Metro South Health

Quality healthcare every day

GP Maternity Share Care Education Alignment Maternity 1

In partnership with Mater Mothers' Hospital

ICARE² values

Queensland Government

Metro South Health

Quality healthcare every day

Metro South Health and Hospital Service – Maternity Shared Care (Alignment 1)

Saturday 25th May 2024

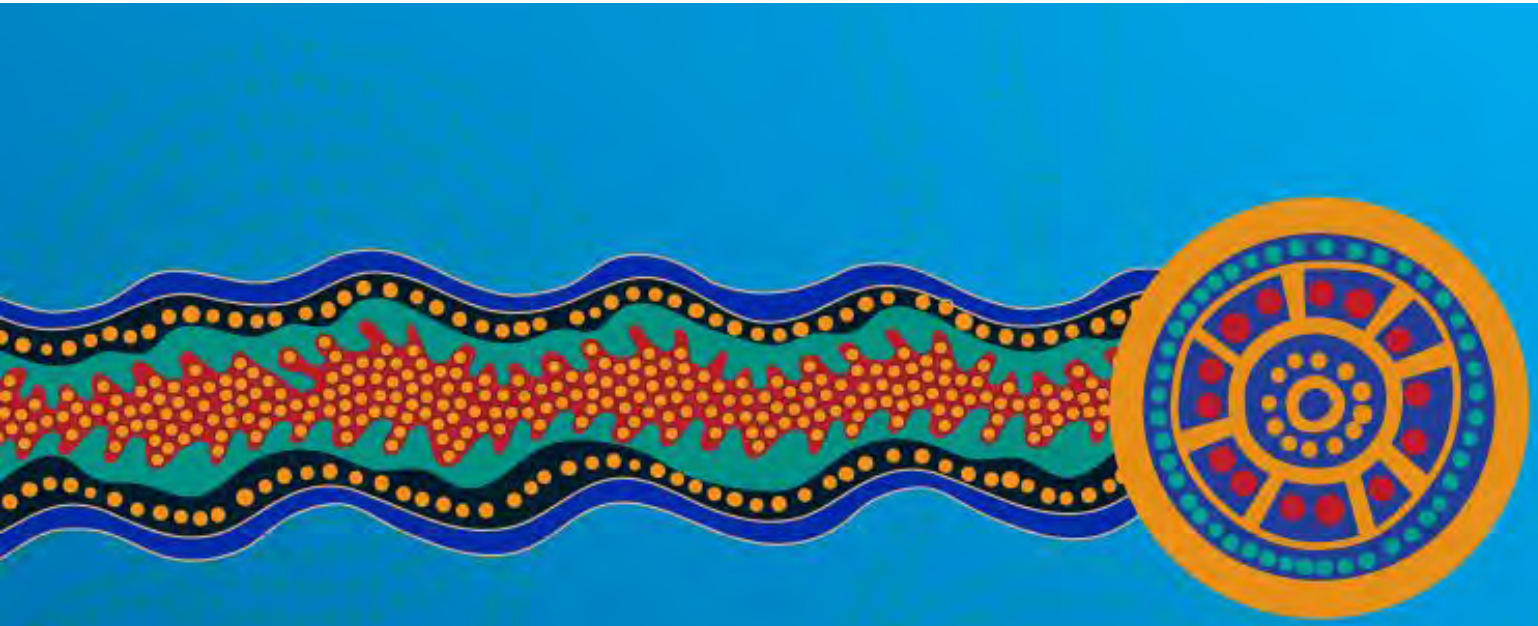
ICARE² values

INTEGRITY COMPASSION ACCOUNTABILITY RESPECT ENGAGEMENT EXCELLENCE

Queensland Government

Metro South Health

Quality healthcare every day



Metro South Health acknowledges the Yugambeh, Quandamooka, Jaggera, Ugarapul and Turrbal, the traditional Custodians of the land on which we work and meet today, recognising their shared country, their continuing connection to the lands, the waters, and communities.

We pay respects to the Elders past, present, and emerging and extend that respect to Aboriginal and Torres Strait Islander peoples here today.

ICARE² values

INTEGRITY COMPASSION ACCOUNTABILITY RESPECT ENGAGEMENT EXCELLENCE

Queensland Government

In our education today, we use the terms women, people, patients or individuals, when referring to those who are pregnant or planning to become pregnant. We also use the term mother, especially in the case of "mother-to-infant transmission".

We respectfully acknowledge that some pregnant people or those planning pregnancy may not identify as 'female' or as having a lived experience of 'womanhood' or 'motherhood', and strongly affirm that maternity care for individuals should be inclusive and respectful of the terms that are preferred by individuals.

Acknowledgments

- Metro South Health and Hospital Service
- Maternity Services at Logan/Beaudesert/Redland Hospitals for their clinical input and support
- The Alignment team at MMH
- The > 1800+ GPs who’ve been through MSHHS or the MMH Alignment education and given us their feedback
- Dr Wendy Burton
- Yourselves

Metro South Health | Queensland Government

Introducing today's team …..

- Facilitator: Dr Kim Nolan , GP - GPLO Maternity Share Care
- Lisa Miller, GPLO Midwife Manager

From Logan, Beaudesert and Redland Hospital Maternity Teams

- Dr Elisha Broom
- Dr Premjit Gill
- Dr Sanja Savic
- Dr Dianna Luong
- Dr Jessica Phillips-Yelland
- Simone Harvey – Credentialed Mental Health Nurse Practitioner, Perinatal Wellbeing
- Christie Dobson, Redland Bay Satellite Hospital, Pelvic Health Physiotherapist
- Dr Rauf Rahman, Senior O & G Registrar, Logan Hospital
- Dr Bruce Wang, Registrar PHO O&G, Logan Hospital
- Dr Mugundan Achari, Registrar PHO O&G, Logan Hospital
- Leah Sims, Complex Care Midwife Navigator, Logan Hospital
- Laurence Bulteel, Registered Midwife, Antenatal Clinic - Redland Hospital
- Julia Prince , Diabetes in Pregnancy Midwife Navigator, Logan Hospital
- MGP Midwife, Logan Hospital
- Naomi Scolari, Dietitian (Redland Hospital)

House keeping

- **Raise your hand** if you want to contribute to the discussion or to ask any questions.
- **Phones on silent please**.

Session 1

Time	Session name	Presenter	Delivery
8:00 am	Welcome, Housekeeping, learning objectives.	Dr Kim Nolan	GP Facilitator
8:05 am	The Antenatal Referral – the good, the bad & the ugly. The importance of the right information with completed booking investigations.	Lisa Miller Dr Kim Nolan	GP Facilitator
8:20 am	Maternity services and models of care	Lisa Miller + Midwifery Teams	Midwifery Team – ANC & MGP
8:50 am	Task 1 Breakout group – Case Discussions	Breakout	Facilitated groups
9:10 am	Pink Group Presentation – Task 1 CALD issues/Nutritional Supplements/Anaemia in Pregnancy/Hyperemesis	Group Spokesperson Dr Kim Nolan O & G Registrar	Facilitated groups Group Discussion – all PowerPoint presentation
9:40am – 10:10 am	Anomaly Screening, Genetic Carrier Screening, New MFM Capacity – MSHHS	Dr Elisha Broom	PowerPoint presentation Group Discussion – all

Session 2

Time	Session	Presenter	Delivery
10:30am	Blue Group (Task 1) – Presentation Topic: Syphilis in pregnancy; Perinatal Mental Health	Group Spokesperson Dr Kim Nolan O & G Registrar Simone Harvey, Credentialed Mental Health Nurse Practitioner, Perinatal Wellbeing Service	Case Discussion – ALL PowerPoint presentation
11:10 am	Red Group (Task 1) - Presentation Topic: Care of the Psychosocially Complex Woman in pregnancy; Termination of Pregnancy	Dr Kim Nolan Leah Sims – ADAPT Clinic	Case Discussion – ALL PowerPoint presentation
11:50 am	Green Group (Task 1) - Presentation Topic: Safer Baby Bundle & the importance of managing DFM and suspected FGR	Group Spokesperson Dr Muhammad (Rauf) Rahman	Case Discussion – ALL PowerPoint presentation
12:20 pm	Physiotherapy Services	Christie Dobson	PowerPoint presentation
12:30 pm	LUNCH		

Session 3

Time	Session	Presenter	Delivery
1:15pm	Quick Quiz	Dr Kim Nolan	ALL
1:25 pm	Task 2 Breakout group – Case Discussions	Breakout	Facilitated groups
1:45 pm	Pink Group (Task 2) - Presentation Topic: Early Pregnancy Bleeding; PUL; EPAU; Anti D use	Group Spokesperson Dr Jessica Phillips-Yelland	Case Discussion – ALL PowerPoint presentation
2:15 pm	Red Group (Task 2) - Presentation Topic: Diabetes in Pregnancy	Group Spokesperson Julia Prince, Diabetes Educator	Case Discussion – ALL PowerPoint presentation
2:45 pm	Green Group (Task 2) - Presentation Topic: Thyroid disease in pregnancy; Obesity in pregnancy including Dietitian Presentation (post bariatric surgery recommendations)	Group Spokesperson Dr Dianna Luong - Endocrinologist Naomi Scolari - Dietitian (VOPP)	
3:30 pm	Blue Group (Task 2) - Presentation Topic: Hypertension and MAC	Group Spokesperson Dr Premjit Gill	Case Discussion – ALL PowerPoint presentation
3:55 pm	Alignment requirements & certification Instruction re completion of quiz online + evaluation	Dr Kim Nolan	

Today's aim

- Educate
- Update
- Equip
- Empower

We aim to increase your familiarity with:

- The new GP Maternity Care Clinical Guideline for GP Maternity Care (in draft – HOPEFULLY APPROVED VERY SOON!!!)
- Referrals for AN care
- The lines of communication for all things maternity
- AN and PN services available in Metro South Health
- AN screening
- Managing common Antenatal presentations and complications
- Maternity Models of Care
- Online resources and learning opportunities that are relevant to our community cohort

How are we going to achieve this?

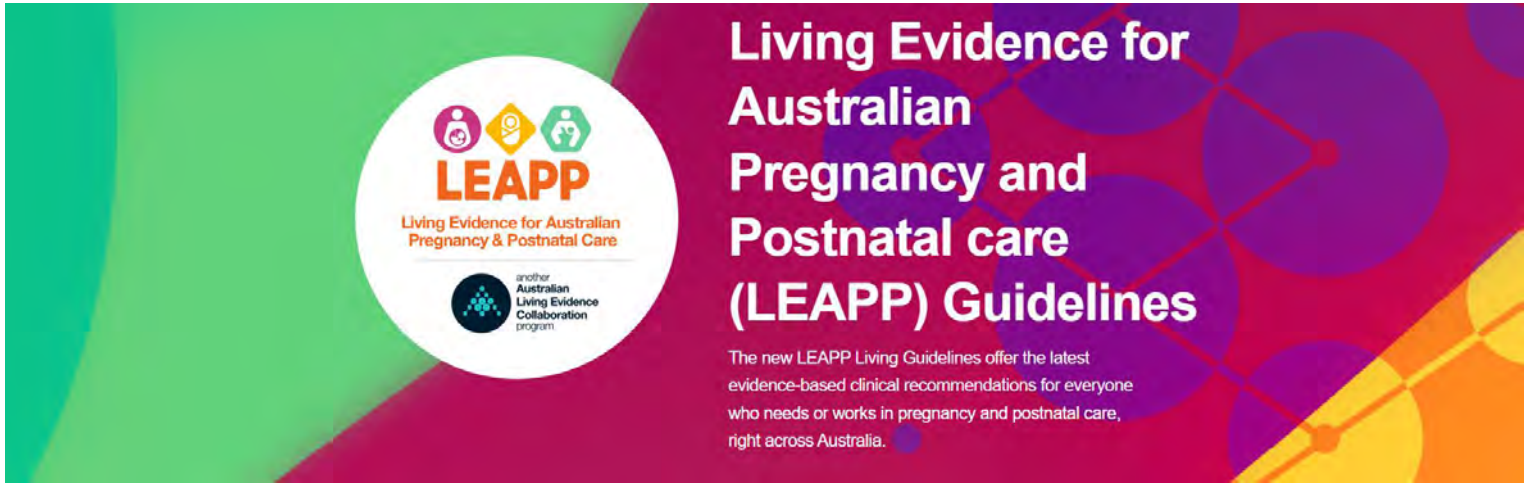
- By utilising the existing skill base within General Practice and the Maternity Team
- Highlighting the existing resources at Queensland Health, Mater Mothers' Hospital and Brisbane South Health Pathways
- Improving communication channels between primary, secondary and tertiary level care
- Managing expectations!

And ultimately…..

Improve the health outcomes for women, their babies and their children

Mother and Child: Hood by Henry Moore 1898-1986
– St Paul's Cathedral, London

Australian Pregnancy Care Guidelines



- Living Evidence in Australian Pregnancy and Postnatal Care (LEAPP) project established in 2023
- To update and establish the Pregnancy Care Guidelines as “living’ guidelines” (key recommendations in areas of uncertainty or rapidly moving research able to be continually updated, keeping pace with the best available evidence)

Pregnancy Care Guidelines currently incorporates content from the 2020 edition but will be progressively updated, with draft recommendations undergoing public consultation also being published.
Information on the date and approval status of recommendations is included with each recommendation.

Over the next five years, we’ll be updating the existing Australian Pregnancy Care Guidelines and developing new Australian Postnatal Care Guidelines, informed by the latest evidence from around the globe.

Australian Living Evidence Collaboration. (2023 version 1).
Australian pregnancy care guidelines.
https://leappguidelines.org/

Queensland Clinical Guidelines

Please incorporate the principals in this 13-page document

(play nice and communicate well = collaborate) into your everyday practice

https://www.health.qld.gov.au/__data/assets/pdf_file/0018/143505/g-sharedcare.pdf

Maternity Care Collaboration:

- dynamic process facilitating communication, trust, and decision-making pathways
- supports health professionals to collaboratively provide safe, woman-centred maternity care.
- ensures the woman is an active partner in their care.

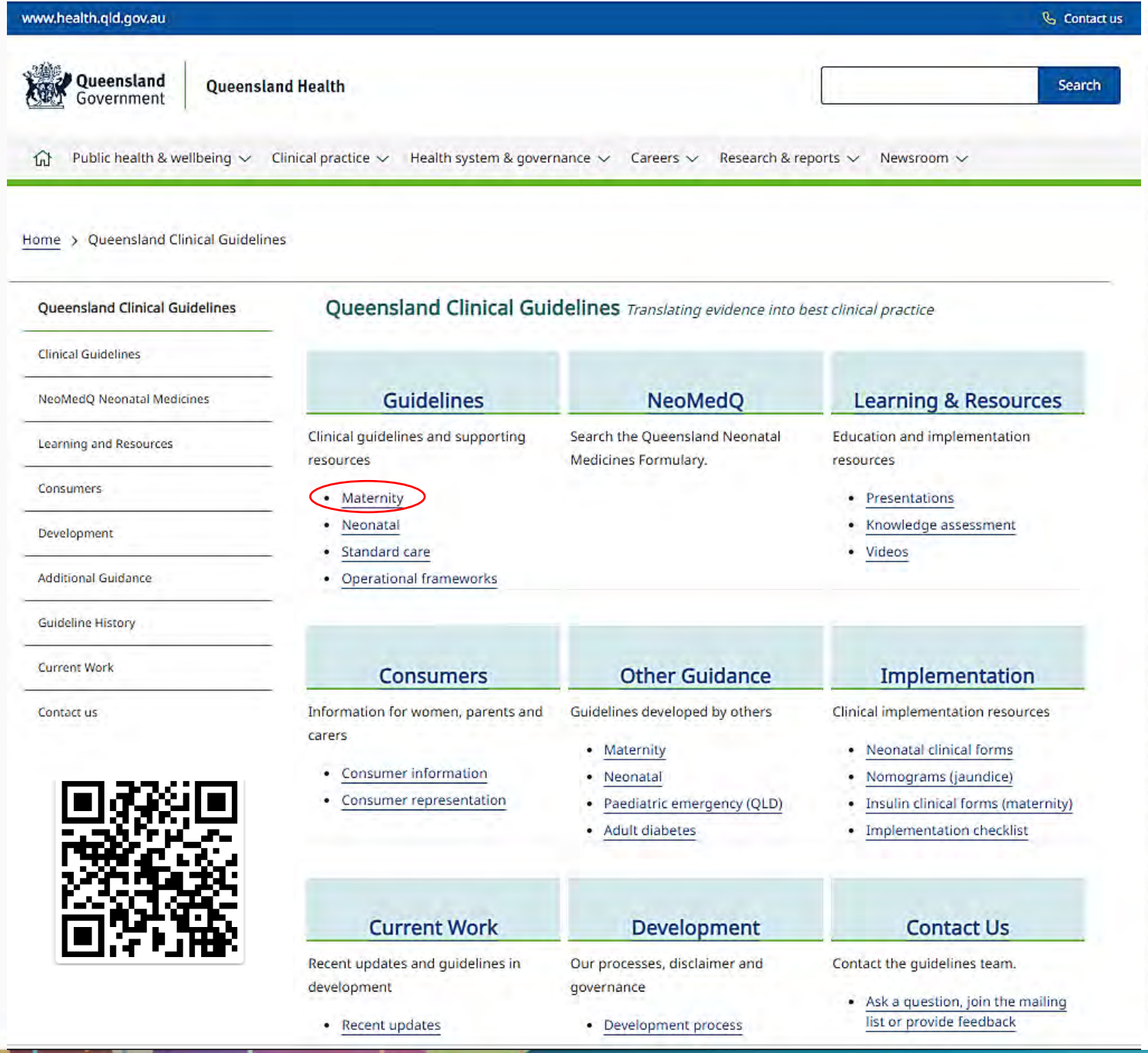
Shared Care:

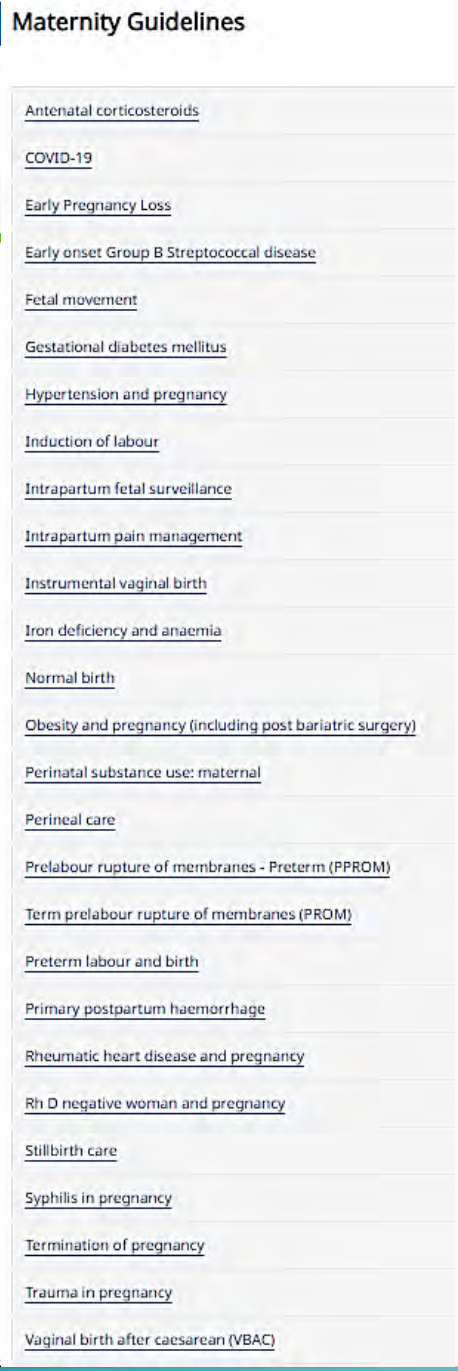
- establishment of a co-operative and collaborative relationship
- set of guidelines giving clearly defined roles & responsibilities for all providers of antenatal care
- each partner works within their scope of practice & limits of their competence/maintains adequate knowledge & skills in maternity care to provide safe care.
- goal of the safest outcomes for the woman and baby.

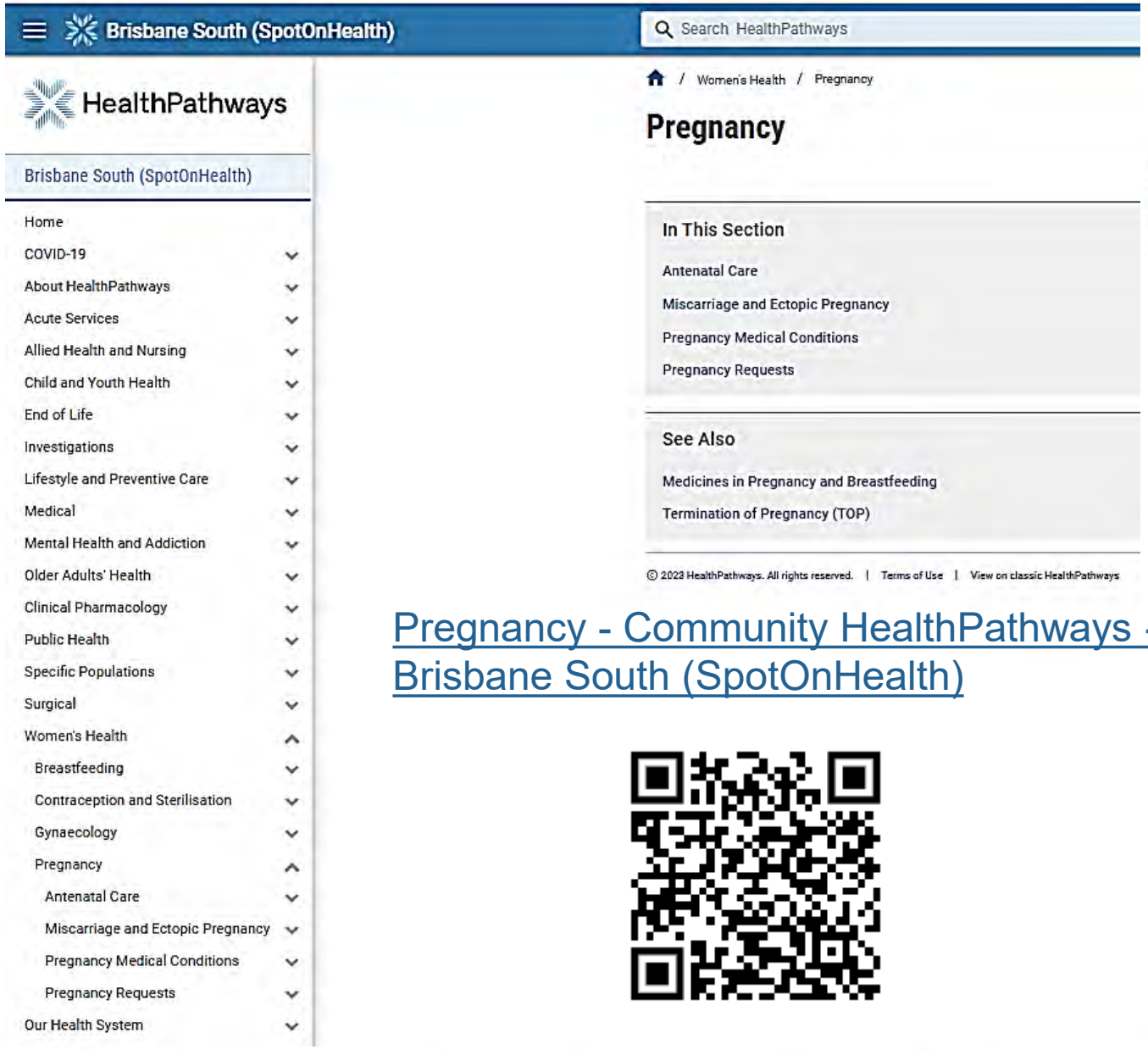
Queensland Clinical Guidelines

QHealth Maternity Guidelines has evidence-based guidelines, consumer and education resources

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







[Pregnancy - Community HealthPathways - Brisbane South (SpotOnHealth)]

/ Women's Health / Pregnancy / Antenatal Care

Antenatal Care

In This Section

- Antenatal Care - Initial
- Antenatal Care - Routine
- Bleeding in RhD Negative Women
- Maternity Models of Care
- Medicines in Pregnancy and Breastfeeding
- Pre-conception Consult
- Prenatal Screening and Diagnosis of Fetal Abnormalities

CPD Hours for HealthPathways Use

About Continuing Professional Development (CPD)

From 1 Jan 2023, the Medical Board of Australia (MBA) requires all medical practitioners (except those who are exempt) to:

- create a performance development plan.
- undertake 50 hours of CPD per year. This includes:
  - 25 hours of performance review and measuring outcomes (no less than 5 hours per category).
  - 12.5 hours of learning/educational activities.
  - 12.5 hours of free choice.

By 1 Jan 2024, all medical practitioners will need to have identified a CPD home. This is typically their Australian Medical Council (AMC) accredited specialist college:

- RACGP
- ACRRM
- AMA's CPD Home

Specialist colleges may have additional requirements to those set by the MBA, e.g.:

- RACGP requires practitioners to complete a CPR course every 3 years.
- ACRRM requires practitioners to complete an advanced life support (ALS) course every 3 years.

Using HealthPathways for CPD

HealthPathways is a source of contemporary and practical clinical information, localised to the geographical region of the medical practitioner. Application of knowledge contained within pathways to the individual patient provides an opportunity for reflection upon current understanding of the patient's clinical condition, and how it may be improved.

Australian College of Rural and Remote Medicine (ACRRM)

Complete 30 minutes of performance review and 30 minutes of educational activity:

- Enter details into the Reflective Activity Template.
- Submit to ACRRM online.

The Royal Australian College of General Practitioners (RACGP)

Complete 30 minutes of performance review and 30 minutes of educational activity:

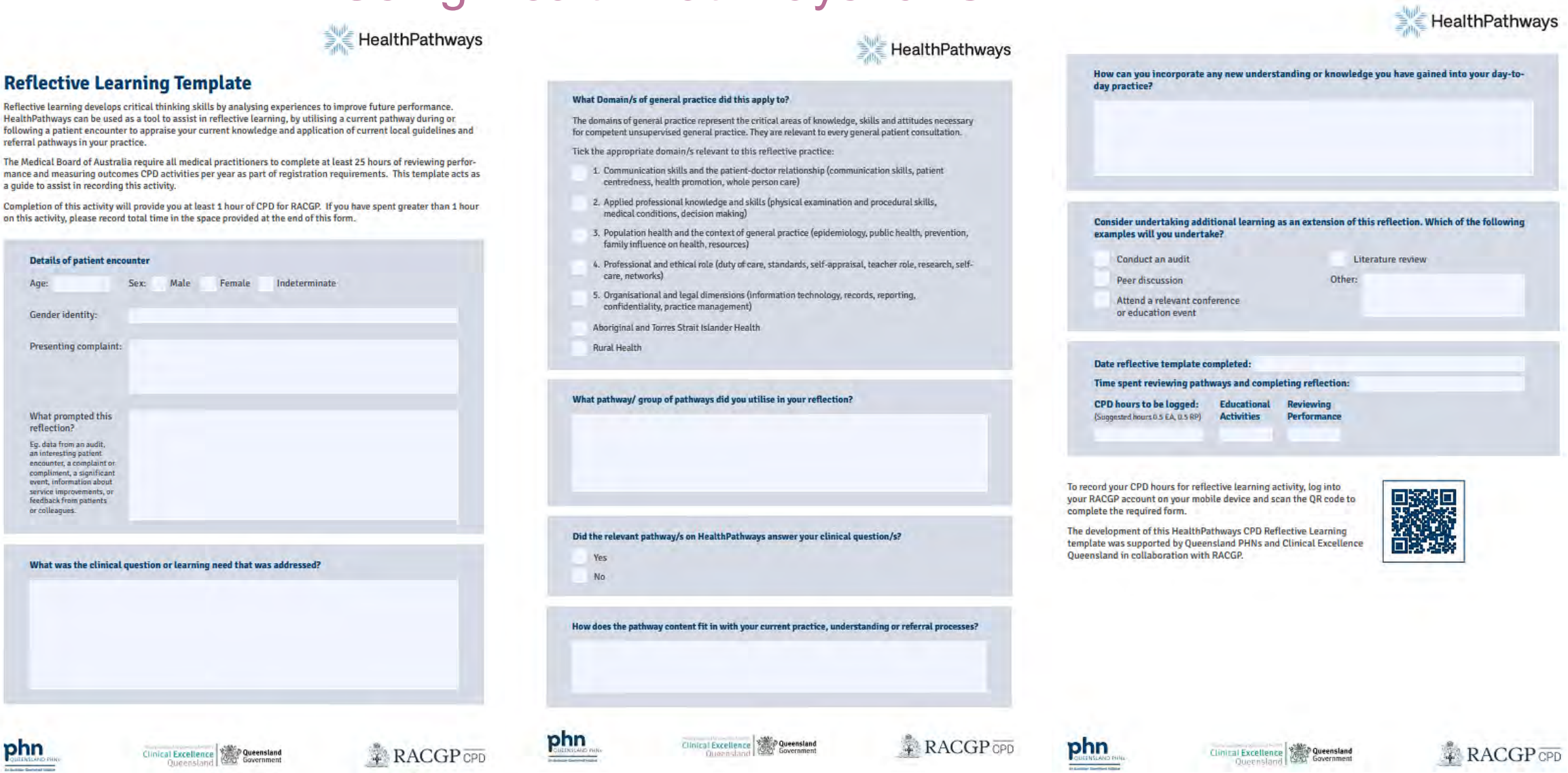
> **Educational activity**
>
> - Reading, viewing, or listening to educational material
> - Active learning courses (online or face to face)
> - Study towards formal qualifications
> - Supervised practice attachments
> - Attending lectures, forums, or workshops

> **Performance review**
>
> Measures that analyse and reflect on your actual work processes. This often includes:
>
> - feedback from peers, colleagues, and patients.
> - undertaking teaching activities, or supervising colleagues.
> - undertaking practice accreditation activities.

- Enter details into the Reflective Activity Template.
- Submit to RACGP online, or through the myCPD app (available on Android or iOS).

[CPD Hours for HealthPathways Use](https://brisbanesouth.communityhealthpathways.org/145650.htm)
https://brisbanesouth.communityhealthpathways.org/145650.htm

Using Health Pathways for CPD Points



HealthPathways

Reflective Learning Template

Reflective learning develops critical thinking skills by analysing experiences to improve future performance. HealthPathways can be used as a tool to assist in reflective learning, by utilising a current pathway during or following a patient encounter to appraise your current knowledge and application of current local guidelines and referral pathways in your practice.

The Medical Board of Australia require all medical practitioners to complete at least 25 hours of reviewing performance and measuring outcomes CPD activities per year as part of registration requirements. This template acts as a guide to assist in recording this activity.

Completion of this activity will provide you at least 1 hour of CPD for RACGP. If you have spent greater than 1 hour on this activity, please record total time in the space provided at the end of this form.

Details of patient encounter

Age: Sex: Male Female Indeterminate

Gender identity:

Presenting complaint:

What prompted this reflection?

Eg. data from an audit, an interesting patient encounter, a complaint or compliment, a significant event, information about service improvements, or feedback from patients or colleagues.

What was the clinical question or learning need that was addressed?

HealthPathways

What Domain/s of general practice did this apply to?

The domains of general practice represent the critical areas of knowledge, skills and attitudes necessary for competent unsupervised general practice. They are relevant to every general patient consultation.

Tick the appropriate domain/s relevant to this reflective practice:

1. Communication skills and the patient-doctor relationship (communication skills, patient centredness, health promotion, whole person care)
2. Applied professional knowledge and skills (physical examination and procedural skills, medical conditions, decision making)
3. Population health and the context of general practice (epidemiology, public health, prevention, family influence on health, resources)
4. Professional and ethical role (duty of care, standards, self-appraisal, teacher role, research, self-care, networks)
5. Organisational and legal dimensions (information technology, records, reporting, confidentiality, practice management)

Aboriginal and Torres Strait Islander Health

Rural Health

What pathway/ group of pathways did you utilise in your reflection?

Did the relevant pathway/s on HealthPathways answer your clinical question/s?

Yes

No

How does the pathway content fit in with your current practice, understanding or referral processes?

HealthPathways

How can you incorporate any new understanding or knowledge you have gained into your day-to-day practice?

Consider undertaking additional learning as an extension of this reflection. Which of the following examples will you undertake?

Conduct an audit

Literature review

Peer discussion

Other:

Attend a relevant conference or education event

Date reflective template completed:

Time spent reviewing pathways and completing reflection:

CPD hours to be logged: (Suggested hours 0.5 EA, 0.5 RP)	Educational Activities	Reviewing Performance

To record your CPD hours for reflective learning activity, log into your RACGP account on your mobile device and scan the QR code to complete the required form.

The development of this HealthPathways CPD Reflective Learning template was supported by Queensland PHNs and Clinical Excellence Queensland in collaboration with RACGP.

phn Clinical Excellence Queensland Queensland Government RACGP CPD

https://brisbanesouth.communityhealthpathways.org/files/Resources/CPDReflectiveLearningTemplateV1.3RACGP.pdf

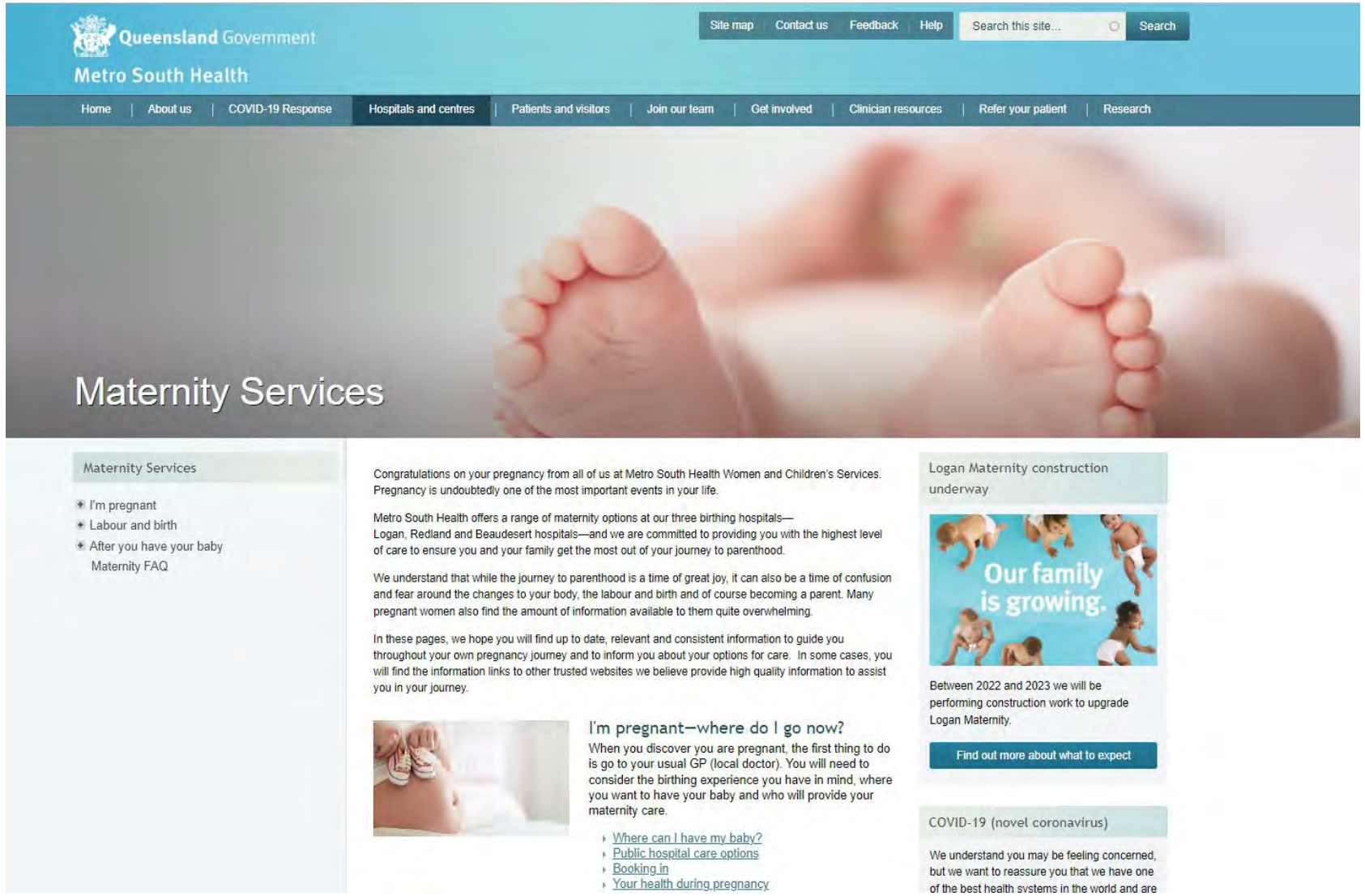
For your CPD points & reviewing performance AM1 Sat 25th May 2024

Pink Case – Task 1	**Blue Case – Task 1**	**Red Case – Task 1**	**Green Case – Task 1**
3 Things Learnt	3 Things Learnt	3 Things Learnt	3 Things Learnt
1.	1.	1.	1.
2.	2.	2.	2.
3.	3.	3.	3.
How will your patient care change?	How will your patient care change?	How will your patient care change?	How will your patient care change?

Online resources

- Metro South Health GP Maternity Care Clinical Guidelines – in Draft
- Australian Pregnancy Guidelines - Living Guidelines
- Queensland Clinical Guidelines - Maternity
- Metro South Health Refer Your Patient
- Mater Mothers' Hospital GP Maternity Shared Care Guidelines – 2023 version
- RANZCOG education resources – Statements and Guidelines Directory
- Australian Society of Infectious Diseases – Management of Perinatal Infections - 2022
- GP Learning (RACGP)
- Australasian Diabetes in Pregnancy Society
- Brisbane South Health Pathways – Antenatal Care
- Safer Baby Bundle Online education and resources
- Syphilis in Pregnancy Clinical Guidelines and resources
- Healthy Pregnancy Healthy Baby
- Metro South Health Maternity Services website

MSHHS Maternity Services page



https://metrosouth.health.qld.gov.au/maternity-services

MSHHS Maternity Services page

Pregnancy

When you discover you are pregnant, you will need to consider the birthing experience you have in mind, where you want to have your baby and who will provide your maternity care. This will help you to make choices that are best for you and your family.

- Where can I have my baby?
- Maternity care options
- Booking in
- Your health during pregnancy

Labour and birth

Find information about labour, birth, our facilities and what to do when you come to hospital:

- Stages of labour
- General birth information
- If birth needs a helping hand

Metro South Health has three birthing hospitals:

- Beaudesert Hospital
- Logan Hospital
- Redland Hospital

After you have your baby

Information about what happens after you have your baby:

- Following birth
- Postnatal care
- Baby care
- Special care nurseries
- Going home from hospital

Maternity FAQ

A list of commonly asked questions about our maternity services.

Public hospital care options

If you plan to give birth at public hospital, you can choose the type of care that best suits the needs of you and your family.

The choices of care sometimes vary between public hospitals.

Read about the options at public maternity hospitals in the Metro South Health area:

Mater Mothers' (Public) Hospital +

Logan Hospital −

We offer the following choices for your maternity care:

- GP shared care
- Hospital midwifery care
- Private midwifery care
- Specialist obstetric care
- Community Maternity and Child Health Hubs (for eligible women)

GP shared care

In GP shared care, your usual doctor (also known as your GP – general practitioner) provides most of your care during your pregnancy.

Shared care is a popular choice for women who are healthy with a normal pregnancy. You have most of your appointments close to your home or work, and you get to build a relationship with your doctor that continues after your baby is born.

In GP shared care:

- most of your appointments will be at your GP's office
- you will attend 3-4 appointments at Logan Hospital
- your baby will be born at Logan Hospital.

Hospital midwifery care

In this model, you will receive your care during pregnancy and birth from a team of midwives based at Logan Hospital. You may see different midwives at each appointment.

A midwife is a health professional who is highly trained in providing care, education and advice to

from late 2020

Between 2020 and 2022 we will be performing construction work to upgrade Logan Maternity.

Find out more about what to expect

COVID-19 (novel coronavirus)

We understand you may be feeling concerned, but we want to reassure you that we have one of the best health systems in the world and are prepared to tackle novel coronavirus (COVID-19).

More information about what to expect

https://metrosouth.health.qld.gov.au/maternity-services/pregnancy/public-hospital-care-options

Follow along on your device if you wish……..

Resources

Please find below useful GP Shared Care Resources, including the Brisbane South Antenatal Shared Care Summary document, and PDF versions of our most recent AM1 PowerPoint presentations, as well as the Online Bridging module. Please note that these presentations will be updated to the most recent version periodically, which may be different to the slides from an Alignment education event you have attended.

- Brisbane South Antenatal Shared Care Summary (PDF, 693.5 KB)
- MSH AM1 Seminar November 2023 - PowerPoint (PDF, 23.34 MB)

https://metrosouth.health.qld.gov.au/events/gp-maternity-shared-care-alignment-1-logan-beaudesert-redland

The first appointment. Women's choices in pregnancy

Helen is a 27-year-old healthy G1P0 who presents for advice with LNMP 5 weeks ago and three positive home pregnancy tests!

She has private health insurance, but thinks it is only singles cover. She has done some online research, checked out the blogs and is a bit confused. Some mothers prefer a private obstetrician (should she simply self-insure if she's not covered and how much will that cost?); others swear by midwifery care (but she's read she needs to ask for the continuity of care model; can she be sure she'll get it and what does it mean?); and she found you on the site for Aligned GPs – you are nice and close to where she lives and what is the difference between GP, midwife and obstetrician care anyway?

You have 15 minutes, what do you tell her?

What resources can you recommend?

The antenatal referral

- Quality and completeness of the antenatal referral is an important component to the start of the women's pregnancy care journey.
- Content of the referral assists our maternity team partners with the information required to triage the referral in a timely manner, and dependent upon a woman's individual personal and clinical needs, allocate a woman to the right maternity model of care.
- Please includes all relevant personal and clinical information to enable an informed consultation, or safe and timely transfer of care.
- Referrals are required to include blood reports and scan reports as per recommended best practice for booking pregnancy care (Queensland Health 2021).
- All women should be referred to the local hospital.

When should you send the referral to the Central Referral Hub?

The antenatal referral journey

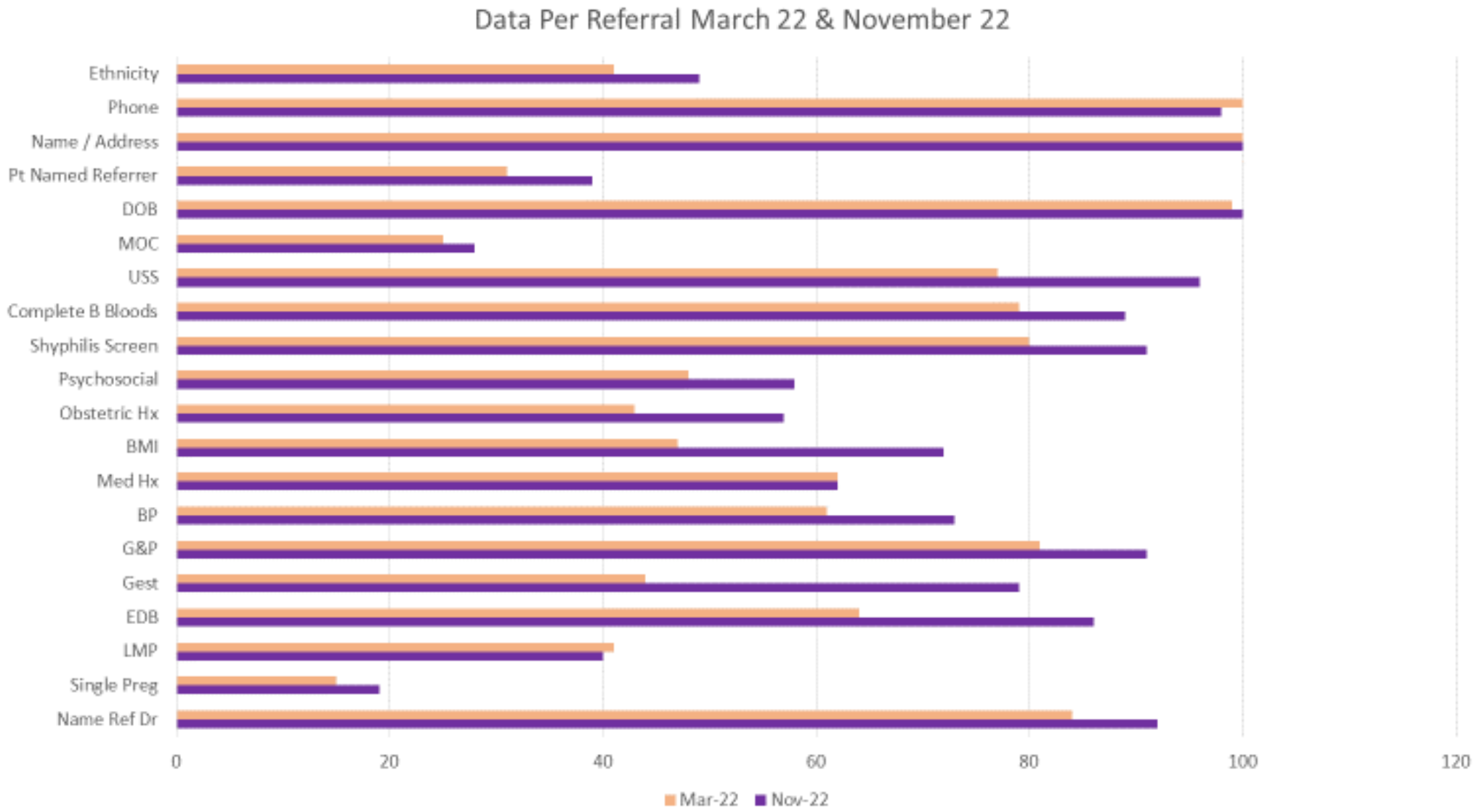
- Your referrals (about 600+/month) for antenatal care usually come into the Central Referral Hub (CRH). The Hub sits within the Primary Care Partnership Unit , Metro South Health.

- Once they reach the “inbox”, the referral goes straight to the requested Maternity Services (Redland, Logan, Beaudesert)

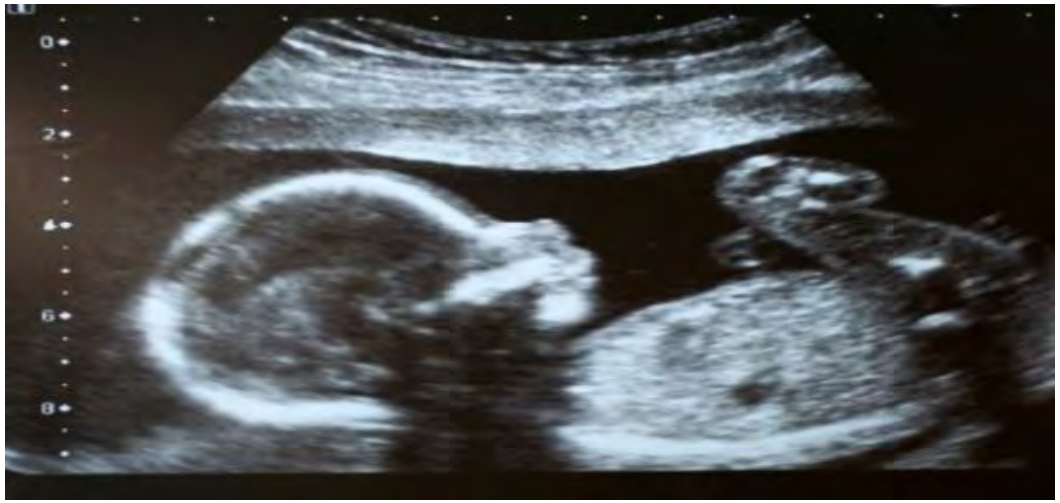
- In AN clinic, the admin officer checks the referral for demographic details, then logs for triage by the Obstetrician or midwife.

- The women then receives an appointment for a booking appointment with a midwife +/- Obstetrician.

