 weeks gestation	625IU
Postnatal prophylaxis	625IU

1. RANZCOG. (2019) Guidelines for the use of Rh(D) Immunoglobulin (Anti-D) in obstetrics in Australia.

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.

A postnatal appointment with the GP is advised for mother and baby at 5–10 days and six weeks. Some women may be offered a postnatal outpatient appointment at Mater Mothers' Hospital if they have experienced specific problems during pregnancy or birth e.g. third or fourth degree tear. During the postnatal period, the GP may identify problems that require referral back to MMH, to QCH or to a paediatrician or to additional support services.

Pregnancy Assessment Centre (PAC) 24/7 for urgent maternal assessment up to six weeks postpartum. For consultation or advice contact the Obstetric Consultant on 3163 1330 (in hours) After hours contact the Obstetric Registrar on 07 3163 6611 or Consultant on 07 3163 6612.

Child Health Service https://www.childrens.health.qld.gov.au/chq/our-services/community-health-services/child-health-service/

Mater Mothers' Parenting Support Centre Phone: 07 3163 2229 Email: parentsupportcentre@mater.org.au By appointment only 8 am to 4 pm Monday to Friday (excluding public holidays) Mater Mothers' Parenting Support Centre offers support and guidance for parents of babies up to six months of age who were born at Mater Mothers' Hospital, Mater Mothers' Private Brisbane, and Mater Mothers' Private Redland.

Women may self refer for assistance with breast feeding and other feeding issues, sleep and settling, emotional wellbeing, infant interaction and adjustment to parenting, and psychological support including a postnatal wellness group. There is no cost for Medicare eligible families.

Australian Breastfeeding Association https://www.breastfeeding.asn.au/

Breastfeeding Helpline 1800 686 268

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 17.1 on page 42 for breastfeeding information and advice
- contraception.

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/ears/mouth/palate/tongue/frenulum; 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 Service.

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. Cervical screening if due; ask re urinary or faecal incontinence
- family planning/intercourse
- follow-up for mother e.g. gestational diabetes, hypertension.

Baby As for initial visit and including the following examination:

- weight, length, head circumference—plot on growth charts
- vision/eye examination
- facial symmetry—smiling
- mouth/palate/frenulum
- hearing profile
- cardiovascular
- femoral pulses
- hip testing
- genitalia—testes fully descended?
- development.

Discuss: bowel habits, vaccinations, SIDS awareness.

17. Further information for GPs

17.1 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

- 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 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 restriction.
    i. Difficulty latching baby to the breast
    ii. My baby is unsettled after feeds.

Australian Breastfeeding Association: 1800 686 2686 or https://www.breastfeeding.asn.au/

Mater Breast Feeding 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 brochures.mater.org.au/Home/Brochures/Mater-Mothers-Hospital/A-guide-to-breastfeeding

Child Health Service: https://www.childrens.health.qld.gov.au/chq/our-services/community-health-services/child-health-service/

17.2 Edinburgh Postnatal Depression Scale (EPDS)[1]

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

1. Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry 150:782-786.

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.

See page 27 for additional information and contacts for mental health support.

17.3 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 1330 (in hours)
After hours Obstetric Registrar 07 3163 6611, Consultant 07 3163 6612

- **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. If new diagnosis 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, opthalmic 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)**
  - Refer to QCG: https://www.health.qld.gov.au/__data/assets/pdf_file/0035/736883/g-sip.pdf
  - 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.

For more information refer to Australasian Society for Infectious Diseases (2014) 'Management of Perinatal Infections' pathways at www.asid.net.au/products/management-of-perinatal-infections.

17.4 Gestational diabetes screening and diagnosis

17.4.1 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).