Audit Results: 100 referrals March vs November 2022



Routine blood tests, tests and scans



Booking Investigations:

These are part of the essential referral information for ALL Antenatal referrals -

Accessible on the MSHHS Refer Your Patient website – Antenatal and Maternity

https://metrosouth.health.qld.gov.au/referrals/antenatal

AND

Brisbane South Health Pathways – Antenatal Care- Initial

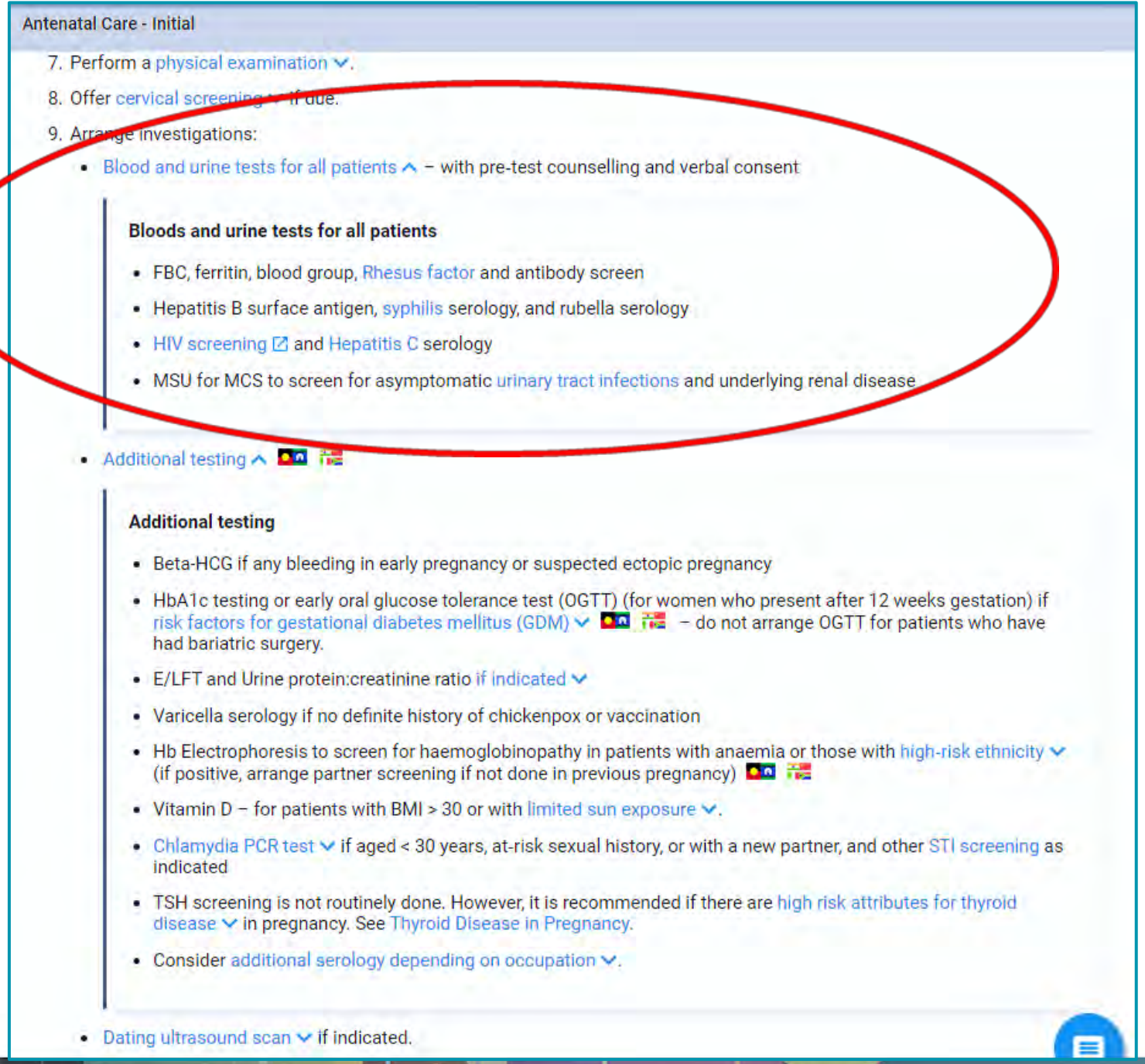
https://brisbanesouth.communityhealthpathways.org/37932.htm

Antenatal Referral ESSENTIAL CRITERIA

[Antenatal - Referrals to Antenatal and Maternity](#) – Refer Your Patient

Essential referral information for Antenatal referrals (Referral will be returned without this)

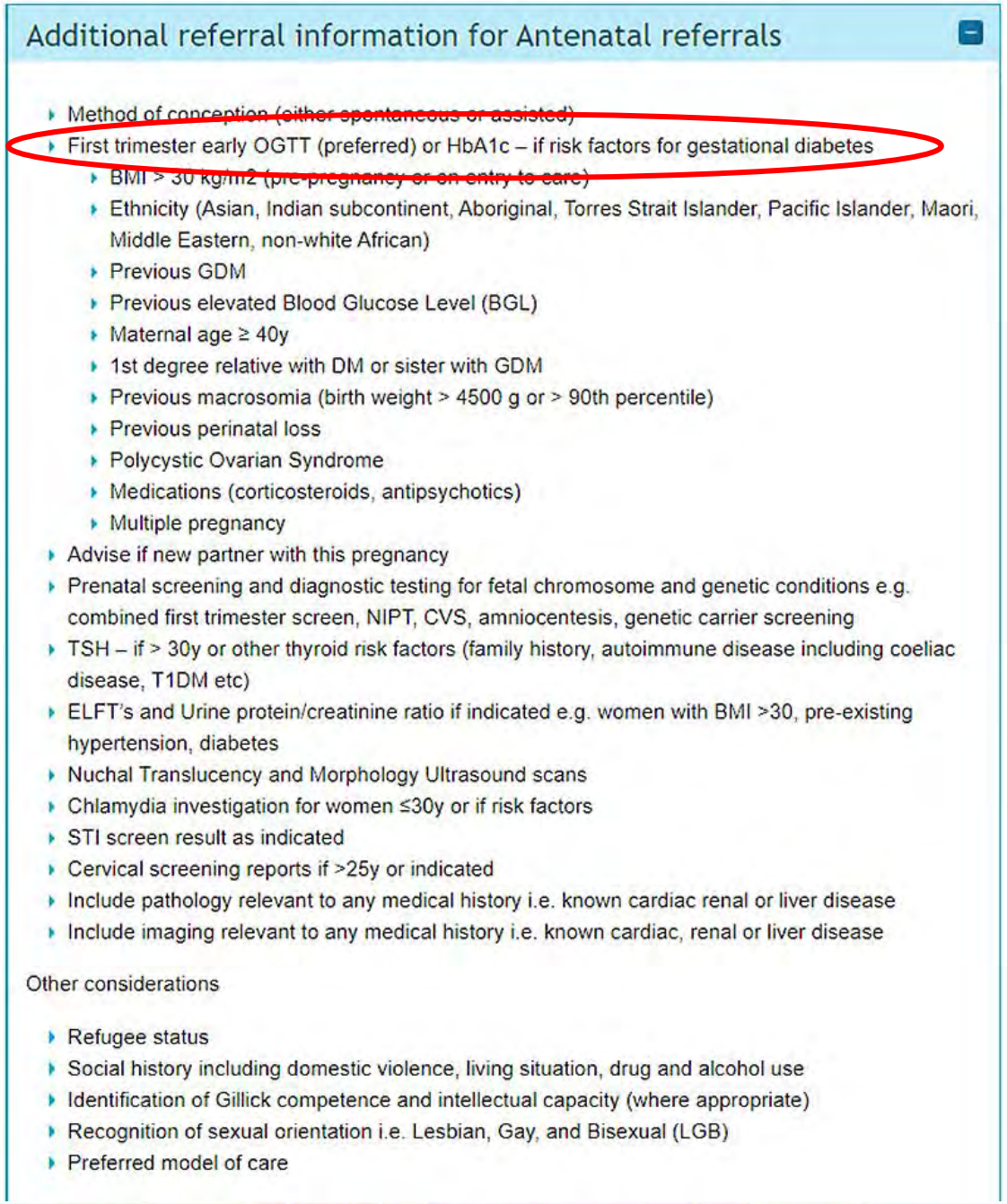
- Current pregnancy (*ensure early referral if risk factors identified, all referrals preferred by twelve weeks where possible)
  - Gravidity, Parity
  - LNMP (Last normal menstrual period),
  - EDB (Estimated Date of Birth)
  - Single or multiple pregnancy
  - Confirmation of pregnancy (positive urine or serum B-HCG)
  - BMI
  - BP
  - Routine antenatal bloods: FBC, Ferritin, blood group and antibody screen, rubella antibody screen, hepatitis B serology, hepatitis C serology, HIV serology, syphilis serology, Mid-Stream Urine for MCS
  - Dating Ultrasound scan (if available)
- Past Obstetric history (if known) - for each previous pregnancy please provide details of outcome:
  - Date of birth, gestation, mode of birth, birth weight, place of birth
  - Any pregnancy complications e.g. GDM (Gestational Diabetes Mellitus), fetal growth restriction, pre-eclampsia, APH (antepartum haemorrhage)
  - Any birth complications e.g. PPH (Postpartum Haemorrhage), preterm birth, stillbirth, pre-existing birth trauma
  - Previous neonatal admission to SCN/NICU and reason
  - Miscarriage
  - Ectopic pregnancy
  - Termination of pregnancy
- Summary of relevant medical, surgical, and psychosocial history including details of any risk factors/co-morbidities (e.g. diabetes, obesity, bariatric surgery, asthma, cardiac, renal or liver disease, hypertension, eating disorders, mental health concerns etc)
- Current medications including psychotropic drugs such as Sodium Valproate, Lithium and other medication with recognised fetal implications
- Indigenous status, Ethnicity and language spoken (identify if interpreter is required)
- Drug, alcohol, and smoking history



Brisbane South Health Pathways

Antenatal Care- Initial

https://brisbanesouth.communityhealthpathways.org/37932.htm



Additional referral information for Antenatal referrals

- Method of conception (either spontaneous or assisted)
- First trimester early OGTT (preferred) or HbA1c – if risk factors for gestational diabetes
  - BMI > 30 kg/m2 (pre-pregnancy or on entry to care)
  - Ethnicity (Asian, Indian subcontinent, Aboriginal, Torres Strait Islander, Pacific Islander, Maori, Middle Eastern, non-white African)
  - Previous GDM
  - Previous elevated Blood Glucose Level (BGL)
  - Maternal age ≥ 40y
  - 1st degree relative with DM or sister with GDM
  - Previous macrosomia (birth weight > 4500 g or > 90th percentile)
  - Previous perinatal loss
  - Polycystic Ovarian Syndrome
  - Medications (corticosteroids, antipsychotics)
  - Multiple pregnancy
- Advise if new partner with this pregnancy
- Prenatal screening and diagnostic testing for fetal chromosome and genetic conditions e.g. combined first trimester screen, NIPT, CVS, amniocentesis, genetic carrier screening
- TSH – if > 30y or other thyroid risk factors (family history, autoimmune disease including coeliac disease, T1DM etc)
- ELFT's and Urine protein/creatinine ratio if indicated e.g. women with BMI >30, pre-existing hypertension, diabetes
- Nuchal Translucency and Morphology Ultrasound scans
- Chlamydia investigation for women ≤30y or if risk factors
- STI screen result as indicated
- Cervical screening reports if >25y or indicated
- Include pathology relevant to any medical history i.e. known cardiac renal or liver disease
- Include imaging relevant to any medical history i.e. known cardiac, renal or liver disease

Other considerations

- Refugee status
- Social history including domestic violence, living situation, drug and alcohol use
- Identification of Gillick competence and intellectual capacity (where appropriate)
- Recognition of sexual orientation i.e. Lesbian, Gay, and Bisexual (LGB)
- Preferred model of care

Antenatal Referral Additional Information

https://metrosouth.health.qld.gov.au/referrals/antenatal

Dating Scans …yes, or no?

Pregnancy Care Guidelines recommends GPs should provide information and offer pregnant women who are unsure of their conception date an ultrasound scan between 8 weeks 0 days & 13 weeks 6 days to determine gestational age, detect multiple pregnancies and accurately time fetal anomaly screening (Grade B evidence).

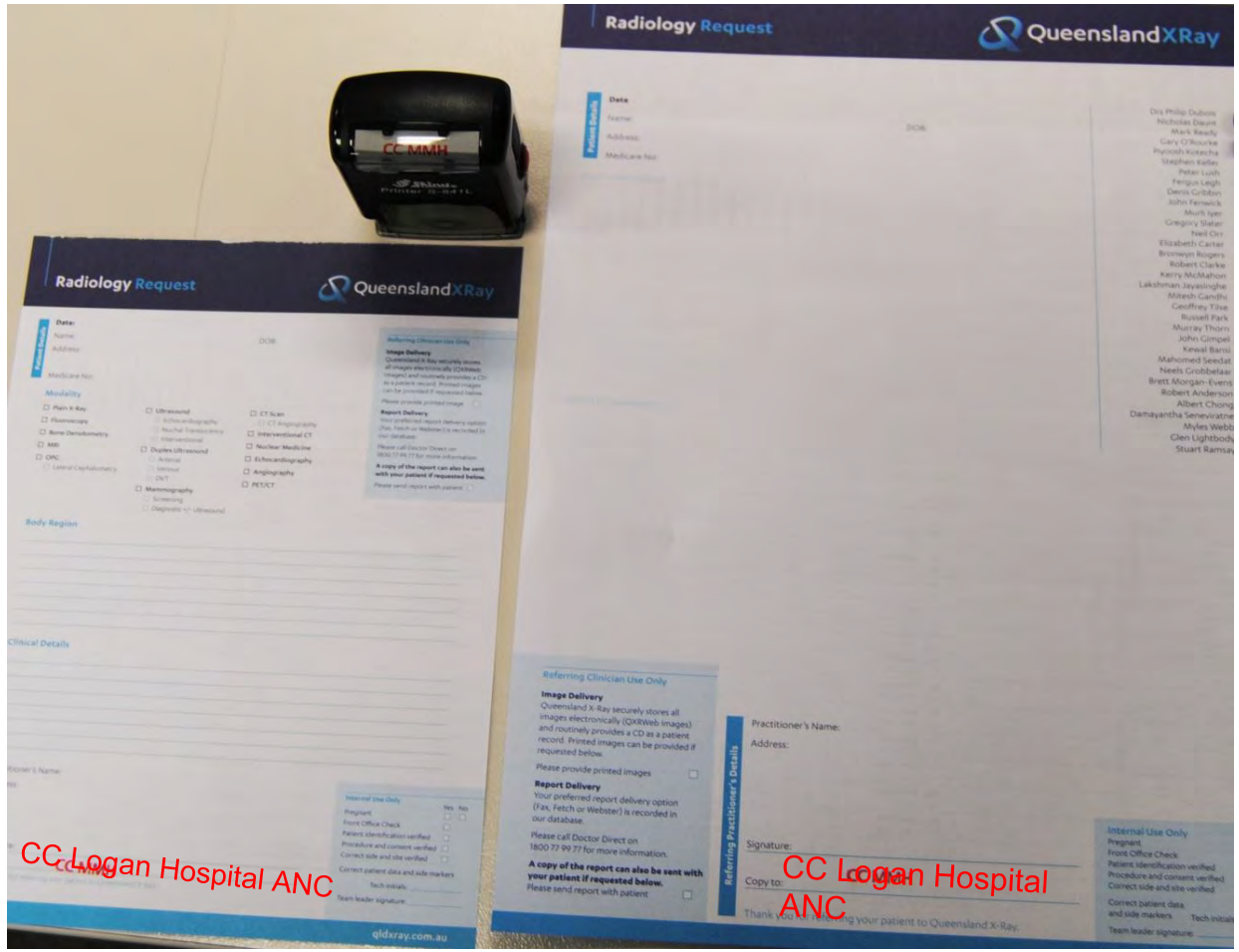
Ultrasound scans < 5 weeks are unreliable at detecting intra-uterine pregnancy.

- **Always** if unsure of LMP
- Irregular Menstrual Cycle
- Abdominal pain or bleeding in early pregnancy
- Conception within 3/12 of a miscarriage
- Conception while breastfeeding or within 3/12 of breastfeeding cessation
- Conception while taking OCP or within 3/12 of cessation
- Conception within 9/12 of Depo-Provera injection
- Women planning to undergo CFTS or NIPT testing
- Women with pre-existing hypertension, diabetes or other medical condition that may influence pregnancy risks (including high BMI)
- Women with previous GDM /high GDM risk
- Previous ectopic pregnancy
- Conception as a result of assisted reproduction
- Woman's choice

Please cc ANC on all pathology and radiology

Practice Point: If you order pathology electronically i.e. not handwritten request, and CC ANC in on that form, results are uploaded to patient's my HR record and can then be accessed at hospital via their "Viewer".

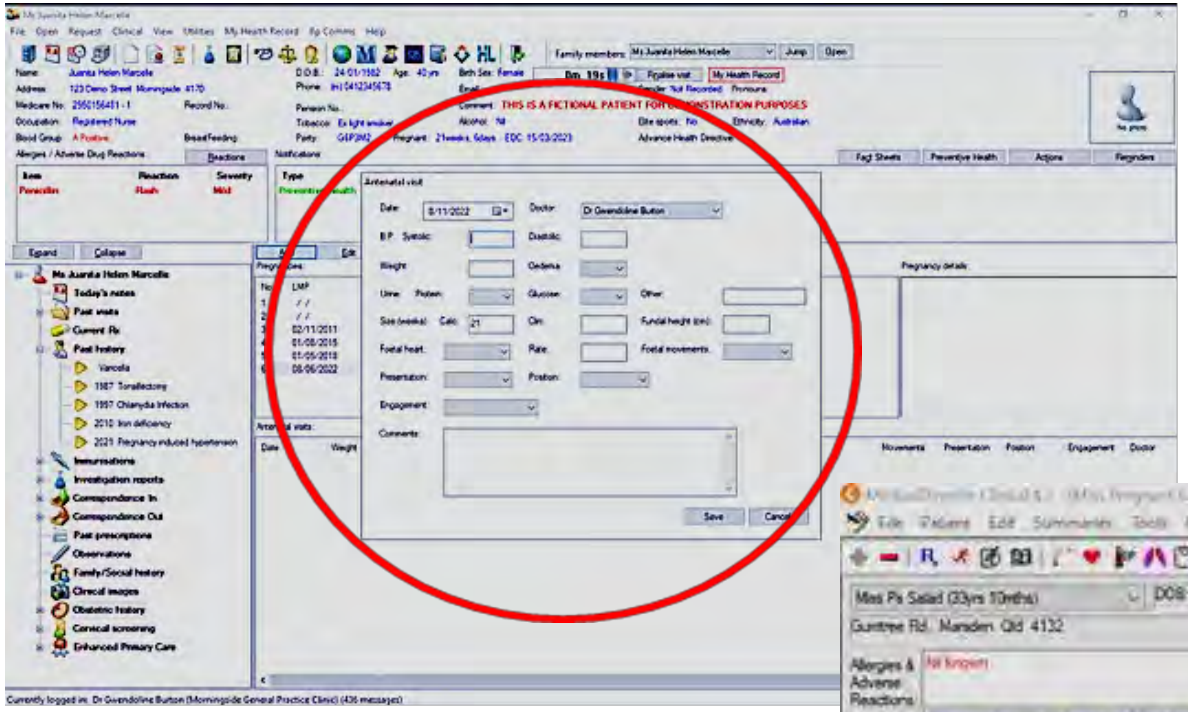
Not yet available for Radiology reports, although this is planned to become the "default" during 2024.



Management of abnormal test results

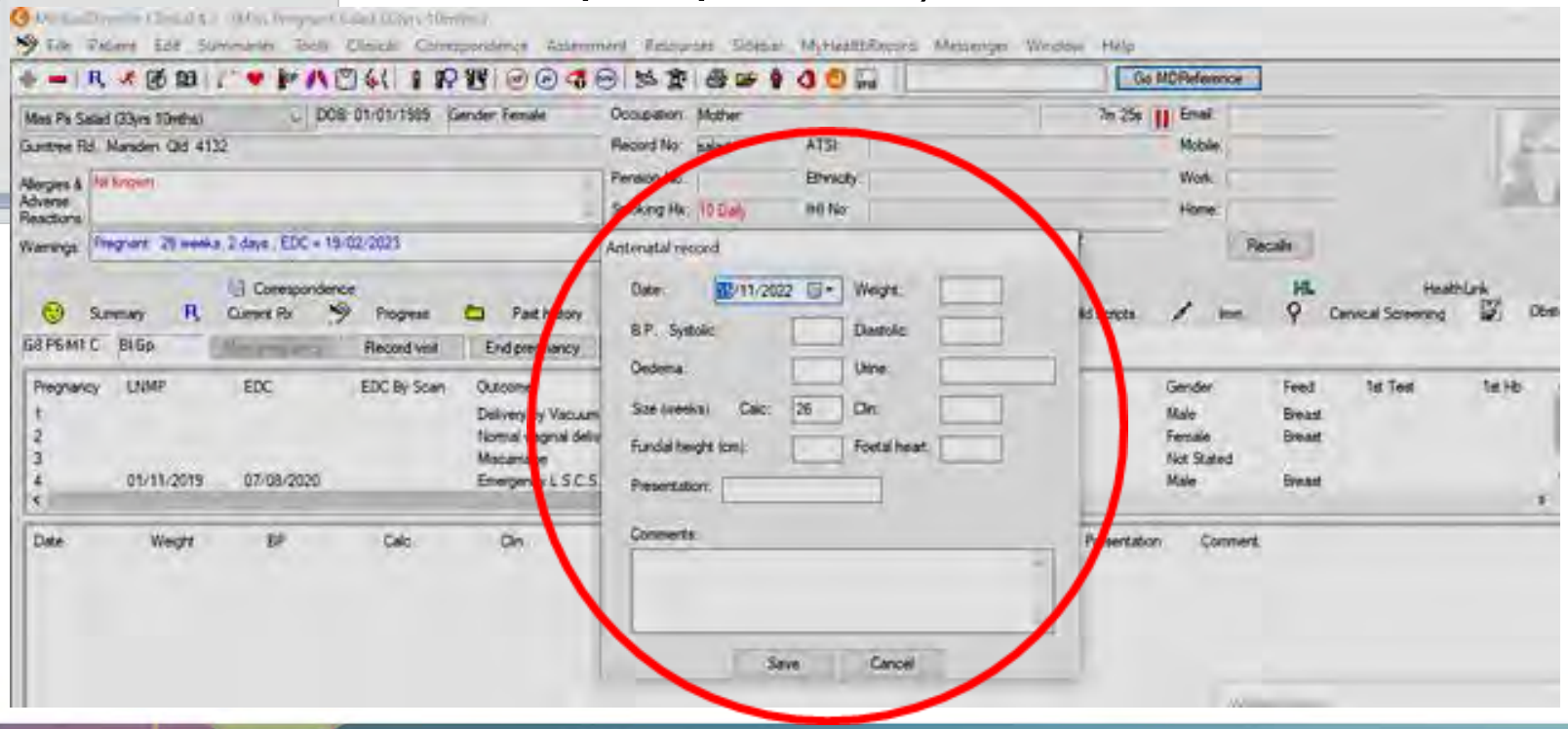
- When you order a test or scan, you are responsible for sending a copy to the hospital AN clinic regardless of the result
- The **clinician who orders the test is responsible for follow up** and prompt referral when appropriate
- What to do with what you have found can be guided by the MSH GP Maternity Shared Care Guideline (in draft) or phone the GPLO Maternity Midwife/GP or Obstetrician/Registrar on call
- An abnormal result may prompt you to contact the booking hospital to discuss further management or arrange review.
- Communicate the care you have initiated – by documenting your actions in the Pregnancy Health Record (or print the visit note from your software Obstetric tab) or phoning/faxing the ANC.

Where are you recording your antenatal visits?

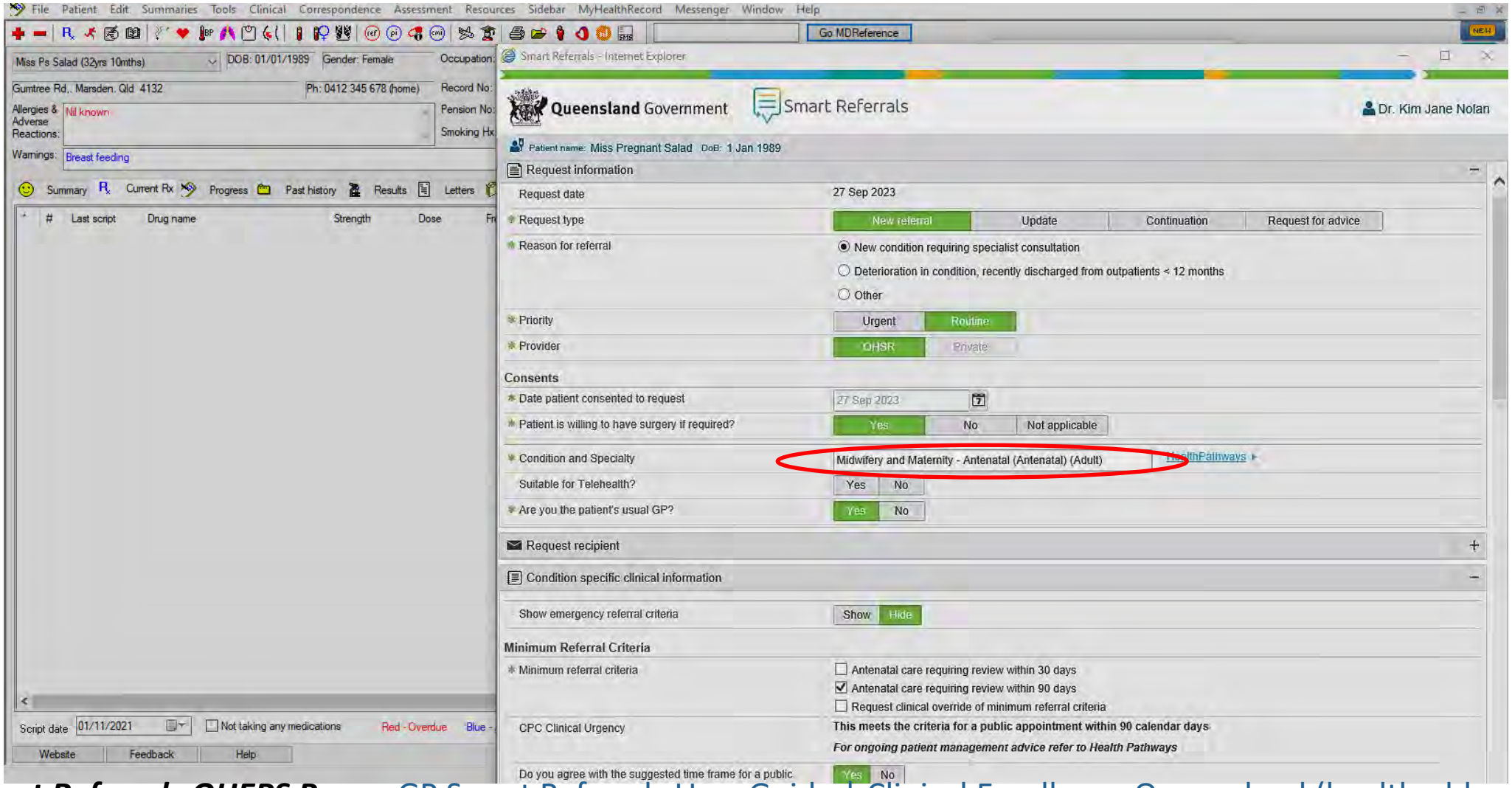


Use the obstetric tabs in your software!

- easy to enter data/reminders of essential checks
- easy to print a copy for PHR
- ready for digital maternity record (must keep hope alive!)



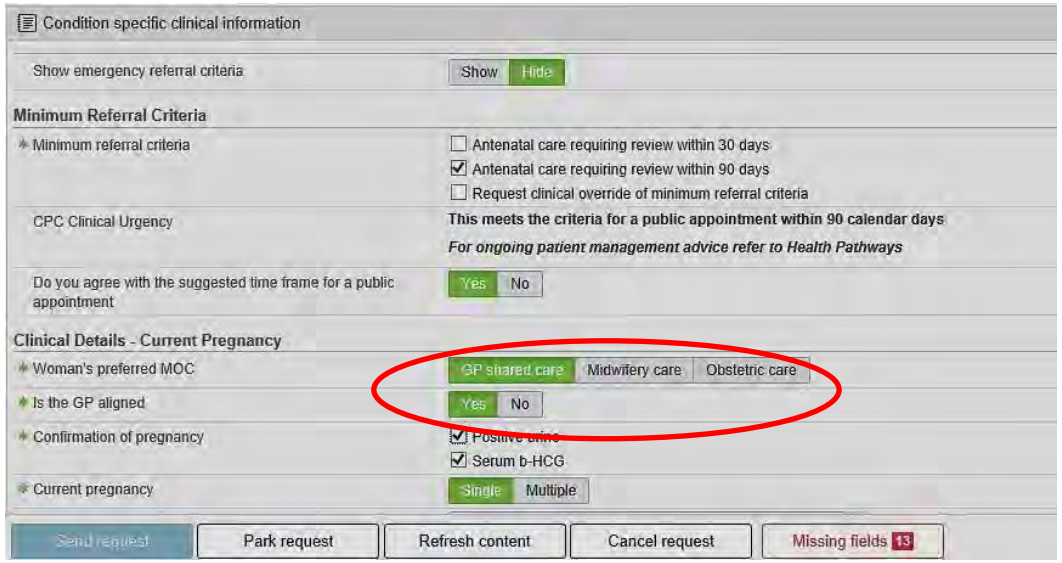
GP Smart Referral – Midwifery and Maternity Antenatal – Adult

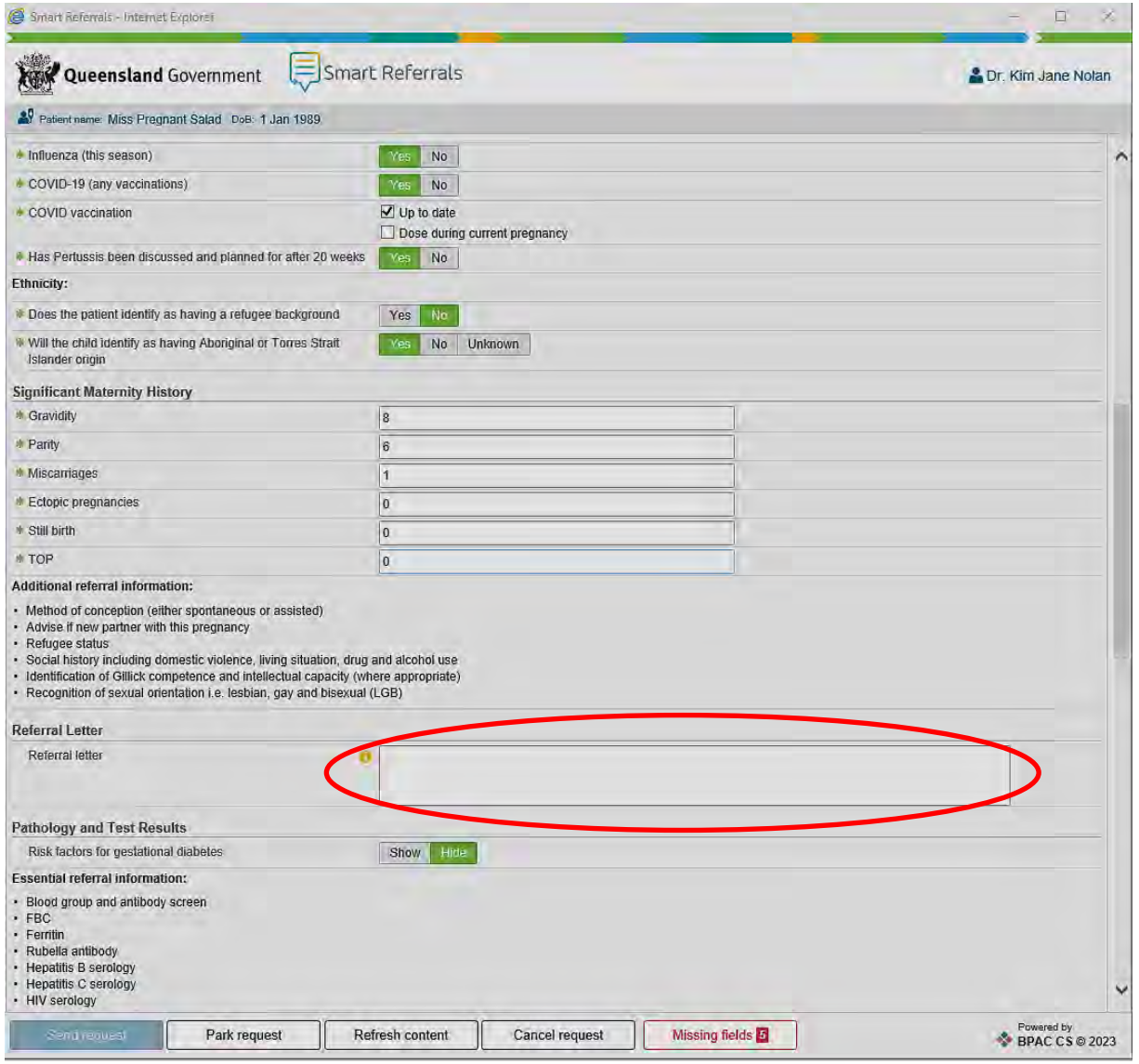


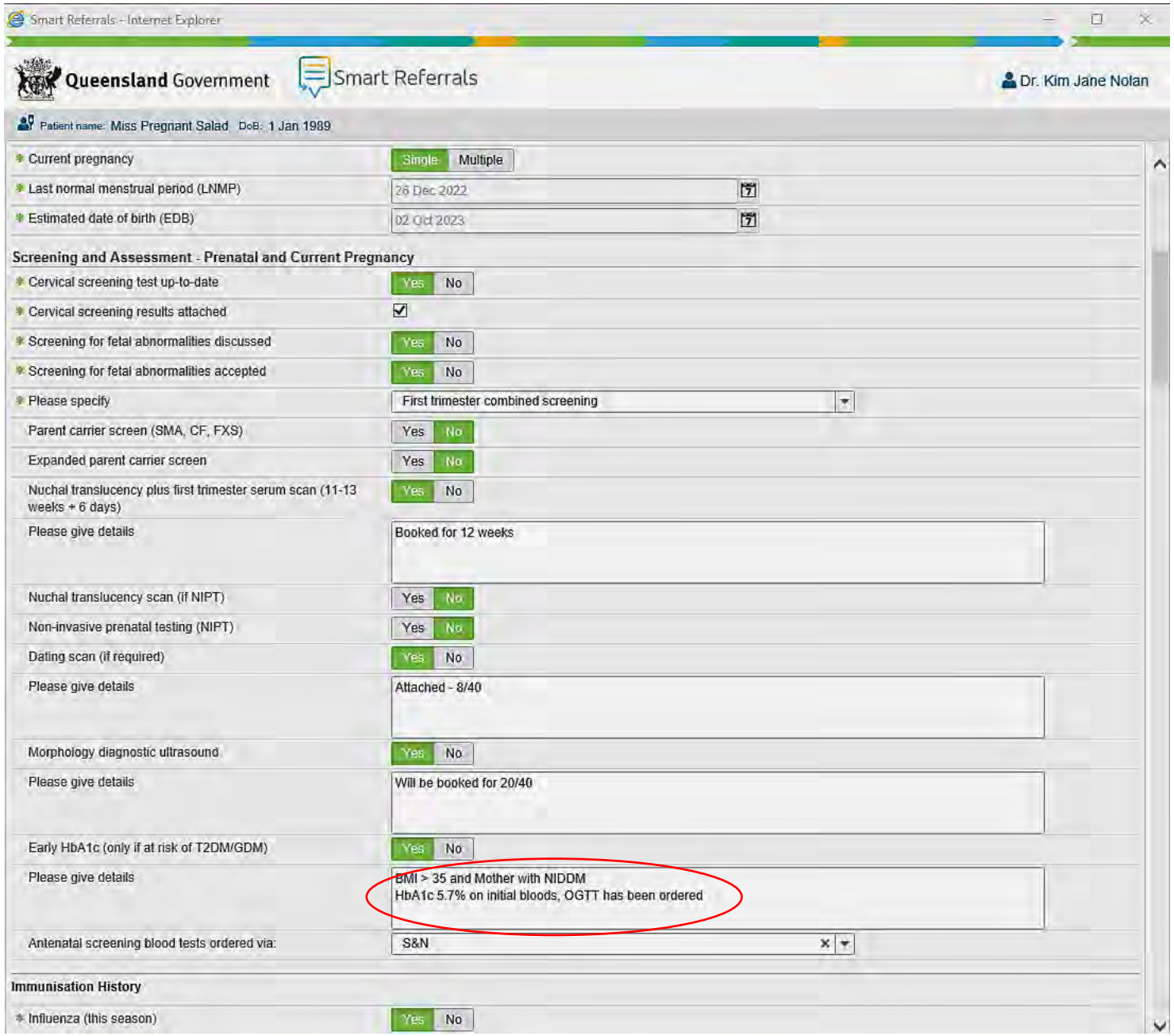
Smart Referrals QHEPS Page: [GP Smart Referrals User Guide | Clinical Excellence Queensland (health.qld.gov.au)]

GP Smart Referrals Page: Smart Referrals resources | Queensland Health

GP Smart Referral – Midwifery and Maternity







Include details of extra investigations you have ordered, and if beyond the routine, why you have done so.

Remember to include details of any management you have instituted as a result of these assessments e.g., Higher dose folate recommended, UTI treated, Thyroxine dose increased, Low dose Aspirin commenced

Maternity GP SMART REFERRAL is "live" – continuing work is in progress on improving

Please continue to use "Refer Your Patient - Antenatal and Maternity" & Brisbane South HEALTHPATHWAYS (https://brisbanesouth.communityhealthpathways.org/24567.htm) to:

- Keep up to date with changes to clinical guidelines e.g. Obesity and Pregnancy (including post bariatric surgery), GDM screening, Prenatal Screening
- Know about Maternity Services in Metro South Health
- **Complete referral** assists MSH Maternity Team with triage of referrals into the right Maternity Models of care **= IMPROVED CARE FOR YOUR PATIENT**
- Of particular importance is:
  - Ethnicity and language spoken
  - Indigenous/refugee status
  - PLUS, choice of model of care - Indicate if you are an "aligned GP" and if the women's choice of model is GP Maternity Share Care

Tips to referring in a timely manner

- Identify medical and social risks and any other indications, to **optimise** planning for safe and appropriate care
- Ongoing referrals can then be made for specialist care if required
- Make any important information **easy to find** in the referral
- Include **Baseline BP** and **current BMI** in referral please
- Women with chronic medical conditions should be referred for AN care **as soon as possible** after the pregnancy is diagnosed
- Allows time for the maternity team to liaise with other specialists if required.
- PRE-PREGNANCY Assessment Clinic (Logan Hospital) available if these women present preconception.

In the first trimester/before the woman is seen in antenatal clinic or with an MGP midwife, YOU are responsible for care, so please consider.....

- Is an early OGTT (or first TM HBA1C if can't tolerate OGTT) indicated?
- Is early use of Aspirin indicated to be commenced before the end of the first TM?
- Are TFT's indicated –high-risk attributes for thyroid disease in pregnancy listed @ Antenatal Care - Initial - Community HealthPathways SpotOnHealth (Brisbane South).

  If the TSH is > 2.5, consider commencement of thyroxine and if so, notify ANC!

DOCUMENT any treatment commenced in your referral.

For women who are over 40 years of age

Aim to have an early obstetric appointment - preferably before 14/40

Send the referral BEFORE the FTCS/NT

Women aged 40 and over will see the Obstetrician at 36 weeks to discuss and plan IOL at 39 weeks

Communication is a two-way street …..

Women identified as suitable for MGP can be directed to these services early if the appropriate information is in the referral.

Most women will be seen initially for a booking in visit with a hospital midwife, and by the Obstetrician either at time of booking or about 20 weeks when the MOC confirmed.

GPs should then receive correspondence confirming the woman's model of care, along with a Pregnancy Management Plan (Logan Hospital - completed by the Obstetrician), or a letter from other hospitals confirming MOC

Referrals beyond the local maternity hospitals e.g. patients with complex medical issues/ specialist care at other hospitals e.g. at MNH/RBWH, or to MMH may be accepted out of catchment, but usually only after discussion with or on the recommendation of the local Obstetrician.

Pregnancy Management Plan – EXAMPLE

Name Ms TH
UR: 0000000
DOB :17-Sep-1988
Consultant Name : HASTHIKA ELLEPOLA
Sign Date : 01-OCT-2020 15:19

Age: 32 Years
EDD: 18/02/21
G1 P0
Booking at K20 weeks + 0 days
Previous births: nil
BMI: 22
Blood group: A-positive
Antibodies: Negative

USS: EDD 18/02/21 (USS at 9 weeks and 5 days)
USS: FTCS, aneuploidy not detected
USS: Morphology - pending, Tue 6 Oct 2020- GP to check on results

Pre-pregnancy risk assessment and management

Past Medical – migraine , Depression
Past Surgical - Nil
Medication - Nil
Systemic review CVS, RS, ABDOMEN, BREAST , THYROID , SKIN - Normal

Antenatal risk assessment and management

Antenatal bloods at 26 weeks: GTT, FBC, Grouping and Antibody test, Ferritin, Syphilis Serology - **GP to organise and verify results please**
Antenatal bloods at 36 weeks: FBC, Grouping and Antibody test- **GP to organise and verify results please**

Delivery management plan

Keen on a vaginal birth

Post-natal

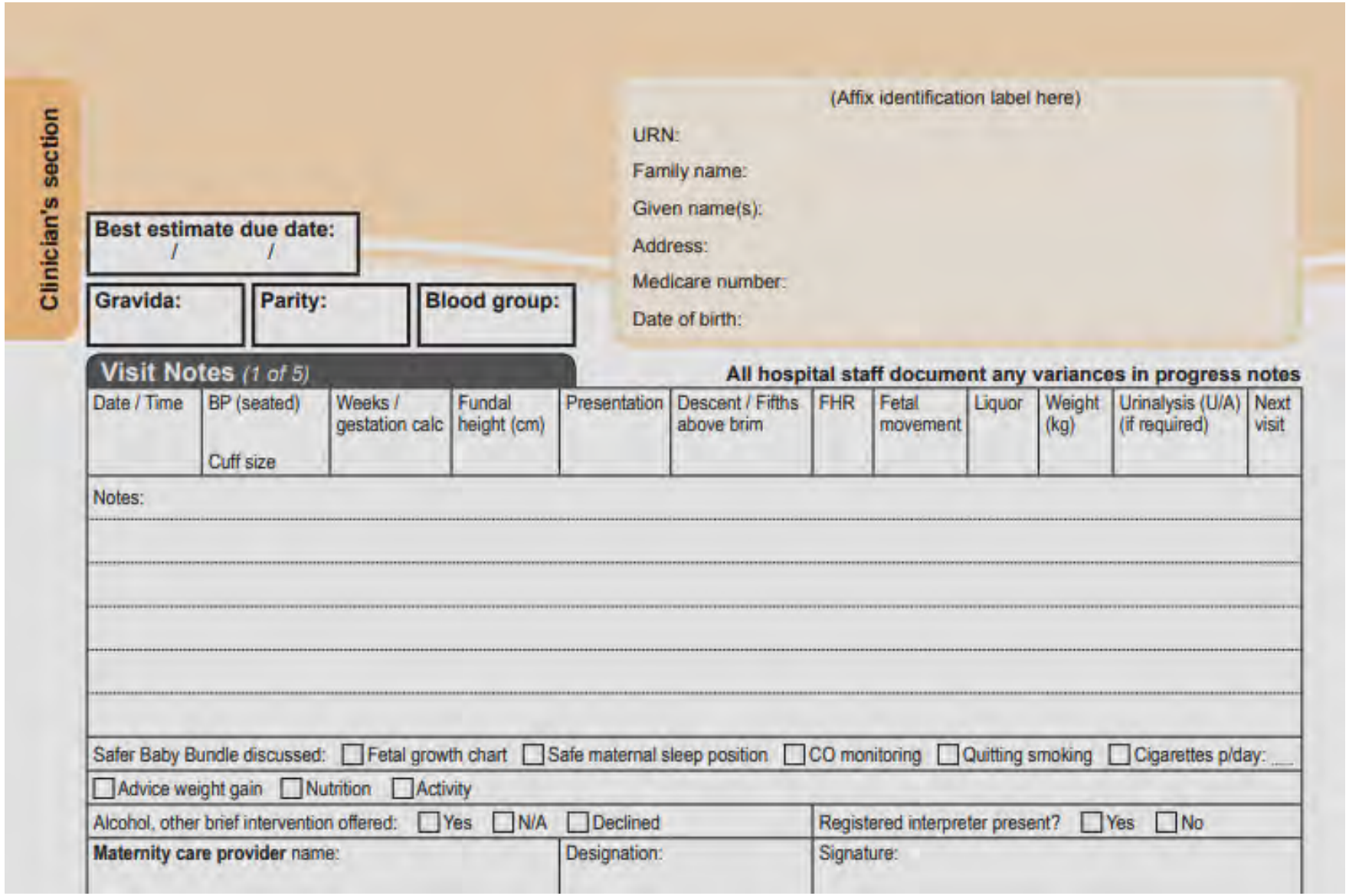
Education on breastfeeding by the Midwifery team
CST- **To be organise by GP 6-12 Weeks postnatal**
Education on Mental health
High risk for Postnatal depression

Follow up plan

1**. Modified shared care with GP**

ANC DR - 36, 40 – Schedule by Logan hospital ANC
CR - 22Weeks Morphology US; 28 Weeks GTT
GP - 24, 28, 30, 32, 34,38

The initial plan has been discussed and agreed by the patient



Clinician's section

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Medicare number:

Date of birth:

Best estimate due date: / /

Gravida:

Parity:

Blood group:

Visit Notes *(1 of 5)*

All hospital staff document any variances in progress notes

Date / Time	BP (seated) Cuff size	Weeks / gestation calc	Fundal height (cm)	Presentation	Descent / Fifths above brim	FHR	Fetal movement	Liquor	Weight (kg)	Urinalysis (U/A) (if required)	Next visit

Notes:

Safer Baby Bundle discussed: ☐ Fetal growth chart ☐ Safe maternal sleep position ☐ CO monitoring ☐ Quitting smoking ☐ Cigarettes p/day: ___

☐ Advice weight gain ☐ Nutrition ☐ Activity

Alcohol, other brief intervention offered: ☐ Yes ☐ N/A ☐ Declined

Registered interpreter present? ☐ Yes ☐ No

Maternity care provider name:

Designation:

Signature:

Pregnancy Health Record – please use this well-crafted document (updated version available at Pregnancy Health Record | Queensland Health)

Pregnancy Health Record
Queensland Health

(Affix identification label here)

URN:
Family name:
Given name(s):
Address:
Medicare number:
Date of birth:

Clinician's section

Recommended Minimum Antenatal Schedule Checklist *(continued)*

28 weeks — *Refer to items to be discussed at every visit*

- ☐ Influenza immunisation discussed
- ☐ Timing of birth for women with stillbirth individual risk factors discussed
- ☐ VTE Risk assessment
- ☐ Where to access help in the community
- ☐ Pathology results checked (Rh Antibody screen completed)
- ☐ First dose of Anti D for Rh D negative woman attended (page b3)
- ☐ Immunisation for dTpa (diphtheria, tetanus and pertussis) administered (recommended before 32 weeks)
- ☐ SUDI (includes SIDS and accidents) discussed
  - Refer to *Guideline: Safer Infant Sleep*
- ☐ Side sleeping discussed
- ☐ SAFE Start or similar tool

31 weeks — *Refer to items to be discussed at every visit*

- ☐ Timing of birth for women with stillbirth individual risk factors discussed
- ☐ Booked into Birthing classes
- ☐ Length of hospital stay discussed
- ☐ Birth preferences discussed (page b5)
- ☐ Side sleeping discussed
- ☐ Follow-up ultrasound for identified complexity (e.g. placental position), if required
- ☐ Postnatal community supports discussed (i.e. Child Health Service)
- ☐ Advise family to have booster immunisation (i.e dTpa [diphtheria, tetanus and pertussis])

34 weeks — *Refer to items to be discussed at every visit*

- ☐ Timing of birth for women with stillbirth individual risk factors discussed
- ☐ Discuss signs of labour and when to come to hospital
- ☐ Birth preferences reviewed and discussed
- ☐ Second dose of Anti D for Rh D negative women attended (page b3)
- ☐ EPDS repeated and recorded
- ☐ Side sleeping discussed
- ☐ Antenatal expressing of breast milk and safe storage discussed (if applicable)
- ☐ Order full blood count (FBC), ferritin (if indicated) and syphilis serology (if required)
- ☐ Perineal massage discussed

36 weeks — *Refer to items to be discussed at every visit*

Visit at 36 weeks, then as clinically indicated every 1–2 weeks until 41 weeks:

- ☐ Timing of birth for women with stillbirth individual risk factors discussed
- ☐ Discuss signs of labour and when to come to hospital
- ☐ Breast feeding education revisited
- ☐ Ensure has contact numbers for Birth Suite and healthcare provider
- ☐ Referral to child health service if required
- ☐ SAFE Start or similar tool
- ☐ Side sleeping discussed
- ☐ SUDI (includes SIDS and accidents) discussed
  - Refer to *Guideline: Safer Infant Sleep*
- ☐ Review Birth Suite video tour (if available)
- ☐ Contraception discussed
- ☐ Vitamin K discussed
- ☐ Hepatitis B Immunisation discussed

At 36 weeks:

- ☐ Elective caesarean section booked (if applicable)
- ☐ Blood results reviewed
- ☐ VTE risk assessment

38 weeks — *Refer to items to be discussed at every visit*

- ☐ Timing of birth for women with stillbirth individual risk factors discussed
- ☐ Blood results reviewed
- ☐ Side sleeping discussed
- ☐ Discuss signs of labour and when to come to hospital
- ☐ Breastfeeding information reviewed

40 weeks — *Refer to items to be discussed at every visit*

- ☐ Discuss signs of labour and when to come to hospital
- ☐ Side sleeping discussed
- ☐ Induction of labour for 41+0 weeks plus or minus membrane sweep discussed

41 weeks — *Refer to items to be discussed at every visit*

- ☐ Assessment of maternal and baby wellbeing completed (arrange for CTG if indicated)
- ☐ Induction of labour by 42 weeks re-discussed (if applicable)
- ☐ Side sleeping discussed
- ☐ Monitoring if indicated as per current fetal surveillance guidelines

Comments (note gestation week):

(Affix identification label here)

URN:
Family name:
Given name(s):
Address:
Medicare number:
Date of birth:

Clinician's section

Immunisation

All vaccinations are required to be reported to the Australian Immunisation Register. *Complete signature log on page a1.*

Rh D immunoglobulin (Rh D negative women only) Blood group:	☐ 28 weeks If *no*, reason:		Initials:
	Date given: ___/___/___	Batch number:	
	☐ 34–36 weeks If *no*, reason:		Initials:
	Date given: ___/___/___	Batch number:	
dTpa (diphtheria, tetanus and pertussis) vaccine *(recommended 20–32 weeks)*	☐ Discussed ☐ Declined	Gestation: weeks	Initials:
	Date given: ___/___/___	Batch number:	
COVID-19 vaccination	☐ Declined ☐ Yes ☐ Up-to-date	Date last given: ___/___/___	Initials:
Influenza vaccine *(recommended at any gestation)*	☐ Declined ☐ Yes ☐ No	Gestation: weeks	Initials:
	Date given: ___/___/___	Batch number:	
Other	Specify:	Gestation: weeks	Initials:
	Date given: ___/___/___	Batch number:	

Antenatal Screening Tests

Preconception screening: ☐ Yes ☐ No Comments:

Date	Gestation (weeks)	**Findings** (document follow-up and management plan on page a11)
/ /		Estimated due date by dating scan
/ /		Screening tests (11–13 weeks + 6 days) • PaPP-A: ___ MoM • NT: ___ mm • EDD: ___/___/___ • ☐ Chance of: ___ 1 in ___ • ☐ NIPT (optional): Low chance: ___ High chance: ___
/ /		Reproductive carrier screening – preconception/early pregnancy: ☐ Yes ☐ No Outcome: ☐ Low chance result ☐ High chance result
/ /		Morphology scan Cervical length (if known): ___ mm (TA/TV) ☐ TA <35mm ☐ TV <25mm Vaginal progesterone discussed/prescribed: ☐ Yes (document intervention on page a12) ☐ No Placenta: ☐ Anterior ☐ Posterior ☐ Fundal ☐ Low lying ☐ Clear of the OS Fetal morphology: ☐ No abnormalities detected
/ /		Additional scans (plot scan results on graphs)

(Affix identification label here)

URN:
Family name:
Given name(s):
Address:
Medicare number:
Date of birth:

Woman's section

Additional Information

Useful information for your pregnancy:
www.qld.gov.au/health/children/pregnancy/pregnancy-health-record-resources
(Scan the QR code for further information on the following topics to support you during the antenatal period)

Prenatal screening:
Prenatal guides and resources to help support expectant parents and inform the process of prenatal testing.

Shared decision-making resources for consumers:
Resources and tips to help you understand your role in the shared decision-making process.

Pelvic floor in pregnancy:
Information on pelvic floor exercises, good bladder and bowel habits and where to go for help.

Safer Baby Bundle:
Provides information about how to reduce the risk of stillbirth.

Perineal care:
Information about perineal care.

Vaccine during pregnancy:
Find out why vaccination during pregnancy is the best way to protect yourself and your baby from disease.

Healthy hearing:
Further information on newborn hearing screening.

Safe infant sleeping:
Further information on safe infant sleeping.

Hepatitis B:
Most important things you need to know about hepatitis B, pregnancy and breastfeeding.

Queensland Clinical Guidelines:
Information for consumers and carers.

Mental health and wellbeing:
For practical advice on emotional wellbeing and mental health for you, your baby and your family.

Partnering with the woman who declines recommended maternity care:
Resource to support you and your health provider to jointly plan maternity care.

Correct use of seat belts in pregnancy:
Information about the correct use of seatbelts in pregnancy.

Nutrition in pregnancy:
The *Australian Dietary Guidelines* provide advice on eating for health and wellbeing of infants, children and adults.

Physical activity in pregnancy:
It is important to remain active during pregnancy. There are benefits for both yourself and your baby.

Dental health:
Keeping teeth and gums healthy during pregnancy is important for both mum and babies.

Information for parents and carers:
Useful resources on pregnancy, birthing and newborns is available on the Queensland Health website.

Newborn bloodspot screening test:
The test and answers some common questions raised by parents.

Vitamin K for newborn babies:
Information and advice on the importance of receiving vitamin k for newborn babies.

Pre-pregnancy Assessment Clinic

- Women with high medical or obstetric risk can be referred to a Preconception Clinic at **Logan Hospital** when planning a pregnancy – Weekly in Gynaecology Clinic (Ambulatory Building 2)
- Purpose of clinic - provide comprehensive assessment, counselling and optimisation of conditions prior to future pregnancies.
- Patients may be referred from 6-8/52 post a pregnancy to discuss planning for a subsequent pregnancy.
- The clinic is not intended for examinations or procedures.

Patients with the following conditions meet the criteria for referral to the Clinic. The conditions may be **pre-existing or new onset during a recent pregnancy:**

- Poorly controlled GDM patients on Metformin (>2.5grams/day) - internal referral.
- Type 1 or 2 Diabetes
- Thyroid conditions and other endocrine disorders
- Haematological/Respiratory/Cardiology/Renal/Hepatic and Gastrointestinal/Connective tissue/Neurological Disorders
- Infectious diseases
- Genetic conditions
- Previous poor obstetric outcomes

Please ensure that appropriate investigations are completed prior to clinic review. For example, if the patient has a renal condition it is expected that FBC, E/LFT's, Urine M/C/S and Cytology +/- renal ultrasound would have been organised and results ready to be discussed at the review appointment.

Maternity models of care in Australia

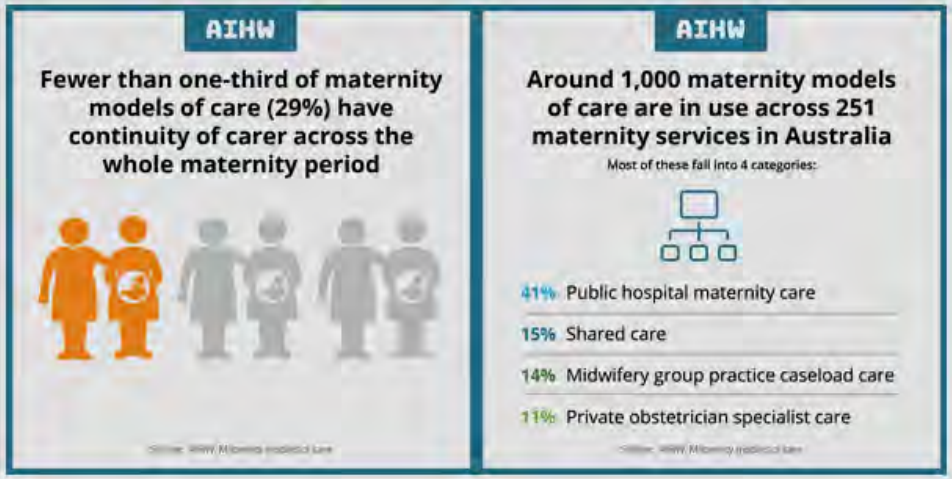
New release from the Australian Institute of Health and Welfare: Maternity models of care in focus

Wednesday, 11 October 2023

Maternity models of care in focus

About the release:

Around 1,000 maternity models of care are in use across 251 maternity services and these fall into 11 model categories. This infocus report examines the different models of care available across Australia in 2023 and the continuity of care within these. It also uses Queensland perinatal data as a case study to explore, for the first time, the number of women using different models of care in Queensland, whether these vary by maternal characteristics, and selected outcomes for mothers and babies by model of care. This infocus report is a companion to Maternity models of care in Australia.



[Maternity models of care in Australia](https://communications.aihw.gov.au/link/id/zzzz6526073e583ee339Pzzzz5e3ba12b03e02626/page.html)
https://communications.aihw.gov.au/link/id/zzzz6526073e583ee339Pzzzz5e3ba12b03e02626/page.html

Metro South Health

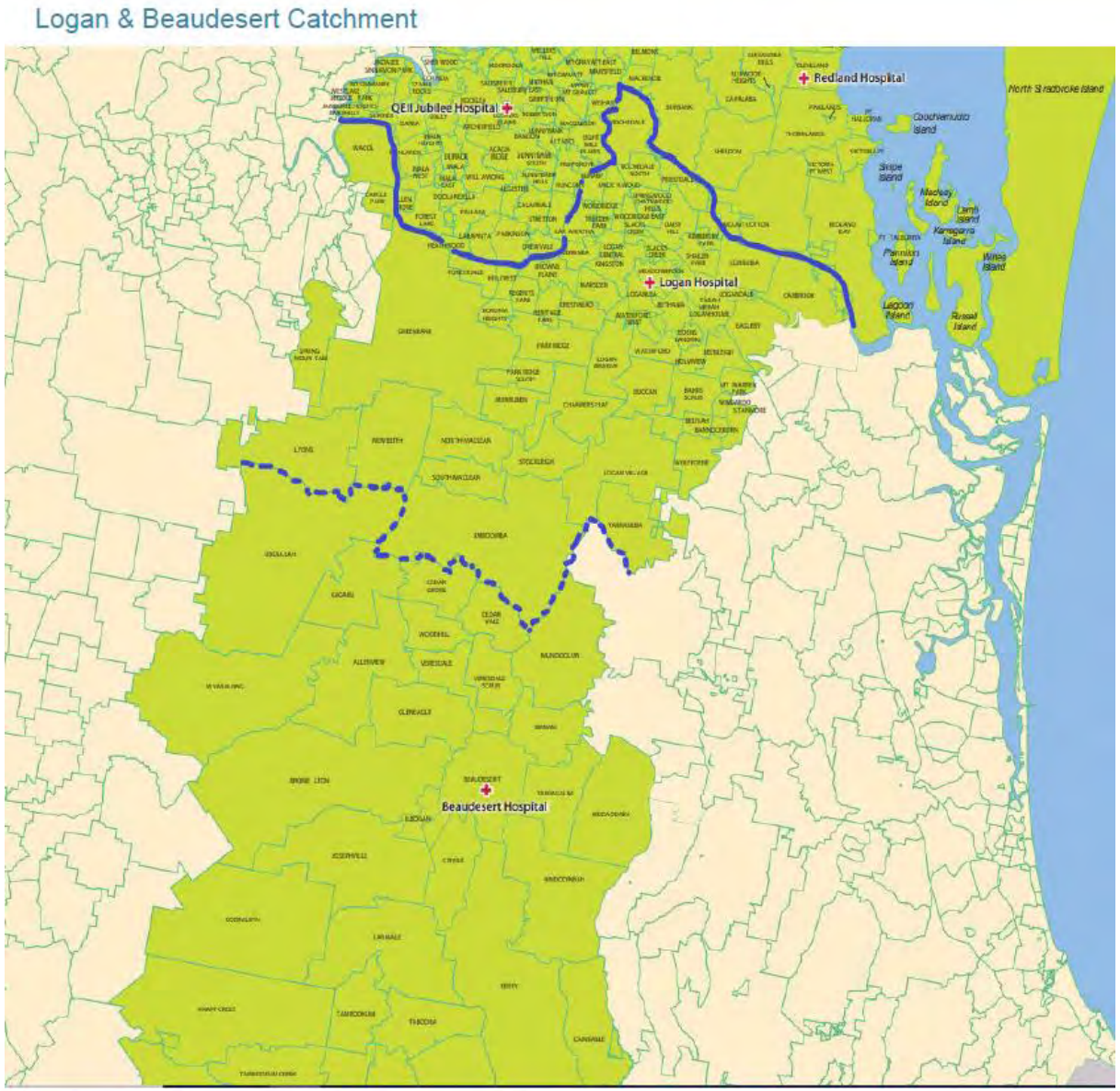
Maternity Models of Care at Logan Hospital

Presented by Midwifery Team - Antenatal Clinic, Logan Hospital

We care about you

Queensland Government

Logan/Beaudesert Hospital Catchment Map



Midwifery Models of Care- Logan Hospital

- Midwives and obstetricians work together to provide shared antenatal care and education for women preparing to birth at Logan
- The current Models of Care available at Logan are
  - Consultant-led care (Women with complex needs)
  - Shared care with O&G and Midwives (Low – Medium complexity)
  - Shared care with O&G and GPs (Low – Medium complexity)
- Midwives work regular clinic days so they can build a rapport and provide some continuity for women.
- A Consultant is available to liaise with, if necessary, as a Consultant led clinic is run alongside the Midwives' clinic
- Midwives also see some of the women under consultant-led care for midwifery input with regards to education, birth planning etc

Current LGH Midwifery Care Information

- Antenatal Midwife Clinics are held Monday to Saturday
- Midwife review appointments are also available to women on Tuesday evenings to help working families and to give them more options.
- A booking clinic takes place in Yarrabilba four days per week to improve access to services for women who live at that end of our catchment area
- Appointment availability is 08.00 – 16.00 for daytime clinics, and 12.30 – 21.00 for the evening clinics
- Contact Antenatal Clinic on 3299 8527 to alter or change appointment times during working hours
- Any other queries can be directed either to the Team Leader on ext. 9312, or to the MUM on 3089 6340
- SMS reminders are sent out to women 10 days and 2 days prior to their appointments to remind them of date and time

Antenatal education classes -Logan

Antenatal Group

These groups are held on Wednesday evenings or Saturday morning, and they are quite informal and interactive, but get fully booked quite quickly. Booking is essential, and should be in the 3rd trimester

The Wednesday group runs for 3 weeks and includes a session with the Obstetric Physio.

The Saturday morning group runs for two weeks, with no physio input included. There is a physio group on Saturday mornings that the ladies can book into separately.

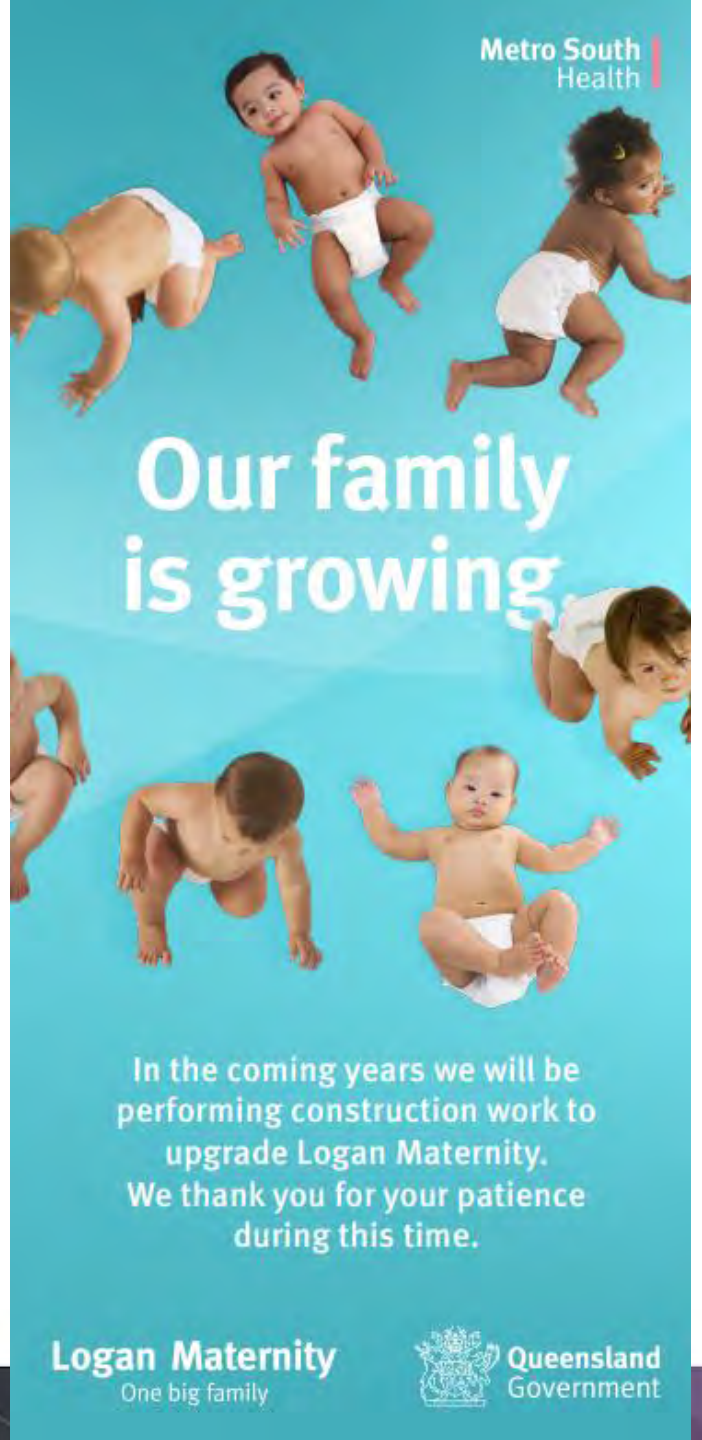
We encourage our clients to bring one support person with them to the group.

VBAC Group

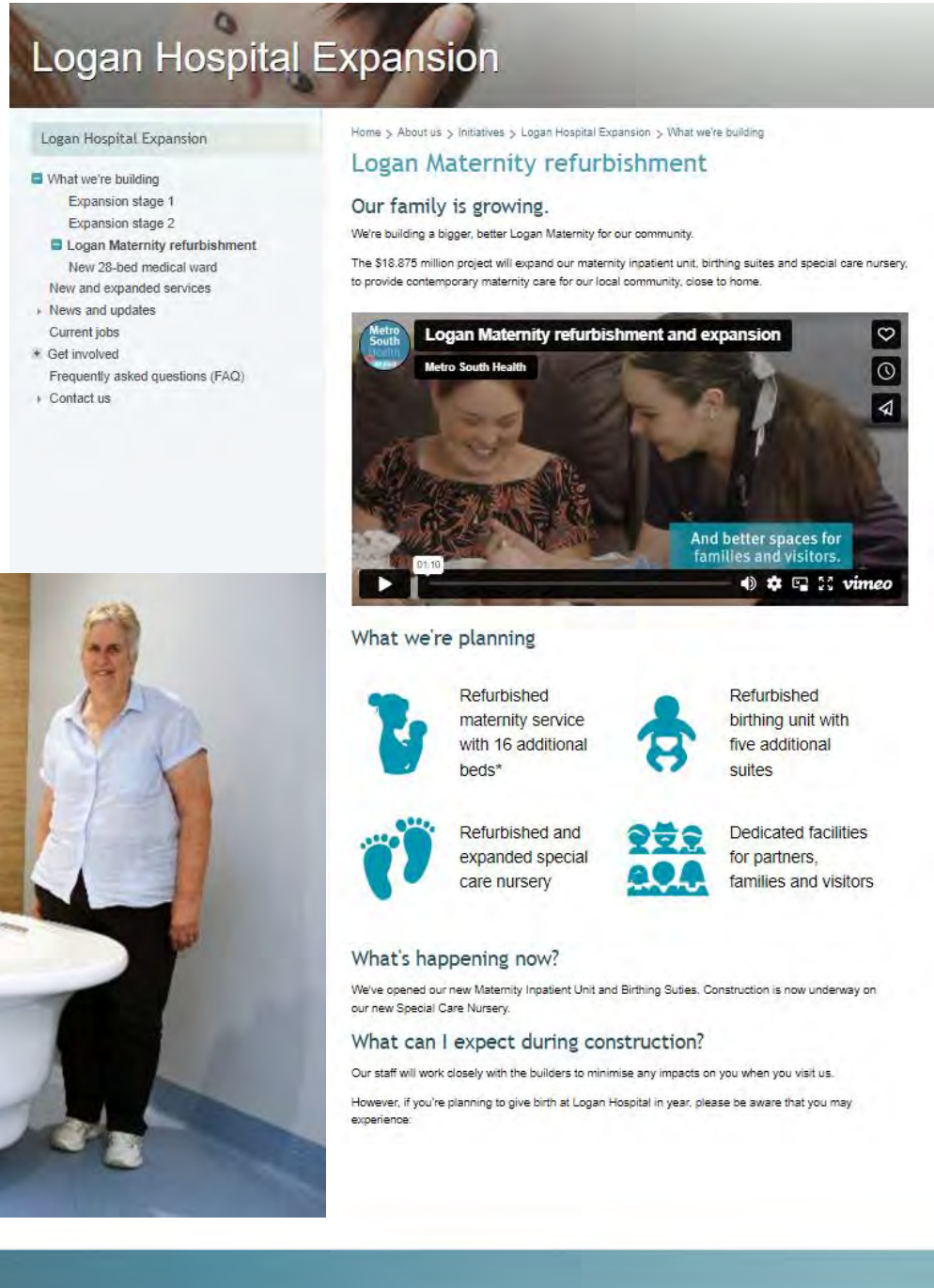
This group occurs once every 8 weeks at present on a Tuesday evening. They are usually small groups so can maintain the social distancing required. Any woman who wishes to have a VBAC or is unsure of her options is welcome to attend. Please book in for this group

Dad's Group

Occurs on the last Wednesday of every calendar month. This is facilitated by Nigel who is a midwife and a dad, and talks about "Man's secret business", so I am told! Men can either book in or drop into this group



https://metrosouth.health.qld.gov.au/loganexpansion/maternity



Metro South Health

Midwife Navigators- Logan Hospital

Gestational diabetes and Complex care

Amanda Wolski
Leah Sims

We care about you

Queensland Government

Midwife Navigator Services- Logan

The Midwife Navigator service is available at Logan Hospital to support women diagnosed with GDM and for vulnerable women with complex needs .

The Midwife Navigators assist women in engaging with services and navigating the health system for any extra care required.

The aim of the roles are to:

- Increase access to continuity of care and to work in partnership with the woman, her lead care provider (including GP), specialist and allied health professionals involved with the woman and her care.

- Improve perinatal outcomes for vulnerable women and their families.

Midwife Navigator Services- Eligibility Criteria

- Gestational Diabetes Mellitus:- GDM and another complexity i.e. poor engagement
- Complex Care:-
  - substance misuse
  - significant mental health issues
  - child safety
  - homelessness
  - significant DFV

Midwife Navigator team at Logan Hospital

- Midwife Navigator for Complex Care

  Email MN.Complexcare@health.qld.gov.au

  Mob. 0436 850 016

- Midwife Navigator: GDM is Amanda Wolski

  Email mn.gdm.logan@health.qld.gov.au

  Mob. 0436 850 028

High risk clinics available at Logan Maternity

	am	pm
MONDAY	• Endocrinologist • Diabetes Nurse Practitioner (insulin adjustment)	• Multi-disciplinary Team for high risk GDM (inc. Endocrinologist, O&G, Diabetes Nurse Prac and Midwife)
TUESDAY		
WEDNESDAY	Twin pregnancy	
THURSDAY	• ADAPT Multi-disciplinary Team	• ADAPT Multi-disciplinary Team • Diabetes Nurse Practitioner (Insulin adjustment)
FRIDAY	• Complex care • Endocrinologist	• Complex Care MGP group, • MDT incl Endocrinologist

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Midwifery Group Practice at Logan Hospital

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What is Midwifery Group Practice (MGP)

Midwifery Group Practice (MGP) is a public midwifery service providing care for people during pregnancy, labour and birth, and in the first 6 weeks of a child's life.

Women using the Midwifery Group Practice (MGP) model of care will have a known midwife who works with one or more backup midwives to provide care from early in pregnancy, throughout labour and birth, and for up to six weeks after birth. MGP midwives work closely with Logan Hospital obstetricians and other health care professionals, allowing the team to care for pregnant women regardless of their pregnancy risk or the complexity of their care.

Metro South Health

Evidence shows that women who receive care from a known midwife

- Are more likely to have a normal birth of a healthy baby at term
- Are less likely to experience medical intervention such as episiotomy, forceps or caesarean section
- Have a more positive experience of labour and birth
- Are more satisfied with their care
- Are more likely to successfully breastfeed
- Increased engagement of women who historically have not engaged with the service whilst pregnant

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MGP hubs at Logan Hospital

- Complex care Hub
- Jajumbora BIOC Hub
- Benevolent Hub
- Gateway Access Hub
- Pasifika Hub

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COMPLEX CARE HUB

Where is the HUB?

YFS

2-5 Rowan st

Slacks creek

4127

Criteria:

Pregnant women with 2 or more medical complexities

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JAJUMBORA BIOC HUB

Where is the HUB?

5 Charles Ave

Woodridge

4114

Criteria:

Pregnant women who identify as Aboriginal or Torres Straight Islander and women carrying babies who will identify as Aboriginal or Torres Straight Islander

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BENEVOLENT HUB

Where is the HUB?

Cnr Wineglass and Middle Rds

Hillcrest

4118

Criteria:

Young mothers 18 years and under

(some times has capacity to take mothers up to 21 years of age)

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GATEWAY HUB

Where is the HUB?

91 Wembley Road

Logan Central

4114

Criteria:

Pregnant women who identify as refugees, culturally and linguistically diverse (CALD) or non-English speaking women

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PASIFIKA HUB

Where is the HUB?

Hosanna

13/390 Kingston road

Slacks Creek

4114

Criteria:

Pregnant women who identify as Mãori or Pacific Islander

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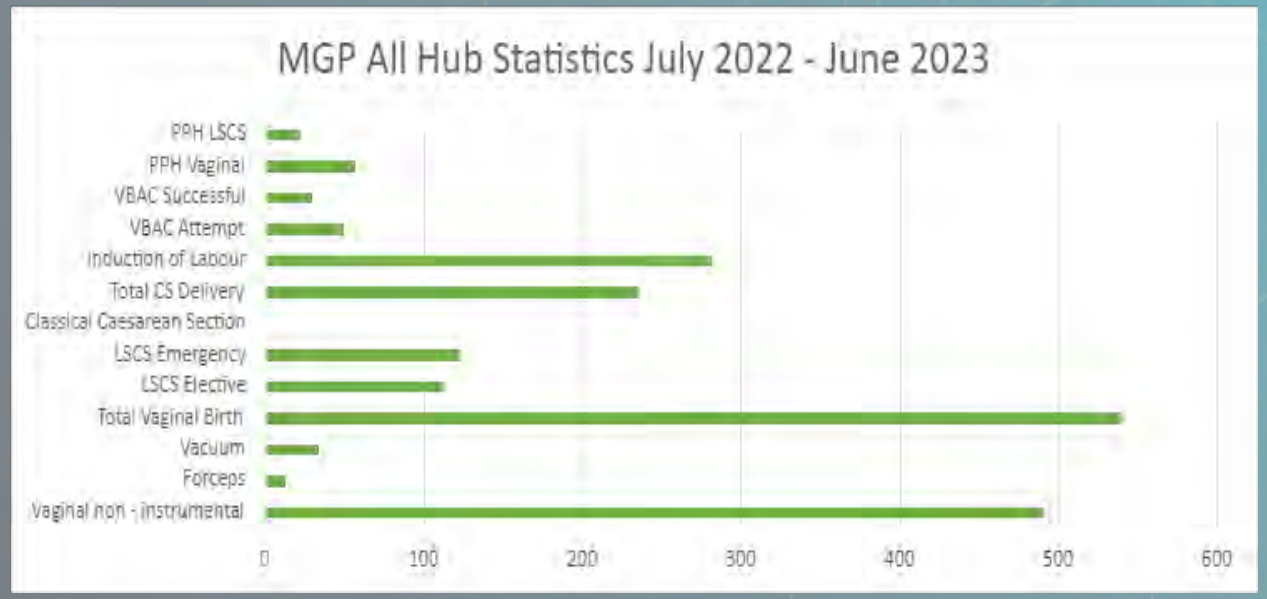
MGP Outcomes



	Total	%
Total Births MGP July 2022-June 2023	**776**	
Total Vaginal Births	540	70%
Vaginal non-instrumental	491	63%
Vacuum	34	4%
Forceps	13	2%
Total LSCS	236	30%
Elective LSCS	113	14%
Emergency LSCS	123	16%
Classical Caesarean Section	0	0%
Induction of Labour	323	36%
VBAC Attempt	50	7%
VBAC Successful	30	60%
PPH Vaginal	57	11%
PPH LSCS	22	9%

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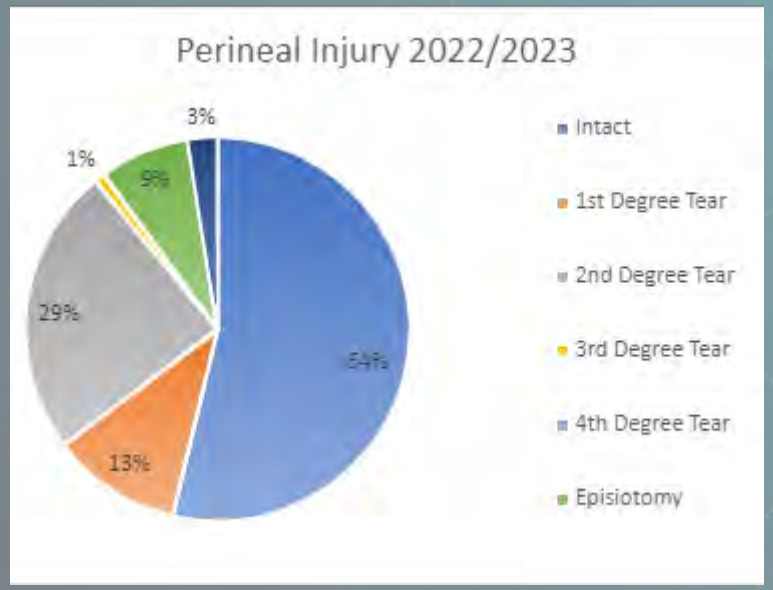
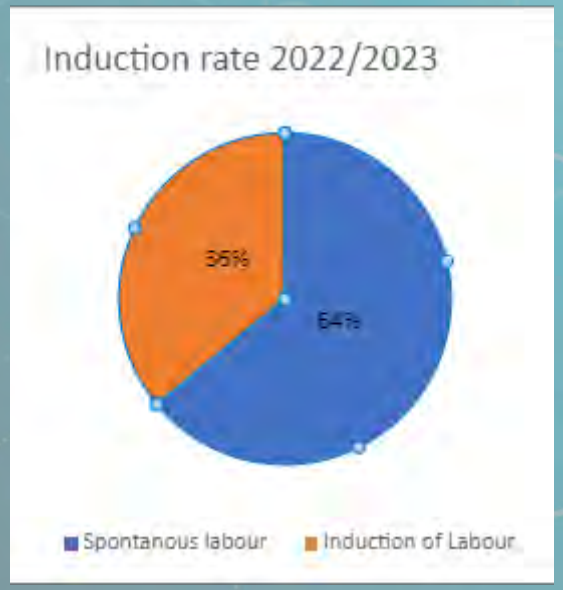
MGP Outcomes





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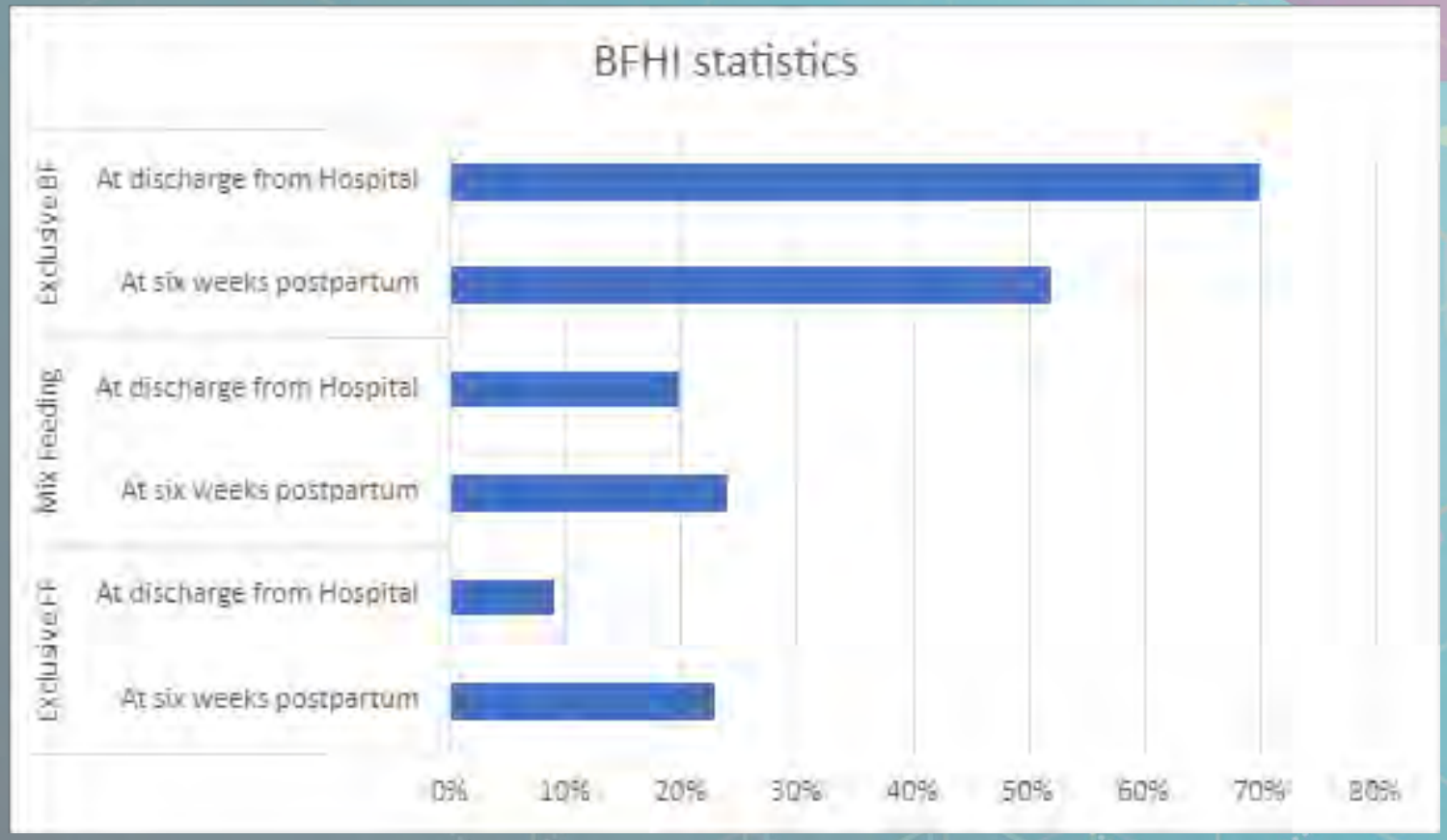
MGP Outcomes



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Consumer feedback

"It helped to have another Indigenous person guide me on my way. At hospital you don't really see many Indigenous people there"

"I love how the hub has different programs I've never had access to before and also has programs for after birth to meet new mums and be more social"

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How to Refer

Places in this model are limited, therefore early referral is essential *(8–10 weeks if possible)*

Referrals are triaged to the Central Referral Hub

- Identify ‘MGP’ on the ‘model of care’ section on referral if that is the wish of the client.

- Include relevant info for triaging: ATSI or MPI identifying - mother and father of baby, medically complex, refugee, CALD.

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"There is something about birth that is very spiritual, very healing. Having the support all the way through pregnancy makes it so much easier giving birth – it's the safety in it"- Aunty Faith Green

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Maternity Models of Care at Redland Hospital

Prepared by Jane Rundle, Clinical Midwife
Redland Hospital Antenatal Clinic

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Maternity Models of Care at Redland Hospital

Model:	Philosophy:	Criteria to participate:
Midwifery Group Practice	Continuity of Care to all risk women Twins). Providing antenatal, intrapartum and post-partum care up to 6 weeks- (care provided in the community or at the woman's home)	Live on the Bay Islands 18 years and under within RH geographical boundaries Live within RH geographical boundaries and would benefit from continuity of care model: i.e., previous poor outcome
BIOC midwifery Group Practice	Continuity of Care to all risk women Providing antenatal, intrapartum and post-partum care up to 6 weeks- (care provided in the community or at the woman's home.) Wrap around service for indigenous families in partnership with YBB and IUIH	Aboriginal and Torres Strait Islander family

Jajum Bajara program

- Partnership model of maternity care between Yulu Burri-Ba Aboriginal Corporation for Community Health (YBB), the Institute for Urban Indigenous Health (IUIH) and Metro South Health's Redland Hospital
- Provides a holistic service for Indigenous families

Jajum Bajara birthing program celebrates early success

A new Bayside birthing program focussed on continuity of care for birthing in our community is celebrating early success with the births of dozens of healthy and happy babies.

This unique, Indigenous led antenatal care model provides mothers with 24/7 access to the same midwives and Indigenous family support workers.

"We want every Indigenous mother to deliver their baby at the right gestation and at a healthy weight, and this is just another important step towards closing the gap for Aboriginal and Torres Strait Islander people to ensure they access the services they need to achieve the very best health outcomes possible," Metro South Health Board Chair Janine Walker said.

Maternity Models of Care at Redland Hospital

Model:	Philosophy:	Criteria to participate:
Midwifery Care	Continuity of care to low risk women planning for normal and active birthing Care provided at Redland and Wynnum ANC	Live in RH geographical boundary Plan active birth
High Risk Obstetric – led Clinics	Provide close supervision and support for women with complex pregnancy. Care provided at Redland and Wynnum ANC	Live in MSHHS
GP share care	Continuity of care to low risk women by their GP	Low risk women, live in or outside RH geographical boundary.

Other Midwifery Services at Redland Hospital

Service:	Purpose:	How to contact:
Antenatal Classes (Saturday only) Antenatal facility tours (Sunday)	Preparation and information for labour, birth, breastfeeding and early parenting	Antenatal Clinic Reception Phone 3488 3434 Tours 3488 4075
Lactation Service	Support women antenatally and postnatally with preparation for and establishment of breastfeeding (inpatient/outpatient service)	Lactation Consultant Ph 3488 3409
Postnatal Midwifery Home Visiting Service	Provide care to women in community for 3 to 7 days following birth for continuation of care from postnatal ward. Home visit to women in geographical boundary. Logan CMS to visit women outside geographical boundary who live in Logan catchment	Phone number 3488 3444/ 3488 3759

Other Services

Service:	How to contact:
Women & Birthing Social Work Service	Antenatal Clinic Reception 3488 3434
Maternity Assessment Unit- Mon – Fri 0930 – 1800hrs Outside of these hours contact Birth suite	Phone Midwife direct 3488 4169/ 3488 4075
Healthy Hearing- Universal screening for all babies, inpatient and outpatient service	Phone: 3488 3444
Perinatal Mental Wellbeing Service	WellbeingPerinatal@health.qld.gov.au Phone: 3825 6214

Midwifery Models of Care- Redland Hospital

- Midwives, Obstetricians and GPs work together to provide shared antenatal care and education for women preparing to birth at Redland
- The current Models of Care available at Redland are
  - Consultant-led care (Women with complex needs)
  - Shared care with O&G and Midwives (Low – Medium complexity)
  - Shared care with O&G and GPs (Low – Medium complexity)
- Midwives work regular clinic days so they can build a rapport and provide some continuity for women.
- A Consultant is available to liaise with if necessary, as a Consultant led clinic is run alongside the Midwives' clinic
- Midwives also see some of the women under consultant-led care for midwifery input with regards to education, birth planning etc

Redland Hospital Referrals

- Midwifery booking in appointments are generally at 12-14 weeks , Obstetric team see the women at 20 weeks, GP to order morphology USS
- Early referrals are preferred- ensure USS or evidence of pregnancy documented
- Pathology should be attached to referral

Current Redland Midwifery Care Information

- Antenatal Midwife Clinics are held Monday to Friday-

  Monday, Tuesday, Thursday and Friday at Cleveland.

  Wednesday at Gundu Pa, Wynnum.
- Midwife review appointments are also available to women on Tuesday evenings.
- Appointment availability is 08.00 – 16.00 for daytime clinics, and 17:00 – 21.00 for the evening clinics
- Contact Antenatal Clinic on 3488 3434 to change appointment times during office hours.
- Any other queries can be directed either to the Team Leader on 3488 3065, or the MUM on 3488 3451.
- SMS reminders are sent out to women 10 days and 2 days prior to their appointments to remind them of date and time.

Antenatal education classes -Redland

Antenatal Group Classes

Antenatal classes have recommenced

4-hour group sessions are held on both Saturday morning and afternoon, they are quite informal and interactive, but get fully booked quite quickly. Booking is essential and should be in the 3rd trimester.

Women only need to attend one session. 3488 3434 to book

We encourage our clients to bring one support person with them to the group.

Birth Suite tours are available Sunday afternoons 3488 4075 to book

Metro South Health

Maternity Models of Care at Beaudesert Hospital

Presented by Dr Kim Nolan for Dr Maggie Robin, Rural Generalist/GP Obstetrician, Beaudesert Hospital

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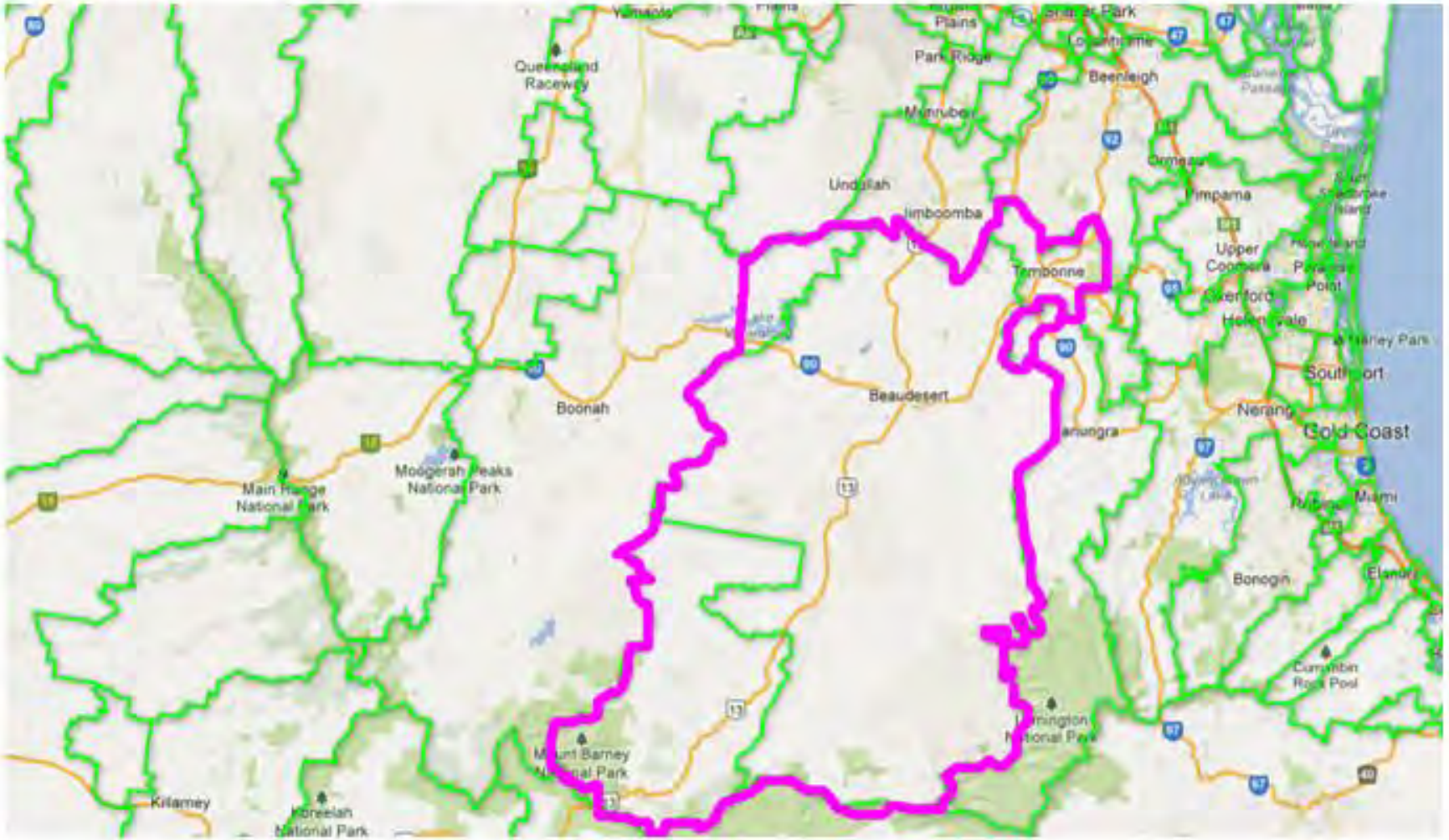
Beaudesert catchment area



Beaudesert Hospital Maternity Care

- Beaudesert Hospital aims to provide as much maternity care locally as possible
- Clinical pathways are flexible to accommodate clinical needs
- Medical care is provided by Rural Generalist Obstetricians (RGO) or shared with GPs
- An Obstetric Consultant from Logan Hospital performs case reviews if requested by the RGO
- Essential that BMI is included on Maternity Referrals to Beaudesert Hospital. BMI will determine suitability for Obstetrics at Beaudesert Hospital (defined by expected BMI at birthing – must be < 40)

Maternity models of care –Beaudesert Hospital

- MGP is an all-risk model for women in Beaudesert catchment only
- Women outside of catchment, but within Metro South, can birth at Beaudesert Hospital provided they meet acceptance criteria.
- Antenatal care can be provided to all women by hospital RGO's/Midwives or in the GP Shared Care arrangement.
- High risk women who are referred to other facilities can have antenatal and postnatal care shared with Beaudesert hospital at the discretion of the higher-level facility.

Beaudesert Hospital Maternity Care

Lower complexity clients

- May be cared for by any model with antenatal and postnatal care conducted locally and Birthing at Beaudesert Hospital.
- 50% of women birthing at Beaudesert in 2019/2020 were cared for by MGP

Higher complexity clients - Obstetrically Complex At Referral Or Booking

- If complexity increases, the women may be referred to a higher-level hospital for birthing according to criteria, with antenatal care shared with BDH if appropriate
- MGP women are cared for by their midwife at both BDH and LGH for antenatal and birthing along with postnatal home visiting
- Postnatally, mother and baby may be transferred back to BDH if medically fit and postnatal home visiting will be carried out by BDH midwives
- If women are referred to a hospital other than Logan, the BDH midwife will not be involved in care, but the women can be transferred back to BDH postnatally and MAY qualify for postnatal home visiting.

Beaudesert Hospital Antenatal Education

- Since the Covid-19 pandemic Antenatal Education is provided telehealth antenatal sessions available to all women.
- Education is provided by midwives at each antenatal visit. Additionally, an education pack is given to each family with links to websites for self-directed learning.

Task 1 - Amina

- Amina is a 22-year-old who presents with an unplanned first pregnancy.
- Her home pregnancy test was positive.
- You have known the family for a year. Amina and her family are Somalian, and she wears a Hijab.
- She has been nauseated and vomited twice this week.
- Her FBC from last year shows a HB of 104 and a low MCV

She has a 10 min appointment - Outline your approach

.

Role of facilitator

Each group will have a facilitator

- To observe
- To assist GPs to stay on task
- To assist GPs to tease out the cases

These cases are deliberately short on detail.

Focus on the process not the particulars.

Consider, as GPs do, the probable outcome but also the possible, more risky ones.

Task 1

- You need a scribe
- You need to identify a presenter
- You have 15 minutes

GOOD LUCK!

Logan area demographics

- 34% were born overseas, and 21.1% households where a non-English language is used predominantly
- 50% of population in the most disadvantaged socio-economic quintile (QLD is 20%)
- Brisbane South is the area of highest refugee settlement in Queensland.
- 4.2% people in Logan identify as Aboriginal and Torres strait Islander
- 8 -10% are Māori (Brisbane South is home to > 42 000 people of Pasifika and Māori descent)
- Around 43% of residents < 30yrs

  (average age 38yrs)

Beaudesert demographics

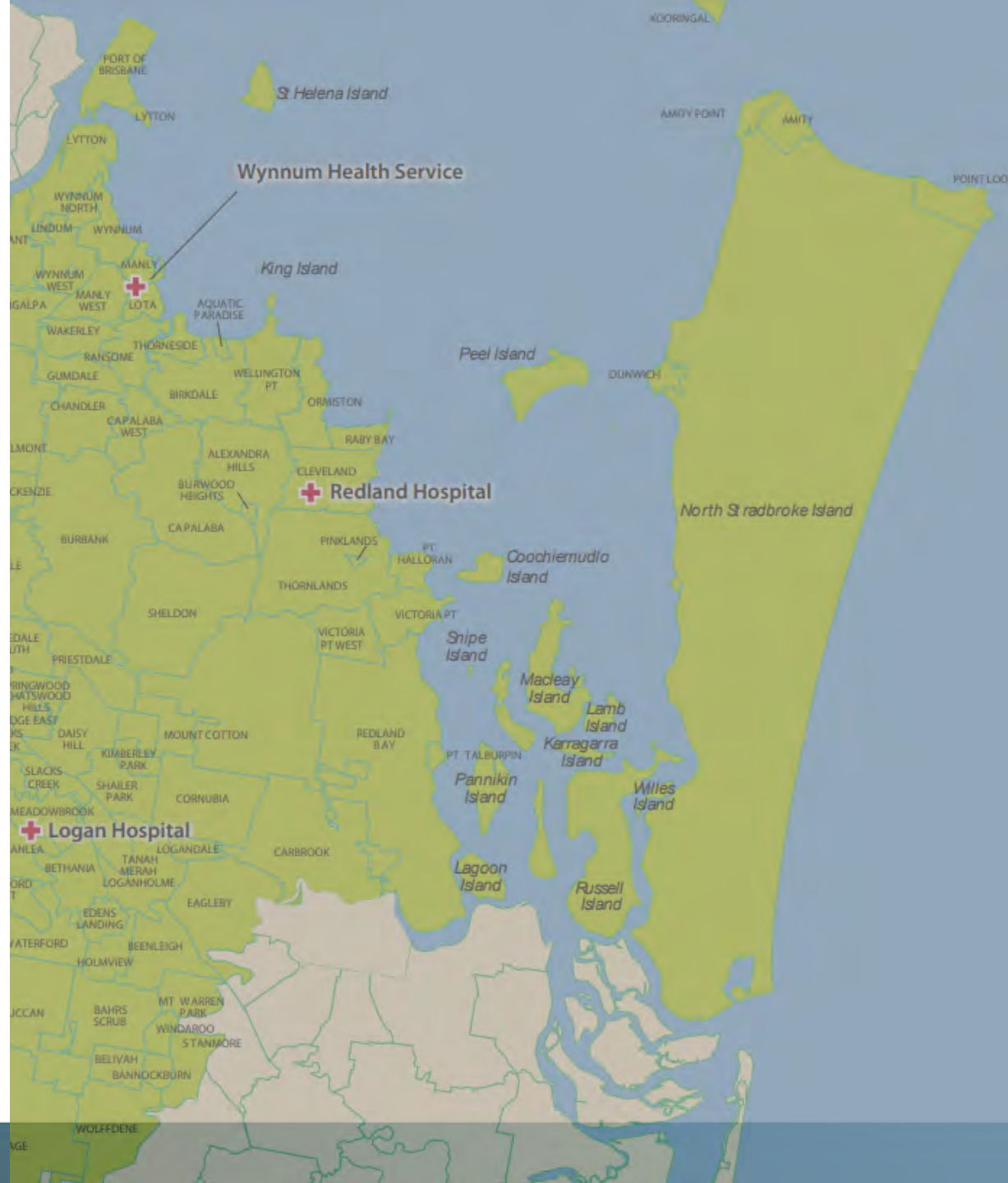
- 8.1 % of population – Aboriginal and Torres Strait Islander
- 81.4% of people were born in Australia
- Most common other countries of birth were New Zealand 3.6%, England 3.0%, Philippines 0.6%

Australian Bureau of Statistics – Census Data 2021 - https://abs.gov.au/census/find-census-data/quickstats/2021/UCL314003

Redland LGA demographics

- 26.5% born overseas
- 9.8% speak language other than English at home
- 2.9% people in Redland identify as Aboriginal and Torres Strait Islander
- Most common countries of birth were England 6.4%, New Zealand 5.0%, South Africa 1.8%, Scotland 0.8% and Philippines 0.7%.

  (ABS Statistics 2021 Census)
- Some of Bay Island residents ranked in most disadvantaged Quintiles, but overall Redland City LGA population in higher Quintiles.
- Do have unique needs in covering geographically isolated communities of the North Stradbroke Island and islands of the southern Moreton Bay (Russell, Macleay, Lamb and Karragarra Islands)



Amina – discussion

Increased risk to women who are born outside of Australia of **not accessing antenatal care** due to particular social determinants:

- education and other social inequalities,
- traditional beliefs,
- language barriers,
- poor knowledge about availability of services ,
- unemployment and
- financial hardship.

What services could you use to refer Amina to for pregnancy and postnatal support?

Communicating the concept of Antenatal care

- Be culturally sensitive - culturally responsive healthcare to meet needs of at-risk populations
- Preferably use an onsite interpreter (can take 2/52 to organise)
- **TIS Ph. 13 14 50**
- Talk about the maternity models of care (Maternity Hub at Access Gateway available)
- Clear communication
- Traditional beliefs ?
- Check Medicare access – Refugees usually have full access, but don’t assume screening investigations e.g., for infectious diseases have been undertaken
- Asylum seekers may have limited health and financial support.

Communication

- Offer interpreter services actively
- Engage local women early in pregnancy
- Despite advanced pregnancy and childbirth care, the rate of stillbirth is high among ethnic groups and migrant populations living in High Income Countries

https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003061

Assessment of Specific Risk Factors:

Obstetric History	Diseases

• Multiple spontaneous or elective abortions
• Previous stillbirth
• Female Genital Cutting (FGM)
• Multigravida
• Short spacing intervals between pregnancies
• Cephalopelvic disproportion (higher incidence in women from Africa)
• Neonatal death
	• Vitamin D Deficiency (dark-skin, Hijab)
	• Anaemia: Thalassaemia, sickle-cell
	• Pelvic infections (previous sexual assault, FGM)
	• Recurrent UTIs (FGM)
	• Infectious Diseases:
	  o Latent TB
	  o Hepatitis B &C
	  o HIV
	  o Parasites (e.g. Schistosomiasis)
	  o Rubella
	  o Varicella

Refugee Health

- Refugee Health Connect- **3864 7580-** one point of call for all aspects of refugee health
  - Partnership between BSPHN, BNPHN, Mater Health, & Metro South HHS
  - Can assist and support Primary Care navigating refugee health space & linking people from refugee backgrounds to appropriate providers (to improve health access & engagement)
  - By providing education & support, builds skills & capabilities of primary care to manage care of refugee families in a culturally and clinically appropriate manner

- Multicultural Health – BSPHN - includes many resources including "Hints and tips for working with interpreters" video

- South-East QLD Refugee Health Contact list (2018) - Refugee Health Network

- Australian Refugee Health Practice Guide -resource to support doctors, nurses & other primary care providers in comprehensive, evidence informed health care delivery for people from refugee backgrounds including people seeking asylum.

- Working with patients when there are language barriers – a guide to accessing and using the Translating and Interpreting Service (TIS) National for primary care health professionals working in private practice

Getting an Interpreter

Free interpreters are available for GPs and medical specialists providing Medicare-rebateable services in private practice.

Immediate phone interpreters: Doctors Priority Line 1300 131 450

Pre-book interpreters: TIS National

Agency eligibility for free interpreting

Refugee Health Service

People who are from refugee or asylum seeker backgrounds

The Metro South Refugee Health Service offers dedicated healthcare, support and information for people with a refugee background in our region.

The nurse-led service is based at Logan Central Community Health Centre and provides the following services:

CareCo (Care Coordination)

- Referrals are received from multicultural organisation, general practitioners and the community.
- Support people with a refugee-like background in connecting/reconnecting with health services to commence/recommence management of their health care issues including linking back to primary care.
- Promote health literacy and culturally appropriate health education within the client, family and
- Facilitate and manage client care to reduce hospital admissions or ED presentation community.

Humanitarian Settlement Program

- Multicultural Australia providers referrals for Humanitarian Settlement Program.
- A comprehensive nursing health assessment and the commencement of immunisation catch up.
- Assistance finding a refugee-ready GP that bulk bills and provides culturally appropriate care in the Logan, Ipswich or Gold Coast region.
- Referrals to other health services including oral health and child health.
- Additional support provided through Care Co.

Health Navigation

Advice is available for health professionals and people seeking assistance with health care referral pathways.

Healthcare Provision for Refugees and Asylum Seekers

Metro South Health

Contact

Refugee Health Service
Logan Central Community Health Centre

Phone: (07) 3290 8900

Email: metrosouth_refugeehealth@health.qld.gov.au

Metro South Health | Refugee Health Service

SSI Gateway Hub – MGP for Women in Logan Hospital Catchment

Maternity Hubs

A better start to life for children of diverse families in Logan

Family, Children & Youth | Health & Wellbeing | QLD

If you would like more information, please speak with your GP about a Maternity Hub referral or email **acsl.gatewayofficer@ssi.org.au**

Maternity Hub is co-located at the SSI Gateway.