Aspect	Recommendation
Diagnostic testing	• At MMH HbA1c is the preferred test in the first trimester as the fasting glucose has not yet fallen to pregnancy levels and the 5.1 mmol/L has proven to be too low for diagnosis of GDM. In the first trimester a fasting glucose ≥ to 5.5mmol/L (as for outside pregnancy) is evidence of impaired fasting blood glucose.[1]
	• 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)
	• If history of bariatric surgery the woman needs early nutritional assessment. As OGTT may be unreliable request early HbA1c and fasting blood glucose. Consider home glucose testing.
All women	• Require a two hour OGTT (after overnight fasting). Fasting BGL if risk of COVID community transmission high. Check current advice at QCG website: https://www.health.qld.gov.au/__data/assets/pdf_file/0022/950503/g-gdm.pdf
	• 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: a. Fasting glucose of greater than or equal to 5.1 mmol/L and/or b. 1-hour glucose greater than or equal to 10.0 mmol/L and/or c. 2-hour glucose greater than or equal to 8.5 mmol/L or d. HbA1c > 41mmol/mol (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 HbA1c of 48mmol/mol (6.4%) or markedly elevated OGTT values may be classified as having Diabetes in Pregnancy e. Fasting glucose greater than or equal to 7.0 mmol/L and/or f. 2-hour glucose greater than or equal to 11.1 mmol/L
	• Women with diabetes in pregnancy: g. Require urgent care h. May have undiagnosed "overt" diabetes and associated complications such as retinopathy and nephropathy i. Are at higher risk of pregnancy complications j. Manage in a centre/clinic with experience in the management of pre-existing diabetes in pregnancy k. May require confirmation of diagnosis in the postpartum period

1. Hyperglycaemia in Early Pregnancy. McIntyre et al Diabetes Care October 2015.

17.4.2 Flowchart for gestational diabetes mellitus screening and diagnosis (revised Feb 2019)

Note: At MMH HbA1c is the preferred test in the first trimester. See page 48.

Note: To reduce the risk of community transmission during the COVID pandemic QCG temporarily advised a fasting BGL instead of the 2 hour OGTT but have returned to OGTT as the standard test. Check current recommendation https://www.health.qld.gov.au/qcg/publications

Screening and diagnosis gestational diabetes mellitus

(Revised February 2019)

Risk factors for GDM

- **BMI greater than 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 or older**
- **Family history DM** (1st degree relative or sister with GDM)
- **Previous macrosomia** (birth weight Greater than 4500 g or greater than 90th percentile
- **Previous perinatal loss**
- **Polycystic Ovarian Syndrome**
- **Medications** (corticosteroids, antipsychotics)
- **Multiple pregnancy**
- **Ethnicity**

GDM diagnosis

At MMH, HbA1c is the preferred test in the first trimester

HbA1c

- First trimester only
- Result equal to or greater than 41 mmol/mol (or 5.9%)

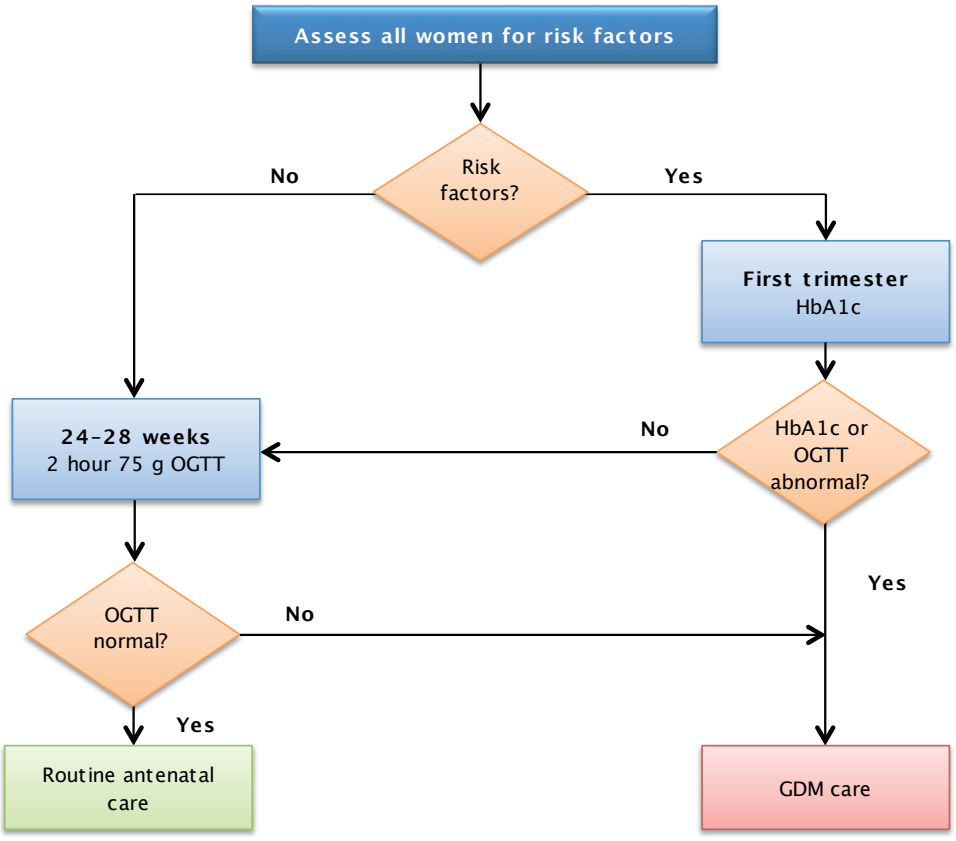
OGTT (after 12 weeks)
One or more of:

- Fasting BGL equal to or greater than 5.1 mmol/L
- 1 hour BGL equal to or greater than 10 mmol/L
- 2 hour BGL equal to or greater than 8.5 mmol/L

OGTT advice for women:

- Fast (except for water) for 8–14 hours prior to OGTT
- Take usual medications.

Note: a single elevated fasting BGL of 5.1–5.5 mmol/L in the first trimester does not constitute a diagnosis of GDM; these women will be recommended to have an HbA1c (if still first trimester) or 2 hour OGT



17.5 Pregnancy Management Plan BMI > 35

Queensland Clinical Guideline: Obesity and pregnancy (including post bariatric surgery)

Flowchart: Obesity and pregnancy (including post bariatric surgery)

Principles of care

- Sensitive language to reduce weight stigma
- Sufficient resources (human and equipment)
- Local criteria for safe care provision
- Audit care

BMI classification (kg/m^2)

Underweight	< 18.5
Normal	18.5–24.9*
Overweight	25.0–29.9*
Obese I	30.0–34.9*
Obese II	35.0–39.9
Obese III	> 40

*Variations for Asian background

GWG

Trimester 1	kg
All women	0.5–2.0
Trimester 2+3	kg/week
Underweight	0.5
Normal	0.4
Overweight	0.3
Obese	0.2

Total GWG

Singleton	kg
Normal	11.5–16
Overweight	7–11.5
Obese	5–9
Twin/triplet	kg
Normal	17–25
Overweight	14–23
Obese	11–19

Pre and inter-conception

- Comprehensive health assessment
- Discuss health impacts and options
- Consider referral to dietitian
- Aim to normalise weight
- Higher dose folic acid daily
- Personalised approach to weight concern and lifestyle
- Post BS: micronutrient supplements and monitoring
- Identify/optimise comorbidities (e.g. diabetes mellitus)

Antenatal

Assessment
- Comprehensive history (including past BS)
- Early antenatal booking-in
- Measure BMI pre-pregnancy and at 36 weeks
- Use correctly sized BP cuff
- If BS: micronutrient supplements/monitoring

Discuss
- Lifestyle options, healthy eating and physical activity
- GWG and consider weight gain chart use
- Implications for care (e.g. transfer of care)
- Greater inaccuracy early pregnancy screening

Refer as required
- Psychosocial wellbeing
- Mental health

Consider risk of
- Pre-eclampsia – low dose aspirin
- VTE and need for thromboprophylaxis