SSI Gateway
91 Wembley Road Logan Central, QLD
Monday to Friday from 8.30am to 4.30pm

https://www.ssi.org.au/our-services/families-children-and-youth/maternity-hubs//

Phone: 07 3412 8222 or email: acsl.gatewayofficer@ssi.org.au

Public Health **Alert**

Communicable Diseases Branch

Queensland Public Health and Scientific Services (QPHaSS)

Email CDMU@health.qld.gov.au

CLINICIAN ALERT | PERTUSSIS

20 March 2024

Key points:

1. *There has been an increase in pertussis notifications in Queensland. Children under 15 years of age account for 60% of all cases since 1 January 2024.*
2. *Clinicians should be alert for signs and symptoms of pertussis, particularly in patients who have had contact with a confirmed case of pertussis.*
3. *Early detection and treatment can reduce the risk of transmission.*

THINK pertussis in patients with:

- Onset of runny nose, sneezing, tiredness, absent or low-grade fever
- Dry cough that progresses to characteristic bouts of paroxysmal coughing

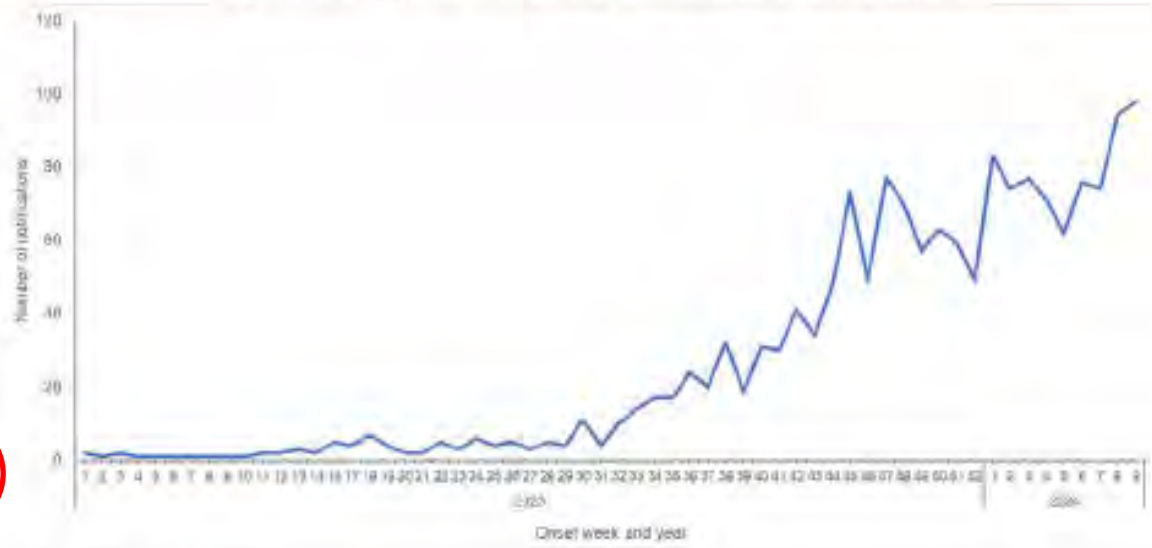
Testing guidance and treatment

- < 3 weeks from symptom onset - nasopharyngeal swab for PCR testing for both children and adults
- Cases are no longer considered infectious after completing 5 days of a course of an appropriate antibiotic treatment, or if 3 weeks have passed since symptom onset
- Further information is available at Pertussis management and Pertussis | Therapeutic Guidelines

Prevention

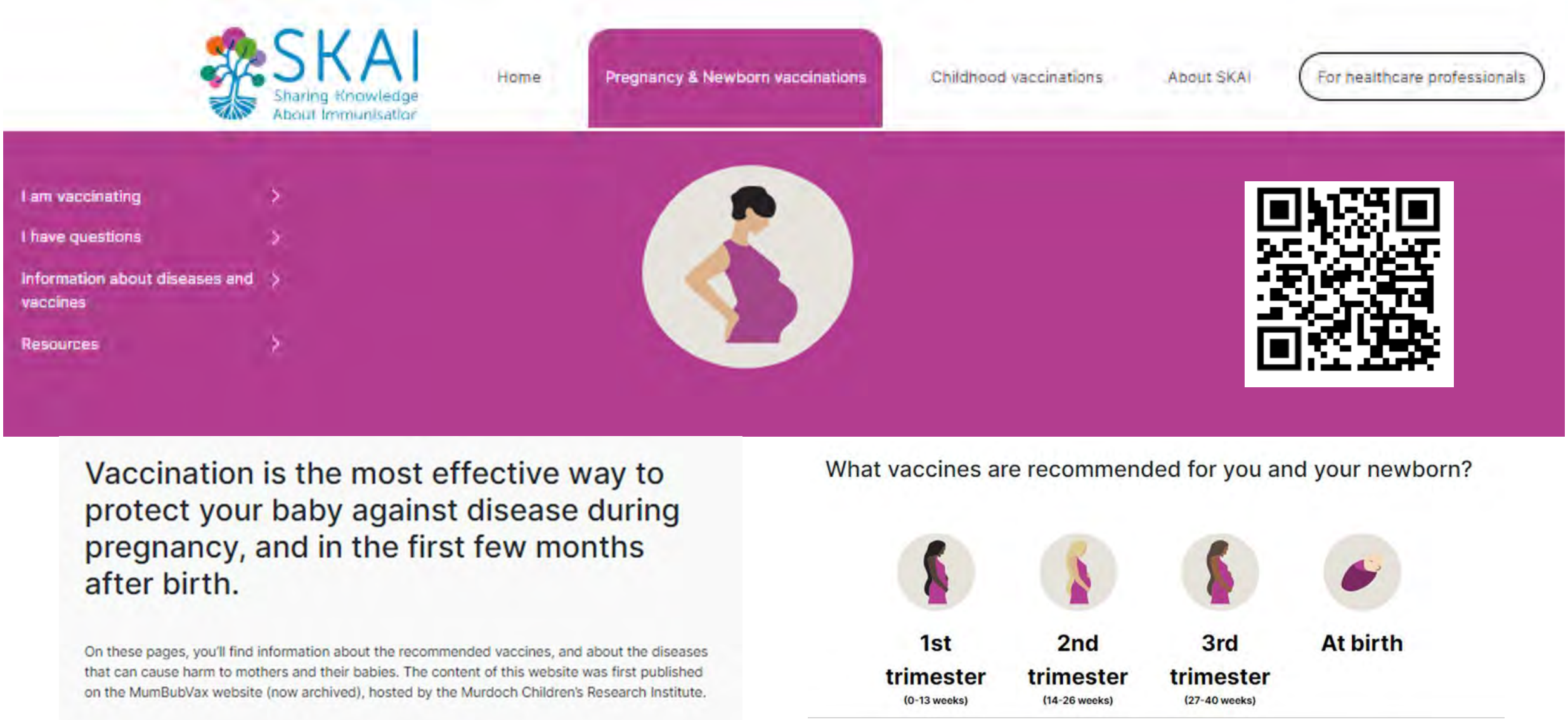
- Vaccinate pregnant women in each pregnancy to protect babies
- Vaccinate infants, children and adolescents according to the National Immunisation Program schedule
- Recommend booster doses for adults caring for infants and haven't had a pertussis booster in the last 10 years
- Early detection and treatment reduce transmission
- Keep patients who are infectious at home
- Identify and manage at risk contacts

Figure1: Pertussis notifications by onset year and week, 1 January 2023-3 March 2024



Who is most at risk?

- Babies who are too young to be vaccinated
- Unvaccinated infants and children



[Pregnancy & Newborn vaccinations | Sharing Knowledge About Immunisation | SKAI]

SKAI
Sharing Knowledge About Immunisation

Home | Pregnancy & Newborn vaccinations | Childhood vaccinations | About SKAI | For healthcare professionals

Evidence-based resources for your conversations with patients who have questions about vaccination.

The SKAI team has produced a range of resources to support conversations between healthcare professionals and their patients about vaccination. There are tools and training options here that can be used by individuals, or by teams. Use the slider to select a vaccination category.

Pregnancy & newborn | Childhood | Aboriginal and Torres Strait Islander | Adult

[For healthcare professionals | Sharing Knowledge About Immunisation | SKAI]

eLearning program

eLearning: Welcome

The purpose of this eLearning program is to provide an efficient, adaptable approach to communicating with pregnant women and their partners about vaccines.

Login to access

eLearning: Recommended communication approach

In this module, we will introduce you to the six key steps in our recommended communication approach.

Login to access

eLearning: Myths and misconceptions

In this module, you will learn some useful strategies to effectively address myths and misunderstandings.

Login to access

eLearning: Influenza

This module will help you respond to concerns about the severity of the disease, the effectiveness of the vaccine, and the safety of having the vaccine during pregnancy, respectfully and effectively.

Login to access

eLearning: Pertussis

This module will help you respond to concerns about the severity of pertussis, and the safety and effectiveness of the vaccine, respectfully and effectively.

Login to access

eLearning: Hepatitis B for newborns

This module will help you respond to parents' questions about the severity of hepatitis B, and the safety and effectiveness of the vaccine.

Login to access

eLearning: Vaccine safety and uptake

In this module, we share information about vaccine safety and some practical strategies for making vaccination a routine part of your practice.

Login to access

eLearning: COVID-19 vaccination and pregnancy

This module is about how to use the recommended SKAI communications approach when talking to pregnant women about COVID-19 vaccination.

Login to access

Resources to share with parents

Including Factsheets re vaccinations in other languages (Arabic, Vietnamese, Chinese)

RSV immunisation program

- In 2023, 29,000 RSV cases in Qld – about 1/3 among children < two years.
- Limited global supply of nirsevimab, so Queensland's immunisation program aimed to ensure infants and young children at highest risk of severe disease from RSV are protected at right time.
- Monoclonal Antibody given as passive immunity – lasts approximately 5 months
- ATAGI identified infants < 3 months of age are at increased risk of severe RSV disease, so these are infants targeted by the Queensland Immunisation Program
- Eligibility for free RSV immunisation:
  - All newborn infants will be offered as dose at birth or prior to discharge from hospital.
  - Infants born on or after the program commencement date not immunised in hospital, can access this dose up until they are less 8 months of age.
- Includes:
  - All infants born on or after 1 February 2024, up until less than 8 months of age
  - Aboriginal and Torres Strait Islander infants less than 8 months of age.
  - Infants with certain complex medical conditions less than 8 months of age.
  - Infants with certain complex medical conditions from 8 months up to 19 months of age (inclusive), until 31 October 2024.

Queensland Paediatric Respiratory Syncytial Virus Prevention Program | Queensland Health

PUQE Score – SOMANZ Guidelines

SOMANZ
SOCIETY OF OBSTETRIC MEDICINE OF AUSTRALIA AND NEW ZEALAND

GUIDELINE FOR THE MANAGEMENT OF NAUSEA AND VOMITING IN PREGNANCY AND HYPEREMESIS GRAVIDARUM

2019

Lowe SA, Bowyer L, Beech A, Robinson H, Armstrong G, Marnoch C, Grzeskowiak L.

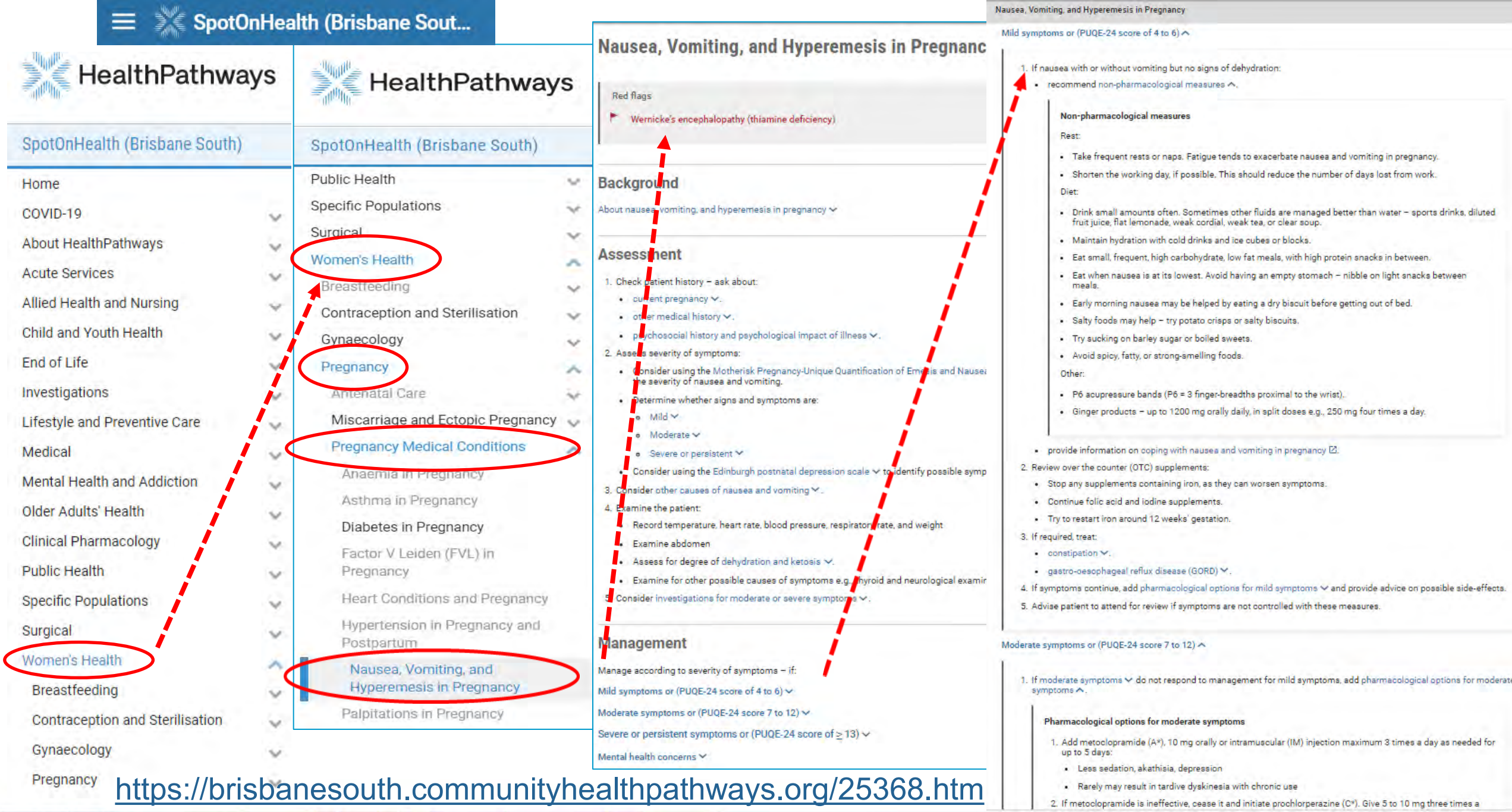
https://www.somanz.org/content/uploads/2020/07/NVP-GUIDELINE-1.2.20-1.pdf

Table 2. Motherisk PUQE-24 scoring system

Total score: mild ≤6; moderate 7 to 12; severe ≥13 (Scores in brackets)

1. In the last 24 hours, for how long have you felt nauseated or sick to your stomach?				
Not at all (1)	1 hour or less (2)	2-3 hours (3)	4 to 6 hours (4)	More than 6 hours (5)
2. In the last 24 hours, have you vomited or thrown up?				
I did not throw up (1)	1 to 2 (2)	3 to 4 (3)	5 to 6 (4)	7 or more times (5)
3. In the last 24 hours, how many times have you had retching or dry heaves without throwing up?				
None (1)	1 to 2 (2)	3 to 4 (3)	5 to 6 (4)	7 or more times (5)

Hyperemesis Gravidarum: severe nausea and/or vomiting caused by pregnancy with significant reduction of oral intake & at least 5% weight loss (compared with pre-pregnancy), with or without dehydration and/or electrolyte abnormalities.
All women should be asked about NVP at each visit between 4 and 16 weeks and if present, severity should be assessed by PUQE-24 score, weight measurement & hydration status



https://brisbanesouth.communityhealthpathways.org/25368.htm

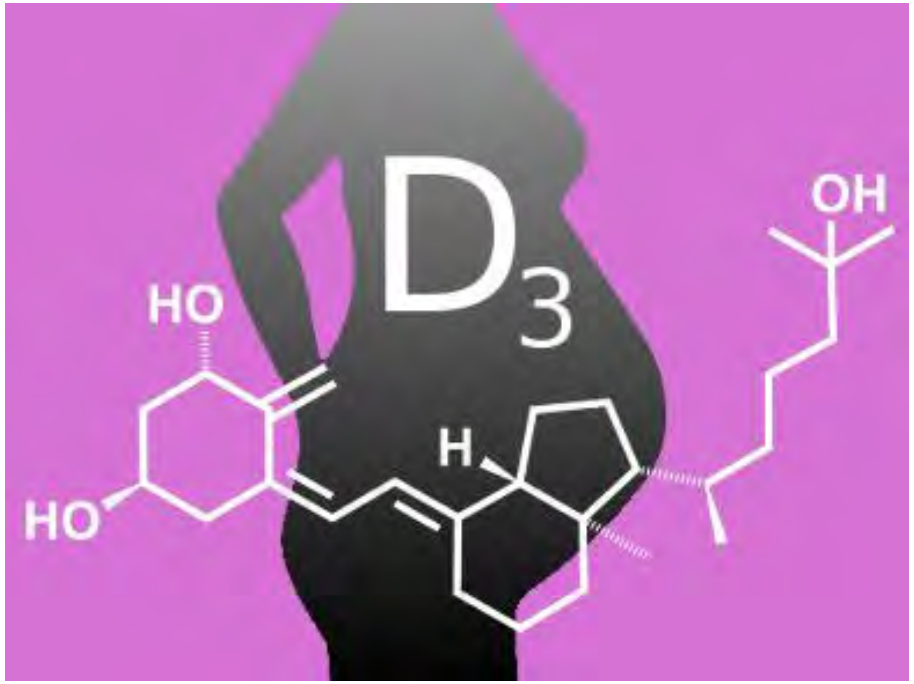
Iodine. Why is supplementation required?

- Increased thyroid function during pregnancy increases iodine requirements (by 50-100%)
- WHO recommends 250 micrograms of iodine daily preconception, during pregnancy and lactation.
- Supplementation with Iodine of a dose of 150mcg per day is recommended at least one month prior to pregnancy, during pregnancy, and while breastfeeding.
- **Caution** in women with known thyrotoxicosis, have Grave's disease or a multinodular goitre

CONSENSUS RECOMMENDATION: *Approved by NHMRC in Nov 2020; expires Nov 2025*

Resource: Australian Pregnancy Care Guidelines

Vitamin D: Who and why?



Increased frequency of Vitamin D deficiency is seen in some Australian communities. Women at increased risk of Vitamin D deficiency include

- those with reduced sunlight skin exposure e.g., veiled women
- those who use sunscreen on a regular basis
- dark-skinned women
- mothers of infants with rickets
- women with a BMI >30.
- post bariatric surgery

Demographic predictors are poor for Vitamin D levels

Vitamin D - Two schools of thought....

If risk factors are identified, consider testing (and advise supplementation if levels lower than 50 nmol/L)

OR

Simply supplement with oral Vitamin D in order to prevent neonatal / infant increased incidence of hypocalcaemic seizures and impaired skeletal development.

Pregnancy Care Guidelines – Vitamin D Status Section 10.8

RANZCOG statement - Vitamin & Mineral supplementation in pregnancy. November 2019

- Does not recommend routine Vitamin D testing in pregnancy regardless of maternal risk
- Do not retest regardless of previous result
- Advise **ALL** women to take minimum 400IU vitamin D daily during pregnancy
- Talk about safe sun exposure
- Fully breastfed infants should be supplemented with 400IU of vitamin D for first 6 months of life
- Supplementation increases a woman's vitamin D levels
  but the clinical significance of this with respect to pregnancy outcomes is unclear.

RANZCOG Statement: https://ranzcog.edu.au/wp-content/uploads/2022/05/Vitamin-and-Mineral-Supplementation-and-Pregnancy.pdf

Healthy eating and weight gain during pregnancy

What's in this handout?

- Healthy eating for pregnancy – essential nutrients and how to get them
- Sample meal plan
- Managing healthy weight gain in pregnancy
- Food safety, including **Listeria** and safe **Eating fish during pregnancy**
- Managing food related side effects, like constipation, heartburn, and morning sickness
- Being active during pregnancy
- Breastfeeding

Other Resources:

- Healthy eating during your pregnancy – *Australian Dietary Guidelines*
- Pregnancy and exercise – *Better Health Channel (Victoria Govt)*


My Nutrition

Healthy eating and weight gain during pregnancy

Healthy eating for pregnancy

Healthy eating is important at all stages of life, especially during pregnancy. What you eat and drink at this time can affect your health and the health of your baby for many years to come.

There is only a *small* increase in the *amount of food* you need to eat while you are pregnant. However, you do need more of certain nutrients, so it is important that you make food choices so you and your baby get all you need for healthy growth and a healthy pregnancy.

Your daily food group requirements during pregnancy are outlined in the table on the next page. Use the numbers in the middle column to guide how many serves to eat from each food group per day. One serve is equal to each of the foods in the column on the right. For example, one serve of fruit is equal to 2 small plums, one serve of grain (cereal) foods is equal to ½ cup of cooked pasta.

What's in this handout?

- Healthy eating for pregnancy – essential nutrients I need and how I get them
- A sample meal plan to show you how this all fits together
- Managing healthy weight gain in pregnancy
- Food safety, including listeria
- Managing food related side effects, like constipation, heartburn, and morning sickness
- Being active during pregnancy
- Breastfeeding

For further information contact your Dietitian or Nutritionist:_____

https://www.health.qld.gov.au/__data/assets/pdf_file/0028/154792/antenatal-heatwtgain.pdf

Nutritional Education Materials Online - NEMO

STIs – Chlamydia + Gonorrhoea

Practice summary: chlamydia

When: At the first contact with women younger than 30 years
Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health worker; multicultural health worker
☐ Discuss chlamydia: Explain the association between chlamydia and preterm birth and low birth weight, that tests for the infection are available and that it is easily treated with antibiotics.
☐ Take a holistic approach: If a woman tests positive for chlamydia, important considerations include counselling, contact tracing, partner testing, testing for other sexually transmitted infections and follow-up. Any positive tests should be notified to public health.

- Australian Pregnancy Care Guidelines (Section 10.1 & 10.2 - Australian Pregnancy Care Guidelines)

- http://www.sti.guidelines.org.au/ - Australian STI Management Guidelines

- Management of Perinatal infections" – Australasian Society for Infectious Diseases https://asid.net.au/publications

Anaemia in pregnancy

Ethnicities at an increased risk of thalassaemia

Alpha thalassaemia

- Middle Eastern
- Southern European
- Indian subcontinent
- Central and southeast Asian
- African
- Mãori/Pacific Islanders
- Aboriginal and Torres strait islanders for NT and far north WA

Beta thalassaemia

- Italian
- Greek
- Arabian Peninsula
- Iranian
- South-East Asian
- Africa Southern China

Identify early so we can test the partner!

Best Practice

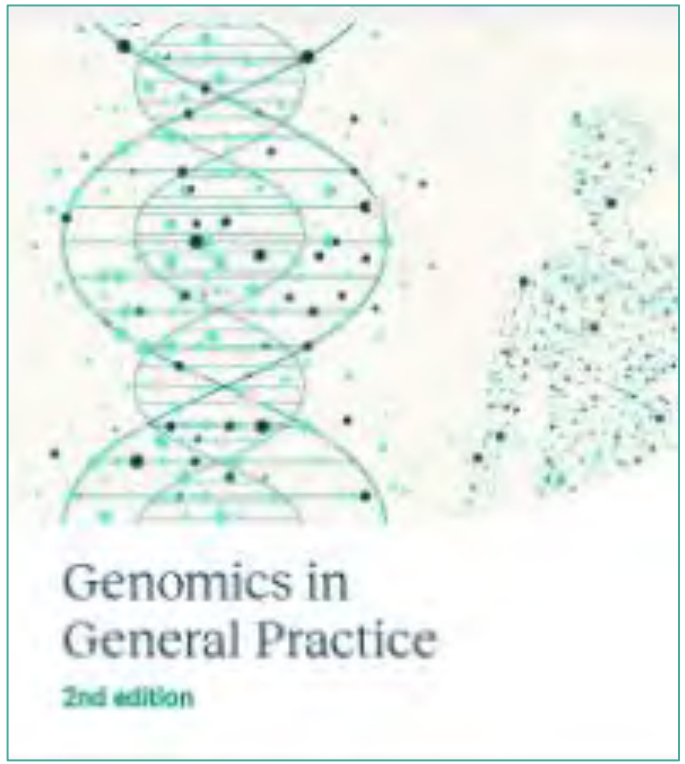
- Ideally testing preconception or offer as early as possible in pregnancy
- Offer testing (FBC and ferritin testing) to all with screening bloods and at 26-28/40
- Using MCV & MCH will identify some but not all carriers of α/β globin gene changes. (MCV – 92.9 % sensitivity/83.9% specificity)
- Consider offering haemoglobin electrophoresis for women from high-risk groups, remembering society is becoming increasingly multicultural.
- Haemoglobinopathies are most common single gene disorders in humans (7% of world's population are carriers), becoming more prevalent in Australia given immigration from endemic regions.
- Identifying parents who are haemoglobinopathy carriers before conception is preferable, discussing testing & implications of carrier status early in pregnancy enables women/partners to make informed choices
- Further testing is recommended for women with a family history of Sickle Cell Anaemia (normal RBC indices) and Thalassaemia, and from high-risk countries
- Consider High Performance Liquid Chromatography/DNA analysis - usually required for α-thalassaemia carrier diagnosis (Medicare funded from July 2022 – specific criteria)
- Early referral and results to ANC, including partner testing if undertaken

Early identification means you can also test the partner

Australian Pregnancy Care Guidelines - Section 9.2 Haemoglobin disorders

Interpretation of results

[RACGP Clinical Guidelines - Genomics in General Practice – Haemoglobinopathies]



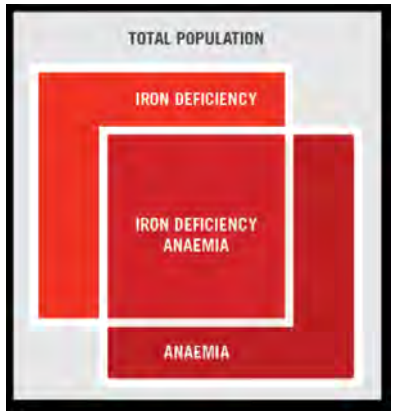
There is an urgency to test the biological male partner concurrently when an at-risk woman who is a carrier is pregnant. DNA testing is required when α-thalassaemia cannot be excluded and the partner is a known carrier of two-gene deletion α-thalassaemia (Table 1).

Table 1. Interpretation of haemoglobinopathy carrier testing results

MCH (pg)/MCV (fL)	Ferritin	Haemoglobin electrophoresis	Interpretation
MCH <27 and/or MCV <80	Normal	HbA_2 increased	β-thalassaemia carrier
		HbA_2 normal HbH present	α-thalassaemia carrier
		HbA_2 normal HbH high	Possible HbH α-thalassaemia
		HbA_2 normal HbE present	HbE carrier or homozygote
		Normal	Possible α-thalassaemia carrier; DNA testing indicated
	Low	Normal	Iron deficiency
			Thalassaemia may co-exist (treat iron deficiency then retest)
			If woman is pregnant, seek advice about further tests
MCH ≥27 and/or MCV ≥80	Normal	Normal	Thalassaemia unlikely but one-gene deletion α-thalassaemia not excluded; DNA testing indicated only if partner is carrier of 2-gene deletion α-thalassaemia
	Normal	HbS present	Carrier for sickle cell disease
	Low	Normal	Reduced iron stores or iron deficiency, thalassaemia unlikely but one-gene deletion α-thalassaemia not excluded. Treat iron deficiency then retest

Definitions

From: Maternity Blood Management – National Blood Authority



Anaemia
Hb≤ 110 g/L

Iron deficiency without anaemia
x 3 incidence of iron deficiency anaemia ? 60 -70%
Ferritin ≤ 30 mcg/L

Iron deficiency anaemia
Low ferritin and low Hb

Estimated daily iron requirement ***increase by 10 X*** from first TM (approx. 0.8mg iron/day) to end of pregnancy (> 6 mg iron/day)
In a year with a pregnancy…..

Table 2. Iron demand during pregnancy

Route of iron loss/gain	Iron (mg)
Skin	-1000
Dietary absorption	1500
Gestation	-1200
Typical labour	-250
Breastfeeding	-200
Net iron	**-1150**

https://gplearning.racgp.org.au/Content/2325/Pubs_check/2023/Jan/601Jan.pdf

Iron optimisation in maternity

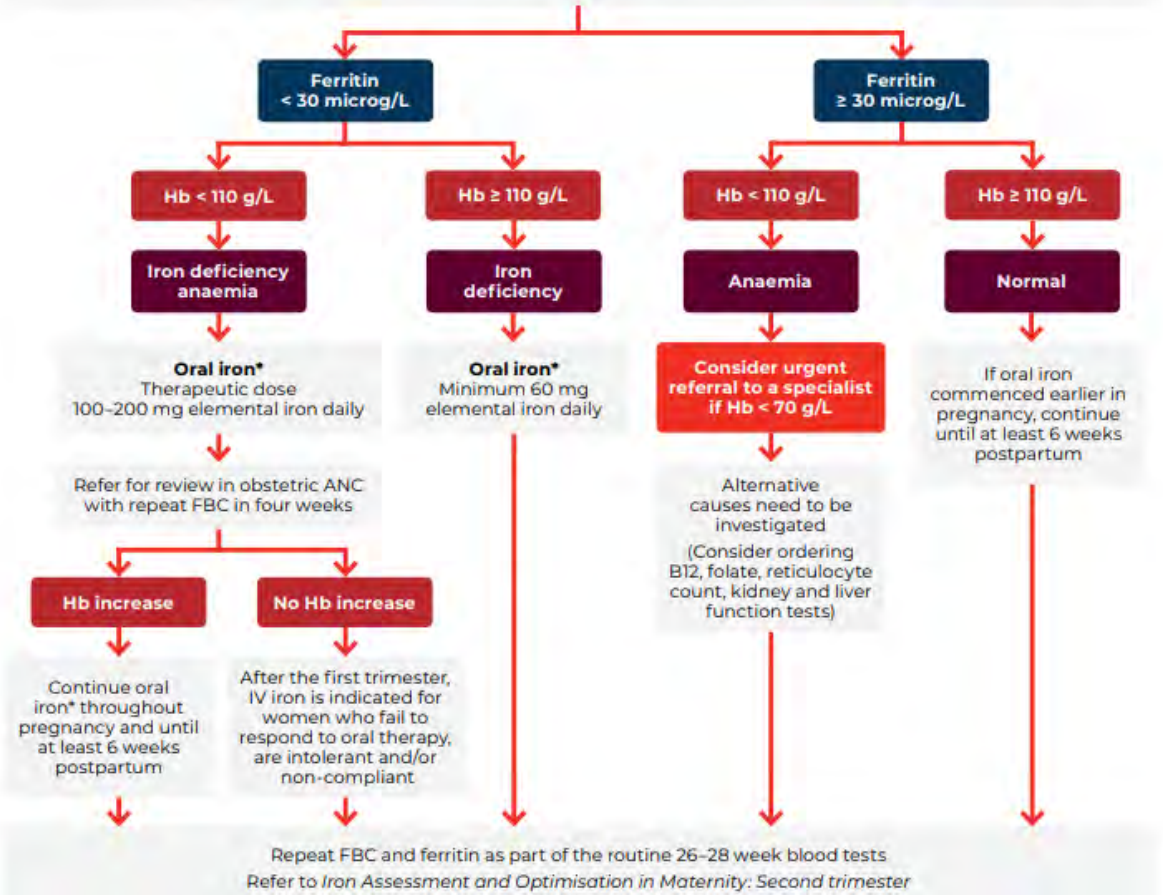
First trimester

First antenatal visit ≤ 20 weeks (booking visit)

- Identify risk factors for iron deficiency: previous iron deficiency, inter-pregnancy interval < 1 year, multiple pregnancy, parity ≥ 3, vegetarian/vegan, adolescent, recent history of bleeding, Aboriginal and Torres Strait Islander.
- Request ferritin and full blood count (FBC) on all women if recent bloods not available.
- Perform haemoglobinopathy screening if risk factors present: family history of thalassaemia or other haemoglobinopathy; high-risk ethnic background where testing has not been performed, FBC shows a MCV ≤ 80 fL and/or MCH < 27 pg in the absence of iron deficiency.

Second antenatal visit (follow-up visit)

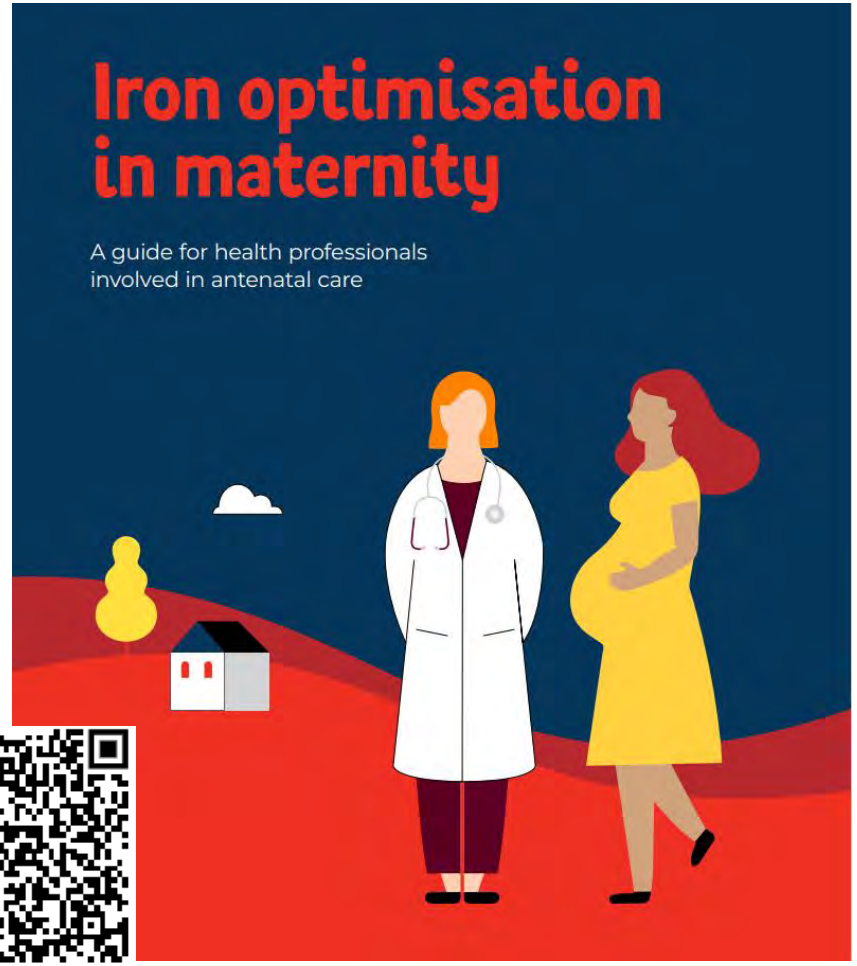
- If a haemoglobinopathy is detected, partner screening should be performed as soon as possible. Include the woman's details on the request form and refer to the obstetric antenatal clinic (ANC).
- Review booking blood results and use the flowchart to determine if iron is required.*



Australian Red Cross Lifeblood®

Iron Optimisation in Maternity

Flow Charts available for each trimester + postpartum management



Iron optimisation in maternity

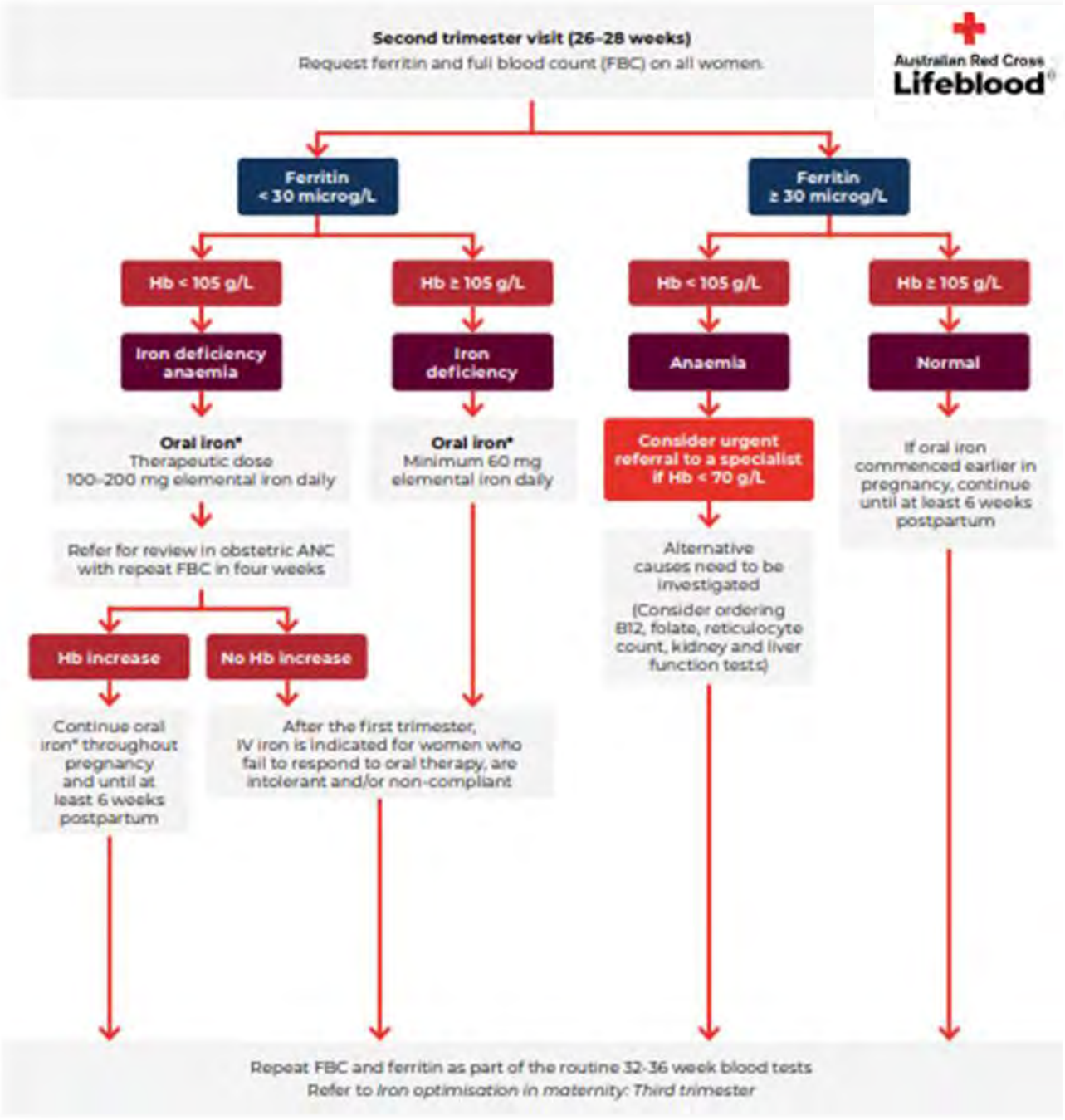
Second trimester

If iron therapy is required i.e., Ferritin < 30 mcg/l

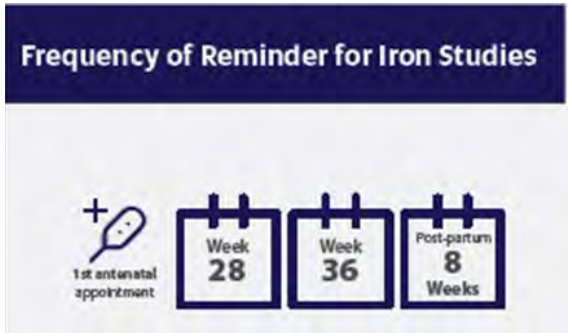
- Continue iron rich diet
  (Queensland Health iron information leaflet)

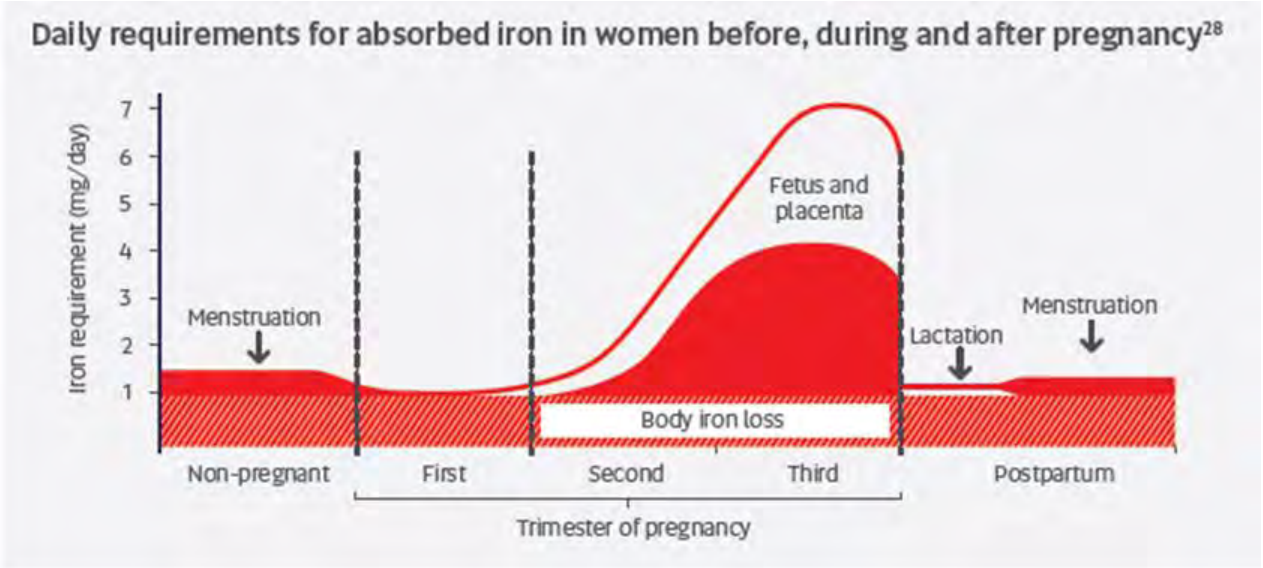
- Commence replacement therapy
  - Minimum 60mg elemental iron daily if iron deficient
  - 100-200mg daily if IDA

- Provide the woman with information: e.g.,
  - Lifeblood's "Oral Iron Choices for Maternity"
  - Bloodsafe's "A Guide to Taking Iron Tablet"
- Assess COMPLIANCE (dose and timing) and side effects at every visit, and manage accordingly



Iron Deficiency – ongoing follow up:





- Check ferritin again in ALL pregnant women at 26-28 weeks'
- 2 of every 3 women in 3rd TM still iron deficient despite iron treatment
- If previously ≥ 30mcg/l – check FBC & ferritin at 32-36/40
- Highest requirements in the 3rd trimester
- If intolerant, poor compliance, fail to respond (Hb falling) – consider Iron infusion (after 1st TM)
- Urgent notification if Hb < 70g/l (and check B12/folate/retics/renal and LFT's)
- Continue Fe Supplement at least 6-8/52 postpartum and recheck as required

Consequences of iron deficiency anaemia in pregnancy and postnatal period

Maternal	Fetal / Neonatal
Fatigue	Impaired placental growth/placental inefficiency
Reduced mental and physical performance	Low birth weight
Poor gestational weight gain	Preterm birth
FGR secondary to poor placental perfusion	Neurological impairment- neurocognitive disorders , behavioural problems
Increased risk of birth complications- haemorrhage, need for transfusion, infection, hospitalisation	Increased mortality
Depression	Associated with retinopathy of prematurity
Inhibited lactation	Iron deficiency/ childhood anaemia
Higher incidence of thyroid autoimmunity	Inadequate iron stores at birth mean higher risk of iron deficiency throughout early childhood and into the preschool years (maternal ferritin levels of <10-14µg/l seem to be critical level at which fetal iron stores become compromised)
Restless leg syndrome	
Increased mortality	

Toolkit for Maternity Blood Management (Aust Red Cross) - https://transfusion.com.au/node/2410

Oral iron choices

Information for pregnant women

Oral Iron Choices for Maternity

Australian Red Cross Lifeblood

Woman's name _____

Today's date _____

Date of blood test _____

Haemoglobin (g/L) _____

Ferritin (µg/L) _____

Health professional's signature: _____

It is recommended you begin taking a daily dose of

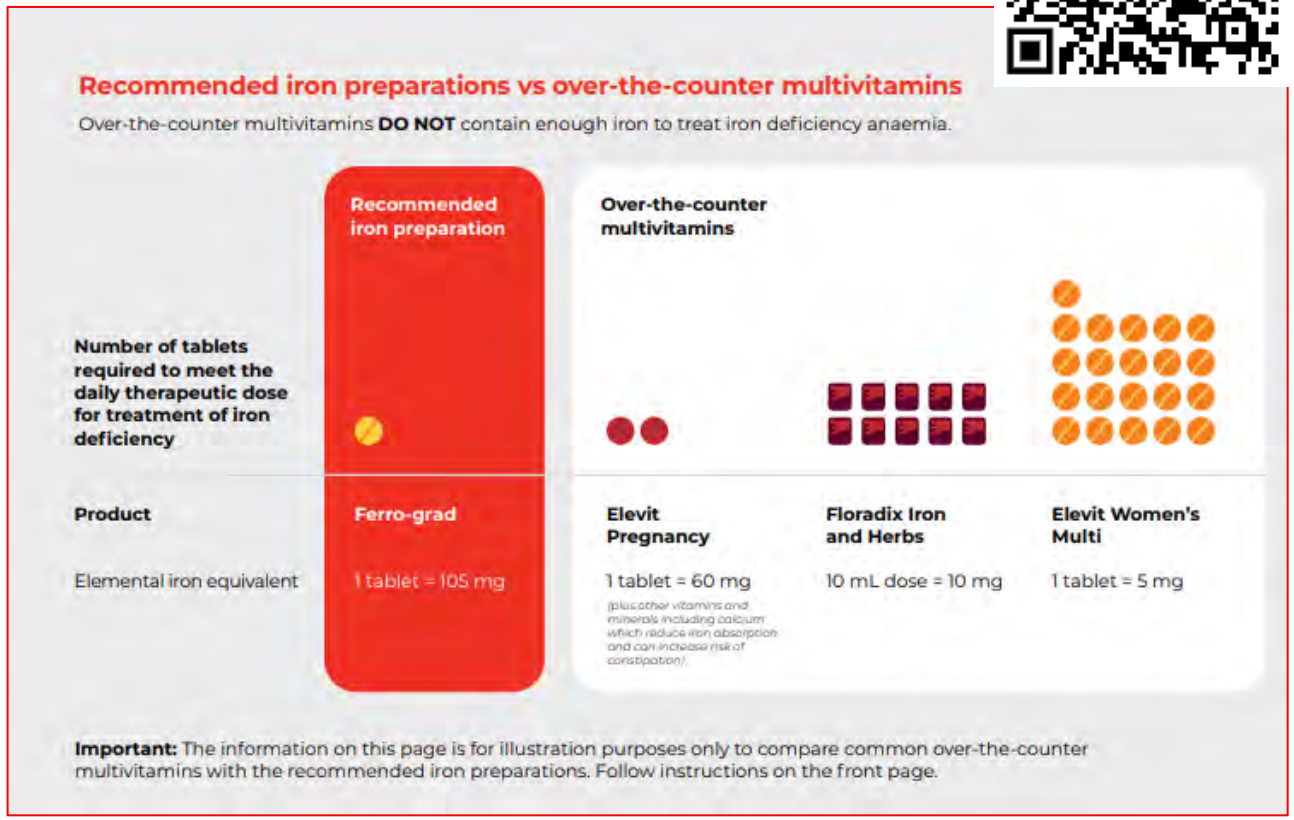
☐ 60–100 mg of elemental iron ☐ ≥ 100 mg of elemental iron

for the remainder of your pregnancy and for a minimum of six weeks after the birth of your baby. Continue taking pregnancy multivitamins.

Follow up with your:

- Maternity Care Provider for a repeat blood test at ____ weeks.
- GP for a repeat blood test six weeks after the birth of your baby.

Recommended iron preparations	Elemental iron	Dosage information
☐ **Ferro-grad** Ferrous sulfate 325 mg tablets	105 mg per tablet	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Ferro-grad C** Ferrous sulfate 325 mg tablets	105 mg per tablet	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Ferro-F-Tab** Ferrous fumerate 310 mg tablets	100 mg per tablet	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Maltofer** Iron polymaltose 370 mg tablets	100 mg per tablet	**Take one tablet with food:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Maltofer Syrup** Iron polymaltose 370 mg/10 mL oral liquid	100 mg/10 mL	**Take _____ mL with food, through a straw to avoid staining teeth.**
☐ **Ferro-grad F** Ferrous sulfate 250 mg tablets	80 mg per tablet	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Fefol Iron & Folate Supplement** Ferrous sulphate 270 mg capsules	87.4 mg per capsule	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Ferro-Tab** Ferrous fumarate 200 mg tablets	65.7 mg per tablet	**Take one tablet on an empty stomach:** ☐ once a day ☐ twice a day ☐ on alternate days
☐ **Ferro-Liquid** Ferrous sulphate 30 g/mL oral liquid	60 mg/10 mL	**Take _____ mL with food, through a straw to avoid staining teeth.**

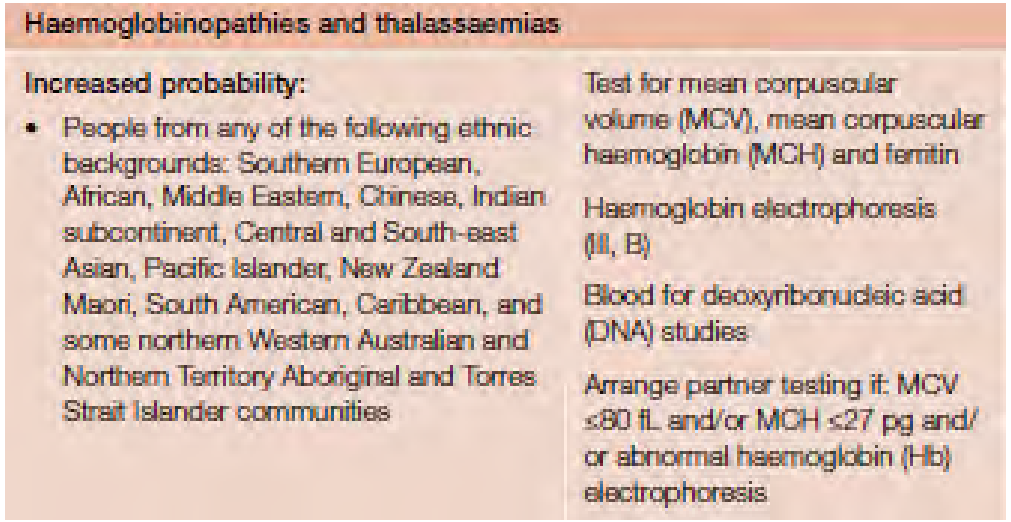


https://transfusion.com.au/node/2359

https://www.lifeblood.com.au/sites/default/files/resource-library/2021-10/Oral_Iron_Choices_for_Maternity_v3.0_FINAL_SCREEN.pdf

Remember ……

- **NB NOT** all microcytic anaemias are due to iron deficiency
- Consider Haemoglobinopathy
- Perform haemoglobinopathy screening if risk factors
  - women with a family history of anaemia, thalassaemia or other abnormal haemoglobin variant
  - any woman from a high-risk ethnic background who has not previously been tested
  - or the booking FBC shows a MCV ≤ 80 fL and/or MCH < 27 pg
- Iron is required for Hb synthesis & a FBC /blood film can be difficult to interpret in women with a low ferritin - may need repeat thalassaemia screening when iron stores are replete
- If haemoglobinopathy detected – arrange partner screening ASAP
- With **Australia's** mixed population - identifying underlying **haemoglobinopathies** is a potential concern



Haemoglobinopathies and thalassaemias

Increased probability:	Test for mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH) and ferritin
• People from any of the following ethnic backgrounds: Southern European, African, Middle Eastern, Chinese, Indian subcontinent, Central and South-east Asian, Pacific Islander, New Zealand Maori, South American, Caribbean, and some northern Western Australian and Northern Territory Aboriginal and Torres Strait Islander communities	Haemoglobin electrophoresis (II, B) Blood for deoxyribonucleic acid (DNA) studies Arrange partner testing if: MCV ≤80 fL and/or MCH ≤27 pg and/or abnormal haemoglobin (Hb) electrophoresis

RACGP Guidelines for preventive activities in General Practice - 9th edition

1. AJGP - March 2019 - Anaemia in pregnancy
2. Thalassaemia and haemoglobinopathy screening in pregnancy – O&G Magazine – Autumn 2022

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?
- ☐ Mental health screening during and after pregnancy is recommended for all. Depression and anxiety are common and can cause problems 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 are recommended: Full Blood Count; Blood Group & antibodies; Ferritin (iron stores); Rubella immunity, Hepatitis B, Hepatitis C, HIV & syphilis serology & a urine test for kidney disease & infections. If you have a high risk of diabetes, you are advised to have an early glucose tolerance test or HbA1c. A dating scan may be recommended.
- ☐ Chicken Pox, thyroid, chlamydia or vitamin D levels may be recommended, depending upon your history.
- ☐ Supplements of folate (0.5 mg for those at lower and 5 mg for those at higher risk) & iodine (150 mcg) 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
- ☐ You should stop drinking alcohol because it can hurt you and your baby. If you are having difficulty stopping, we would like to work with you on this important change. Resources are available https://www.nofasd.org.au/alcohol-and-pregnancy/resources/support-for-parents/ 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 at least 6 weeks after your last normal period.
- ☐ 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.
- ☐ You can test (just once is funded & needed) to see if you are a carrier for chromosomal conditions including cystic fibrosis, spinal muscular atrophy, and fragile X syndrome. The noninvasive prenatal test (NIPT) gives information about a limited range of chromosomal abnormalities, including Down Syndrome. NIPT is not covered by Medicare and costs ~ $400.
- ☐ An ultrasound test, the morphology scan, is recommended and usually done at or after 20 weeks of pregnancy to check on the position of the placenta, anatomy, growth & development of the baby. Ask about the best place to have it done.
- ☐ Go and see your midwife or doctor for 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. Get a paper copy for your hospital.
- ☐ If you have a Rhesus negative blood group, you should have an AntiD injection 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.
- ☐ Ask for a free* whooping cough booster from 20 weeks' gestation in every pregnancy, even if the pregnancies are less than two years apart.
- ☐ At 26-28 weeks, your blood count and blood group antibodies are checked again, and a glucose tolerance test is recommended, unless you already have diabetes. Ferritin and syphilis testing may be recommended.
- ☐ 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. Ferritin and syphilis testing may be recommended.
- ☐ If you choose to have Shared Antenatal Care with your GP, you will usually have a hospital 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

March 2024

PREGNANCY CHECKLIST

Pregnancy Checklist March 2024.docx

US/S costs – Clinics compared – Non endorsed

☺ Costs correct as of August 31, 2023, for singleton pregnancies with a valid referral.
Not all services are available at all locations, especially the Nuchal Translucency Scan (NTS). Advise women to confirm current costings at the time of booking.