Elements | BMI (kg/m^2)	25–29.9	30–34.9	35–39.9	> 40	BS
Higher dose folic acid		✓	✓	✓	✓
Multidisciplinary	✓	✓	✓	✓	✓
Additional bloods		✓	✓	✓	✓
Early GDM screen		✓	✓	✓	✓caution:OGTT
Additional USS			✓	✓	✓
Referrals					
Dietitian	✓	✓	✓	✓	✓
Obstetrician			Consult	✓	✓
Anaesthetic				✓	✓
Obstetric medicine					✓

Labour and birth

- If BMI > 40 kg/m^2
  - Early assessment of IV access
  - Recommend CFM
- If prophylactic antibiotics, consider higher dosage
- Surveillance for shoulder dystocia/PPH
- Active third stage management

Postpartum

- Surveillance for airway compromise
- Early mobilisation
- Assess risk of VTE and consider thromboprophylaxis
- Additional support for breastfeeding
- Referral for ongoing healthy lifestyle support

BMI: body mass index, BP: blood pressure, BS: bariatric surgery, CFM: continuous fetal monitoring, GDM: gestational diabetes mellitus, GWG: gestational weight gain, IV intravenous, OGTT: oral glucose tolerance test, PPH: postpartum haemorrhage, USS: ultrasound scan, VTE: venous thromboembolism, > greater than, < less than

17.6 Smoking cessation assistance and information

- 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 using the lowest dose intermittent nicotine replacement therapy that is effective, using a risk/benefit approach.

Pregnant and lactating women

- Cigarette smoking by pregnant women (or through secondhand smoking of household members) 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.

Quitline Resources

https://quithq.initiatives.qld.gov.au/quit-support/quitline/get-help-from-quitline/

Smoke Free Pregnancy Project

Quit for You...Quit for Baby
This free program is available to pregnant women living in Queensland, their partners, and women planning on falling pregnant within the next six months. It includes an optional 12 week supply of nicotine replacement patches, gum or lozenges. https://protect-au.mimecast.com/s/XCchC5QP9LFpPOYXS8Nz10?domain=health.qld.gov.au

Quitline (13 7848) or complete the Request a Quitline Call form. https://quithq.initiatives.qld.gov.au/quit-support/quitline/get-help-from-quitline/

Yarn to Quit Program Quitline has a team of Aboriginal and Torres Strait Islander support staff. The 'Yarn to Quit' program includes free nicotine replacement therapy. Call Quitline on 13 7848. https://deadlychoices.com.au/programs/quit-now/

https://www.tobaccoinaustralia.org.au/chapter-7-cessation/7-11-smoking-cessation-and-pregnancy

https://www.health.qld.gov.au/__data/assets/pdf_file/0025/441484/smokingandpregnancy.pdf
– brochure for women

17.7 Natural Fertility services at Mater Mothers' Hospitals

Preconception Care Service

This service assists individuals and couples who are planning a pregnancy, to optimise their own health so they may have a healthy pregnancy. Both men and women undergo a thorough assessment of their health and lifestyle and given information on ways to improve their health prior to conceiving. They consult with an Obstetrician/Gynaecologist to address specific health conditions that might affect a pregnancy. The consultation and some of the investigations performed through Mater Health Services are bulk-billed.

The Fertility Assessment and Research Clinic (FAR Clinic)

This Clinic is offered following on from the Preconception Care Service. It offers specialised care to couples experiencing subfertility and/or recurrent miscarriages and aims to provide couples with information, and to improve their combined fertility. Specialised medical and surgical care is provided. The consultation and some of the investigations performed through Mater Health Services are bulk-billed. There is a service fee, if progressing into this service from the Preconception Care Service. Clients will receive: formal instruction in the fertility awareness method, the Sympto-Thermal Method (STM), fertility focused investigations, medical and surgical management.

The Mater Mothers' Hospital does not offer ART or IVF services. The Fertility Assessment and Research Clinic has a particular interest in investigating the value of other therapies to assist couples to conceive and is presently conducting a number of clinical trials. Some couples will be offered the opportunity to participate in a clinical trial which may have the potential to further enhance their reproductive outcomes.

A GP referral to Dr Janssens is required for Natural Fertility Services Fax to Mater Referral Centre Phone: 07 3163 8548.

GP and patient enquiries Phone: 07 3163 8437 or email naturalfertility@mater.org.au

Access to Mater Fertility Service is not restricted by catchment but catchment restrictions will apply for ongoing maternity care.

17.8 Resources for GPs

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

Antenatal referral form
materonline.org.au/quick-referrals/antenatal-clinic

Domestic and family violence information and support for GPs
bdvslocallink@micahprojects.org.au or Phone: 07 3013 6035

Domestic and family violence support
www.dvconnect.org.au or 1800 811 811

Guidelines for consultation and referral
materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Mater Doctor Portal
materonline.org.au/doctor-portal

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

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

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

Safer baby bundle Free eLearning about providing women with information to reduce the risk of stillbirth.
https://vimeo.com/352404965

Shared Care Guidelines
materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies

Therapeutic advice & information service
www.nps.org.au

18. Additional information for women

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

Aligned GPs
matermothers.org.au/shared-care-gps

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

Choices for maternity care
matermothers.org.au/hospitals/mater-mothers-hospital/models-of-maternity-care-at-mater-mothers-hospital

Domestic and family violence support
www.dvconnect.org.au or Telephone: 1800 811 811

Information on having your baby at the Mater Mothers'
brochures.mater.org.au/having-your-baby-at-mmh

Mater Breast Feeding Support Service
brochures.mater.org.au/brochures/mater-mothers-hospital/breastfeeding-support-at-mater-mothers-hospital

Mater brochure site
brochures.mater.org.au/brochures/mater-mothers-hospital

Mater Mothers' Baby care
https://matermothers.org.au/journey/baby-care

Mater Mothers' Parenting Support Centre
matermothers.org.au/hospitals/services/mater-mothers-parenting-support-centre

Mater Patient Portal
patientportal.mater.org.au

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

Queensland Child Health Service
www.childrens.health.qld.gov.au/chq/our-services/community-health-services/child-health-service/

19. MMH antenatal shared care process flowchart

Pre-conception—unique role for GPs

- Folate & iodine supplementation
- Rubella serology +/- vaccination
- Varicella serology if no history +/- vaccination
- Cervical screening if due
- Smoking cessation
- Alcohol cessation
- Pre-conception clinic MMH if medical condition/s
- Consider screening for genetic conditions e.g. SMA/CF/FXS*

First GP visit/s
(may take more than one visit)

- Confirm pregnancy & dates
- Scan if uncertain dates or risk of ectopic (previous ectopic, tubal surgery)
- Folate & iodine supplementation for all
- Review medical/surgical/psych/family history, medications, allergies etc., update GP records
- Identify risk factors for pregnancy
- Discuss screening vs diagnostic testing
- Discuss diet & drug avoidance—Listeria, alcohol, cigarettes etc.
- Complete Mater referral
- Indicate if you wish to share care & confirm you are aligned
- Recommend and plan administration of COVID and influenza vaccinations
- If woman agrees to a My Health Record, consent for & upload shared health summary

First trimester screening tests *(cc to MMH ANC on pathology & radiology request form please)*

- FBE, blood group & antibodies, rubella, Hep B, Hep C, HIV, syphilis serology, MSU (treat asymptomatic bacteruria) Cervical screening if due
- Discuss/request/review prenatal screening or first trimester screening/testing for anatomical, chromosomal & genetic anomalies:
  1. Nuchal translucency scan + first trimester screen (free hCG, PAPPA) K11-13+6 or
  2. Maternal serum screening (AFP, Oestriol, hCG) K15-20 if desired or if presents too late for first trimester testing. (Not if twins or diabetic)
  3. Non-Invasive Prenatal Test * (NIPT) > K9 (K13 anatomical scan is recommended)
  4. SMA/CF/FXS or other genetic testing as indicated*
- Varicella serology (if no history of varicella or vaccination)
- HbA1c (first trimester only) or OGTT if high risk for diabetes
- ELFT, TFTs, Vitamin D for specific indications only