Practice	Under 12 weeks (Item 55700, $55.25 rebate)	NTS (Item 55707 $64.50 rebate)	Morphology (Item 55706 $92.10 rebate) Including cervical length – TV-USS if required
Exact Radiology	BB viability, dating scans <16/40	$235 (available at Sunnybank, Inala, Chapel Hill, Ipswich Riverlink and Underwood) GAP: $173.05	$235 morphology - GAP: $146.55 >22/40 $140 (if had Morph scan with Exact, or $235 if not) Further scans > 22/40 are BB if referred by Obstetrician or DRANZCOG – GP (if undertaken by Exact)
Qscan	$123.45 GAP:$70 (Medicare rebate)* BB ALL USS Meadowbrook	$261.95* GAP: $200	$311.65 for morphology GAP: $220, BB HCC (Meadowbrook only) $311.65* 3rd TM scans GAP: $220
Qld Radiology Specialists (Nov 2023 prices)	$160 viability and dating < 12/40 GAP: $104.75 12-16/40 - $303 GAP: $238.50	$303 GAP: $238.50	$304 GAP: $211.90
I-MED Radiology	$153.10 HCC BB GAP $100	$225 HCC BB - GAP: $160.85 - Only available at Carina	$255, HCC BB GAP: $163.35 for morphology & all 3rd TM scans (Only Carina)
Qld Xray	$215 viability, dating (at some practices GAP: $160 BB HC Holders	$260 GAP: $195.85	$287 - morphology GAP: $195.35 $210 3rd TM scans GAP: $120 BB HCC holders if previous NTS or morphology scan with QXR
Lumus Imaging Formerly QDI	$185 GAP: $132	$234* Only at Browns Plains (book well in advance (prefer 12/40); GAP: $170	$211 GAP: $120 for morphology (prefer 20-22/40) & 3rd TM scans, GAP: $120
So + Gi (4D)	$245 GAP: $190 $633 for NIPT + dating scan, GAP: $580	$394.15 GAP: $330 $872 NIPT + NTS rebate $62 GAP: $810	$422 GAP: $330 $422 3rd TM scans GAP: $330+

*viability, dating scans and a single third trimester/follow up scans BB

Eligibility

MEDICARE REQUIREMENTS

- Eligibility for Obstetric USS - Medicare Rules for rebates (June 2020) recognised that **all** pregnancies are at risk of fetal anomaly & miscarriage.

- If ordered by a GP, a Medicare rebate is payable for an ultrasound of the pelvis related to pregnancy or a complication thereof, for a gestational age of **less than 16 weeks** (as determined by ultrasound).

- GPs limited to one pregnancy ultrasound request for services performed from 17 to 22 weeks' gestation + one request for scans performed on patients > 22 weeks' gestation.

- To attract a Medicare rebate, any additional scans required must be referred by DRANZCOG holders or RANZCOG Fellows/Members (as clinically indicated – Item Number 55721 - Rebate $105.90).

Morphology scan at 18- 20 weeks' gestation- a refresher

Also known as a morphology scan , the scan also looks at placental location and the structural and developmental growth of the fetus. This scan is not a screening test for chromosomal anomalies.

Areas examined during morphology USS

The head
The spine
The abdominal wall
The heart
The stomach
Kidneys and bladder
Arms, legs, hands and feet
Placental position
Umbilical cord examination
The amniotic fluid (AFL)
Cervical length

Fetal anomaly detection at 18-20 weeks USS

Neural tube defect >90%
Cardiac anomaly 20%-75%
Cleft lip >75%
Trisomy 21 20-50%
Trisomy 13 >90%
Trisomy 18 >90%

Takeaways:

- Follow up and manage iron deficiency early in pregnancy but assess for other causes of anaemia including haemoglobinopathy if clinically indicated (including partner testing!)
- Vitamin D – consider supplement in all, including in exclusively breastfed infants, even in Queensland. Remember iodine!
- Not all vomiting in pregnancy is “hyperemesis” – manage in a stepwise fashion remembering to do no harm.

Metro South Health

Prenatal Carrier Screening + Aneuploidy Screening

Dr Elisha Broom
BSc, MBBS(Hons), FRANZCOG, CMFM.
Maternal Fetal Medicine Consultant | Department of Obstetrics and Gynaecology
Logan Hospital | Metro South Health

We care about you

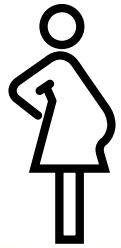
Queensland Government

Outline

- Maternal Fetal Medicine Scope and Referrals
- Prenatal Carrier Screening
  - Who, what, when
- Aneuploidy screening
  - CFTS vs NIPT
  - Pathway for high probability results

Maternal Fetal Medicine

- Who are we (and where are we..)?
- What is our scope?
- When to refer to MFM



Reproductive Genetic Carrier Screening

Current screening for genetic conditions:

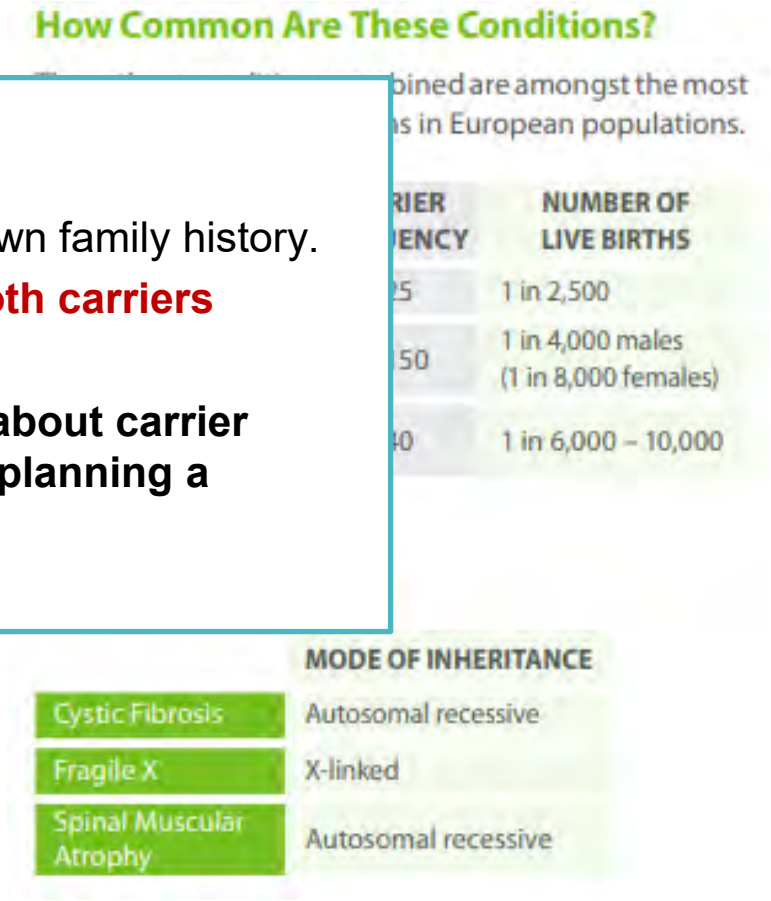
- Newborn 'hee
  - Voluntar
  - 26 condi
    galactos
- **Prenatal carr**
  - 1st November 2023 – Federally funded
  - 3 condition test (CF, SMA, Fragile X)
  - Ideally pre-conception

Practice Point:

Most carriers of a genetic condition will not have a known family history.

1:20 Australians carrier, 1:240 couples both carriers

Both RANZCOG + RACGP recommend '**information about carrier screening should be offered to all women/couples planning a pregnancy'**



How Common Are These Conditions?

…bined are amongst the most
…s in European populations.

…RIER …ENCY	NUMBER OF LIVE BIRTHS
…25	1 in 2,500
…50	1 in 4,000 males (1 in 8,000 females)
…40	1 in 6,000 – 10,000

	MODE OF INHERITANCE
Cystic Fibrosis	Autosomal recessive
Fragile X	X-linked
Spinal Muscular Atrophy	Autosomal recessive

Genetic Carrier Screening

Medicare funding for Carrier Status testing in Australia from Nov 2023

- Spinal Muscular Atrophy
- Cystic Fibrosis
- Fragile X Syndrome

Medicare Criteria:

1. Female planning pregnancy
2. Female who is already pregnant (best done ASAP)
3. Male reproductive partner of a female carrier

The rebate only applies ONCE per lifetime

Genetic Carrier Screening Informed Reproductive Decision Making FOR MEDICAL PROFESSIONALS - e48af711-4931-4663-bb08-16efb821c1a7.pdf (healius.com.au)

88% of carriers have no family history[1]

1 in 20 is the combined carrier frequency for these three conditions[1]

What does carrier screening entail?

- Maternal and paternal serum samples
- Federal funding for existing carrier screening providers

  S+N, QML, VCGS
  3-4 week wait for results

‘Extended’ carrier screening (limited rebate)

- ~400 conditions
- requires detailed pre-screening counselling.
- $600

AUSTRALIAN CLINICAL LABS

- Gene Access Carrier Screen
- Comprehensive Carrier Screening

EUGENE

- Expanded Carrier Screening

GENOMIC DIAGNOSTICS

- Core Genetic Carrier Screen
- Myriad (Counsyl) Foresight Expanded Carrier Screen

GENOMICS FOR LIFE

- Extended Carrier Screening

SONIC GENETICS

- 3-Gene Carrier Screen
- Beacon Expanded Carrier Screen

VICTORIAN CLINICAL GENETICS SERVICES

- Prepair Genetic Carrier Screening
- Expanded Carrier Screening

VIRTUS DIAGNOSTICS

- Genetic Carrier Screen – 3 Gene Panel
- Expanded Carrier Screen

Medicare Criteria

As of November 1 2023, genetic carrier screening will be listed on the Medicare Benefits Schedule.

Medicare Item 73451 – screening for a female who is pregnant or planning pregnancy

Testing of a patient who is pregnant, or planning pregnancy, to identify carrier status for pathogenic or likely pathogenic variants in the following genes, for the purpose of determining reproductive risk of cystic fibrosis, spinal muscular atrophy or fragile X syndrome:

(a) CFTR
(b) SMN1
(c) FMR1

One test per lifetime.

Medicare Item – 73452 – screening for a reproductive partner of a carrier

Testing of the reproductive partner of a patient who has been found to be a carrier of a pathogenic or likely pathogenic variant in the CFTR or SMN1 gene identified by testing under item 73451, for the purpose of determining the couple's reproductive risk of cystic fibrosis or spinal muscular atrophy.
One test per condition per lifetime.

Explanatory note: The intent of MBS item 73451 is to test an asymptomatic patient of female chromosomal sex who is either planning a pregnancy or is already pregnant. The intent of MBS item 73452 is to test an asymptomatic patient of male chromosomal sex who is the reproductive partner of the female patient tested under item 73451.

Arranging Genetic Carrier Screening

Step 1: Patient consultation

- Discuss carrier screening with your patient as recommended by clinical guidelines
- Order Genetic Carrier Screening on a standard request form, noting any family history or pregnancy , and if the reproductive partner is a known carrier

Step 2: Sample collection

- Patient attends collection centre with their signed request form
- Blood is collected
- Genetic Carrier Screening is performed

Step 3: Result discussion

- Results are delivered to you by your preferred method
- Genetic counselling is provided for couples who are identified as carriers

Genetic Carrier Screening
Informed Reproductive Decision Making

FOR MEDICAL PROFESSIONALS

Genomic Diagnostics
LEADING THE WAY TO IMPROVE HEALTH

For more information, contact us at info@genomicdiagnostics.com.au

1800 822 999 genomicdiagnostics.com.au PO Box 250, Heidelberg West, VIC 3081

Healius companies

abbott pathology | dorevitch pathology | laverty pathology | qml pathology | tml pathology | western diagnostic pathology

e48af711-4931-4663-bb08-16efb821c1a7.pdf (healius.com.au)

Genetic Carrier Screening – Carrier parents

- **If parents identified to both be carriers:**
  - Counselling regarding inheritance chances and pregnancy options
  - Uncertainty as to funding of post-test counselling. ?GHQ/private geneticist

- **Pregnancy options:**
  - Early diagnostic testing (CVS) (referral to MFM)
  - IVF + PGT ($$)
  - Donor egg / sperm / embryo, adoption

https://www.racgp.org.au/getmedia/4b19d774-d020-4cda-80e1-7b75a8d7dfc7/A-quick-guide-to-carrier-screening-for-hereditary-diseases.pdf.aspx

Who should be offered carrier screening?

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists guidelines recommend that clinicians:

- offer basic thalassaemia screening to **all pregnant women** (FBC)
- offer information on carrier screening (both three-condition & expanded panel) to **all women** planning a pregnancy or in the first TM of pregnancy, regardless of family history or genetic origin.
- offer **additional screening** to individuals of Eastern European (Ashkenazi) Jewish descent, due to a higher incidence of conditions such as Tay–Sachs disease in this population
- offer a more detailed discussion about carrier screening with an informed clinician
- obtain **informed consent** for screening – this should include any out-of-pocket expenses that are required for the chosen test
- refer all carrier couples, and women who are carriers of an X-linked recessive disorder, for genetic counselling.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Excellence in Women's Health

Reproductive Carrier Screening

Genetic screening options for healthy couples who are planning a pregnancy, or who are in the early stages of pregnancy, are becoming more available.

Inherited genetic conditions
There are hundreds of inherited genetic conditions that can affect human health, and most are very rare. However, when all of these inherited conditions are considered together, they affect up to 1 in 400 people. Most couples who have an affected child have no family history of the condition and were not aware they had an increased chance of having a child with the condition. This occurs because a healthy couple can pass on genetic changes to their child without knowing they are carriers of that condition. Therefore, carrier screening is relevant to everyone regardless of whether or not they have a family history of a genetic condition.

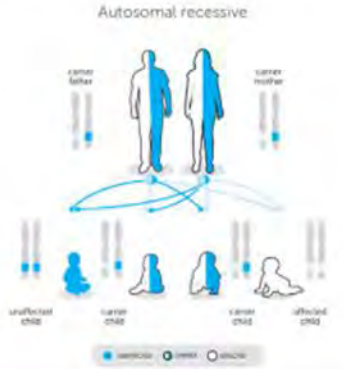
What screening is currently available for genetic conditions?
The newborn screening programs in Australia and New Zealand offer screening of all newborns for a range of genetic conditions using the "heelprick test". This is a voluntary, government-funded test that does not require any payment. The majority of parents choose to have this screening for their baby.

Screening can also be performed on adults to see if they are at increased chance of having a child with a genetic condition. When a healthy couple or individual have screening to see if there is a chance of passing a genetic condition to their children, this is called "reproductive carrier screening". This is usually not government funded unless there is a family history of the condition.

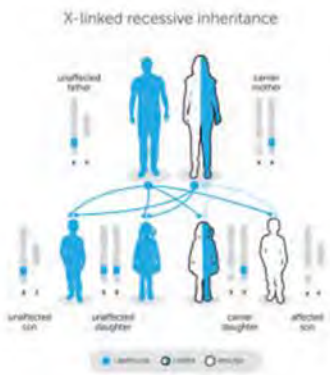
How does a baby inherit a genetic condition from healthy parents?

There are two major types of inheritance that can lead to a healthy couple having a child with a serious genetic condition. These are referred to as autosomal recessive and X-linked recessive inheritance.

Autosomal recessive conditions
For autosomal recessive conditions, a person only develops the disease if they inherit the same faulty gene from each parent. In this case, each parent has one faulty gene and one healthy or functioning gene, they do not have the condition; but are healthy "carriers" of the condition. If both members of a couple are carriers of the same faulty gene there is a 1 in 4 chance of having a child affected by that condition. The most common autosomal recessive conditions in our community are thalassemia and cystic fibrosis.



X-linked conditions



X-linked conditions occur when the faulty gene is on the X chromosome. Males have an X and a Y chromosome while females have two X chromosomes. Since males have only one X chromosome, if there is a faulty gene on their X chromosome they are more severely affected by the condition since they do not have a second normal X chromosome to compensate.

If a woman is a carrier for an X-linked condition, there is a 1 in 2 chance of having an affected son and 1 in 2 chance of the daughter being a carrier.

The most common X-linked condition is fragile X syndrome. For fragile X, female carriers have up to a 50% chance of having a child with fragile X syndrome. Both males and females can have fragile X syndrome.

What should we do if we have a family member with a genetic condition?

If you or your partner have a relative with a genetic condition, you may have an increased chance of having a child with that genetic condition. Examples of inherited genetic conditions include thalassemia, cystic fibrosis, fragile X syndrome, spinal muscular atrophy, and haemophilia. Some genetic conditions occur more frequently in certain ethnic groups. If you have a relative with a genetic condition, you should discuss this with your family doctor (general practitioner (GP)). Your GP can refer you to a genetic counsellor or medical geneticist for further advice and testing if needed.

We don't have a genetic family condition. Is there a risk?

Carrier screening is relevant to all people planning a pregnancy or in early pregnancy. Most people who are a carriers of a genetic condition/s do not have a family history of a genetic condition/s. This is because carriers are generally healthy and because usually both members of the couple need to carry the same condition in order to have an increased chance of having a child with that condition. This means these conditions can be passed down through families for many generations before a person is affected by the condition.

How often do these genetic conditions occur?

The chance of a child being born with a genetic condition varies depending on the ethnicity of the population. The numbers of carriers and affected individuals for the more common conditions in a Caucasian population are listed below. As technology improves and people are having screening for a large number of conditions, it is becoming clear that most people are carriers for one or more inherited conditions.

	Number of people who are carriers	Number of people with the conditions
Cystic fibrosis	1 in 25	1 in 2,500
Fragile X syndrome	1 in 250	1 in 4,000
Spinal muscular atrophy	1 in 40	1 in 6,000 - 1 in 10,000

When should I have screening?

Carrier screening can be performed at any time, but it is preferable to screen before pregnancy so that prospective parents have time to consider their reproductive options.

What are the costs?

The cost of testing for three of the most common genetic conditions - cystic fibrosis, spinal muscular atrophy, and fragile X syndrome - is currently out of pocket. At the moment there is no rebate for these tests.

How do I access screening?

A range of carrier screening options are available. These generally fall into two groups:

- Screening for a small number of common inherited conditions (such as cystic fibrosis, fragile X syndrome and spinal muscular atrophy)
- Screening the common inherited conditions as well as a large number of rare conditions

If you are considering carrier screening, speak to your GP, obstetrician or midwife. They can discuss your options with you and may refer you to a genetic counsellor. Some genetic testing laboratories and clinical genetics services offer genetic counselling for people considering carrier screening.

What can we do if we have an increased chance of having a child with a genetic condition?

If you and your partner are carriers of the same genetic condition or the female partner is a carrier of an X-linked condition, then you should seek genetic counselling prior to getting pregnant. This will give you time to consider all the options available to you, including:

- Getting pregnant naturally and having the baby tested after birth
- Getting pregnant naturally and having diagnostic testing during pregnancy, with the option of considering an abortion if the baby will be affected
- Having in vitro fertilization (IVF) and preimplantation genetic testing (PGT) in order to selected unaffected embryos to get pregnant
- Using IVF and sperm, eggs or embryos from donors who are not carriers of the condition
- Adoption
- Not to have children at all

If you are already pregnant, it is recommended that you speak to a genetic counsellor. They can discuss options for testing in early pregnancy to determine whether the developing baby is likely to be affected.

RANZCOG © 07|2019

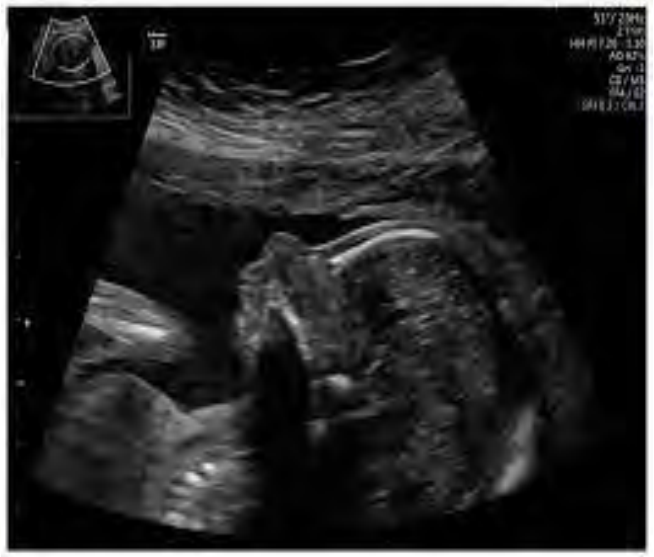
RANZCOG Patient Leaflet - Reproductive Carrier Screening

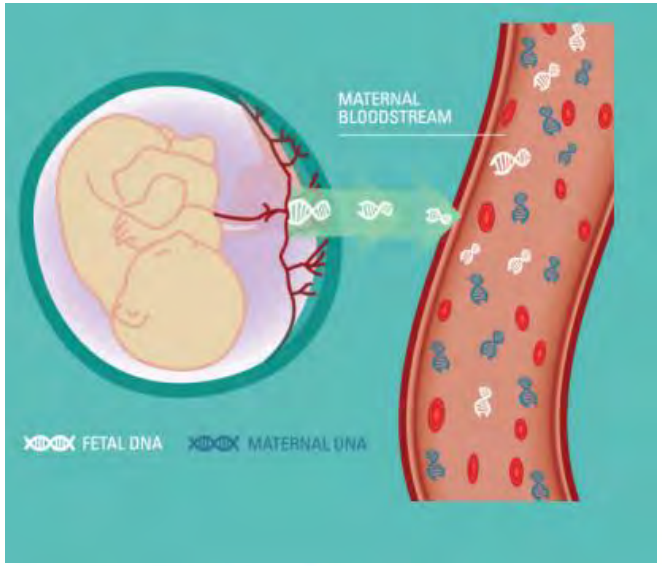
Aneuploidy Screening

Prenatal Aneuploidy Screening

Not just Trisomy 21!

- Antenatal screening to provide a probability of Trisomy 21 (Down Syndrome), Trisomy 18 (Edwards Syndrome), Trisomy 13 (Patau Syndrome) (CFTS or NIPT)
  - May also provide probability risk of rare autosomal trisomies (RATs) (NIPT)
  - Early detection of major structural anomalies (ultrasound)
  - Risk screening for pregnancy complications; pre-eclampsia/FGR (Papp-A / FMF screening)





Practice Point:

NIPT highly sensitive **screening** test for T21 but $$

Second trimester serum screen has lower sensitivity

Ultrasound screens for structural anomaly (T13/18), poor performance in screening for trisomy 21

Not just about continuation vs TOP

Chorionic villus sampling (CVS)

Chorionic villus sampling (CVS) is performed from 11 weeks of pregnancy. An ultrasound is first performed to date the pregnancy and check that the position of the placenta and fetus is suitable for performing the procedure. Occasionally the procedure may not be possible and your doctor will discuss this with you. A sterile needle is guided into the placenta and a small sample is taken for testing. CVS has a miscarriage risk of 1%. Sometimes, a test result may be difficult to interpret and it may be necessary to undergo further testing, such as amniocentesis, to clarify the result.

Amniocentesis (Amnio)

Amniocentesis is performed from 16 weeks of pregnancy. Under ultrasound guidance, a needle is inserted through the abdomen into the amniotic sac around the fetus and fluid is taken for testing. Amniocentesis has a miscarriage risk of 1%.

Test results

CVS and amniocentesis test the fetal chromosomes. Other genetic testing can occur where indicated. A rapid chromosome screening test takes 2-5 days. This only assesses for a handful of chromosomal disorders including Down syndrome, Edward syndrome, and Patau syndrome, amongst others. This test can also determine fetal gender. Normal rapid screening results are very reassuring; however it is important to wait for the final chromosome results which may take 2–3 weeks for confirmation. The time taken for other genetic test results may vary depending on the test.

What is genetic testing?

If you are considering a pregnancy or are pregnant, it is advisable to obtain a referral to a genetics service if you have a personal and/or family history of an inherited disorder (e.g. cystic fibrosis, Fragile X or Duchenne muscular dystrophy). Tests on couples or their family members may be required before prenatal diagnostic testing can be offered in a pregnancy.

Limitations of prenatal screening and testing

Prenatal screening and diagnostic tests are designed to detect disorders in a fetus before birth. Some conditions can be treated after birth. However, chromosome abnormalities and some other genetic disorders cannot be reversed, which may have serious consequences for the baby. In these situations, some couples may wish to have information prior to the birth of their baby so they have time to prepare; other couples consider requesting a termination of the pregnancy. No prenatal test can give a full guarantee that the baby will be normal in every way. However the majority of couples will have a healthy child.

Genetic Health Queensland (GHQ)

For more information about Genetic Health Queensland, educational material and details about making appointments, please contact the main office or the genetic counsellor at one of the outreach centres.

Royal Brisbane and Women's Hospital (Main Office)	07 3646 1686
Royal Brisbane and Women's Hospital Prenatal Service	07 3646 2269
Cairns and Townsville	07 4433 1464
Bundaberg, Rockhampton and Mackay	07 4150 2794
Nambour	07 5441 7167
Toowoomba	07 4616 6995
Gold Coast	07 5687 1515

Office hours are 8 am to 5 pm.

Genetic Health Queensland
C/ Royal Brisbane and Women's Hospital
Butterfield Street, Herston QLD 4029
Phone: 07 3646 1686
Fax: 07 3646 1987
E-mail: ghq@health.qld.gov.au
Web: www.health.qld.gov.au/ghq

QH453 03/15

Queensland Health

Genetic Health Queensland

Prenatal screening and testing

Queensland Government

What are prenatal tests?

Prenatal tests are medical investigations performed during a pregnancy to check on the health of the developing fetus (baby).

The most common tests are:

- nuchal translucency ultrasound at 12–14 weeks combined with a blood test (biochemistry) from the mother
- detailed ultrasound at 18–20 weeks
- chorionic villus sampling (CVS) from 11 weeks
- amniocentesis from 16 weeks.

What is combined nuchal translucency screening?

This screening test is performed between 12–14 weeks of pregnancy, and is an optional ultrasound scan and blood test for all pregnant women. An ultrasound involves the use of high frequency sound waves to create images of the fetus. Ultrasound is non-invasive and has been shown not to cause harm to the fetus.

Your blood test, ultrasound scan and age are combined to calculate the risk of your fetus having Down syndrome or other less common chromosome problems. Down syndrome is more likely if your fetus has extra fluid at the back of the neck, if the nasal bone can not be seen and/or your blood test is out of the normal range. Assessing the nasal bone is a new feature and it improves the accuracy of the screening. It is important to ask if the centre where you are having your screening performed also includes a nasal bone in their risk assessment.

You are not required to have a risk assessment for Down syndrome. However a 12–14 week ultrasound can give you other important information about your pregnancy such as whether you are having twins. Ask your doctor or genetic counsellor for more details.

What is the second trimester blood test/triple test?

This screening blood test can be taken between 15–20 weeks of pregnancy. This blood test provides you with a risk assessment for Down syndrome (if you could not have the combined first trimester test) and spina bifida.

What is non-invasive prenatal testing?

This screening blood test identifies fetal DNA in the blood stream of the mother, and tests for Down syndrome as well as some other common chromosome problems. If you have a positive test result for Down syndrome, it is more than 98% likely that the fetus has Down syndrome. A negative test result means that the fetus has a 1:10000 chance of having Down syndrome. If positive, this test does not replace invasive testing, and the results should be confirmed with either a chorionic villus sampling or amniocentesis.

This test may not be possible for all pregnancies, such as triplets or in pregnancies where one twin has died. Please discuss with your doctor or genetic counsellor if this test is a good screening test for you.

What is the ultrasound at 18–20 weeks?

An ultrasound at 18–20 weeks is a routine scan to assess the growth and development of the fetus. At this time, some structural abnormalities (such as spina bifida, cleft lip/palate and heart defects) may be identified on scan. Ultrasound may detect certain signs in the fetus which suggest an increased risk of a chromosomal or other genetic problem. It is not possible to detect all structural abnormalities or all chromosome problems on ultrasound. This scan is not very good at screening for Down syndrome.

Do I need a prenatal diagnostic test?

Chorionic villus sampling and amniocentesis are prenatal diagnostic tests. These are invasive tests which allow for the analysis of the baby's chromosomes and, in some cases, genetic testing for inherited conditions.

Prenatal diagnostic testing may be offered if:

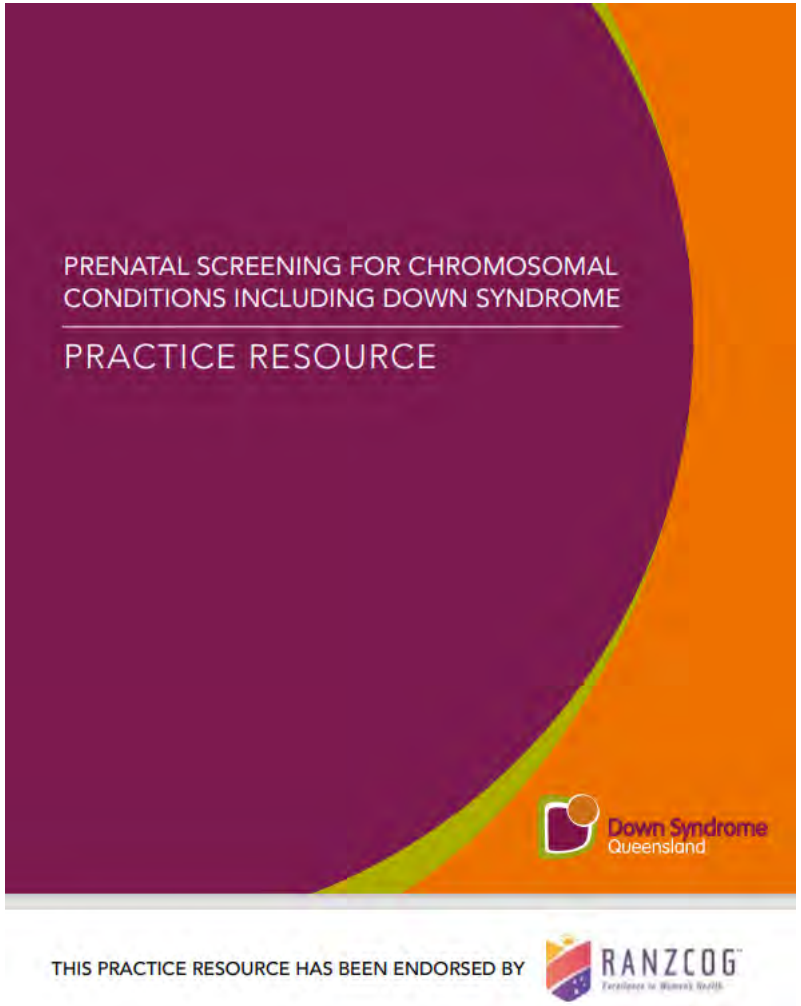
- the mother is 35 years of age or older at delivery and has had no other screening tests
- there is an increased risk of Down syndrome or other chromosome problems from screening tests in pregnancy
- there is an abnormal finding on ultrasound
- there are concerns the mother has had certain infections during pregnancy
- the mother has had a condition herself which could put the fetus at risk
- Or if either parent:
  - is a carrier of a chromosome problem
  - has a personal and/or family history of an inherited disorder
  - has had a pregnancy or child with an inherited or chromosome disorder.

Is counselling available before testing?

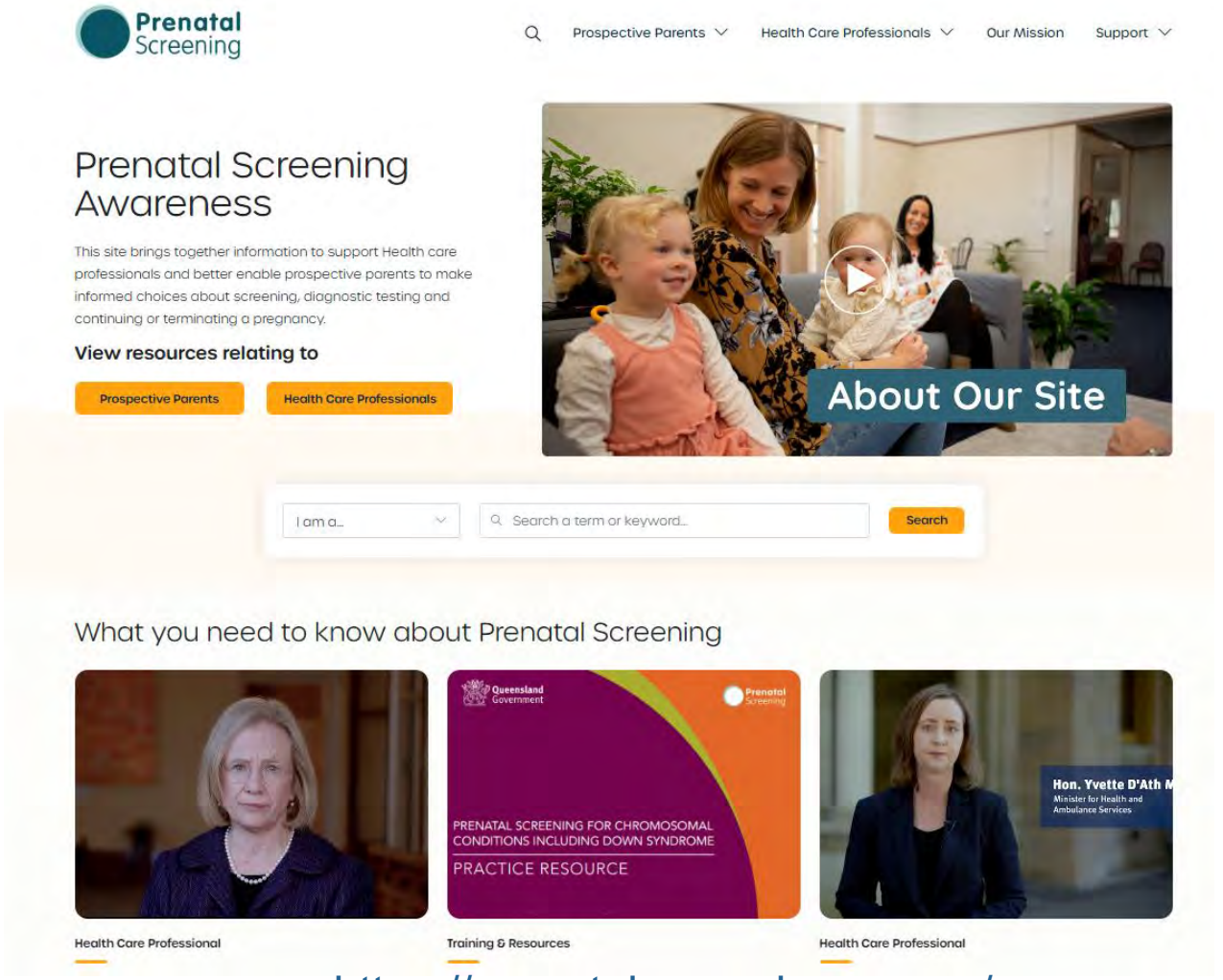
Discussion with your doctor, obstetrician, and/or a genetic counsellor is recommended before any prenatal diagnostic test is performed. You will receive:

- information to enable you to make an informed decision regarding prenatal testing
- a thorough explanation of the prenatal tests and the options available to you
- a discussion regarding the possible outcomes of testing and what your options are
- information on how long test results will take and who will give the results to you.

Perinatal Testing Information Brochure - Genetic Health Queensland



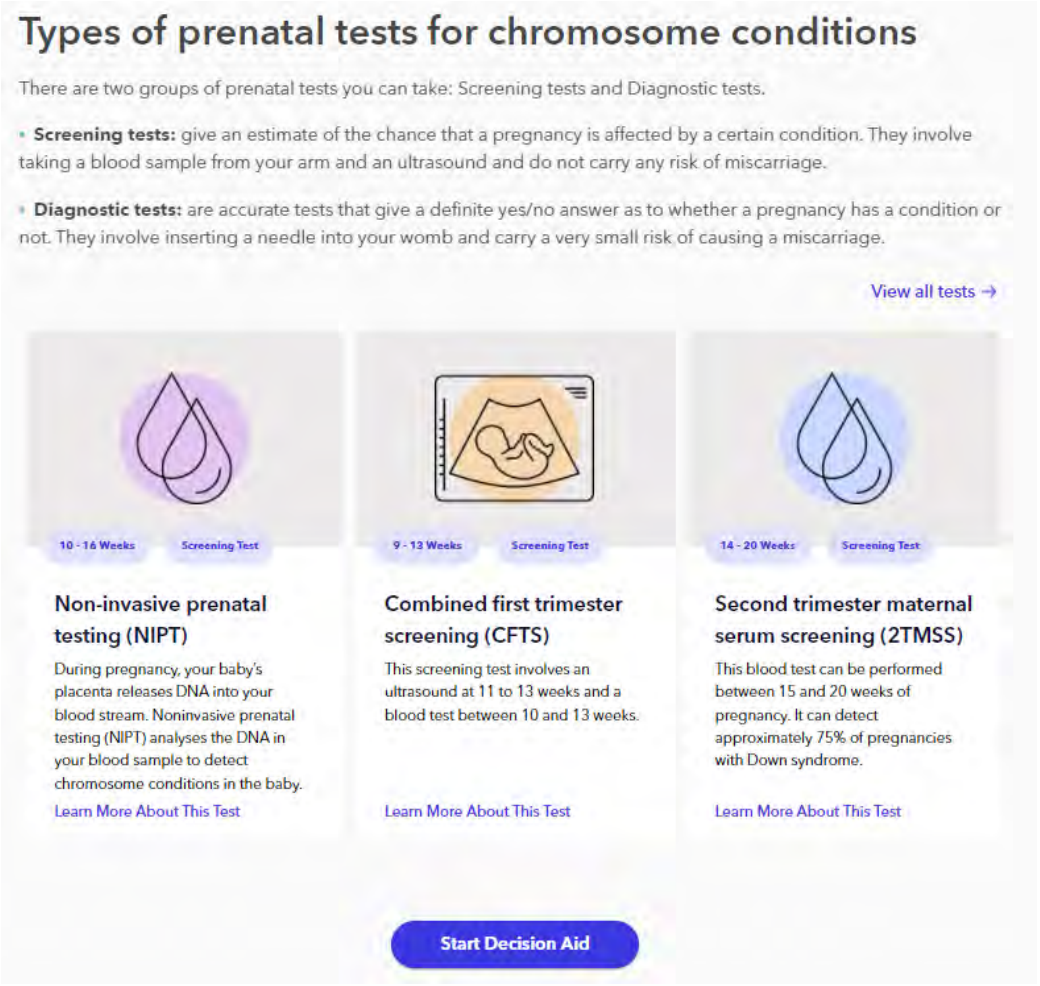
[Prenatal Screening for Chromosomal Conditions Including Down Syndrome - PRACTICE RESOURCE]

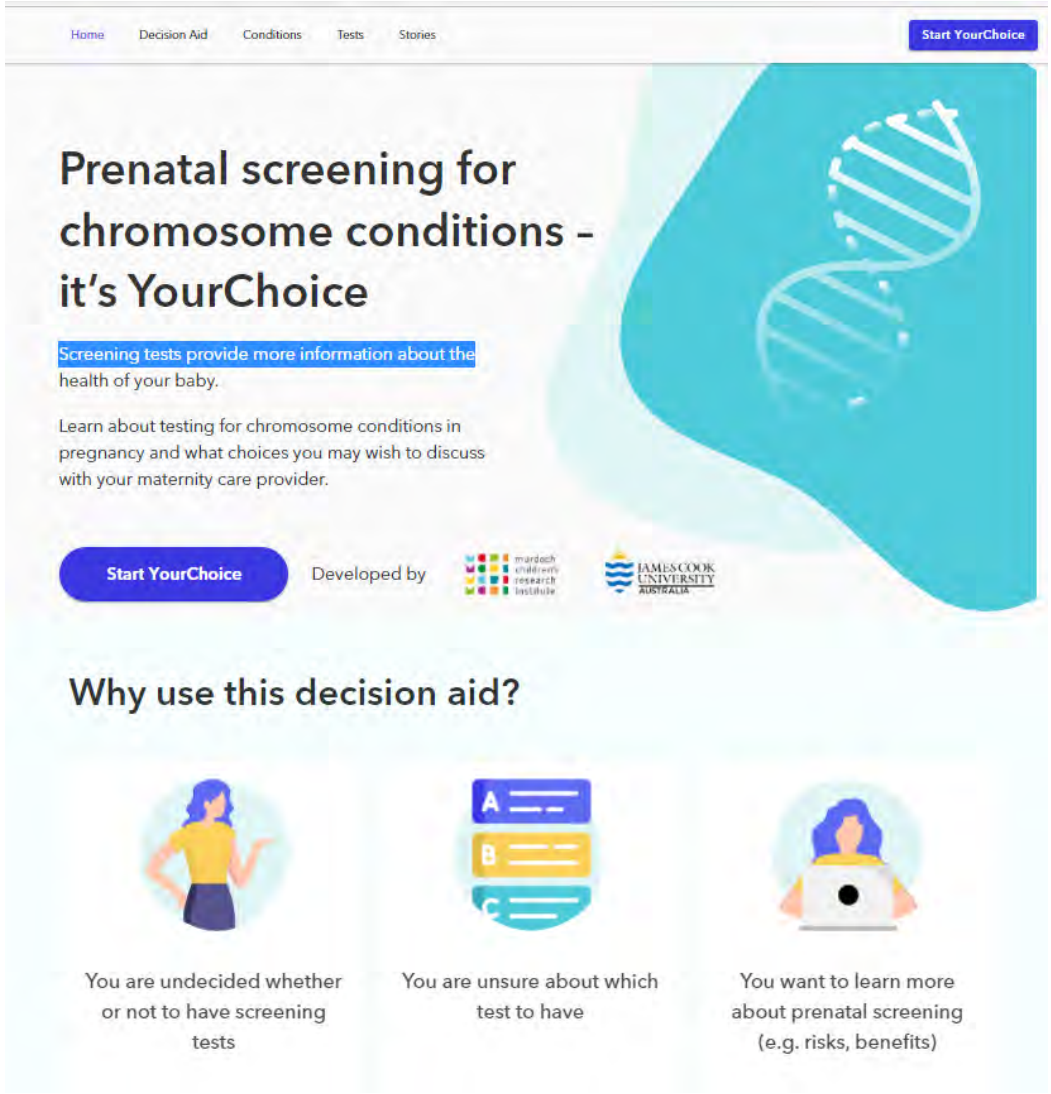


https://prenatalscreening.org.au/

- contains resources for Health Care Professionals and Prospective Parents to support them in the prenatal screening journey
- references both resources developed as part of this website and also useful external resources in each area.

YourChoice (mcri.edu.au)





Developed By Murdoch Children's Research Institute and James Cook University

Non-invasive prenatal testing (NIPT)

- Different platforms / providers / offerings
- Some will offer genetic counsellor in event of a high probability result (VCGS, Harmony)
- Need to notify if multiple pregnancy (VCGS will provide a result in higher order multiples)
- Common reasons for failure:
  - Too early (<10wks)
  - Low fetal fraction (e.g. high BMI)

CONDITION	SENSITIVITY (95% CI)	SPECIFICITY (95% CI)	PPV	NPV
Trisomy 21*[2,4]	99.0% (CI 97.1-100)	>99% (CI 99.93-99.99)	95%	>99.99%‡
Trisomy 18*[2,4]	94.1% (CI 82.9-100)	>99% (CI 99.96-100)	91%	>99.99%‡
Trisomy 13*[2,4]	>99% (CI 73.5-100)	>99% (CI 99.96-100)	68%	>99.99%‡
				>99.99%‡
				>99.99%‡
				99.87%‡
				99.9%‖(CI 99.9-100)
				99.98-99.99%‖

Practice Point:

More is not necessarily better...

Low probability result **does not** mean that the fetus does not have a genetic anomaly

High probability result **does not** in isolation mean that a baby has an aneuploidy

panorama® natera prenatal screen

percept™ cell-free DNA prenatal test

Harmony™ PRENATAL TEST

Generation a new era in prenatal testing

Interpretation of screening results

CFTS:

11+6 – 13+6

- >1:300 = Low risk result
- <1:300 = High risk result
  - NIPT **NOT** appropriate alternative to diagnostic testing/tertiary referral if NT >3.5mm OR <1:100 probability

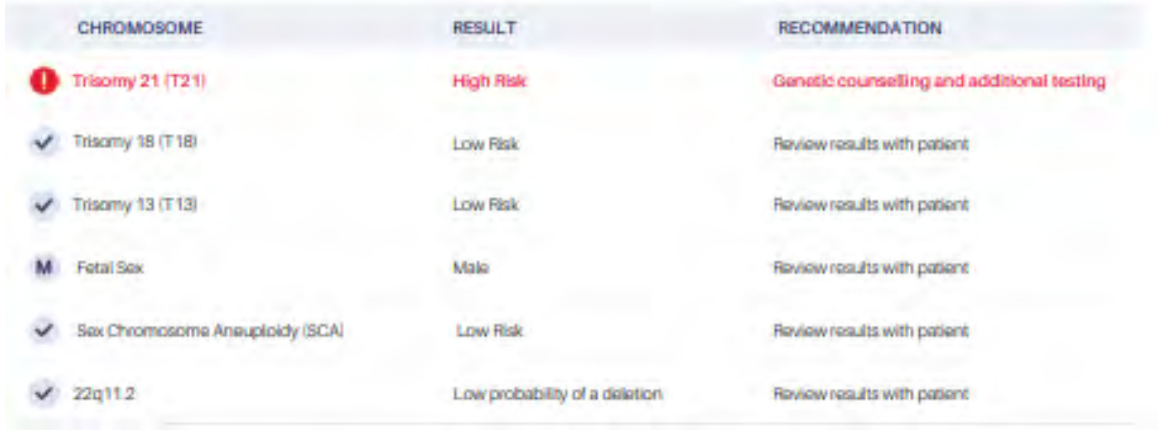
NIPT:

+ early structural USS 11+6 – 13+6 (do not request CFTS)

- High probability result. This DOES NOT mean that the fetus is affected. NIPT is not a diagnostic test.
  - Refer to MFM for discussion of diagnostic testing
- Atypical result; rare autosomal trisomy
  - Refer to MFM / GHQ

Pre-eclampsia screening:

- FMF risk of PET of <1:100 -> commence LDA 100-150mg nocte from <K16 – K36
- Low Papp-A (<0.4MoM) -> commence LDA + refer for growth ultrasounds



CHROMOSOME	RESULT	RECOMMENDATION
Trisomy 21 (T21)	High Risk	Genetic counselling and additional testing
Trisomy 18 (T18)	Low Risk	Review results with patient
Trisomy 13 (T13)	Low Risk	Review results with patient
Fetal Sex	Male	Review results with patient
Sex Chromosome Aneuploidy (SCA)	Low Risk	Review results with patient
22q11.2	Low probability of a deletion	Review results with patient

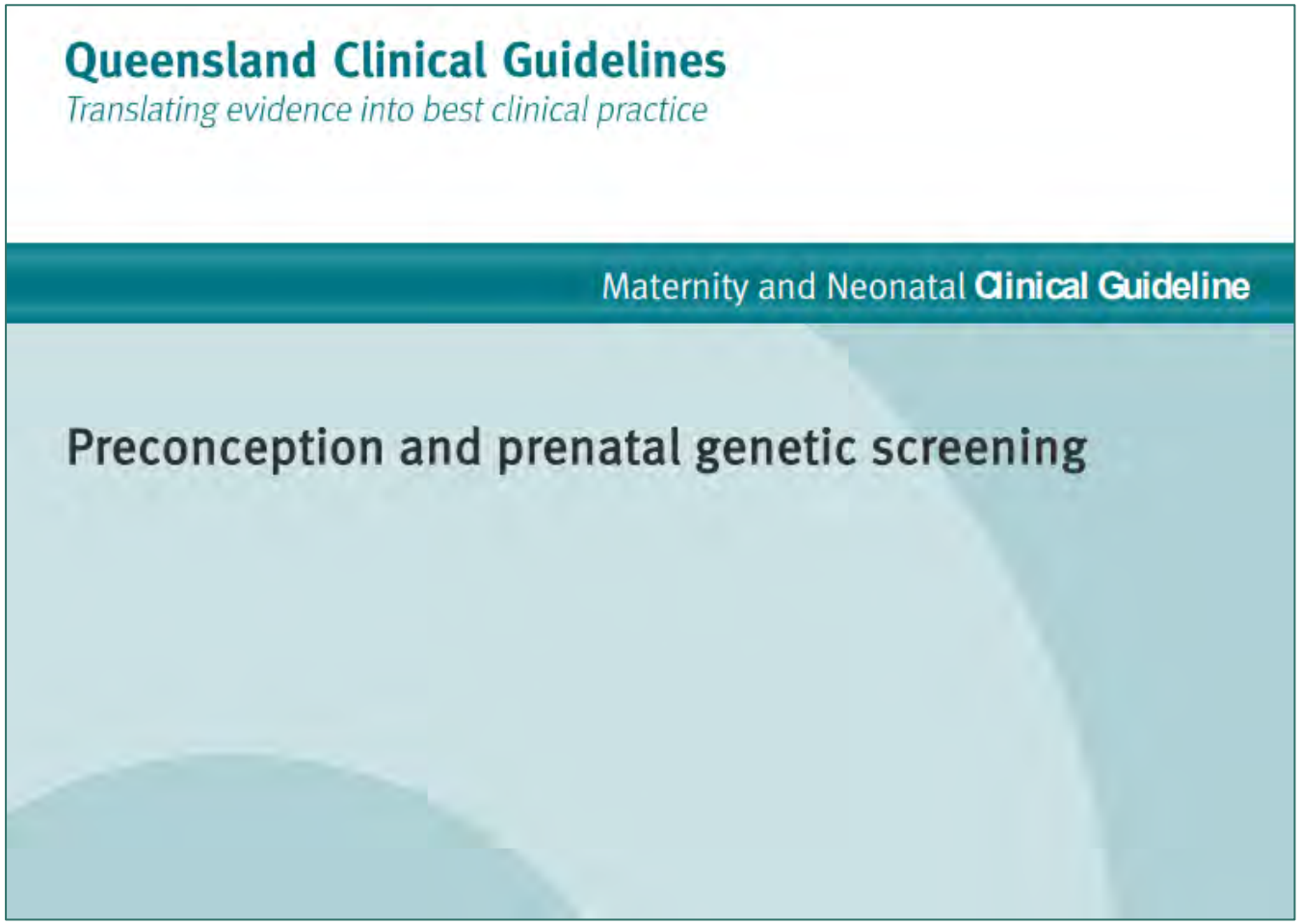
Practice Point:

If requesting NIPT, don't omit early structural USS

Refer to MFM if:

- **Patient requesting diagnostic testing**
- NT > 3.5mm
- CFTS <1:100
- High probability NIPT result

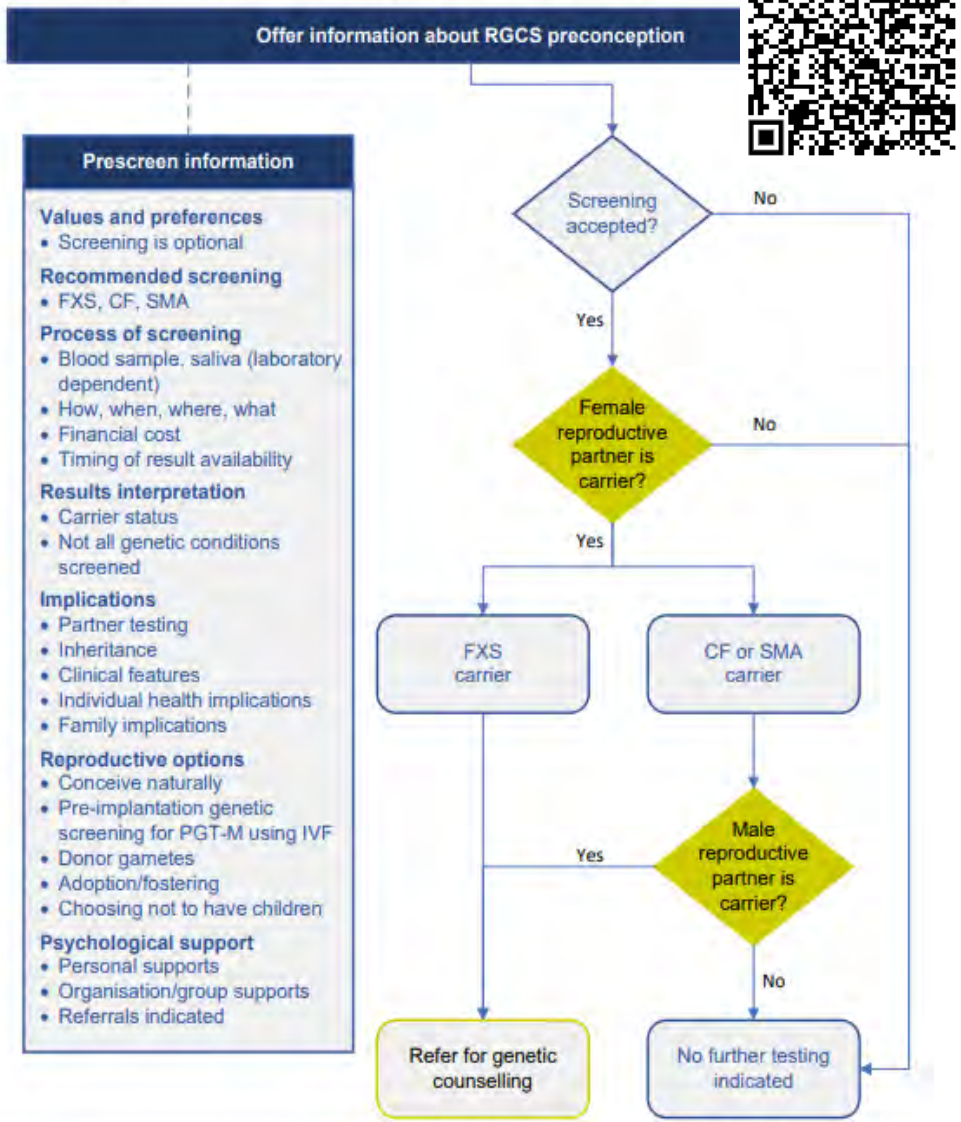
Queensland Clinical Guidelines - NEW



Preconception and prenatal genetic screening
https://www.health.qld.gov.au/__data/assets/pdf_file/0018/1324602/g-prenatal-screen.pdf