Uncomplicated pregnancy

- Send referral to Mater ANC fax 3163 8053
- 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 & obstetric doctor K 18-20
- You will be responsible for care until she is seen by a doctor in the hospital

GP visits: 14, 24, 28, 32, 34, 38, 40 weeks
(more frequently if clinically indicated)

- Record in Pregnancy Health Record (place printed copy of computer obstetric record in the blue folder)
- GTT, FBC; if Rh Neg blood group/antibody screen at K26-28 & 625 IU Anti D offered
- k20-32, recommend & administer Pertussis
- K34, if Rh Neg, 625 IU Anti D offered
- K36, FBC
- cc MMH ANC on pathology & radiology

Mater Mothers' Hospital visit: 36 weeks
(more frequently if clinically indicated)

Mater Mothers' Hospital visit: 40+ weeks *prn*

General information

High risk for diabetes in pregnancy?

- Previous GDM or baby > 4500g, polycystic ovarian syndrome, strong family history, glycosuria, BMI ≥ 30, maternal age ≥ 40, ethnicity 41 mmol/mol or 5.9%)
- If positive, refer promptly, specify the reason & include the results Fax to 3163 8053

Medical disease or obstetric complications? EARLY/URGENT Hospital ANC referral:

- GP referral letters are triaged within two working days
- Please specify urgency & reasons in the referral letter. Fax to 3163 8053
- cc MMH ANC on pathology & radiology

Rh Negative mothers

- If antibody negative, offer 625 IU anti-D at 28 & 34 weeks

For urgent referral or advice contact Mater Mother's Hospital:

- Obstetric Consultant 07 3163 1330 (clinic hours)
- GP Liaison 07 3163 1861, ANC team leader 07 3163 8611 (clinic hours)
- After Hours O&G Registrar 07 3163 6611 Consultant 07 3163 6612

BMI > 35 recommend folic acid 5 mg daily

- In addition to routine bloods, order first trimester HbA1c, E/LFT, urine protein/creatinine ratio. OGTT 25-28 weeks if first trimester test normal.

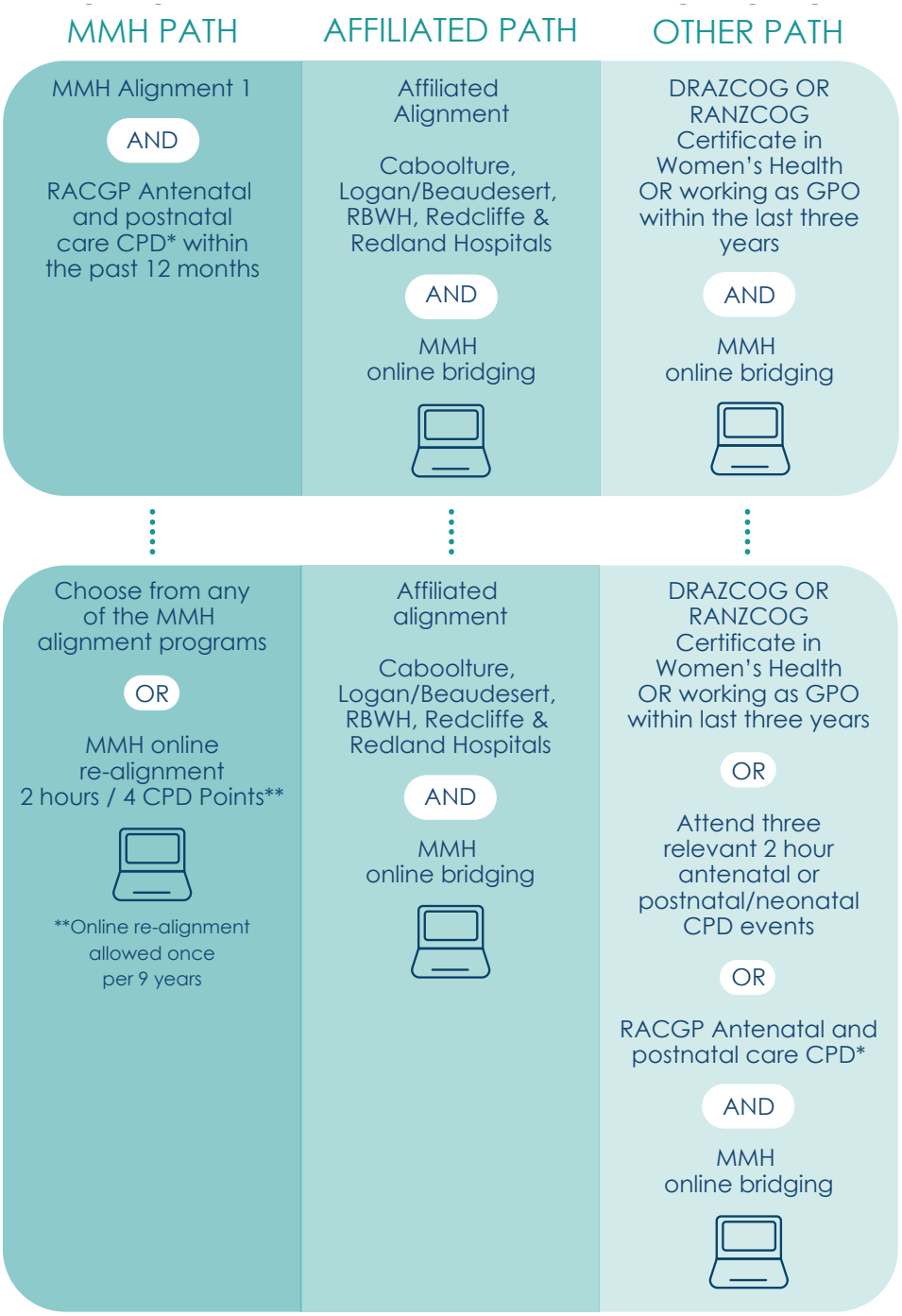
Pregnancy Assessment Centre (PAC) Open 24/7

- For urgent obstetric related care at any stage in pregnancy and for 6 weeks after the birth. Team Leader: 07 3163 6577
- Women who reside out of catchment should be referred to their local hospital.

*Not Medicare funded. **SMA/CF/FXS** = spinal muscular atrophy, cystic fibrosis, fragile X syndrome
For more information, resources and education: materonline.org.au (Click on *Shared Care Alignment*)