Publication date: April 2024

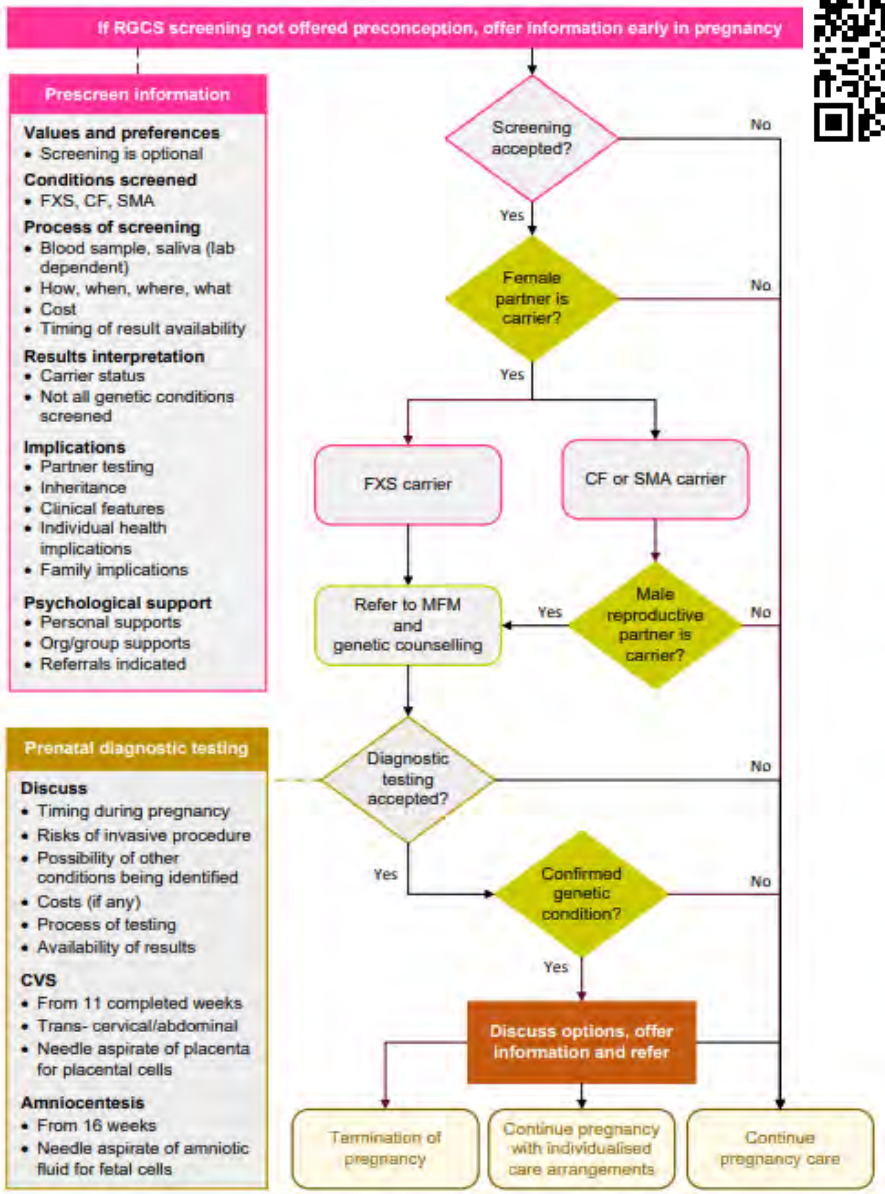
Flowchart: Preconception reproductive genetic carrier screening



CF: cystic fibrosis, **FXS:** fragile X syndrome, **IVF:** invitro fertilisation, **MFM:** maternal fetal medicine, **NPV:** negative predictive value, **Org:** organisation, **PGT-M:**:Pre-implantation genetic screening for monogenic conditions, **PPV:** positive predictive value, **RGCS:** reproductive genetic carrier screen, **SMA:** spinal muscular atrophy

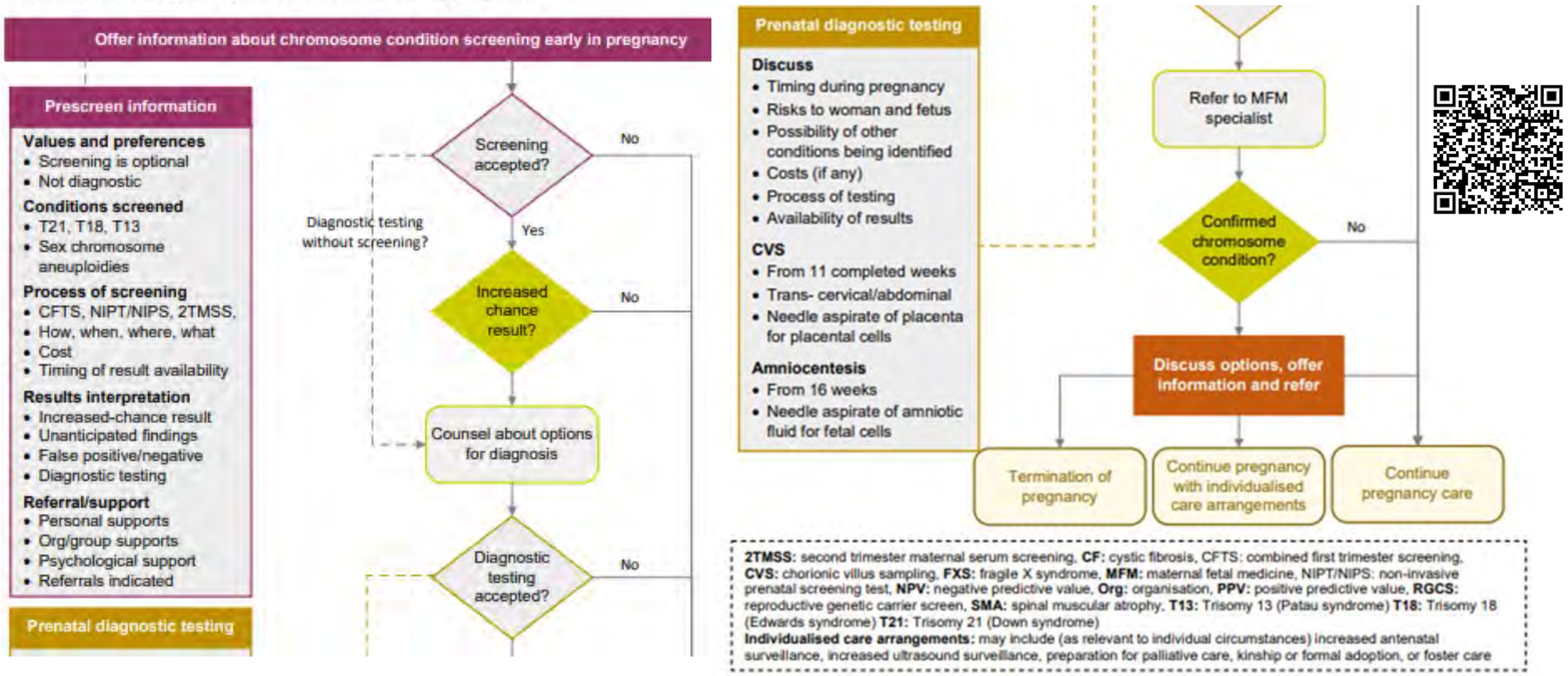
Queensland Clinical Guideline: Preconception and prenatal genetic screening

Flowchart: Reproductive genetic carrier screening during pregnancy



CF: cystic fibrosis, **FXS:** fragile X syndrome, **MFM:** maternal fetal medicine, **NPV:** negative predictive value, **Org:** organisation, **PPV:** positive predictive value, **RGCS:** reproductive genetic carrier screen, **SMA:** spinal muscular atrophy
Individualised care arrangements: may include (as relevant to individual circumstances) increased antenatal surveillance, increased ultrasound surveillance, preparation for palliative care, or kinship or formal adoption, or foster care arrangements

Flowchart: Chromosome condition screening during pregnancy



2TMSS: second trimester maternal serum screening, **CF:** cystic fibrosis, CFTS: combined first trimester screening, **CVS:** chorionic villus sampling, **FXS:** fragile X syndrome, **MFM:** maternal fetal medicine, NIPT/NIPS: non-invasive prenatal screening test, **NPV:** negative predictive value, **Org:** organisation, **PPV:** positive predictive value, **RGCS:** reproductive genetic carrier screen, **SMA:** spinal muscular atrophy, **T13:** Trisomy 13 (Patau syndrome) **T18:** Trisomy 18 (Edwards syndrome) **T21:** Trisomy 21 (Down syndrome)
Individualised care arrangements: may include (as relevant to individual circumstances) increased antenatal surveillance, increased ultrasound surveillance, preparation for palliative care, kinship or formal adoption, or foster care

Referral to MFM Pathway

Metro South Maternal Fetal Medicine (located at Logan Hospital)

- Offer:
  - Tertiary USS and consultation (for patients meeting criteria for referral)
  - Diagnostic and (limited) therapeutic procedures (amnio, CVS)
  - Telehealth consultations
- Limited capacity – notify patient that they may be on-referred depending on capacity

Refer via **SmartReferrals** to Metro South Maternal Fetal Medicine

- If needing further advice:
- **Phone "On Call" Obstetrician** if you wish to obtain further advice and then forward a referral as consultant advises.
  - Logan Hospital – Obstetrician on Call - Telephone: 3089 6963 or via Switchboard
  - Beaudesert Hospital - GP Obstetrician/Rural Generalist on Call –
  - Telephone: 5541 9174 or via Switchboard
  - Redland Hospital - Obstetrician on Call - Telephone: 3411 3111 or via Switchboard

Referral to MFM Pathway

[Maternal Fetal Medicine | Referrals to Antenatal and Maternity | Metro South Health]

Essential referral information for Maternal Fetal Medicine referrals (Referral will be returned without this)

- Indication for Tertiary Maternal Fetal Medicine ultrasound or consultation
- Prior screening results – NIPT / CFTS / no screening
- EDD
- Copy of prior ultrasound reports

Home > Refer your patient > Antenatal and Maternity

Maternal Fetal Medicine

Useful management information

The Metro South Maternal Fetal Medicine Service is under establishment at Logan Hospital, and able to provide limited tertiary services to patients within the catchment who meet criteria for Maternal Fetal Medicine Review.

Patients who meet criteria do not need to be booked for antenatal care at Logan Hospital prior to referral to Maternal Fetal Medicine, providing that criteria for referral are met.

Maternal Fetal Medicine offers consultation, tertiary ultrasound and diagnostic and therapeutic procedures in high risk pregnancies. This includes:

- Known genetic condition requesting diagnostic testing in a pregnancy (CVS / amniocentesis)
- High risk screening test (NIPT, CFTS) requesting consultation +/- diagnostic procedure (CVS, amniocentesis)
- Suspicion of fetal structural anomaly on ultrasound
- High risk of fetal growth restriction:
  - History of early onset fetal growth restriction (<K32) or early onset pre-eclampsia (<K32) in a prior pregnancy
  - Significant maternal medical condition which carries a high risk of growth restriction (e.g. essential hypertension, pre-existing diabetes, autoimmune condition)

See full Metro South Maternal Fetal Medicine Referral Guidelines for detailed explanation, or flowcharts below. Referral Guidelines Flowchart (PDF, 643.51 KB)

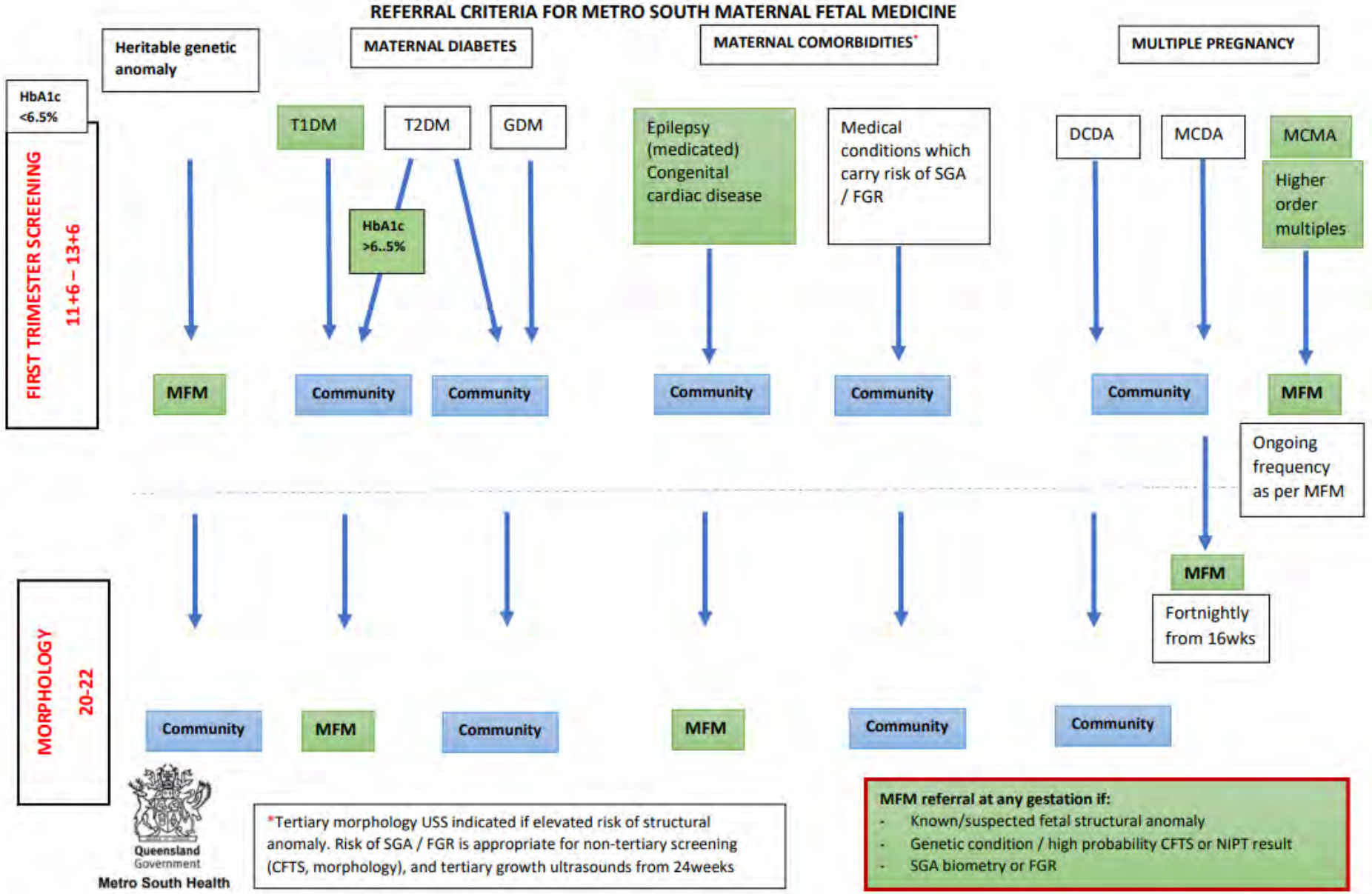
If the patient does not meet the criteria for referral but the referring practitioner believes the patient requires sub-specialist review, a clinical override may be requested:

- Please explain the indication for referral outside of Maternal Fetal Medicine Referral Criteria
- Consider calling Logan Hospital On Call consultant for advice

Metro South Maternal Fetal Medicine does not have capacity to provide routine screening ultrasounds outside of the referral criteria. Referrals for low risk patients, or routine screening, will be declined.

Please note that your referral may not be accepted or may be redirected to another service based upon capacity and acuity

Metro South Maternal Fetal Medicine Referral Guidelines flowcharts [Referral Guidelines Flowchart (PDF, 643.51 KB)]



REFERRAL CRITERIA FOR METRO SOUTH MATERNAL FETAL MEDICINE

MATERNAL DIABETES

FURTHER ULTRASOUND ASSESSMENT

T1DM

T2DM

All GDM

HbA1c >6..5%

HbA1c <6.5%

No HbA1c

MFM

Morphology

24wk growth + cardiac views

Growth USS frequency as per MFM

MFM

24wk growth + cardiac views

Medical Imaging

28 + 34-36wks

MATERNAL COMORBIDITIES

High risk of placental insufficiency:

Significant maternal medical conditions e.g.:

- Essential hypertension (medicated)
- Epilepsy (medicated)
- Autoimmune (RA, SLE, APLS)
- IBD (Crohns / UC)
- Renal impairment
- Congenital cardiac disease
- Graves Disease
- Gastric bypass

Previous early FGR or PET (≤32wks)

Previous stillbirth with FGR/SGA

Other PMHx with significant risk of SGA / FGR

MFM

24wk – growth + UtA Dopplers

Ongoing USS frequency as per MFM

Risk factor for placental insufficiency*:

High BMI (>35)

AMA (>40yo)

Smoker

IVF

Substance use

Prior late ≥32wks SGA/FGR

PappA <0.4MoM

Medical Imaging

26-28wks + 34-36wks

CLINICAL INDICATION

Clinically SGA / LGA

APH

TPTL

Cervical length monitoring

Low lying placenta

Medical Imaging

Refer to MFM at any gestation if USS diagnosis of:

- SGA EFW or AC <10th centile
- USS suspicion of placenta accreta spectrum
- Structural abnormality
- Cervical length <15mm at <24wks
- Polyhydramnios (DVP>10cm)
- Abnormal dopplers

Otherwise complex, please call MFM for advice

Queensland Government

Metro South Health

* Safer Baby Bundle, V2. May 2022.

Diagnostic Procedures

- Risk of procedure related miscarriage 1:500-1000[1]
  - Trans-cervical CVS 1:100-200

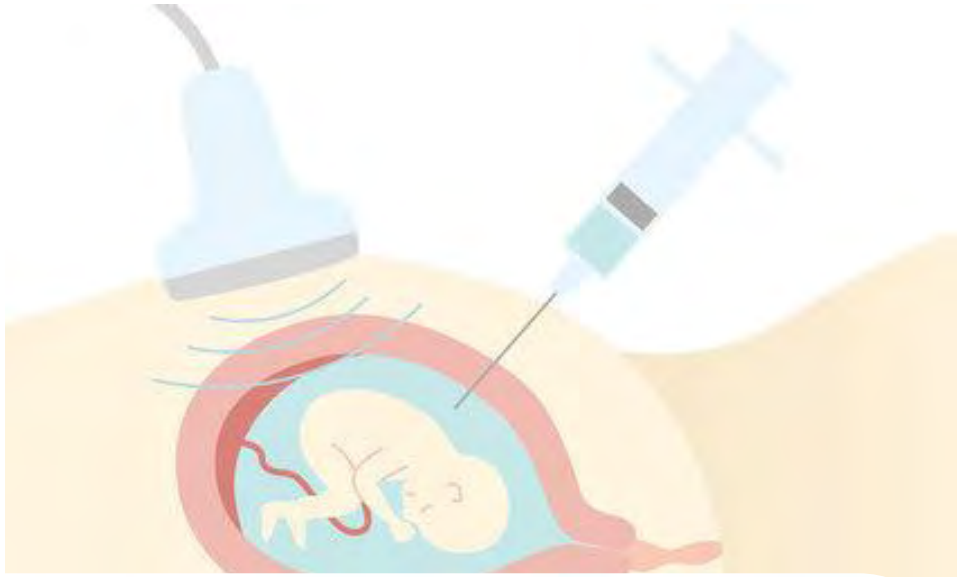
- CVS: 11-14 weeks
- Amnio: from 16 weeks

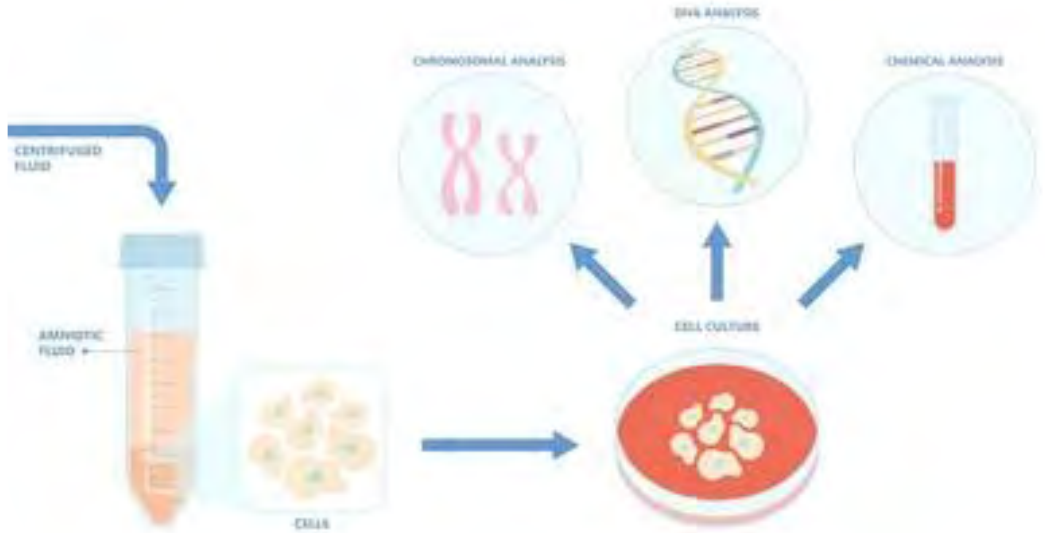
Performed in MFM.

No local anaesthetic.

2 days off work, other usual activities.

Results: FISH (1-3days) CMA (2 weeks)





1. Salomon, L.J., Sotiriadis, A., Wulff, C.B., Odibo, A. and Akolekar, R. (2019), Risk of miscarriage following amniocentesis or chorionic villus sampling: systematic review of literature and updated meta-analysis. Ultrasound Obstet Gynecol, 54: 442-451

Confirmed Trisomy 21:

MDT Antenatal Care:

- GP
- MFM
  - +/- paedi
  - +/- paedi
- Neonatology/
- Social work

Practice Point:

Trisomy 21 pregnancy warrants hospital-based care:

- Increased risk FGR, IUFD
- Congenital cardiac anomaly
- GI anomaly (+ polyhydramnios / PTB)

Impacts timing of delivery +/- site of delivery

Down Syndrome Queensland

Down Syndrome Queensland support service is also available for any prospective parent, health care professional, community service, carer or family member supporting someone who has received unexpected news about their pregnancy.
Contact (07) 3356 6655 and ask for the Early Years Officer.

https://www.downsyndrome.org.au/qld/

or email prenatal@downsyndromeqld.org.au

or via an online referral at https://prenatalscreening.org.au/support/

And consider

- There is variable understanding within the community of congenital abnormalities and their risks in pregnancy
- Much less known about trisomy's 18 (Edward syndrome) and 13 (Patau syndrome) – both life limiting conditions
- Cultural and language barriers are evident and should be considered in your approach to communication
- Provide verbal and written information… in the right languages
- **INFORMED CONSENT =**
  - **Document the giving of information ***
  - **Document offer of test/s ***
  - **Document response ***

* Use Q Health referral templates to facilitate this

Also, opportunity for other early risk screening

- Screening for history which identifies high risk pregnancies:
  - Prior pregnancy outcomes (GDM, PET, IUFD, early onset FGR)
  - Maternal medical conditions:
    - Risk of FGR (T2DM, essential HT, autoimmune conditions)
  - Family /known history of genetic disorders
  - Risk factors for preterm birth

Practice Point:

- **Early hospital referral** for any high chance pregnancy
- Low dose aspirin (100-150mg nocte) PRIOR to 16weeks (Hx PET or FGR, or risk factors)
- Cervical length screening if Hx PTB
- HbA1c <K12 if high risk GDM OR preexisting diabetes

Support organisation for families

Harrison's Little Wings is a not for profit organisation that supports women & their families who have receive a poor diagnosis in their pregnancy, or Mum has a Maternal health issue that puts her life or her baby's life at risk.

"We aim to hold hands with the Mum's and Dad's as well as their family and provide resources, peer support and practical support through their pregnancy journey"

Morning Tea

Session 2

Time	Session	Presenter	Delivery
10:30am	Blue Group (Task 1) – Presentation Topic: Syphilis in pregnancy; Perinatal Mental Health	Group Spokesperson O & G Registrar Simone Harvey, Credentialed Mental Health Nurse Practitioner, Perinatal Wellbeing Service	Case Discussion – ALL PowerPoint presentation
11:10 am	Red Group (Task 1) - Presentation Topic: Care of the Psychosocially Complex Woman in pregnancy; Termination of Pregnancy	Dr Kim Nolan Leah Sims – ADAPT Clinic	Case Discussion – ALL PowerPoint presentation
11:50 am	Green Group (Task 1) - Presentation Topic: Safer Baby Bundle & the importance of managing DFM and suspected FGR	Group Spokesperson Dr Muhammad (Rauf) Rahman	Case Discussion – ALL PowerPoint presentation
12:20 pm	Physiotherapy Services	Christie Dobson	PowerPoint presentation
12:30 pm	LUNCH		

Blue Group: Task 1 – Megan

- Meghan presents as a married 32-year-old lady, currently 9 weeks pregnant. She has returned to you for her blood results organised by another GP.
- She has a positive syphilis screen.
- She is extremely distressed at this news and had no idea she how she contacted it. She cannot recall ever having symptoms in the past.

She has a 10-minute appointment. What are your next steps?

- Now seen at age 34yrs, two years after her marriage failed following the syphilis diagnosis. She was treated appropriately with Penicillin but decided to terminate the pregnancy as her marriage fell apart.
- Treated for depression since soon after and remains on a SSRI.
- Is now in a new relationship and hoping to fall pregnant in the next few months.
- Very worried about further miscarriage risk, but also worried about the effect of the antidepressant in pregnancy.

Outline your approach

Syphilis screening – WHY?

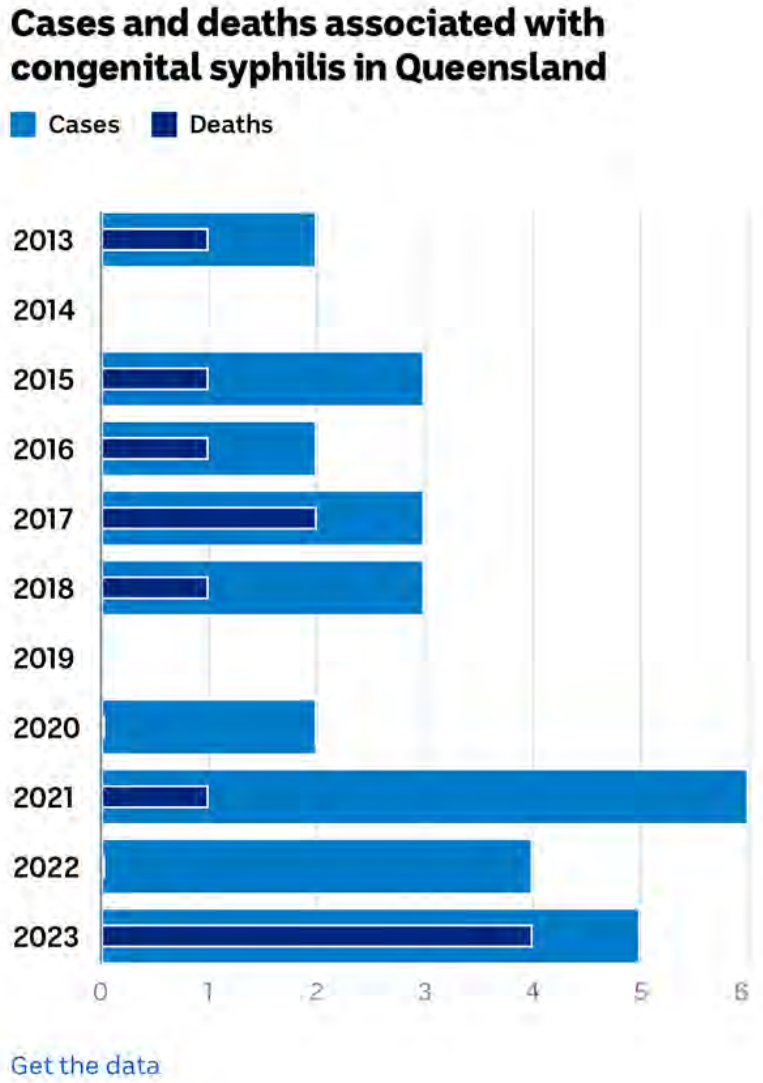
Because congenital syphilis **is devastating**, and it's not just one isolated population being affected

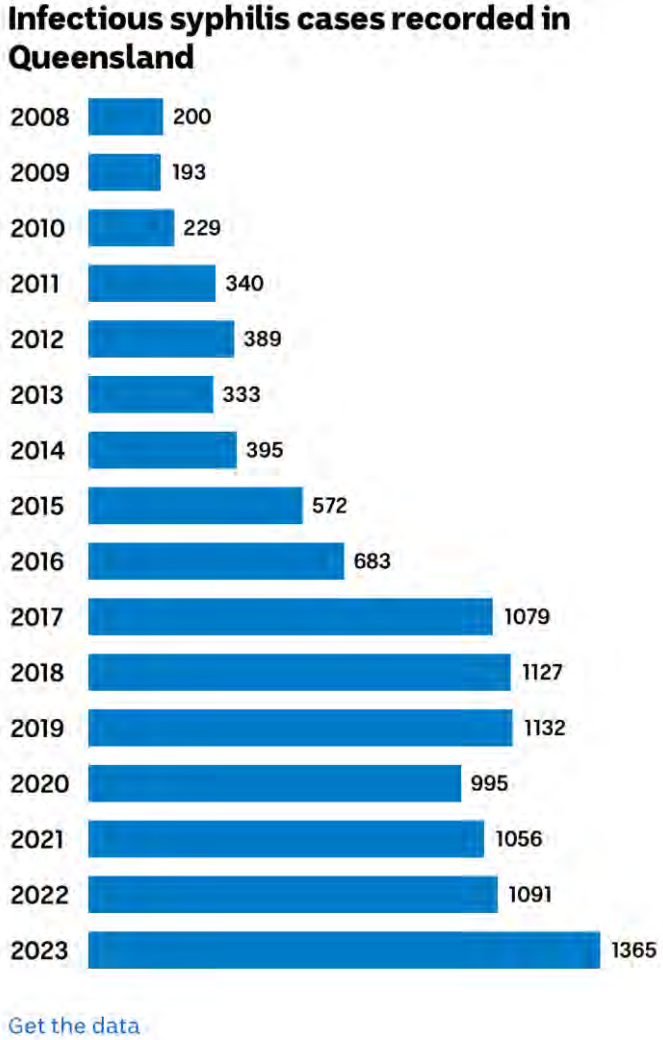
Syphilis re-emergence causing birth abnormalities

Thirty-five babies in Queensland have been diagnosed with congenital syphilis since 2009, 13 of them dying.

The latest report of the Queensland Maternal and Perinatal Quality Council in 2022 also notes the re-emergence of syphilis as causing abnormalities in babies.

Dr Gerrard, an infectious disease specialist, said syphilis could damage a baby's central nervous system and affect hearing and eyesight, causing lifelong problems.





Syphilis screening – WHY?

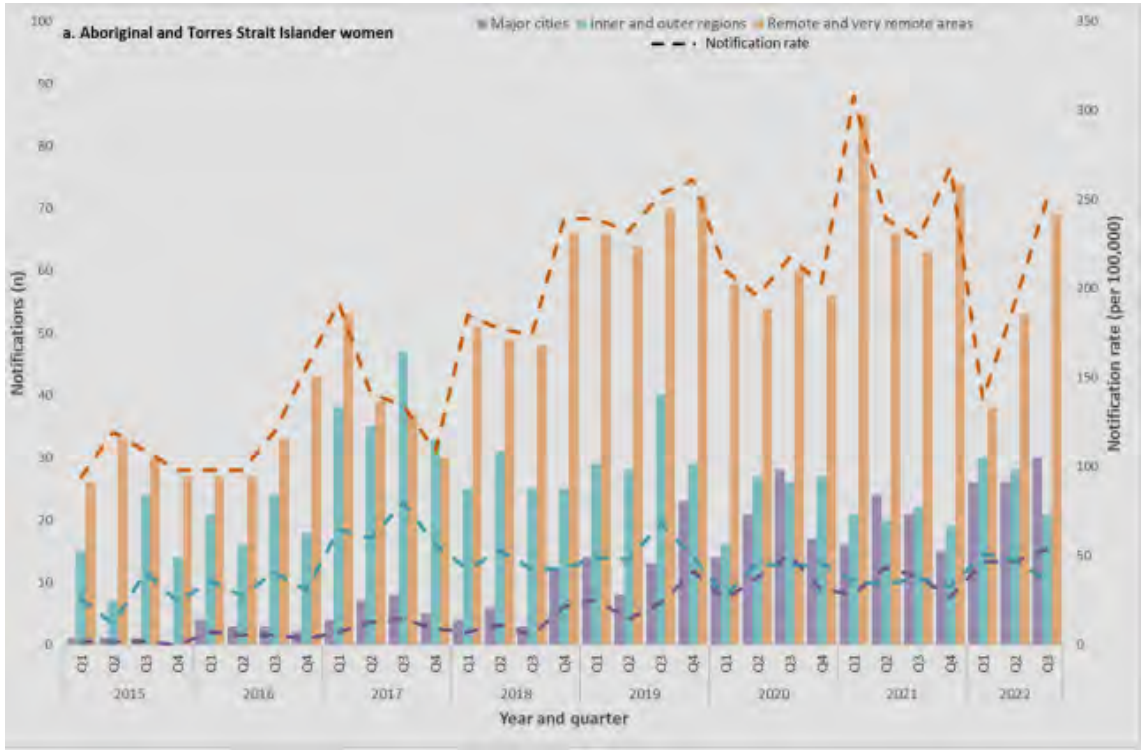
- Steady increase of notifications throughout Qld, including in SEQ, including cases of congenital syphilis, affecting both **indigenous** and **non-indigenous** women.
  - Recent change in demographic of pregnant women infected with syphilis.
  - At those with congenital syphilis, at least 8 acquired syphilis after 12/40 bloods, of which 5 had further antenatal care, *SO congenital syphilis may have been prevented* with inclusion of further routine syphilis screening.
  - MSHHS - 2 cases Congenital Syphilis in 2021, one in 2022, and another in 2023
  - 2024 so far – 2 cases Congenital Syphilis – MNHHS and Darling Downs HHS

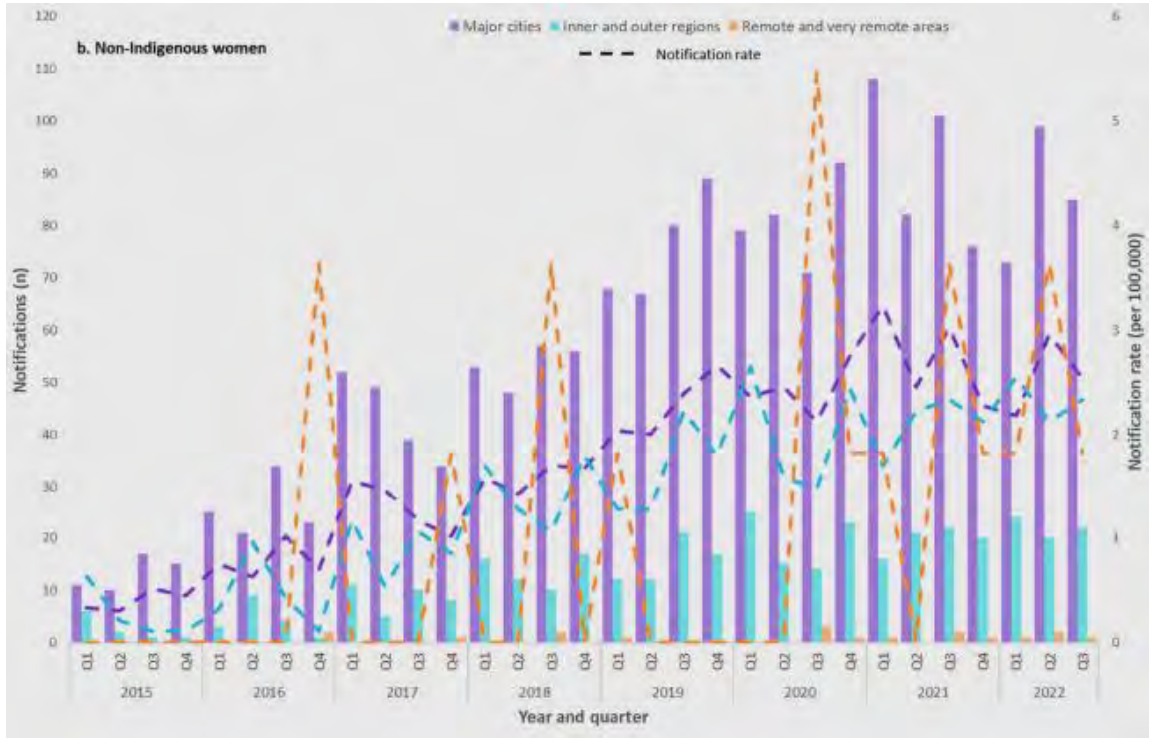
NOW ROUTINELY RECOMMENDED -
28/40 AND 36/40 SYPHILIS SCREEN IN ALL PREGNANT WOMEN

- Women considered to be of HIGH Risk may be screened even more often as per the Syphilis in pregnancy: Antenatal care (Flowchart)

- Testing and treating during first two TMs of pregnancy results in 2.2 x more chance of healthy baby than those receiving 3rd TM syphilis treatment Vertical transmission can occur as early as 9/40
- About 80 % of women in Australia giving birth to infant with congenital syphilis (2016-2022) were diagnosed in LATE pregnancy

Syphilis across Australia – Women of child-bearing age





"Non-Indigenous women of reproductive age diagnosed with syphilis over the previous 12 months were predominately residents of major cities of Australia, consistent with historical trends"

Notification rate (per 100,000) of infectious syphilis reported in females aged 15-44 years, by Indigenous status, remoteness area, quarter and year, 2015 – 2022 (to 30 Sept 2022) (a. Aboriginal and Torres Strait Islander and b. non-Indigenous)*

(SYPHILIS OUTBREAK SURVEILLANCE REPORT: Sept 2022@ https://www.health.gov.au/sites/default/files/2023-03/national-syphilis-surveillance-quarterly-report-july-to-september-2022.pdf)

Syphilis in pregnancy – Clinical Guidelines

Risk assess all women

Universal risk
- All pregnant women

High risk
- Sexual contact with infectious syphilis case
- Woman or partner identify as Aboriginal and/or Torres Strait Islander AND reside in an outbreak declared area
- Substance use – particularly methamphetamine ('ice')
- Woman's partner is MSM
- Late, limited or no antenatal care
- Engages in high risk sexual activity

Antenatal screening

All pregnant women
- Serology at first antenatal visit (preferably < 10 weeks gestation)
- Repeat serology at:
  - 26–28 weeks gestation
  - 36 weeks gestation
- Dry swab (PCR) if lesions/chancre present
- Repeat if change in risk status

If high risk
- Serology at first antenatal visit (preferably < 10 weeks gestation)
- Around 20 weeks gestation (opportunistically between 16–24 weeks)
- 26–28 weeks gestation
- 34–36 weeks gestation

Test at birth if (any of the following)
- **All** women not having 36 week screen
- Syphilis treated during pregnancy
- Woman is *high risk*
- If no serology after 26–28 weeks AND
  - Woman or her partner identify as Aboriginal and/or Torres Strait Islander
  - Adolescent pregnancy
  - STI in current pregnancy/last 12 months
  - Ongoing sexual links in high prevalence countries (woman or partner)
  - Preterm birth with most recent serology > 4 weeks before birth
- Indicated following risk assessment

https://www.health.qld.gov.au/__data/assets/pdf_file/0035/736883/g-sip.pdf - Queensland Clinical Guidelines – Syphilis

https://www.health.gov.au/resources/pregnancy-care-guidelines/part-f-routine-maternal-health-tests/syphilis – Australian Guidelines

Benzathine benzylpenicillin IS NOT "BenPen"

Situation

Recent incidents highlight the ongoing need for awareness regarding the differences between **benzathine benzylpenicillin** and **benzylpenicillin**.

Background

Benzathine benzylpenicillin and benzylpenicillin are not therapeutically interchangeable (see Table 1 which highlights important differences).

Benzathine benzylpenicillin

A long-acting antibiotic formulation that is typically used for treatment of uncomplicated syphilis; and prevention of rheumatic heart disease.

Benzylpenicillin

A short-acting antibiotic that should not be used in a therapeutically equivalent manner to benzathine benzylpenicillin.

When used at the same dosing schedule as benzathine benzylpenicillin (i.e. stat or weekly doses) it will not treat or prevent further transmission of syphilis.

It does not prevent vertical transmission of syphilis in pregnancy.

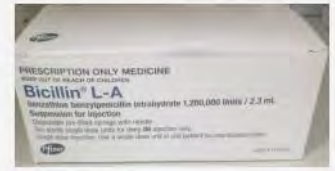
Benzylpenicillin is used to treat a baby with congenital syphilis (refer to Neonatal medicine: Benzylpenicillin (health.qld.gov.au) and Guideline: Syphilis in pregnancy (health.qld.gov.au).

Assessment

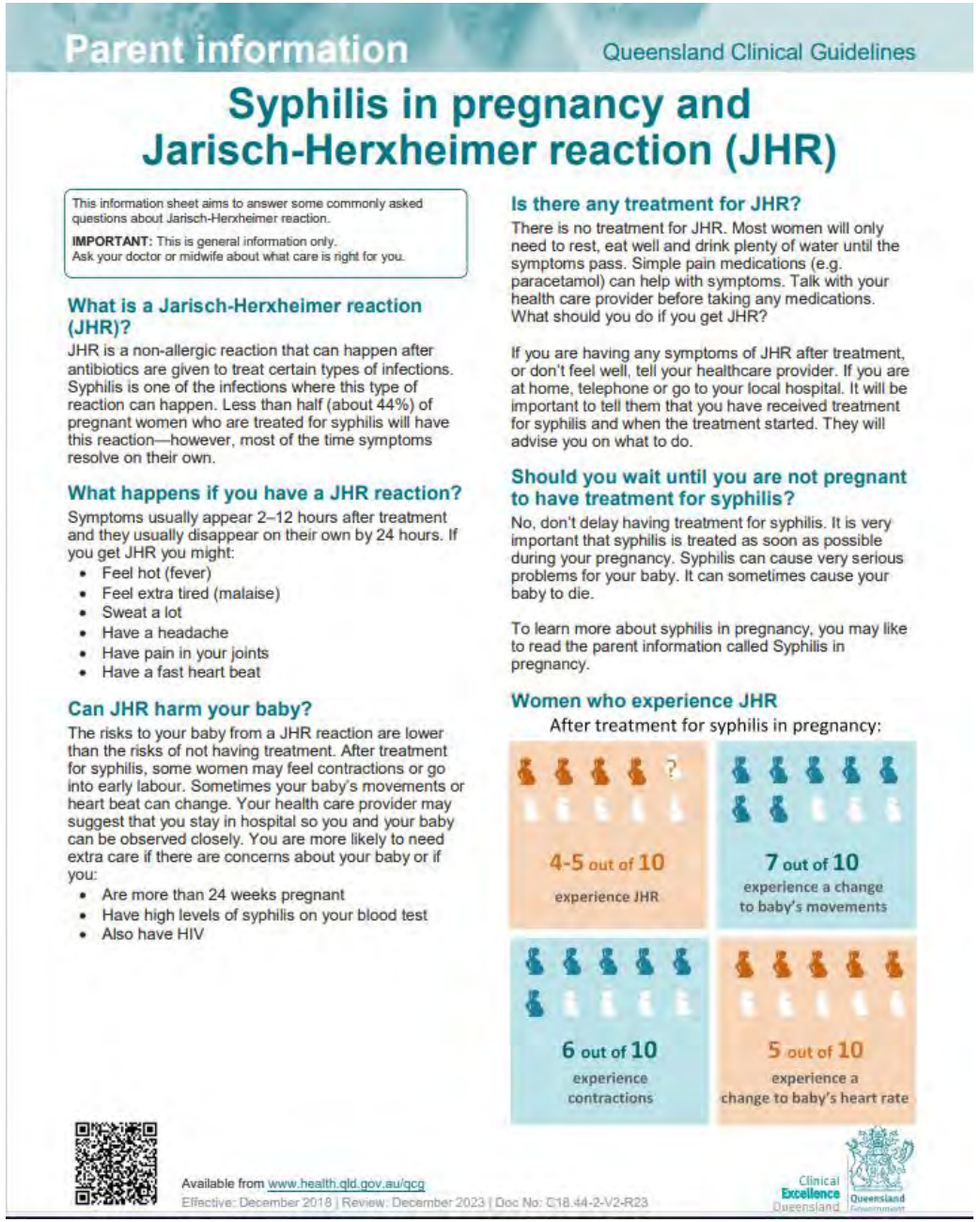
There are several factors that may increase the risk of medicine errors when prescribing, supplying, and administering benzathine benzylpenicillin:

- Similarity of the names benzathine benzylpenicillin, benzylpenicillin and the trade name 'BenPen' (benzylpenicillin) may lead to confusion.
- Penicillin G is a synonym for benzylpenicillin that has been used historically further complicating correct product selection.

Table 1: Differences between Australian registered Benzylpenicillin and Benzathine benzylpenicillin products

	Benzylpenicillin	Benzathine benzylpenicillin*
Also known as	Penicillin G	Benzathine penicillin, Benzathine penicillin G
Trade name	BenPen	Bicillin L-A
Typical dosing	Prescribed in **grams**. Adult: 1.2 to 2.4 grams IV every 4 to 6 hours. Paediatric: refer to Children's Health Queensland Paediatric Antibiocard: Empirical Antibiotic Guidelines. Neonate/Infant: refer to Neonatal medicine: Benzylpenicillin (health.qld.gov.au) or ANMF consensus group guidelines (anmfonline.org).	Prescribed in **units**. Rheumatic fever prevention Adult: 1,200,000 units IM every 3 to 4 weeks. Paediatric: refer to ARF RHD Guidelines 3rd Edition (rhdaustralia.org.au). Syphilis Late latent or unknown duration: 2,400,000 units IM once each week for 3 weeks. Infectious (known acquired in past 2 years e.g. primary, secondary early latent): 2,400,000 units IM as a single dose. Paediatric: refer to Australasian Society for Infectious Diseases (ASID) Management of Perinatal infections (3rd edition) guidelines and contact a paediatric infectious diseases specialist for advice. Neonate/Infant: 50,000 units/kg IM as a single dose.
Storage	Shelf	Fridge
Product presentation	  Also comes in 600 mg	  2 syringes needed to give typical 2,400,000-unit dose for syphilis

- Vertical transmission rates in primary, secondary and early latent phases of syphilis are high - rate of adverse neonatal outcomes with untreated infectious syphilis is reported to be 60–70%.
- Accurate staging required to determine correct dosing – use QSSS
- Benzathine benzylpenicillin given IM into the ventrogluteal space of each buttock – see ‘GP how to’ video guide by The Royal Australian College of General Practitioners (www.youtube.com/watch?v=uEoXv0V-Wyo)
- Caution patient regarding the possibility of the self-limiting Jarisch–Herxheimer reaction
- Less than half (about 44%) of pregnant women treated for syphilis will have this reaction & mostly symptoms self-limiting.
- “The resurgence of syphilis in Australia”, AJGP March 2024, Vol 53(3); doi:10.31128/AJGP-08-23-6943



Parent information

Queensland Clinical Guidelines

Syphilis in pregnancy and Jarisch-Herxheimer reaction (JHR)

This information sheet aims to answer some commonly asked questions about Jarisch-Herxheimer reaction.

IMPORTANT: This is general information only.
Ask your doctor or midwife about what care is right for you.

What is a Jarisch-Herxheimer reaction (JHR)?

JHR is a non-allergic reaction that can happen after antibiotics are given to treat certain types of infections. Syphilis is one of the infections where this type of reaction can happen. Less than half (about 44%) of pregnant women who are treated for syphilis will have this reaction—however, most of the time symptoms resolve on their own.

What happens if you have a JHR reaction?

Symptoms usually appear 2–12 hours after treatment and they usually disappear on their own by 24 hours. If you get JHR you might:

- Feel hot (fever)
- Feel extra tired (malaise)
- Sweat a lot
- Have a headache
- Have pain in your joints
- Have a fast heart beat

Can JHR harm your baby?

The risks to your baby from a JHR reaction are lower than the risks of not having treatment. After treatment for syphilis, some women may feel contractions or go into early labour. Sometimes your baby's movements or heart beat can change. Your health care provider may suggest that you stay in hospital so you and your baby can be observed closely. You are more likely to need extra care if there are concerns about your baby or if you:

- Are more than 24 weeks pregnant
- Have high levels of syphilis on your blood test
- Also have HIV

Is there any treatment for JHR?

There is no treatment for JHR. Most women will only need to rest, eat well and drink plenty of water until the symptoms pass. Simple pain medications (e.g. paracetamol) can help with symptoms. Talk with your health care provider before taking any medications.
What should you do if you get JHR?

If you are having any symptoms of JHR after treatment, or don't feel well, tell your healthcare provider. If you are at home, telephone or go to your local hospital. It will be important to tell them that you have received treatment for syphilis and when the treatment started. They will advise you on what to do.

Should you wait until you are not pregnant to have treatment for syphilis?

No, don't delay having treatment for syphilis. It is very important that syphilis is treated as soon as possible during your pregnancy. Syphilis can cause very serious problems for your baby. It can sometimes cause your baby to die.

To learn more about syphilis in pregnancy, you may like to read the parent information called Syphilis in pregnancy.

Women who experience JHR

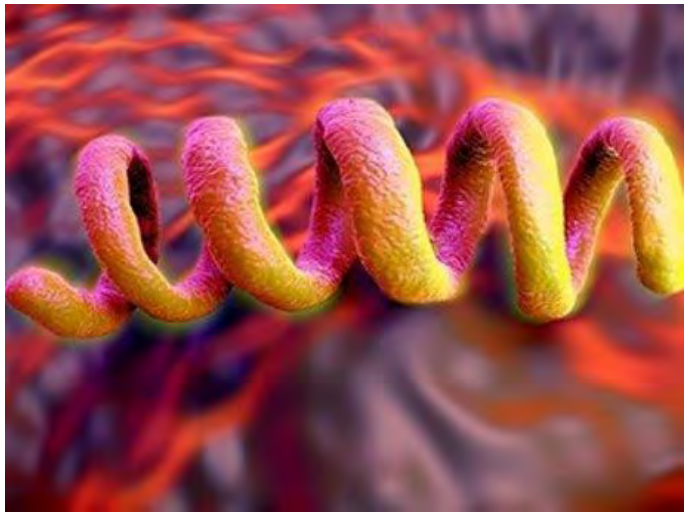
After treatment for syphilis in pregnancy:

Available from www.health.qld.gov.au/qcg
Effective: December 2018 | Review: December 2023 | Doc No: C18.44-2-V2-R23

Clinical Excellence Queensland
Queensland Government

SEQ Queensland Syphilis Surveillance Service

- NOT JUST A FAR NORTH QUEENSLAND PROBLEM!!
- Early detection and treatment essential with **repeat testing at 28/40 for ALL and again at 34-36/40**
- PLEASE refer back as URGENT to ANC with the test results if positive, and liaise with Obstetrician re commencing treatment ASAP
- Partner screening and follow up required, and ongoing monitoring and consideration to empiric treatment of the newborn if maternal treatment inadequate in pregnancy.
- QSSS Phone: 1800 032 238 / Email: South Queensland - QLD-Syphilis-Surveillance-Service@health.qld.gov.au



KEEP SCREENING & KEEP PROMOTING AWARENESS

* Resource for Syphilis Positive Patient

Parent information: Syphilis in pregnancy (health.qld.gov.au)

"Don't fool around with syphilis" - Australian Govt campaign

Campaign webpage - includes downloadable resources (Fact Sheets for priority populations and health professionals, & posters) - https://www.health.gov.au/campaigns/dont-fool-around-with-syphilis

Syphilis during pregnancy

Untreated syphilis during pregnancy can lead to the mother passing the infection to their baby before birth.

This can cause miscarriage, stillbirth, premature births, low birth weight and death of the baby shortly after birth.

A baby with congenital syphilis can experience serious health issues that affect their growth and development, such as permanent organ and brain damage.

Some babies affected by congenital syphilis won't show symptoms until they grow older, which can lead to a delay in diagnosis.

Get regular syphilis tests

Regular testing for syphilis is important, even if you don't have symptoms. If detected, it can be treated early and prevent serious health complications.

Pregnant women should also be tested at their first antenatal visit to prevent congenital syphilis.

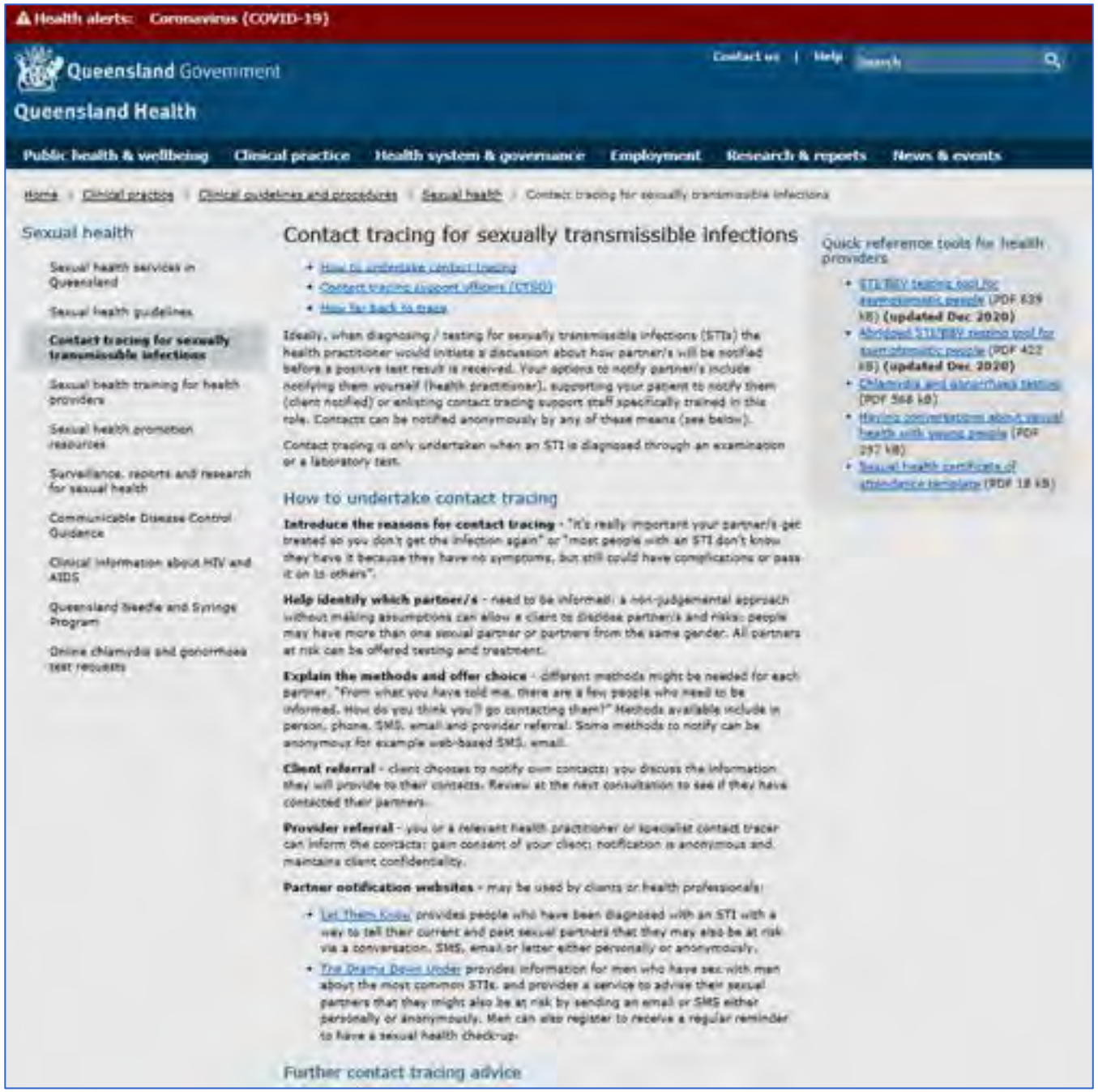
Pregnant women with a high risk of infection or reinfection should get tested regularly at:

- the first antenatal visit
- 28 and 36 weeks
- the time of birth
- 6 weeks after the birth.

See your local doctor to assess your risk of contracting syphilis and get tested.

STI Contact Tracing:

https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/sex-health/contact-tracing



“Let Them Know”

Helpful websites for anonymous notification:

- letthemknow.org.au (for people diagnosed with an STI)
- thedramadownunder.info (for men who have sex with men)
- bettertoknow.org.au (for Aboriginal and Torres Strait Islander people)

OR with GP help: “Let Them Know” - https://letthemknow.org.au/DocInfo.html

Cost	Fully funded, free to access
Delivery method	The online ASK course is multifaceted and consists of: • A 45-minute presentation • Online learning modules • Podcast series of 4 • Online resource hub • Frequently Asked Questions (FAQ)
Who should register?	Clinicians who provide antenatal care. This may include but is not limited to GPs, GP registrars, nurse practitioners, general practice nurses, registered nurses, registered midwives, and Aboriginal and Torres Strait Islander health practitioners.

Course outcomes

Participants will:

- Learn how to apply a sexual health history assessment in practice
- Learn strategies to overcome barriers in a sexual health history assessment
- Develop skills of contact tracing and its importance to apply in practice
- Learn to interpret the Queensland Health Maternity and Neonatal Clinical Guidelines: Syphilis in Pregnancy
- Identify where key resources are available to aid with contact tracing

Antenatal Sexual health Kit (ASK) - Self-paced – FREE – 4.5 CPD points

TRUE's Clinical Education Unit has recommenced ASK education sessions. Join a live webinar by registering to a session or email ask@true.org.au if you would like an education session for your workplace.
Otherwise individually register for the ASK package and complete the self- directed online webinar, modules and podcasts via the 'Register now' icon. **Register Now**

Blue Group: Task 1 (Part 2) …….

- Now seen at age 34yrs, two years after her marriage failed following the syphilis diagnosis. She was treated appropriately with Penicillin but decided to terminate the pregnancy as her marriage fell apart.
- Treated for depression since soon after and remains on a SSRI.
- Is now in a new relationship and hoping to fall pregnant in the next few months.
- Very worried about further miscarriage risk, but also worried about the effect of the antidepressant in pregnancy.

She has a 15 min appointment - Outline your approach

.

Metro South Health

Perinatal Mental Health
Perinatal Wellbeing Service

Presentation by Simone Harvey

Nurse Practitioner| Clinical lead, Perinatal Wellbeing

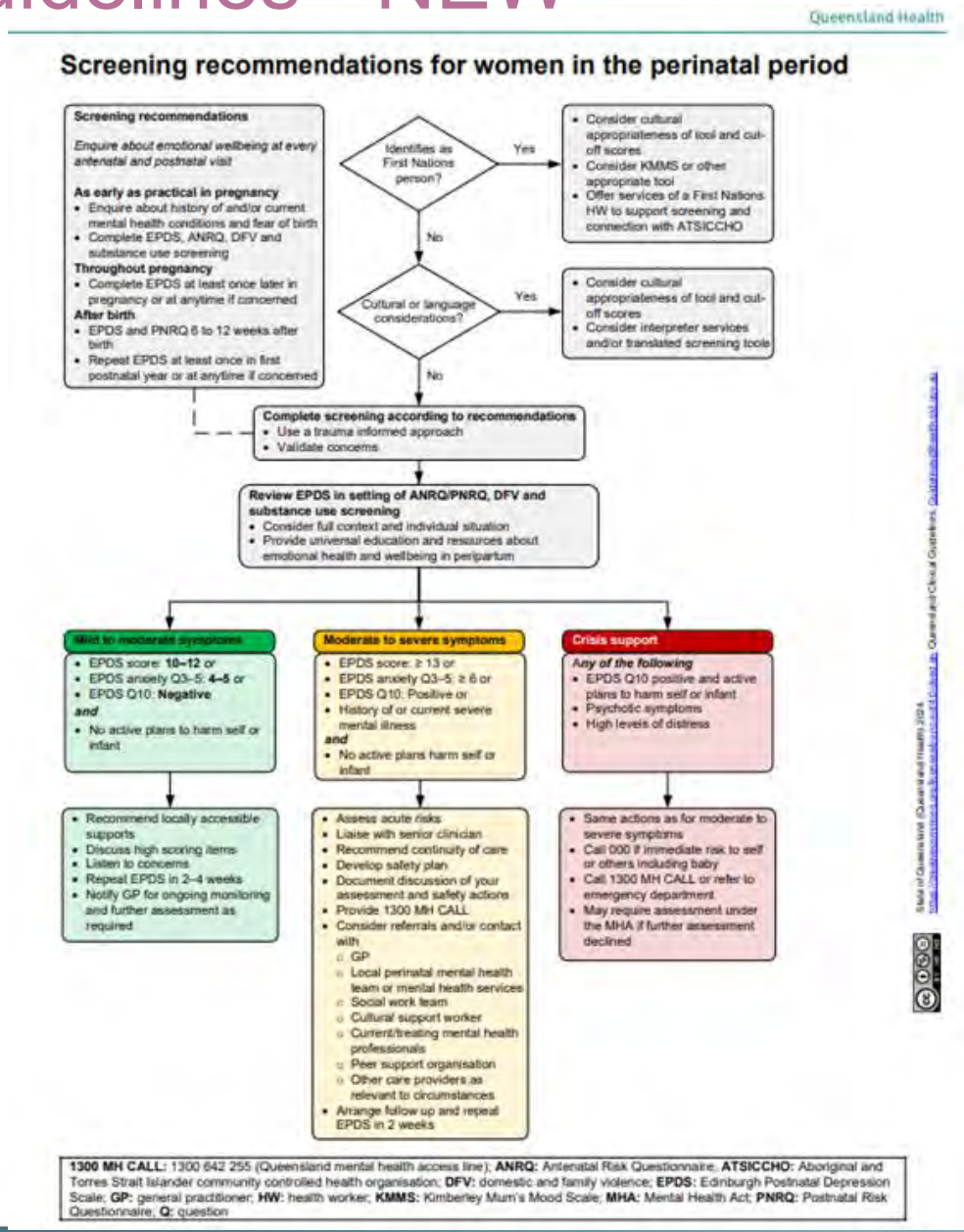
Credentialed Mental Health Nurse

We care about you

Queensland Government

Queensland Clinical Guidelines - NEW

Perinatal Mental Health
https://www.health.qld.gov.au/__data/assets/pdf_file/0016/1321225/g-peri-mental-health.pdf
Publication date: April 2024



Preconception Medication: Choices to consider

- Stop medication before & during pregnancy
- Stop medication & reintroduce if symptoms recur
- Reduce dose
- Change to alternate medication / Rx
- Continue current medication

Perinatal Depression

Prevalence of Perinatal Depression - Antenatal Depression: (new cases)	Recurrences of major depressive disorders **occur rapidly**
• 1st Trimester - 7.5% • 2nd Trimester - 13% • 3rd Trimester - 12%	• 50% 1st Trimester • 90% 2nd Trimester

Practice Point: Important to warn women/discuss mental health risks associated with pregnancy early, so that symptoms are not hidden, denied or not acknowledged until they become overwhelming.

During Pregnancy

- NO DRUG “SAFE”
- Need clear indication for medication
- “Dance with the one that brung you”
- Medication considerations
  - ✓ Dose (lowest effective, evidence based)
  - ✓ Time (in pregnancy and expected time for treatment effect)
  - ✓ Interactions
  - ✓ Complicating factors
  - ✓ Prior Use/Efficacy/Reason discontinued.
  - ✓ Tolerability

Medication in Pregnancy - General principles

- Avoid 1st trimester if possible
- Lowest effective dose for shortest time
- Chose best evidence-based medication – usually SSRIs such as Sertraline or Escitalopram (large body of comparative safety evidence)
- Discuss reason for choice and goals of treatment with women
- Avoid polypharmacy
- Use an effective medication in an effective dose, treat to remission and continue treatment past vulnerable times
- Wherever possible, combine pharmacological treatment with psychological therapies and psychosocial interventions

Online Mater resources

Medication use in pregnancy. The use of psychotropic medications in a breastfeeding woman	• Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML • Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University	 Video (≈8 mins)
Medication Use in Pregnancy. Managing Bipolar, Schizophrenia and Psychosis	• Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML • Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University	 Video (≈5 mins)
Medication Use in Pregnancy. Managing Anxiety and Depression	• Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML • Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University	 Video (≈16 mins)
Hyperemesis	• Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML • Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University	 Video (≈8 mins)
Antidepressant use in pregnancy	• Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML • Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University	 Video (≈11 mins)

Antidepressant medication in pregnancy – MMH

Quick Links

- Information for pregnant women
- Taking antidepressant medication during your pregnancy
- Antenatal management
- Postnatal management
- Care of your baby
- Follow up
- Some useful contact phone numbers
- References

View other services offered by

Mater Mothers' Hospital

Antidepressant medication during pregnancy and breastfeeding

Information for pregnant women

During your pregnancy it is really important for you to have a stable mood and be comfortable on your antidepressant medication as part of providing a safe environment for your baby.

Taking antidepressant medication during your pregnancy

Mood and anxiety disorders need to be treated appropriately during pregnancy. This could include the need for antidepressant medication which is safe, effective and not addictive. Among the antidepressant medications often prescribed to treat mood and anxiety disorders are selective serotonin reuptake inhibitors (SSRI) and selective noradrenaline reuptake inhibitors (SNRI).

Antenatal management

If you are taking SSRI or SNRI antidepressant medication during your pregnancy, please ensure your doctor, and/or midwife is notified. You are encouraged to speak with your prescribing doctor about the possible risks and benefits of using antidepressant medications in pregnancy.

Any adjustments in dose should take place under the supervision of your doctor and we strongly recommend against reducing or increasing your medication without supervision.

A pharmacist or the National Prescribing Service Medicines Information line on **1300 MEDICINE (1300 633 424)** can also help answer questions you might have about the safety of your antidepressant medication during pregnancy. You may also be offered an appointment with a lactation consultant to discuss preparation for breastfeeding.

Babies can be exposed to these medications because they cross the placenta. Exposure to antidepressant medication in late pregnancy may result in your baby having something called **'Discontinuation Syndrome'**.

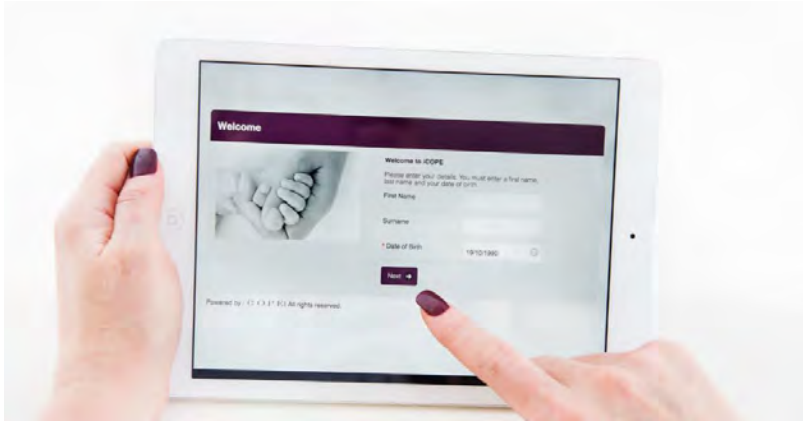
Symptoms of discontinuation syndrome occur in up to one in three babies who have been exposed to SSRI or SNRI medication. Symptoms are usually mild and disappear within a few days. However, moderate to severe symptoms have also been reported.

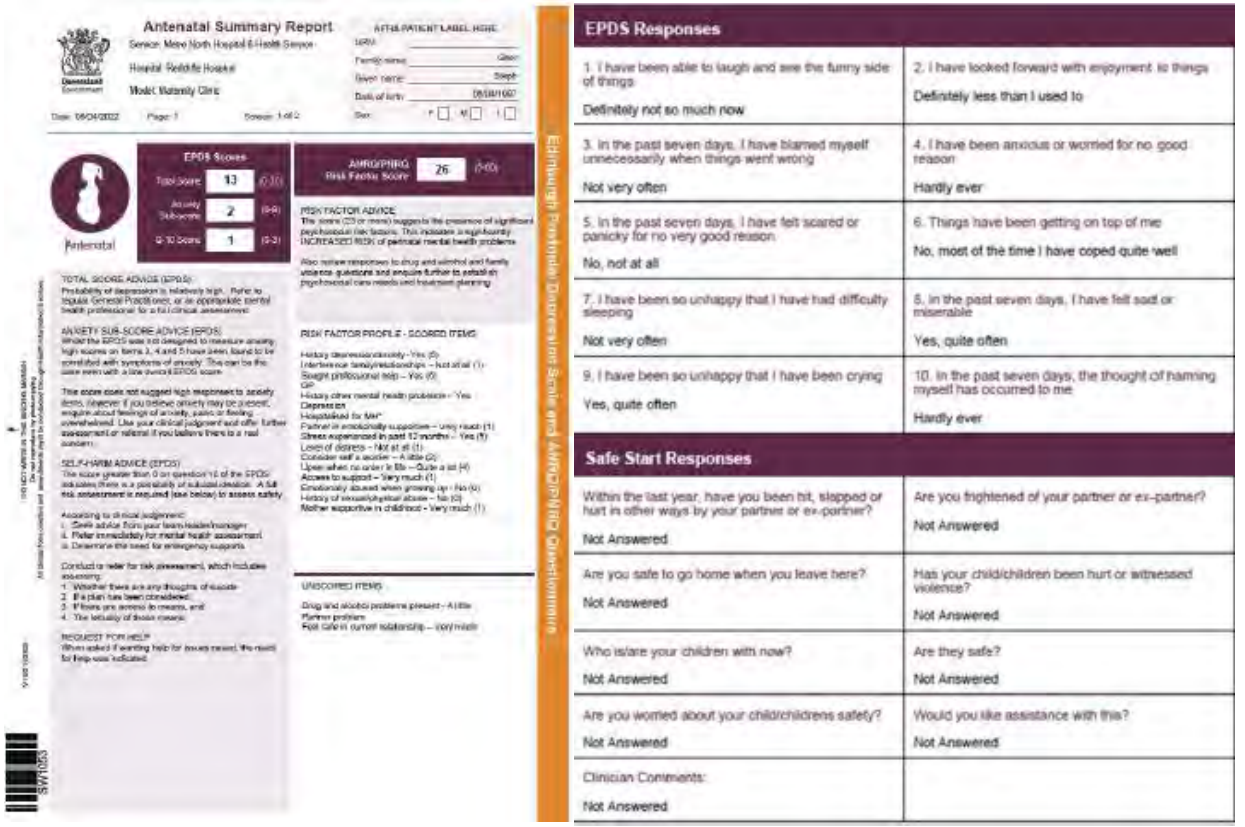
Screening for Perinatal Mental Health Issues

- Edinburgh Postnatal Depression Scale (EPDS) should be used to SCREEN all women for symptoms of depression +/- anxiety during the perinatal period.
- EPDS - validated for use in both pregnancy and the postnatal period to assess for possible depression and anxiety
- Alternatives - Antenatal (Psychosocial) Risk Questionnaire (ANRQ), Kimberley Mums Mood Scale (no other culturally appropriate validated tools are in use)
- ANRQ – includes items to identify specific risk factors that independently put the woman at greater psychosocial risk (past history of trauma or significant mental health condition).
- EPDS developed in various languages and for diverse backgrounds but not necessarily validated for these groups
- Screening tools specifically for perinatal anxiety less researched: recommended in Australia to use: EPDS items 3, 4 and 5;
  Anxiety items from DASS (Depression, Anxiety and Stress Scale) or
  Kessler Psychological Distress Scale (K10)

Mental Health Care in the Perinatal Period - Australian Guidelines 2023 - COPE
Queensland Clinical Guidelines: Perinatal mental health (published April 2024)

iCOPE digital screening





Completed on individuals' phone or can be done on dedicated iPad / tablet

- Translated into 25 languages
- Can incorporate KMMS for First Nations women / families
- Uses EPDS and ANRQ/PNRQ – questions are answered through a device
- Generates 2 reports when completed
  - Summary with resource links for woman (iCOPE Patient Report - can be sent as PDF to email)
  - Summary report for the clinic which highlights issues of concern

https://www.cope.org.au/health-professionals/icope-digital-screening/

Initial assessment to plan appropriate treatment

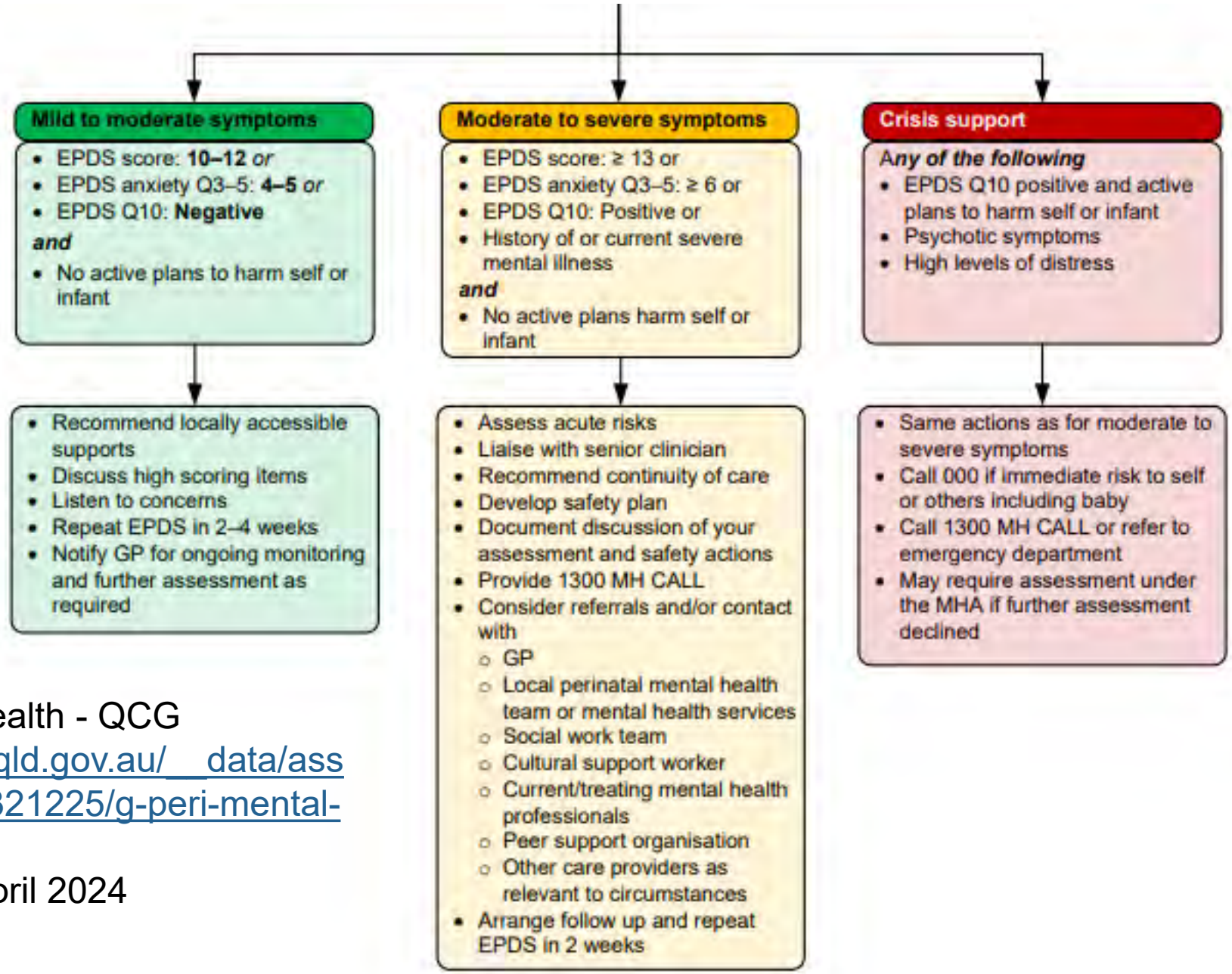
Health professionals can ASSESS risk more broadly and identify ways in which different kinds of services (not all of them clinical) can be activated to support the woman and her family through pregnancy and after birth

Assessment includes

- Psychosocial risk assessment including comorbid issues incl family violence; lifestyle factors including nutrition, physical activity, substance use and smoking; availability of social supports in family or externally
- Past mental health history (esp. of Bipolar Disorder/Psychosis), Eating disorders and family history
- ? difficulties in the mother-infant relationship
- ? risk of harm to the infant or other children in woman's care
- Suicide risk assessment

Assessment is required to be culturally and linguistically suitable and use a trauma informed approach.

Mental Health Care in the Perinatal Period - Australian Guidelines 2023 - COPE



Perinatal Mental Health - QCG
https://www.health.qld.gov.au/__data/assets/pdf_file/0016/1321225/g-peri-mental-health.pdf
Publication date: April 2024

Suicide

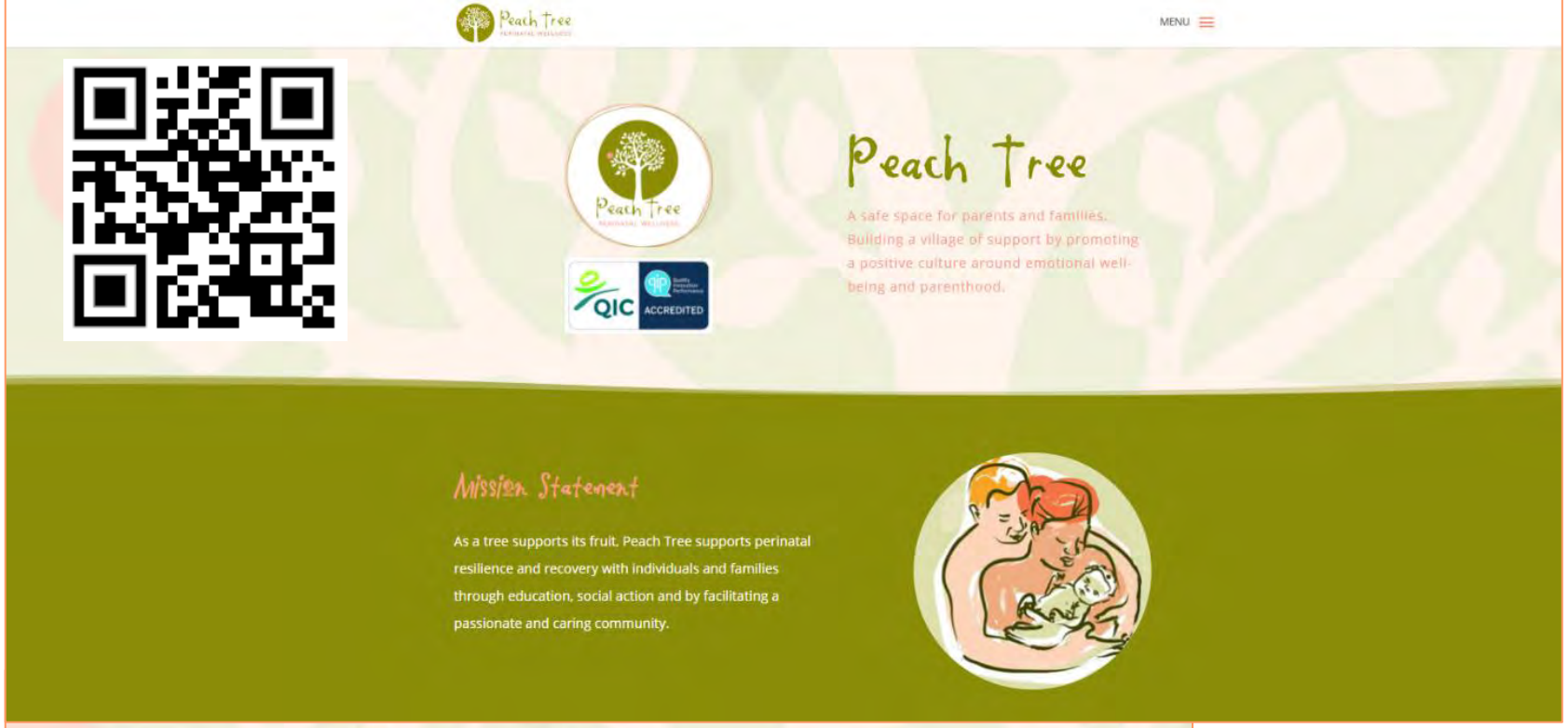
Good practice point

Women who have pre-existing mental health disorders or are diagnosed during pregnancy require a clear discharge plan provided by hospital maternity care providers, for mental health follow-up.

Transparent communication between all health care providers involved in the woman's care must be a priority and led by the primary maternity care provider.

- Suicide remains the most common cause of maternal mortality – 12 maternal deaths in Qld in 2018-2019
- Often violent
- Highest risk period 6 weeks - 12 months post diagnosis
- In some cases, failure to recognise a history of difficulties faced in previous pregnancies, and past mental health history.
- GPs, Child Health and Family support services play a key role in screening and referral in the postpartum period
- Women with multiple psychosocial adversities (complex trauma & high burden of adverse childhood experiences), mental health and comorbid substance use issues are extremely difficult to engage.
- In the 59 deaths by suicide between 2004 -2017
  - 53% post-natal
  - 36% following a termination of pregnancy (ToP)
  - remainder either during pregnancy or post miscarriage/ectopic

Queensland Mothers and Babies Report 2018 - 2019 - Report of the Queensland Maternal and Perinatal Quality Council 2021 (published September 2022)



MOUNT GRAVATT

Peach Tree Parent Wellbeing Centre
1454 Logan Road
Mount Gravatt QLD 4122

https://peachtree.org.au/

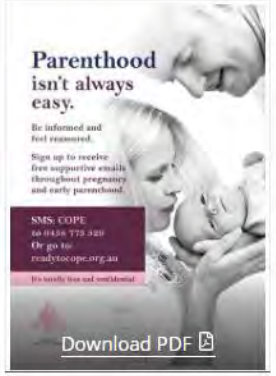
Health Professional Referral Form

Peach Tree Perinatal Wellness is a community-based perinatal and infant mental health service. Peach Tree provides peer-led education and support to expecting parents and parents of children aged 0 - 5 years. This Referral Form is for Health Professionals working with parents currently experiencing - or at risk of experiencing - perinatal mental health challenges during the parenthood transition.

Ready to COPE Resources

To support the uptake of Ready to COPE in your setting, simply print out one of these downloadable posters and place it in a visible spot in your community, healthcare or workplace setting. You can also share our digital images across your website, e-newsletters and social media accounts.

A4 Posters for Download



Ready to cope

Great news!
Ready to COPE is now available in a **free** mobile app.
Download for weekly updates, plus other new great features.

Free to download

Fully funded by the Australian Government, Ready to COPE is a free pregnancy and parenting app that equips mothers, fathers and non-birthing partners with clear, honest and evidence-based information.

Only receive information relevant to your pregnancy or parenting journey

Ready to COPE is designed to help you understand what to expect and how to cope with the range of physical and emotional changes and challenges of each week of pregnancy, birth and the first 12 months of being a mum, dad or parent.

By entering your baby's due date or birth date, you'll receive relevant pregnancy or parenting information at the time you need it most.

Weekly updates you'll receive during pregnancy and early motherhood or parenthood cover topics such as:

- Coping with changes to your body during pregnancy
- Accepting your post-baby body
- Coping with morning sickness
- How to emotionally prepare for birth
- Shopping for your baby
- How pregnancy and motherhood can impact your career
- Changes to friendships during pregnancy and motherhood
- Common changes to relationships, sex and intimacy
- Coping with an unsettled baby
- How to make new mum-friends during motherhood
- Parental burnout, parent guilt, and how to take care of yourself
- What might increase your risk of stress, depression and anxiety in the antenatal period, plus how to know if or when you should seek help

Our National Helpline on 1300 24 23 22 is now live between 9.00am-4.30pm – Monday to Friday. Call 1300 24 23 22

ForWhen Provided to you by Australia's early parenting services

For Parents | For Professionals | Helpful Resources | Contact | Subscribe

How to refer?

You can refer a patient (who has given consent) or request information about mental health services by calling **1300 24 23 22**.

Patient can also self-refer or have a family member call on their behalf.

Who can ForWhen support?

- New and expecting parents from conception until the child is 12 months of age
- Parents with moderate to severe perinatal mental health concerns

We will work with you to help your patients find appropriate and timely perinatal mental health supports that suit their needs.

ForWhen
1300 24 23 22
Mon-Fri 9am - 4.30pm
@ForWhenHelpline
ForWhenHelpline.org.au

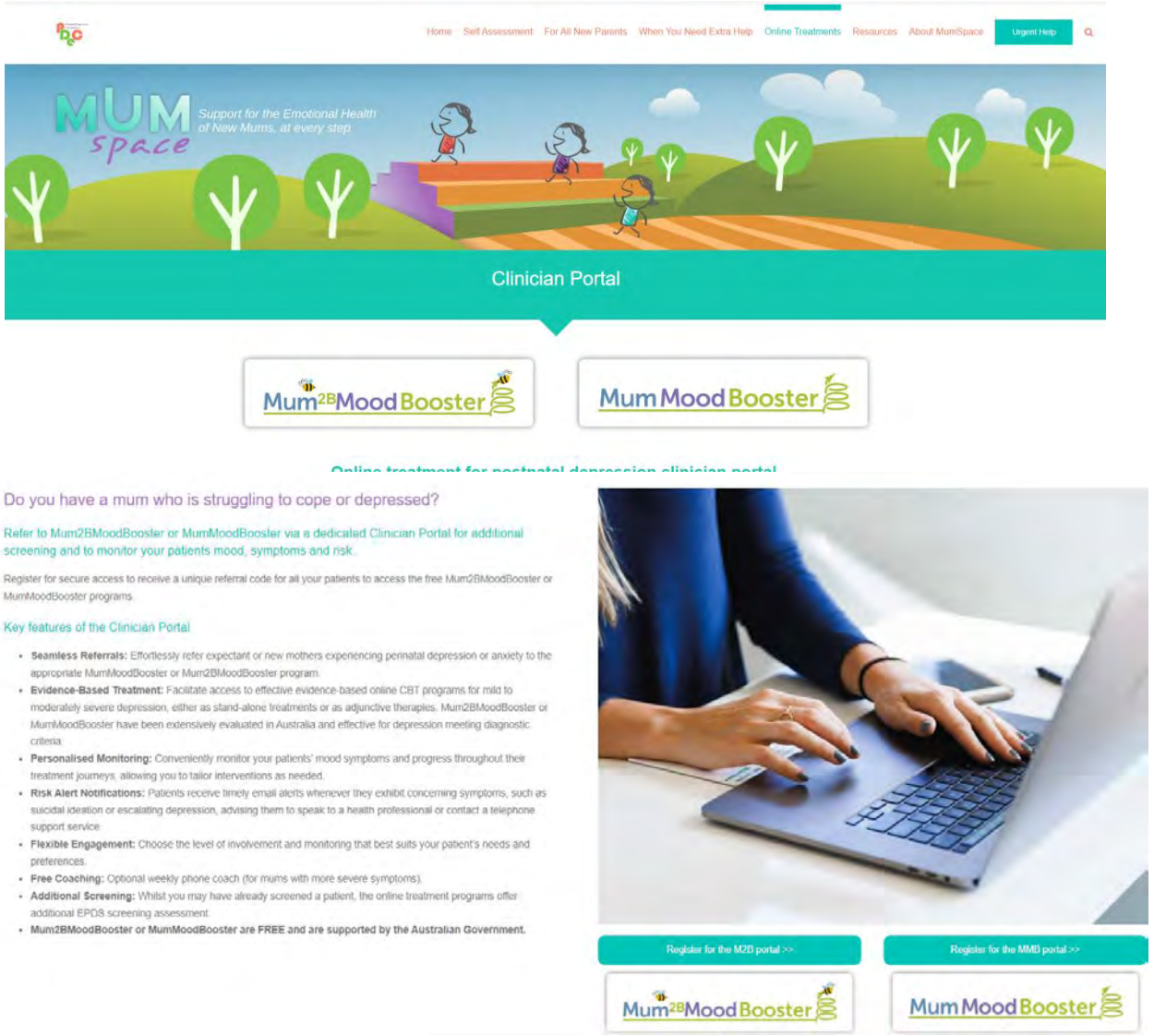
https://forwhenhelpline.org.au/

Online treatment for postnatal depression clinician portal.

Perinatal Depression e-Consortium (PDeC), a Commonwealth-funded initiative, led by the Parent-Infant Research Institute (PIRI), dedicated to providing effective and accessible online treatment program for women experiencing mild –moderate perinatal depression and anxiety.

MumMoodBooster - trialled in clinical studies (Australia/US) & in RCTs in Australia.
- effective in major and minor depression with rapid symptom reduction (80% no longer depressed at program completion, with high 95% completion rate)
- as effective as F2F CBT

[MumMoodBooster Clinician Portal Brochure.cdr (piri.org.au)]



Mum2BMoodBooster Clinician Portal - [Mum2BMoodBooster Clinician Portal.]

SMS4dads

INFO & SUPPORT

SMS4dads

There's not a lot out there that speaks directly to dads. SMS4dads supports men in their role as fathers and increases awareness of their influence on baby's brain development.

SMS4dads helps fathers understand and connect with their baby and partner. It also checks in on their wellbeing and offers professional support if needed.

SMS4dads is FREE. It provides info related to the age and stage of your baby. It's the info you need – when you need it, how you need it – straight to your phone.

WHAT ARE THE MESSAGES LIKE?

Texts are linked to the baby's birth date – so they fit with what's usually going on. Messages are written by health professionals, and many are from the "VOICE" of the baby – so it feels like your bub is talking to you.

My first poo is going to be black, sticky and look like tar. I'm working on it for you now dad.

If you've been at work all day, you might be able to support mum by taking me out for a walk dad. This will also give us more bonding time.

Most dads feel stressed if their new baby cries a lot. How have you coped this week with settling your baby?

JOIN UP

4DAD : *Tell a mate how it is going. Even if they don't have kids. Having a mate who knows what is happening can help to keep you on track.* [TXT STOP TO OPT OUT]

Babies come with personality dad. Getting to know my personality can make being my dad much more rewarding for you. [LINK]

I know I look really small dad, but if I'm well enough, I'd love you to touch or hold me. Let the staff know its important to you.

Although it's noisy in here, I'll be able to hear your voice from about 20 weeks. Try telling me about the things we will do together.

Fathers, Dads-to-be, Families & Health Professionals. Receive free text messages, support, info & tips – especially for dads & dads-to-be

https://www.sms4dads.com.au/

Management of mental illness in the perinatal period

Consider all options including lifestyle & facilitating appropriate supports

Options include:

- Pregnancy support counselling—no Mental Health Plan required, 3 Medicare funded visits

  Search for eligible psychologists at www.psychology.org.au
- Mental health assessment and plan if required and manage/refer as appropriate
- Medication/GP Support and counselling
- Private Psychologist under “Better Access”
- Psychiatrist – Assessment and Planning Item (291) or ongoing care
- Metro South Health Mental Health Services
- Further multidisciplinary training for Perinatal Carers available through Brisbane South (BSPHN) – PIPE-MC Program (Perinatal Interprofessional Psychosocial Education for Maternity Clinicians)

Perinatal Wellbeing Service

Video
https://vimeo.com/351322500/ee92ff319c

Perinatal Mental Health

Metro South Health

Metro South Addiction and Mental Health Services

Healthy mind. Healthy mum. Healthy baby.

Helpful websites

- www.panda.org.au
- www.beyondblue.org.au
- www.blackdoginstitute.org.au
- www.womhealth.org.au
- http://cope.org.au
- peachtree.org.au

Urgent/ Afterhours Mental Health Support
1300 MH CALL (ph. 1300 64 22 55)

Partnering with Consumers - This patient information brochure supports National Safety and Quality Health Service Standard 2 (2.4.1). Consumers and/or carers provided feedback on this patient information.

Contact us
Perinatal Wellbeing Service

LOGAN:
P.O Box 6031, Yatala, 4207
Telephone: (07) 3089 2734
Fax: (07) 3089 2722

Redlands
P.O Box 585, Cleveland, 4163
Telephone: (07) 3825 6214
Fax: (07) 3089 2722

Email:
WellbeingPerinatal@health.qld.gov.au

Website metrosouth.health.qld.gov.au/logan-beaudesert-wellbeing-service/perinatal

Perinatal Wellbeing Service

Logan Beaudesert
Phone: 3089 2734

Redlands
Phone: 3825 6214

We care about you

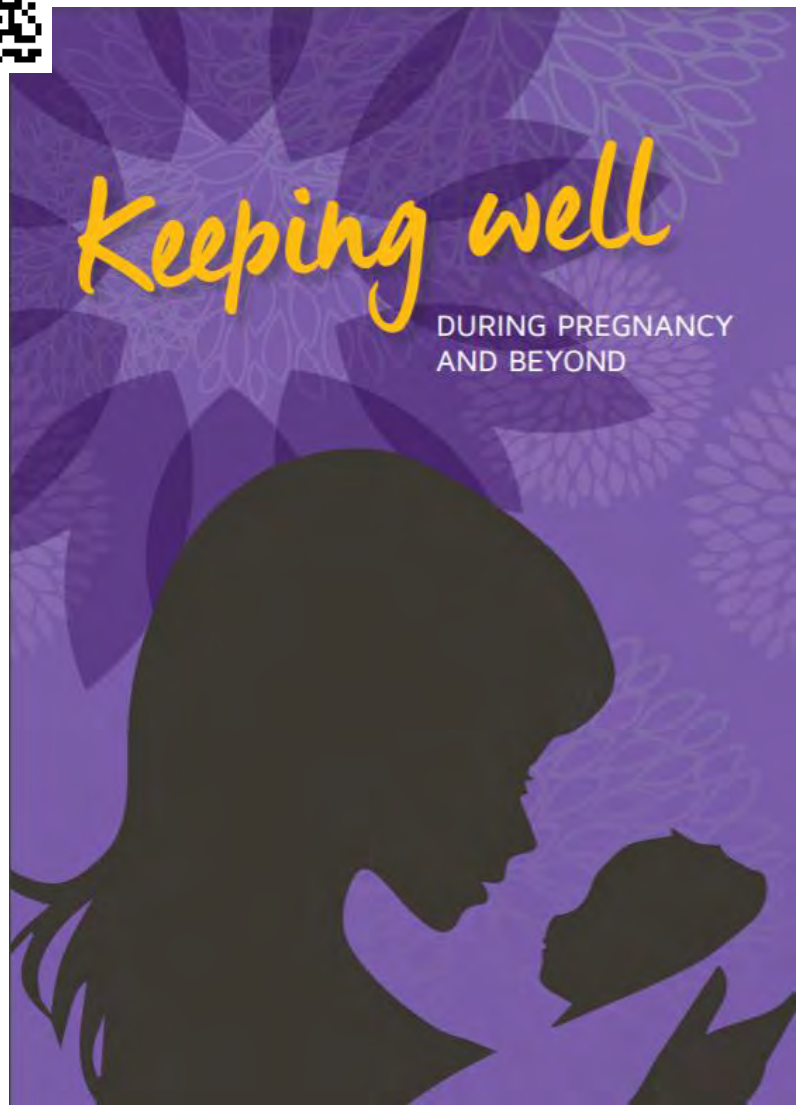
Queensland Government

Perinatal Wellbeing Service

- A specialist perinatal mental health assessment and brief intervention community service up to 6 appointments (Qld Health)
- For women ≥18 years, pregnant or have a baby up to 1 year and their families, living in Logan, Beaudesert or Redland suburbs
- Services provided by a Nurse Practitioner and Clinical Nurse Consultants who work closely with referrers, GPs, and other health providers. (P/T psychiatrist)
- Primary target group: women with adjustment disorders, anxiety and depressive disorders
- New funding for P/T psychiatrist support so will consider referrals for women with Bipolar disorder, or psychotic disorders not requiring urgent or case management services – refer these to MH CALL
- Psychological based treatments and prescribing and reviewing medications (NP)
- Provide information, advice and education about perinatal mental illness and advice around treatment

Perinatal Wellbeing Service

Keeping Well - During Pregnancy and Beyond



Referral process

- Women can self-referral by contacting the service directly
- GPs, midwives, community health and other health providers can make referrals on behalf of a woman with consent.
- GPs & Non-Q Health referrers - Fax to: 3089 2722 or send referral via CRH (only generic template available at the moment)
- The service can assist with GP management and suggest other services that may assist the woman or her family.
- More information available at -

Website: https://metrosouth.health.qld.gov.au/logan-beaudesert-wellbeing-service/perinatal

MSH074

Queensland Government

Metro South Addiction & Mental Health Services

Perinatal Wellbeing Service Referral

Scan and email form to: WellbeingPerinatal@health.qld.gov.au or fax to (07) 3089 2722

Telephone enquiries: Logan-Beaudesert ph. (07) 3089 2734, Redlands ph. (07) 3825 6214

Patient Family Name:
Given Name:
Date of Birth: **Country of Birth:**

Marital Status: ☐ Single ☐ Defacto ☐ Married ☐ Separated ☐ Divorced ☐ Widowed

Religion:

Interpreter Required? ☐ Yes ☐ No

If yes, language:

Address:

Phone (home): **Work:** **Mobile:**

Email:

Has the patient agreed to the referral? ☐ Yes ☐ No

Next of Kin (name): **Relationship:**

Contact No.:

Baby's Details (if applicable):
Name:
Date of Birth: ☐ M ☐ F

Indigenous Status:

- ☐ Aboriginal but not Torres Strait Islander origin
- ☐ Torres Strait Islander but not Aboriginal origin
- ☐ Both Torres Strait Islander and Aboriginal origin
- ☐ Neither Torres Strait Islander nor Aboriginal origin
- ☐ Not stated or unknown

Referrer's Name: **Designation:**

Service:

Address:

Phone: **Email:**

Reason for Referral:

Antenatal - EDC: **Postnatal - number of weeks:**

Other relevant medical history:

Mental health history:

GP (name): **Phone:** **Fax:**

Address:

Email:

If the GP is not the referrer, are they aware of the referral? ☐ Yes ☐ No

Referrer's signature: **Date of Referral:**

Perinatal Wellbeing Referral Form

For urgent assistance or advice

- Lifeline: ph. 131114
- MH CALL – ph. 1300 64 22 55 - Metro South Wide, 24/7
  - provide public urgent and after-hours triage assessment and advice for service providers
  - for patients assessed at high risk of harm to self or others
  - can also provide expert advice on management and advice around medications.
- PANDA: (Perinatal and Anxiety Depression Australia) National Perinatal Mental Health Helpline ph. 1300 726 306
- Inpatient service at Gold Coast University Hospital – for postnatal women with severe illness such as psychotic illnesses, or severe depression and or anxiety and non-ambulatory infants.
- New MH Catherine's House (private and public mother-infant beds) coming soon (tertiary referrals only)

Takeaways:

- Syphilis serology at 28 + 36/40 in ALL women, with low index of suspicion to test at other times and post-natally
- QSSSA to sort Rx needed - Benzathine Penicillin and ensure Rx given communicated to hospital
- Continue to screen all your pregnant patients for Perinatal Mental Health concerns – high risk time for women.
- Make use of all the resources available for parent support including the local Perinatal Well Being Service.

Red Group: Task 1 – Jade

- 26-year-old multiparous G5 P3 at 10 weeks pregnant.
- History of Postnatal depression treated sporadically with SSRI; high alcohol use at times; Smokes 10-15 cigarettes/day
- Unplanned pregnancy and considering a termination of pregnancy.
- Department of Child Safety involvement in the past, but you are unsure of the current situation
- Large bruise on her arm noted when you check her BP

Set out your initial assessment and referrals.

Metro South Health

Termination of Pregnancy in MSHHS

Presented by Dr Kim Nolan for:
Nurse Navigator
LBH Early Pregnancy Assessment Unit & MSHHS Termination of Pregnancy Unit

We care about you

Queensland Government

Termination of pregnancy

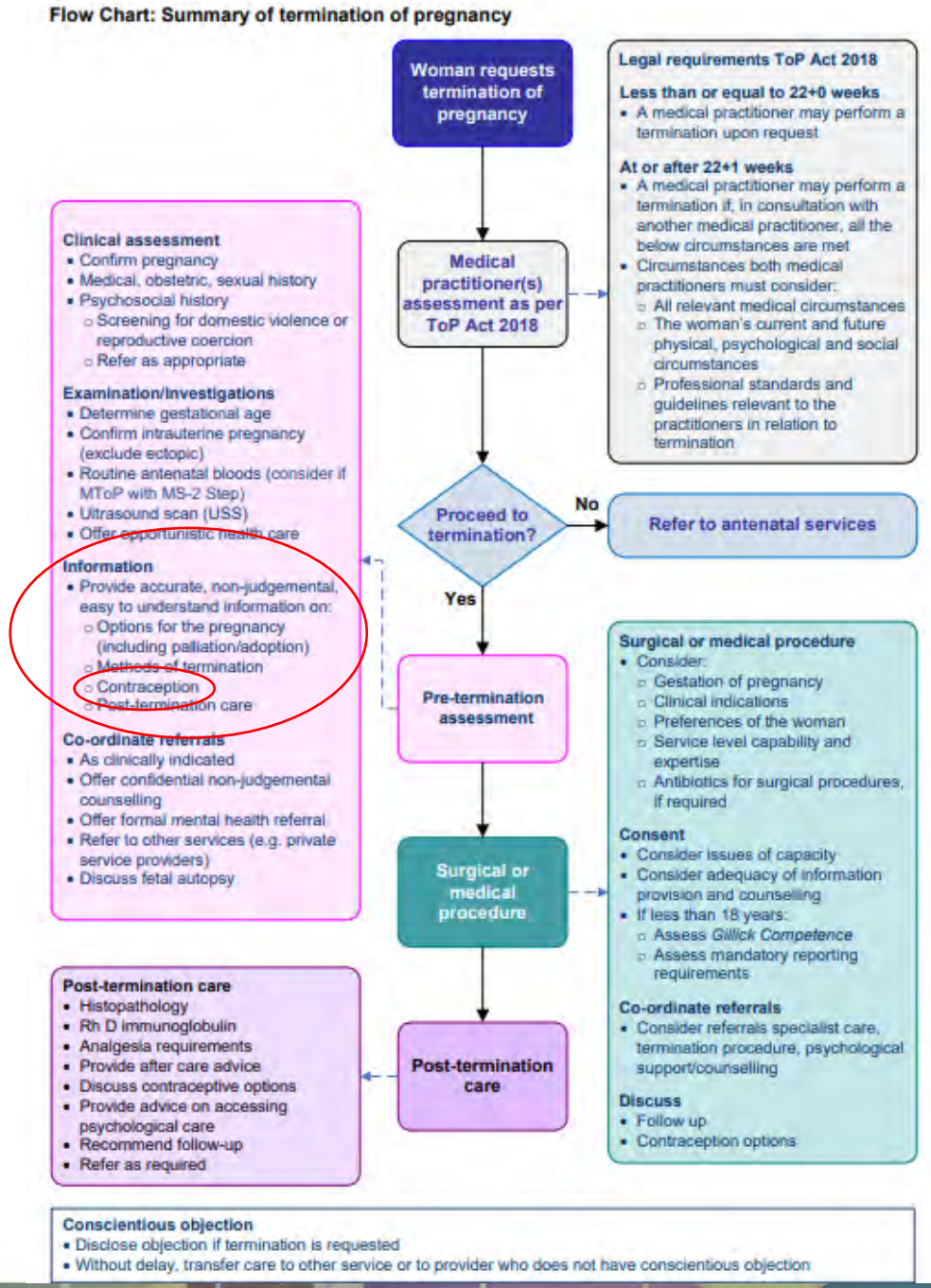
Termination of Pregnancy Act 2018

- Lawful termination may be performed by registered medical practitioners
- Up to gestational limit of 22 + 0, for any reason
- Gestation upward of 22+1; 2 x medical practitioner agreement that termination can be performed
- GPs advised to contact Obstetrician on Call or Nurse Navigator for ToP service to assist these patients

Conscientious Objectors:

Where a health practitioner conscientiously objects to ToP care, they must disclose their objection and they have a **professional responsibility and legal requirement** to ensure transfer of care without delay to a health practitioner or service who they believe can provide the requested service.