July 2022

20. Mater Mothers' Hospital shared care– Alignment and re-alignment options



** RACGP Antenatal and postnatal care accredited course (gp_learning_CPD Code: 180645)*

mater mothers

phn BRISBANE SOUTH
An Australian Government Initiative

21. Pregnancy checklist

Pregnancy Checklist	
☐	Decide on where and how you wish to have your child—do you wish to be looked after privately or publicly? Do you wish to be looked after by a midwife, general practitioner (GP) or obstetrician?
☐	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. R U OK? ☐ Do you feel safe at home and work?
☐	When was your last Cervical Screening Test (Pap Smear)? It is recommended that it is up to date.
☐	The following tests are recommended: Full Blood Count; 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.
☐	Chicken Pox, thyroid, chlamydia, iron stores or vitamin D levels may be recommended, depending upon your history.
☐	Supplements of folic acid and iodine are recommended.
☐	Reliable information on safe use of drugs and alcohol, diet, exercise and lifestyle activities in pregnancy can be found on www.matermothers.org.au/journey www.pregnancybirthbaby.org.au www.raisingchildren.net.au/pregnancy
☐	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. www.quitnow.gov.au
☐	It is recommended that alcohol be stopped as it is known to cause problems for you and/or your baby. If you are having difficulty stopping, we would like to work with you to help you to stop drinking alcohol during this pregnancy. Other drugs may also be harmful, so let's talk.
☐	It is recommended that you are up to date with Covid vaccinations and that you have a free* influenza vaccine from your GP as soon as they are available. These vaccines can be safely given at any time in your pregnancy.
☐	If you are not sure when you fell pregnant, a scan is recommended to confirm how many weeks pregnant you are.
☐	There is a blood test (B HCG and PAPPA-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 chance of having a child with genetic conditions including Down Syndrome, as well as confirming how many weeks pregnant you are and baby's anatomy.
☐	The noninvasive prenatal test (NIPT, cost ~ $400) gives information about a limited range of chromosomal abnormalities, including Down Syndrome and there are tests for chromosomal conditions including cystic fibrosis, spinal muscular atrophy and fragile X syndrome (~$400 for these 3 tests). These blood tests do not have any Medicare funding.
☐	An ultrasound test, the morphology scan, is recommended and usually done at or about 20 weeks of pregnancy to check on the position of the placenta, anatomy, growth and development of the baby.
☐	It is recommended that you have a visit with your midwife or doctor to follow up the results of any blood tests or ultrasound scans as soon as practical after the test. Don't just assume everything is OK if you have not been contacted.
☐	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, it's very important that you let us know ASAP. Most Rh-negative women who bleed in pregnancy require an injection within 72 hours of the bleeding starting. This significantly reduces the risk developing antibodies which could harm your baby.
☐	It is recommended that you have a free* whooping cough booster from 20 weeks' gestation in each and every pregnancy, even if the pregnancies are less than two years apart.
☐	At 26-28 weeks of pregnancy, your blood count and blood group antibodies are checked again and a glucose tolerance test is recommended, unless it is already known that you have diabetes.
☐	Visits are generally recommended 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.
☐	A blood test for anaemia is recommended at 36 weeks of pregnancy.
☐	If you choose to have Shared Antenatal Care with your GP, you will usually have a booking in appointment at 16-20 weeks (earlier if you are at higher risk) and a review appointment at 36 weeks.
☐	How do you plan to feed your baby?

*There may be a fee to see your GP | Dr Wendy Burton | Creative Commons License | March 2022

22. Contact list

Mater Mothers' Hospital

Aboriginal and Torres Strait Islander Liaison Service
Telephone: 07 3163 1528 or 07 3163 1853 or via switch 07 3163 8111, Pagers: 4854; 0918 or 4558

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)

Diabetes Educator
Telephone: 07 3163 1988 Fax: 07 3163 8053

Dietitian
Telephone: 07 3163 6000 Fax: 07 3163 2442

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

Genetic counselling (Refer to Genetic Health Qld) www.health.qld.gov.au/ghq

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

Mater Centre for Maternal Fetal Medicine (MFM)
Staff access telephone: 07 3163 1899 Fax: 07 3163 1890 Appointments: 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

MMH Antenatal Clinic
Staff access telephone: 07 3163 8611 Fax: 07 3163 8053 Appointments: 07 3163 8330
Obstetric Consultant: 07 3163 1330

Natural Fertility Services at Mater - Refer to Mater Gynaecology
Telephone: 07 3163 8437 Email: Naturalfertility@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 1671

Preconception Care Clinic - Refer to Mater Gynaecology
Telephone: 07 3163 8437 Fax: 07 3163 8548

Pregnancy Assessment Centre (PAC)
Open 24/7 for the urgent assessment of women from early pregnancy until 6 weeks post-partum
In hours: Obstetric Consultant: 07 3163 1330 After hours: O&G Registrar: 07 3163 6611 Consultant: 07 3163 6612
Team Leader: 07 3163 6577
There is no phone number for women to call for advice. Women should present for assessment.
Appointments are available for non-urgent follow up of early pregnancy complications for women in MMH catchment:
Telephone: 07 3163 5132 Fax: 07 3163 6120

mater
mothers' hospital

Raymond Terrace
South Brisbane Qld 4101
07 3163 1861
GPL@mater.org.au
materonline.org.au/sharedcare