We believe that all clinicians who may encounter a patient considering a pregnancy termination need to have knowledge of the options available to patients, and we invite all to be involved in this case discussion.

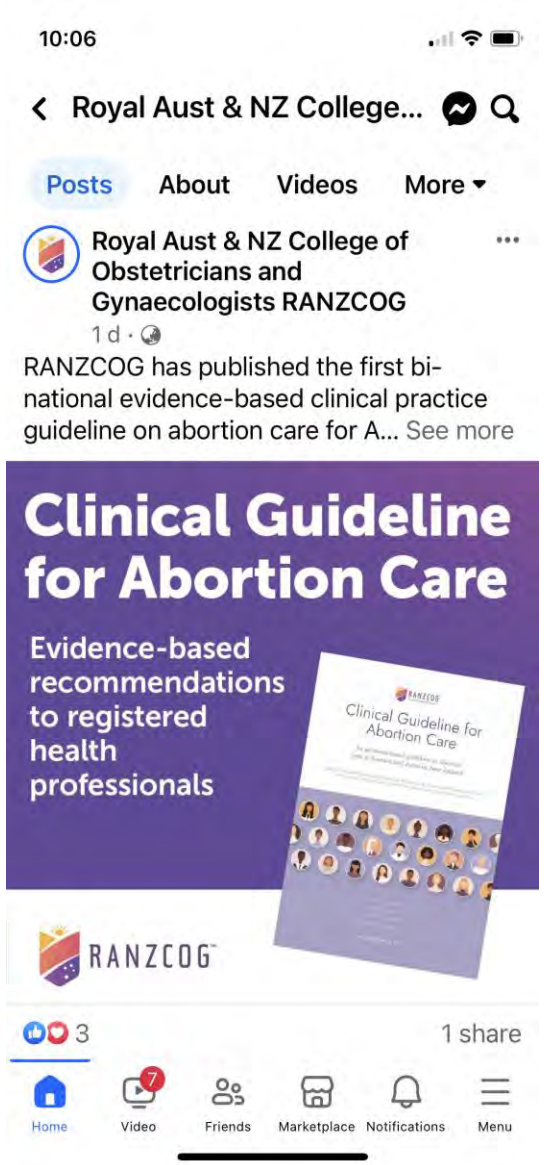


Guideline: Termination of pregnancy (health.qld.gov.au)

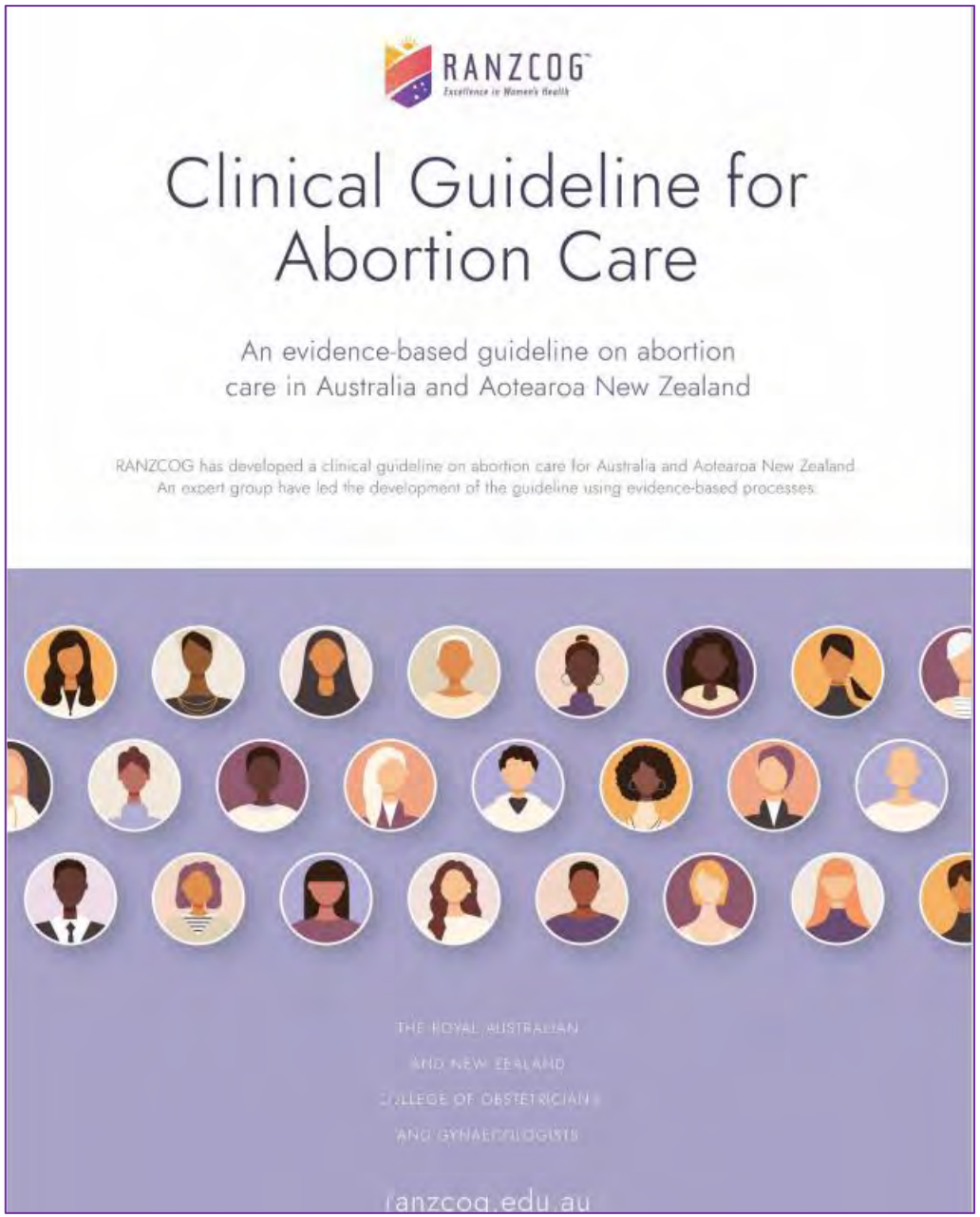
- Australia has a relatively high rate of unintended pregnancy (19.7 per 1000 women aged 15–44 years).
- Australia ranks amongst the highest countries for termination of pregnancy in the developed world with 1 in 4 (-6) women undergoing a termination procedure.

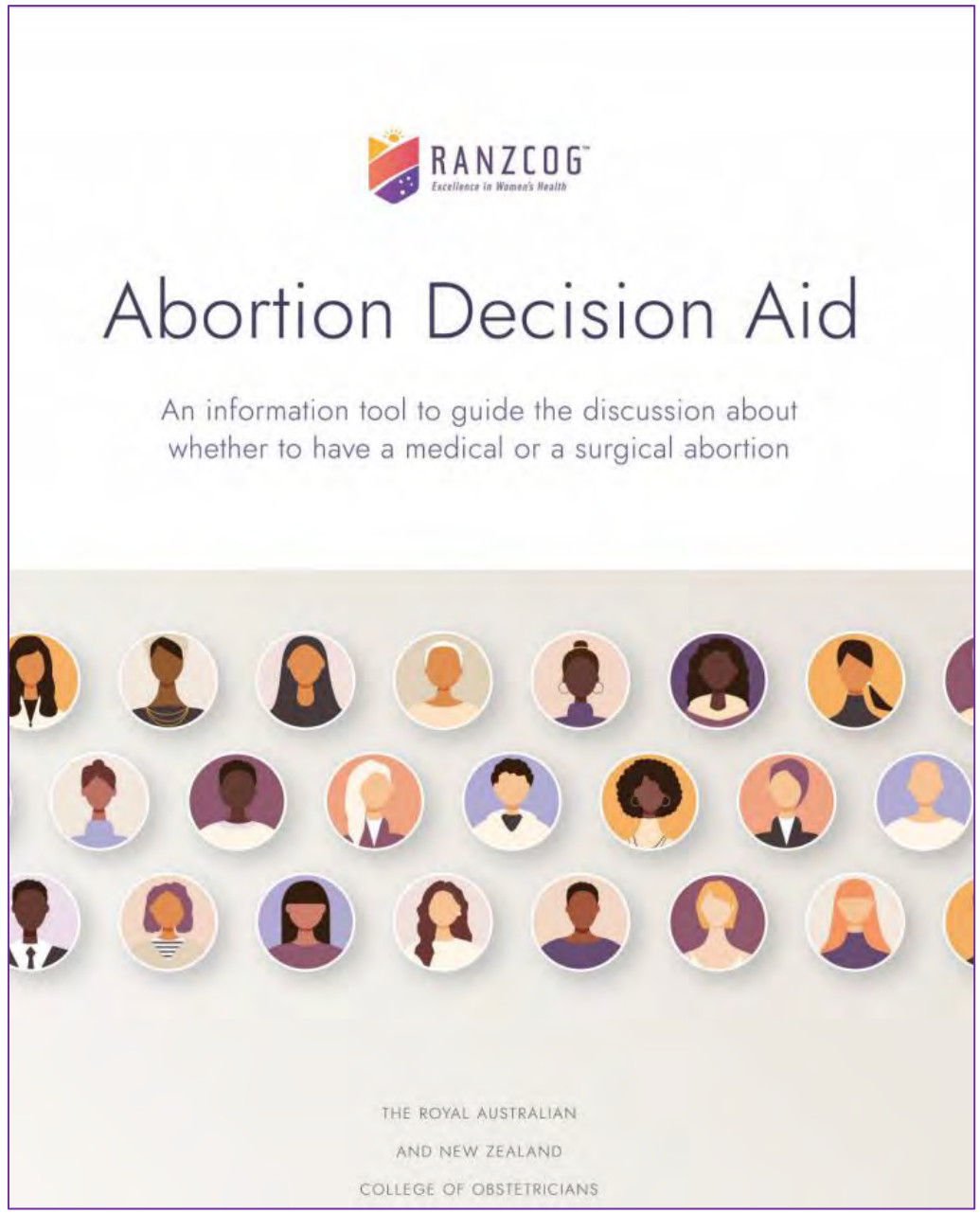
https://www.health.qld.gov.au/__data/assets/pdf_file/0029/735293/g-top.pdf

RANZCOG – Clinical Guideline for Abortion Care and Patient Resource Launch – 30th October 2023



[Clinical Guideline for Abortion Care - RANZCOG]





[Clinical Guideline for Abortion Care - RANZCOG](https://ranzcog.edu.au/resources/abortion-guideline/) https://ranzcog.edu.au/resources/abortion-guideline/

5.10 Medical or surgical abortion and pain relief

Good Practice Point 11

The guideline development group recommends that analgesia for surgical or medical abortion should be individualised to patient preferences, clinical need, clinician capabilities, local policies and/or contextual factors.

5.10.1 Pain relief up to 14 weeks pregnant

Recommendation 14 — **Evidence-based recommendation** — **Strong**

For surgical abortion up to 14 weeks pregnant offer combination of:

- Pre-procedure analgesia with non-steroidal anti-inflammatory (NSAID) medications
- Conscious or deep sedation with the possible addition of paracervical block

GRADE of evidence: Moderate

Good Practice Point 12

For surgical abortion up to 14 weeks pregnant, general anaesthesia could be offered if clinically indicated or patient preference.

Recommendation 15 — **Evidence-based recommendation** — **Strong**

For medical abortion up to 14 weeks pregnant offer a single dose ibuprofen 1600 mg (off-label use), followed by ibuprofen 400 mg to 600 mg eight-hourly. A maximum dose of ibuprofen 2400 mg can be taken in 24 hours while symptoms of pain persist.

GRADE of evidence: Moderate

Good Practice Point 13

For medical abortion up to 14 weeks pregnant, pain relief can be optimised by:

- Offering paracetamol (1000 mg 4 to 6 hourly as required with a maximum 4000 mg per 24 hours) in addition to ibuprofen with antiemetic 30 minutes prior to administration of misoprostol
- Considering selective use of opiate analgesia

Termination of Pregnancy – Medical

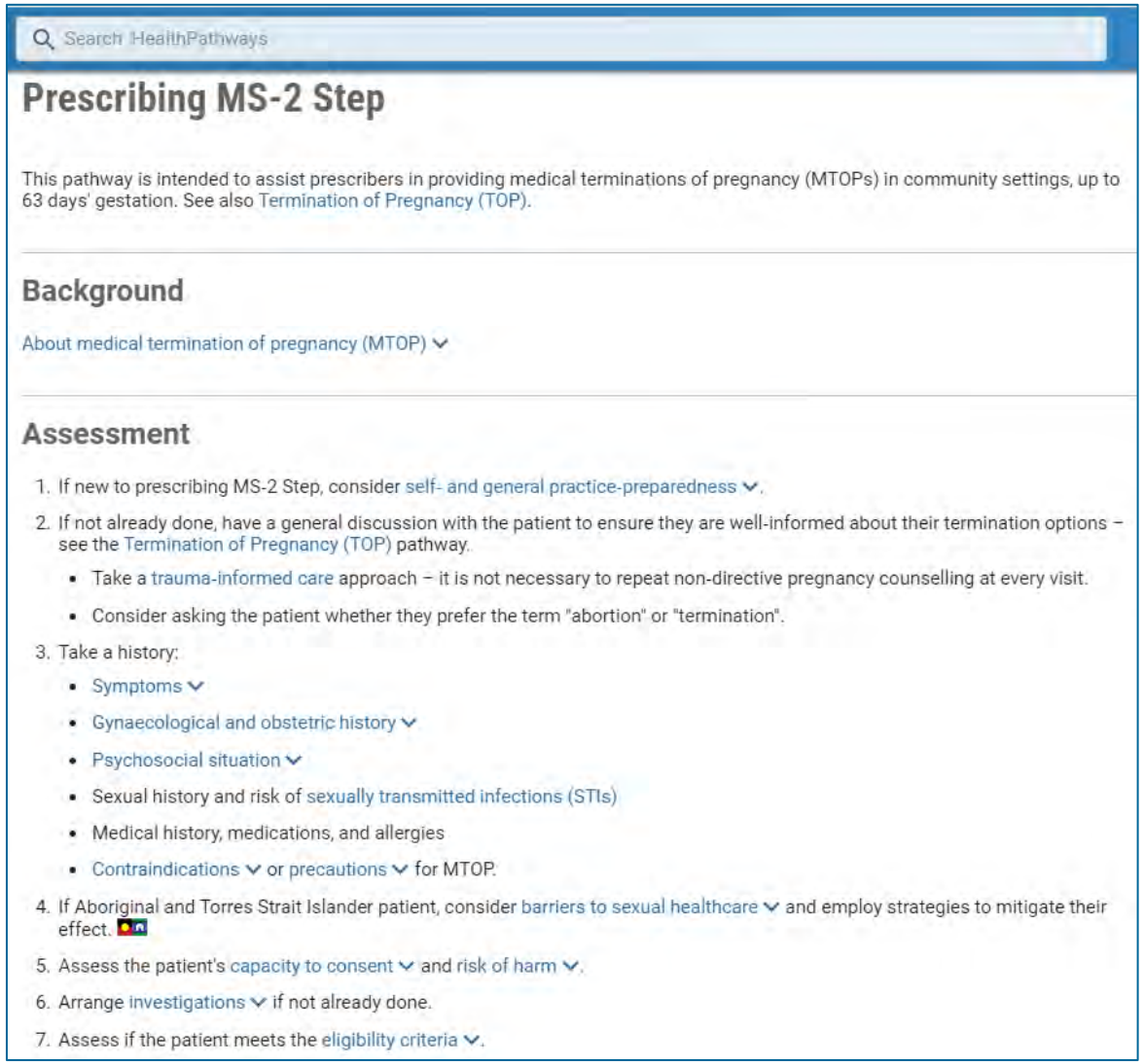
For gestation ≤ 9 weeks (63 days), GP management with MS 2 Step is appropriate

- MS 2 Step prescribing is available to all GPs from August 2023
- Pregnancy must be confirmed to be intrauterine and ≤ 9 weeks (63 days) on USS
- Online training and resources provided by MS Health on MS-2step for registered health practitioners to enable them to understand the pharmacology and prescribe the medication - go to https://www.ms2step.com.au/
- Queensland Health Termination of Pregnancy Clinical Guideline and Presentation, which are intended to provide evidence-based information and guide clinical practice.
- Termination of Pregnancy knowledge assessment (self-directed learning tool)
- "Prescribing MS-2 Step" page on Health Pathways - https://brisbanesouth.communityhealthpathways.org/17305.htm
- For those who do not wish to prescribe, see GP to GP referrals page on Brisbane South Health Pathways.

MS2-Step

- For women ≤9 weeks gestation (63 days gestation)
- Mifepristone/ Misoprostol combination
- Day 1 - Mifepristone turns off progesterone
- 36-48 hours after - Misoprostol induces uterine contractions to expel POC
- Follow up plan in place

“Prescribing MS2Step” Brisbane South Health Pathways – Newly published!



Search HealthPathways

Prescribing MS-2 Step

This pathway is intended to assist prescribers in providing medical terminations of pregnancy (MTOPs) in community settings, up to 63 days' gestation. See also Termination of Pregnancy (TOP).

Background

About medical termination of pregnancy (MTOP)

Assessment

1. If new to prescribing MS-2 Step, consider self- and general practice-preparedness.
2. If not already done, have a general discussion with the patient to ensure they are well-informed about their termination options – see the Termination of Pregnancy (TOP) pathway.
   - Take a trauma-informed care approach – it is not necessary to repeat non-directive pregnancy counselling at every visit.
   - Consider asking the patient whether they prefer the term "abortion" or "termination".
3. Take a history:
   - Symptoms
   - Gynaecological and obstetric history
   - Psychosocial situation
   - Sexual history and risk of sexually transmitted infections (STIs)
   - Medical history, medications, and allergies
   - Contraindications or precautions for MTOP.
4. If Aboriginal and Torres Strait Islander patient, consider barriers to sexual healthcare and employ strategies to mitigate their effect.
5. Assess the patient's capacity to consent and risk of harm.
6. Arrange investigations if not already done.
7. Assess if the patient meets the eligibility criteria.

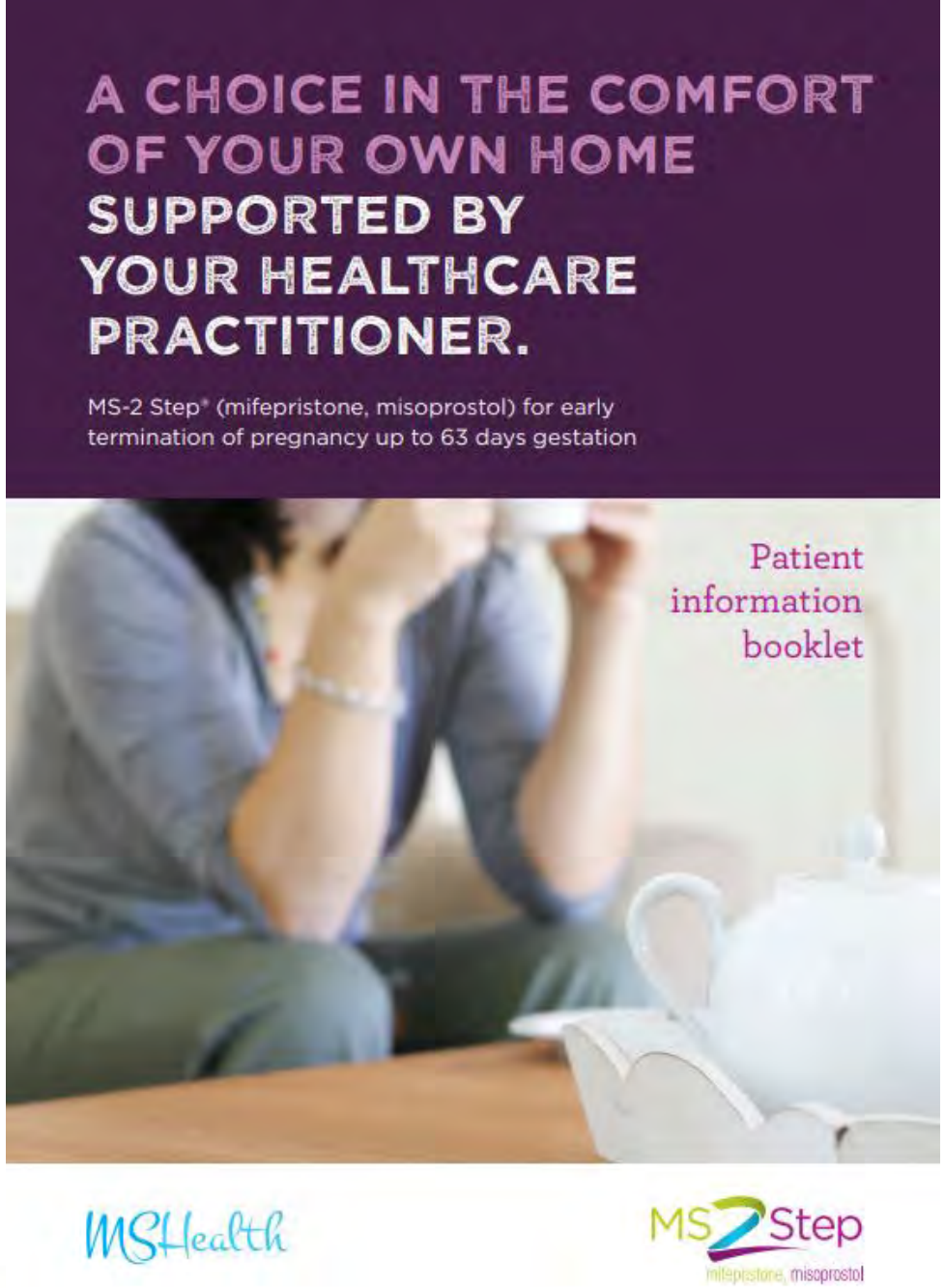
Before prescribing

Prescribing

Follow-up and management of complications

1. Arrange follow-up (can be in person, by phone, or via telemedicine).
   - Arrange initial follow-up 3 to 7 days after mifepristone (step 1)
   - If the patient is having follow-up quantitative beta hCG, check for adequate drop in beta hCG levels
   - Arrange further follow-up at 14 to 21 days after MTOP
2. If the quantitative beta hCG measurement has not dropped appropriately, arrange a pelvic ultrasound to assess possible causes.
3. Manage complications:
   - If symptoms suggestive of ongoing pregnancy, arrange an urgent ultrasound and quantitative beta hCG, looking for viable intrauterine pregnancy or ectopic pregnancy. Manage the patient according to ultrasound results.
   - If haemorrhage, arrange emergency assessment. Consider further monitoring of FBC and iron studies at follow-up, and manage as appropriate.
   - Manage retained products of conception (RPOC):
     - Examine the patient
     - Arrange investigations
     - If ultrasound indicates retained products of conception, treatment options include expectant, medical, or surgical management, depending on the clinical situation.
   - Manage infection:
     - Examine the patient
     - Arrange investigations
     - If moderate to severe infection, arrange emergency assessment.
     - If mild infection, treat with antibiotics.
4. Assess the patient's feelings about their experience. Most individuals report feeling a range of emotions after medical termination, including relief, sadness, and guilt. If any symptoms of abnormal mood or grief, request counselling services if necessary.

https://brisbanesouth.communityhealthpathways.org/17305.htm



Consider ordering patient information booklets and pre-printed consent forms from MS Health

MS-2-Step-Patient-information-booklet.pdf (ms2step.com.au)

Adverse Events

- Significant Adverse Events should be reported to the TGA
  - Template within clinical software
  - Online at https://aems.tga.gov.au
  - Can also be reported to MS Health via their website
- Admission to hospital for D&C / Hemorrhage
- Reporting SAE's provides accurate real-world data

Early Medical Abortion Education

Promoting excellence in compassionate abortion care education, the following resources may assist new and emerging clinicians:

- https://www.fpnsw.org.au/medical-abortion-online Family Planning NSW have a Medical Abortion online course for GPs, nurses and midwives: 4 hours
- Termination of pregnancy – a good practice guide for Tasmanian care providers (womenshealthtas.org.au)
- Early medical abortion - Women's Health Victoria (whvtraining.com.au) – free online training module
- AusCAPPS Network (The Australian Contraception and Abortion Primary Care Practitioner Support) Network

AusCAPPS | Medcast

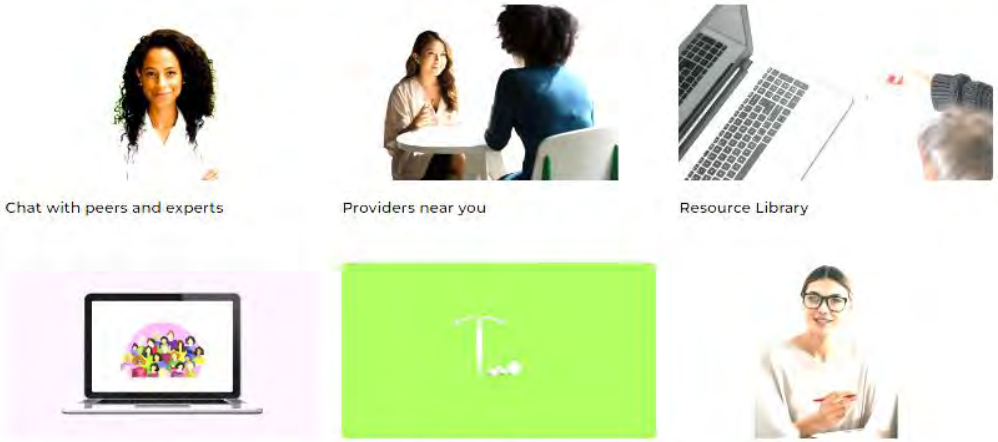
Home | Chat Page | Providers Near You | Resources | Webinars & Podcasts | LARC & EMA Training | Topic Library | About

AusCAPPS Home

The Australian Contraception and Abortion Primary Care Practitioner Support Network

A network for professionals working with women to optimise reproductive health.

About this network
- How to use this network
- Meet the team
- Get in touch
- Our project and mission



ABOUT THIS NETWORK

Our project and mission

AusCAPPS Network (The Australian Contraception and Abortion Primary Care Practitioner Support Network) is an NHMRC-funded project designed to connect the primary care workforce and increase women's access to contraception and abortion.

IUD and implant use among Australian women remains low, despite being safe and effective for women of all ages.

Early medical abortion is also under-utilised in primary care, despite it being an effective and less-invasive option than surgical termination. These inequities are magnified in rural and regional areas.

AusCAPPS Network aims to:

- Increase women's access to long acting reversible contraceptive (LARC) methods (IUDs and implants).
- Increase women's access to safe, affordable early medical abortion (EMA), including for women from the most vulnerable populations.

How to use this site

Chat, network, ask a question, or post your thoughts:

Create your own profile page and connect with other AusCAPPS members - it looks a little like Facebook. Post questions, topics for discussion, news and interesting research. You can also put a specific clinical question to our expert network, and you can post anonymously if you wish.

Providers near me

This is a database of all AusCAPPS users you can search according to location. This is a great resource if you are looking to find a colleague or provider located near you - for example, if you are a GP in a rural area looking to find an EMA dispensing pharmacist nearby.

LARC and early medical abortion resource libraries

We have collated a comprehensive and up-to-date collection of clinical guidelines, templates, tools and tips and FAQs to assist you in delivering best-practice clinical services and save you the time spent searching online.

How to become a provider

If you are interested in becoming an EMA provider, having IUD insertion training, or building on your existing skills, this section of the site will put you in touch with training and education providers and opportunities.

Case study discussion

Get involved with fortnightly case study discussions, expert Q and A's and live chats.

News, events and research

Find latest news, conference opportunities, research papers, opinion blogs and other updates. You can also subscribe to our newsletter to stay up to date with what is happening in this community and in women's health more broadly.

Termination of Pregnancy - services available in the region

- MSHHS provides **limited** service to patients within catchment
- Local hospital services prioritise appointments for women with complex healthcare needs or significant social disadvantage - (complex psychosocial concerns, mental health issues, safety issues, behavioural issues, homelessness and/or alcohol/drug issues, low health literacy, lower socio economic, diverse cultural population)
- **Metro South Hospital ToP Nurse Navigator Clinic – now for Logan/Beaudesert and Redland Hospitals**
  - Offering specialised support for women seeking access and information for a termination of pregnancy and patient risk assessment re eligibility
  - Women are offered flexibility in appointment times, +/- phone appointments**.**
  - Written referral (preferably SMART referral) required after contacting Nurse Navigator (preferred via CRH/SMART Referral)
  - Referral information: **Termination of Pregnancy Service**

https://metrosouth.health.qld.gov.au/referrals/gynaecology/termination-of-pregnancy **OR**

https://brisbanesouth.communityhealthpathways.org/82377.htm

  - **Contact** Phone: 0459 462 478 (Mon – Fri 9am to 4pm) or 07 2891 5578

Children by Choice Abortion and Contraception Services MAP -

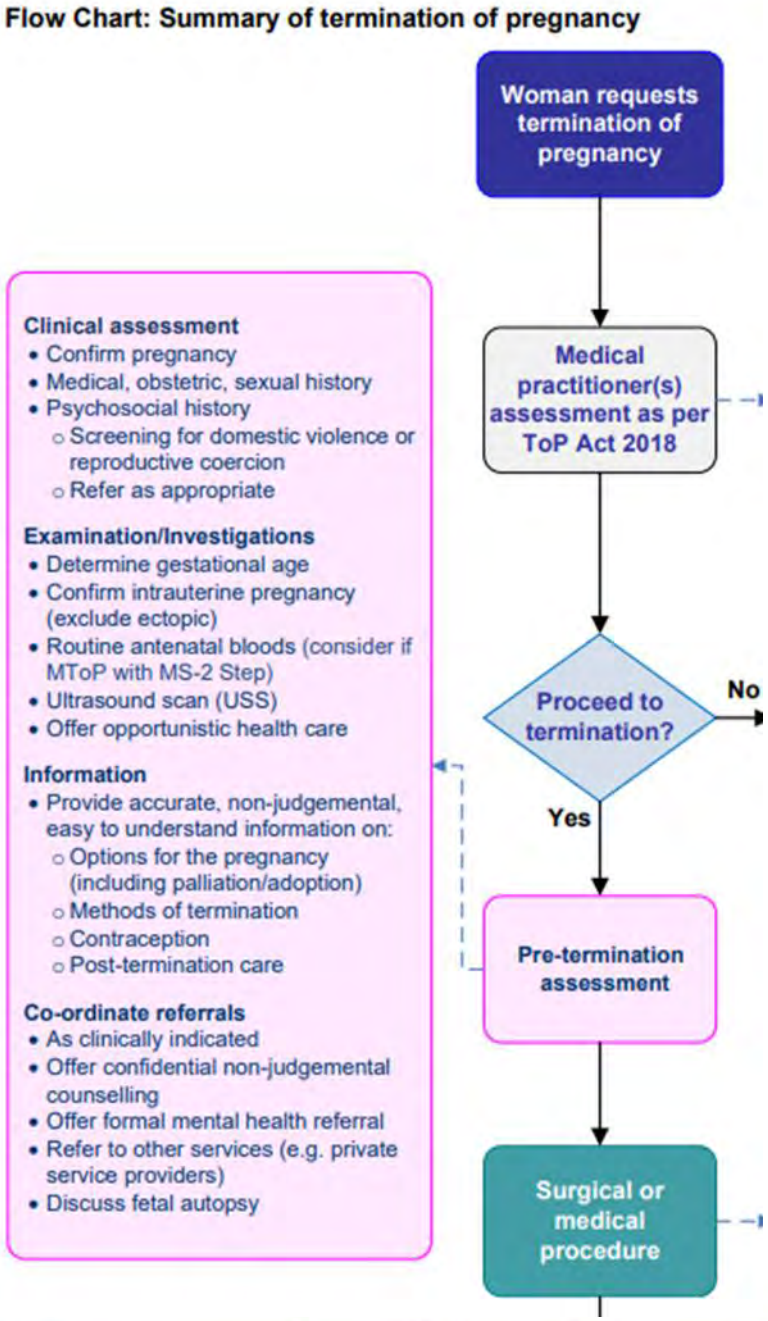
https://www.childrenbychoice.org.au/information-support/abortion/queensland-abortion-providers/

Further information is available at:

Termination of Pregnancy (TOP) - Community HealthPathways Brisbane South (SpotOnHealth)

Other Considerations

- Is your patient under 16 years of age?
  - Consider independent counselling & ensure there is a support person who is available and engaged
  - 14 years and above require assessment for Gillick competence and social work input
- Assessment and screening for domestic violence & reproductive coercion is important. Each woman referred to the service should be asked how she is feeling, if she is safe and if she has been forced into making this decision
- Support services available to the woman to aid in decision making due to circumstance (e.g., Children by Choice, SANDS)



Essential referral information

Referrals need to be complete and have all relevant investigations attached as per Termination of Pregnancy Clinical Guidelines https://www.health.qld.gov.au/qcg/publications#top

Incomplete referrals lead to delays - Be Timely!

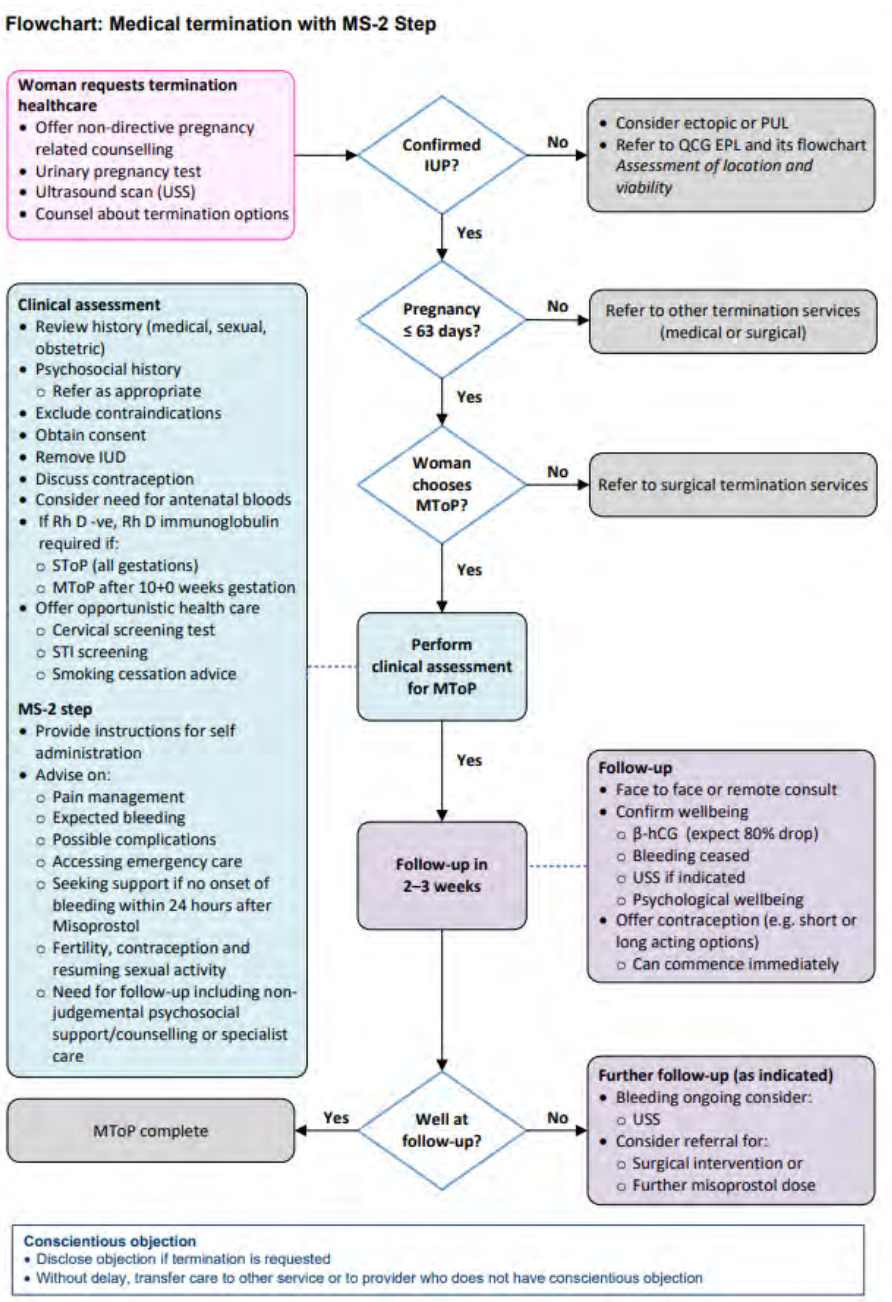
- Medical, surgical and obstetric history
- Menstrual history and last menstrual period (LMP) date
- Results of a physical examination as indicated by patient history, vital signs, and BMI
- MUST have confirmation of pregnancy (βhCG) and gestation with:
  - **USS proven live intrauterine pregnancy ***
  - **Blood group and hold**

"Refer Your Patient" - Gynaecology - Termination of Pregnancy

* Ensure sensitive treatment noted on USS request - If appropriate, ask women about their preference to see/hear USS images

Additional referral information:

- If MToP (MS-2-Step) routine antenatal screening not required, but consider based on history/opportunistically with other serum tests
- Quantitative β hCG for comparison at follow-up visit after medical termination
- For other MToP or SToP, undertake routine AN serum screening (if not already done) FBC, Rubella antibody, Hep BsAg/Hep C serology , HIV serology, Ferritin, and syphilis serology
- HPV vaccination history & CST result if done
- STI screen - endocervical PCR swab for chlamydia + gonorrhoea +/- other STI screen as indicated
- History of smoking/ substance use and alcohol
- History of DFV or sexual violence/reproductive coercion
- Mental Health Status



https://www.health.qld.gov.au/__data/assets/pdf_file/0034/735298/f-top-ms.pdf

5.3 Testing prior to an abortion

5.3.1 Abortion without prior testing of haemoglobin, Rh D status

Recommendation 3 Consensus-based recommendation

Routine testing of haemoglobin is not required prior to abortion.

Recommendation 4 Consensus-based recommendation

Routine testing of blood group for Rh D status, up to 10 weeks pregnant for either medical or surgical abortion, is not required prior to abortion.

Good Practice Point 3

Clinical judgement should be used to evaluate selective testing of haemoglobin and blood group prior to abortion in women at increased risk of haemorrhage, including but not limited to anaemia or advanced gestation.

Good Practice Point 4

Anti-D[IG] administration is recommended for abortion in pregnancies 10 weeks or more for Rh D negative women. Individualised care based on an individual's risk-benefit profile could be considered.

https://ranzcog.edu.au/resources/abortion-guideline/

Queensland Health

Queensland Clinical Guidelines

*short*GUIDE

Rh D negative women and pregnancy

https://www.health.qld.gov.au/__data/assets/pdf_file/0016/1219003/g-rhd-negative.pdf

Sensitising events

Aspect	Consideration
First 12+6 weeks of pregnancy[6]	• Miscarriage[26] ○ Excludes threatened miscarriage—consider confirming gestational age by ultrasound scan • Termination of pregnancy[26] (medical or surgical) from 10+0 weeks gestation[32] • Ectopic pregnancy[26] • Molar pregnancy[26] • Chorionic villus sampling[26]

Follow up after ToP

- Recommended 2-3/52 after termination of pregnancy (ToP).
- Enquire re - symptoms suggestive of ongoing pregnancy (failed termination)
    - signs of infection or retained products of conception (RPOC) – any abnormal vaginal bleeding or discharge, pain, or fever.
- Note that if a patient starts hormonal contraception immediately after miscarriage or termination, they may experience prolonged abnormal bleeding.
- If concerns re possible infection, retained products of conception, or abnormal bleeding: - perform examination
    - Temp/BP/Pulse, Uterine tenderness/? Involution, ? Clots at os

  + arrange investigations – swabs incl STI screen, ? βhCG test, ? FBC, ? TVUS
- For medical termination of pregnancy (MToP), arrange a 2-to-3-week post-ToP βhCG test to confirm that ToP is complete - **2% failure rate with MToP**.
- **Contraception and future pregnancy planning (start at first visit)**
- Ask about patient's feelings about her experience - significant mental health risk

Brisbane South Health Pathways - Follow Up after ToP

Resources available in MSH region

- 13 HEALTH – 13 43 25 84 provides health information, referral and services to the public
- Children by Choice – 1800 177 725 offers free all-options pregnancy counselling, information and referrals Qld wide
- Red Nose Grief and Loss/SANDS - 1300 308 307 – 24/24 support line
  - Provide support to grieving individuals and families.
  - For patients who may have made decision for ToP due to fetal abnormalities or other health concerns
- Women's Health Qld – 1800 017 676 offers health promotion, information and education services for women and health professionals
- True Relationships and Reproductive Health provides expert reproduction and sexual healthcare
- Termination of Pregnancy Clinical Guidelines https://www.health.qld.gov.au/qcg/publications#top – provides patient information + Flowcharts/ Education for Health Professionals
- Key facts about the Termination of Pregnancy Act https://clinicalexcellence.qld.gov.au/sites/default/files/docs/priority-area/termination-pregnancy/termination-pregnancy-act-facts.PDF

Metro South Health

ADAPT Clinic – Alcohol and Drug Awareness in Pregnancy

Slides prepared by Nicole Makin

- RN/Masters of Midwifery, Graduate Diploma Addiction & Mental Health
- Clinical Lead ADAPT Clinic at Logan Hospital,
- Co-Clinical Lead on Review Committee of Queensland Health "Perinatal Substance Use in Pregnancy" Guidelines

Presented by Leah Sims. Complex Care Midwifery Navigator

We care about you

Queensland Government

ADAPT Clinic – Alcohol & Drug Awareness in Pregnancy Team

- Midwife clinic 3 days/week offering specialised support for pregnant women with substance use & psychosocial issues.
- Women see same midwife at every appointment & offered flexibility in times +/- phone appointments..
- Illicit drug use has high association with mental health issues, and many substance using women are polysubstance users. Coexisting mental health disorders may contribute to substance use or the effects of substance use in pregnancy and include anxiety, schizophrenia, PTSD, BPD, and personality disorders. *Perinatal Substance Use: Maternal – Queensland Clinical Guidelines*
- Later pregnancy recognition & 50% unintended pregnancies increases risks/harmful effects of substance use.
- ***Refer as per usual pathways**, but please identify in the referral as much information as you have available to assist in suitable triage to dedicated services:*
  - *EDB (by USS determined dates if possible)*
  - *Substance used (as specific as can), amount and frequency*
  - *Consent to referral*
  - *Brief History of past + DV, Child Protection Service/ Dept of Child Safety history, if known*
  - *STI Screen , Cervical Screening Test result, Screening for blood borne viruses*
- If non-attendance & information re substance use included in referral, ADAPT Midwife will courtesy call, and follow up.

Purpose of ADAPT Clinic

- **Retain attendance** of women who use illicit substances or alcohol during pregnancy to antenatal appointments.
- Provide care with **known carer** & care planning within same multidisciplinary team, in a **non-judgemental environment**, to build a **trusted relationship**, in a positive environment supporting the individual woman's needs.
- Promoting **engagement** in a partnership with **support services** that aim to improve outcomes for mother and infant.
- **Minimise harm** by undertaking a comprehensive assessment and recommendations for care around continued substance use & associated risks for mother and infant.
- **Planning** for a safe birth, care planning for medication requirements, and reducing risks of presentation with acute maternal withdrawal and fetal distress, and/or effects of substance abuse. Can arrange SCN tour prenatally if considered that may be needed.
- **Consider comorbidities** and necessary referrals for further management e.g., STD management, postnatal Hepatitis C treatment.

Substance used – 2022

79% Cannabis

20% Methamphetamine

22% Cigarette + Other drug use

11% Alcohol use

5% MDMA or other

0.04% Suboxone

29 had Child safety involvement -
4 removals

160 referrals in 2022, 103 seen in ADAPT MW

Others cared for in MGP, birthed at another HHS or DNA

Nicole Mackin

Co-morbidities

BPD

OCD

Depression

Schizophrenia

PTSD

Anxiety

Bipolar affective disorder

In 2022, of the 103 seen in ADAPT Clinic:

61% Anxiety

60% Depression

21% DFV

11.6 % Self harm/suicide attempt/Overdose

50.4 % Other complex mental health diagnosis

Perinatal
Logan-Beaudesert Wellbeing Service

Linking with other services

ParentsNext
AN AUSTRALIAN GOVERNMENT INITIATIVE

- **Liaise** with internal/external support networks prn – GP, Community-based Addiction (Alcohol and Drug) Service, MH Team, Quitline, Social Worker, Complex Care Midwifery Navigator, Dietitian, Women's Legal Service, Family and Child Connect, Child Protection Liaison Officers, Extended Home visiting midwives' program, Child Health

- **Communication** is imperative to best support the client during the pregnancy and postpartum.

Right@home

Lives Lived Well
Breakthrough For Families
Alcohol & Other Drug Information, Education and Support

THE CENTRE FOR WOMEN & CO.

YFS

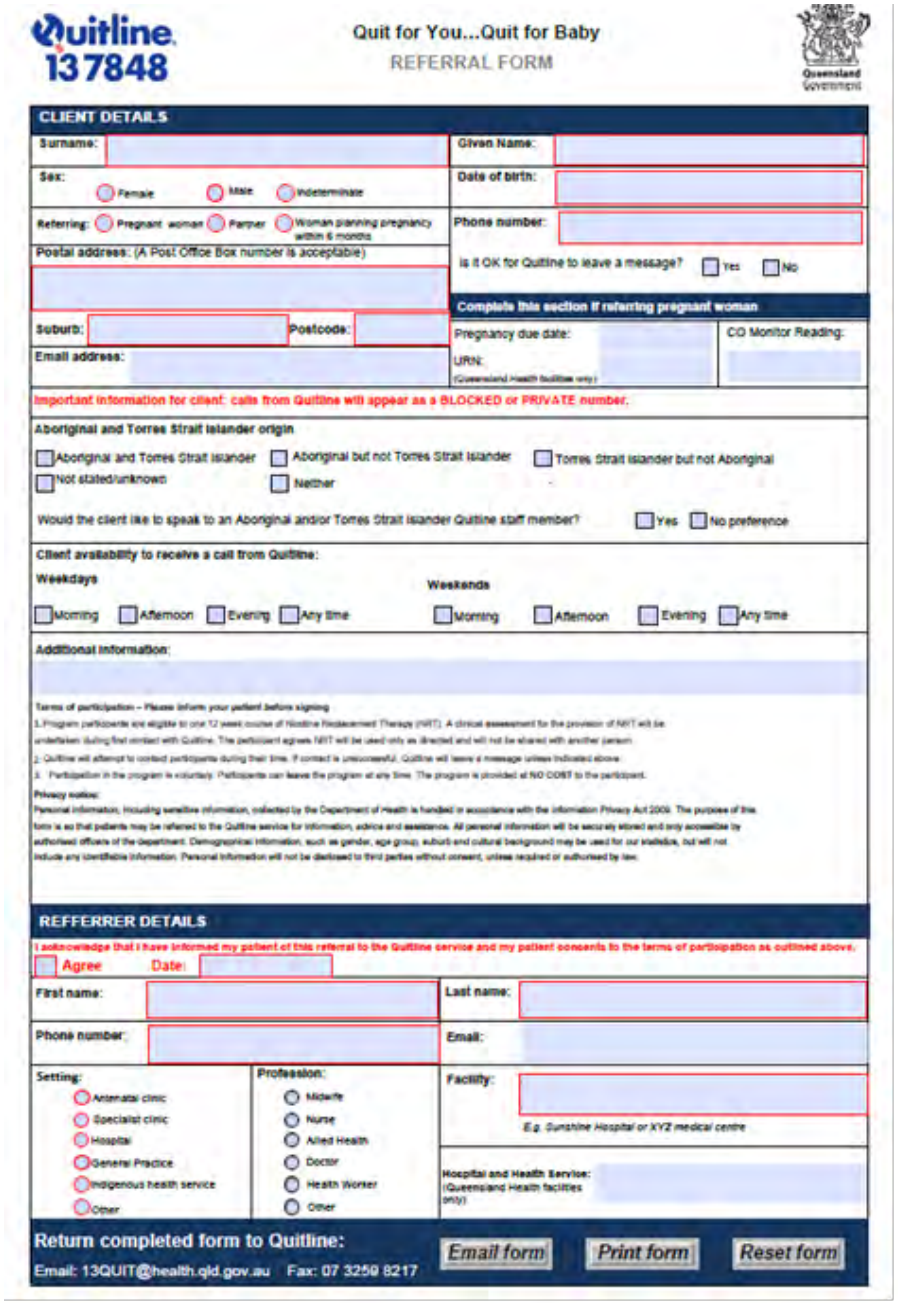
RECONCILIATION ACTION PLAN
INNOVATE

wesley mission QUEENSLAND

Thank you to Nicole Mackin for her information about the ADAPT Clinic/use of some of her slides.

Safer Baby Bundle - #Quit4Baby

Safer Baby in Pregnancy - The Centre of ResearchExcellence in Stillbirth (stillbirthcre.org.au)



Quitline 137848

Quit for You...Quit for Baby

REFERRAL FORM

Queensland Government

CLIENT DETAILS

Surname: | Given Name:

Sex: ○ Female ○ Male ○ Indeterminate | Date of birth:

Referring: ○ Pregnant woman ○ Partner ○ Woman planning pregnancy within 6 months | Phone number:

Postal address: (A Post Office Box number is acceptable) | Is it OK for Quitline to leave a message? ☐ Yes ☐ No

Suburb: Postcode: | **Complete this section if referring pregnant woman**

Email address: | Pregnancy due date: | CO Monitor Reading:

URN: (Queensland Health facilities only)

Important information for client: calls from Quitline will appear as a BLOCKED or PRIVATE number.

Aboriginal and Torres Strait Islander origin

☐ Aboriginal and Torres Strait Islander ☐ Aboriginal but not Torres Strait Islander ☐ Torres Strait Islander but not Aboriginal
☐ Not stated/unknown ☐ Neither

Would the client like to speak to an Aboriginal and/or Torres Strait Islander Quitline staff member? ☐ Yes ☐ No preference

Client availability to receive a call from Quitline:

Weekdays				Weekends			
☐ Morning	☐ Afternoon	☐ Evening	☐ Any time	☐ Morning	☐ Afternoon	☐ Evening	☐ Any time

Additional information:

Terms of participation – Please inform your patient before signing

1. Program participants are eligible to one 12 week course of Nicotine Replacement Therapy (NRT). A clinical assessment for the provision of NRT will be undertaken during first contact with Quitline. The participant agrees NRT will be used only as directed and will not be shared with another person.
2. Quitline will attempt to contact participants during their time. If contact is unsuccessful, Quitline will leave a message unless indicated above.
3. Participation in the program is voluntary. Participants can leave the program at any time. The program is provided at NO COST to the participant.

Privacy notice:

Personal information, including sensitive information, collected by the Department of Health is handled in accordance with the Information Privacy Act 2009. The purpose of this form is so that patients may be referred to the Quitline service for information, advice and assistance. All personal information will be securely stored and only accessible by authorised officers of the department. Demographical information, such as gender, age group, suburb and cultural background may be used for our statistics, but will not include any identifiable information. Personal information will not be disclosed to third parties without consent, unless required or authorised by law.

REFFERRER DETAILS

I acknowledge that I have informed my patient of this referral to the Quitline service and my patient consents to the terms of participation as outlined above.

☐ Agree Date:

First name: | Last name:

Phone number: | Email:

Setting:
○ Antenatal clinic
○ Specialist clinic
○ Hospital
○ General Practice
○ Indigenous health service
○ Other

Profession:
○ Midwife
○ Nurse
○ Allied Health
○ Doctor
○ Health Worker
○ Other

Facility:
E.g. Sunshine Hospital or XYZ medical centre

Hospital and Health Service: (Queensland Health facilities only)

Return completed form to Quitline:

Email: 13QUIT@health.qld.gov.au Fax: 07 3259 8217

Email form | Print form | Reset form

Quit for You…Quit for Baby REFERRAL FORM
https://www.health.qld.gov.au/__data/assets/pdf_file/0027/737316/quitline-hp-referral-pregnancy.pdf

Smoking Cessation Information

Quit & Alfred Health, RWH (Melbourne) have developed an evidence-informed clinical guideline, including an algorithm for prescribing NRT:

Supporting smoking cessation during pregnancy – nicotine replacement therapy (NRT).

TWO versions available - for clinicians providing care to pregnant women in

- **General practice**
- **Health services**

Recognised as Accepted Clinical Resource by **RACGP** & endorsed by **RANZCOG,** the **Stillbirth CRE** and the **Australian College of Midwives.**

Supporting smoking cessation during pregnancy - nicotine replacement therapy (NRT)

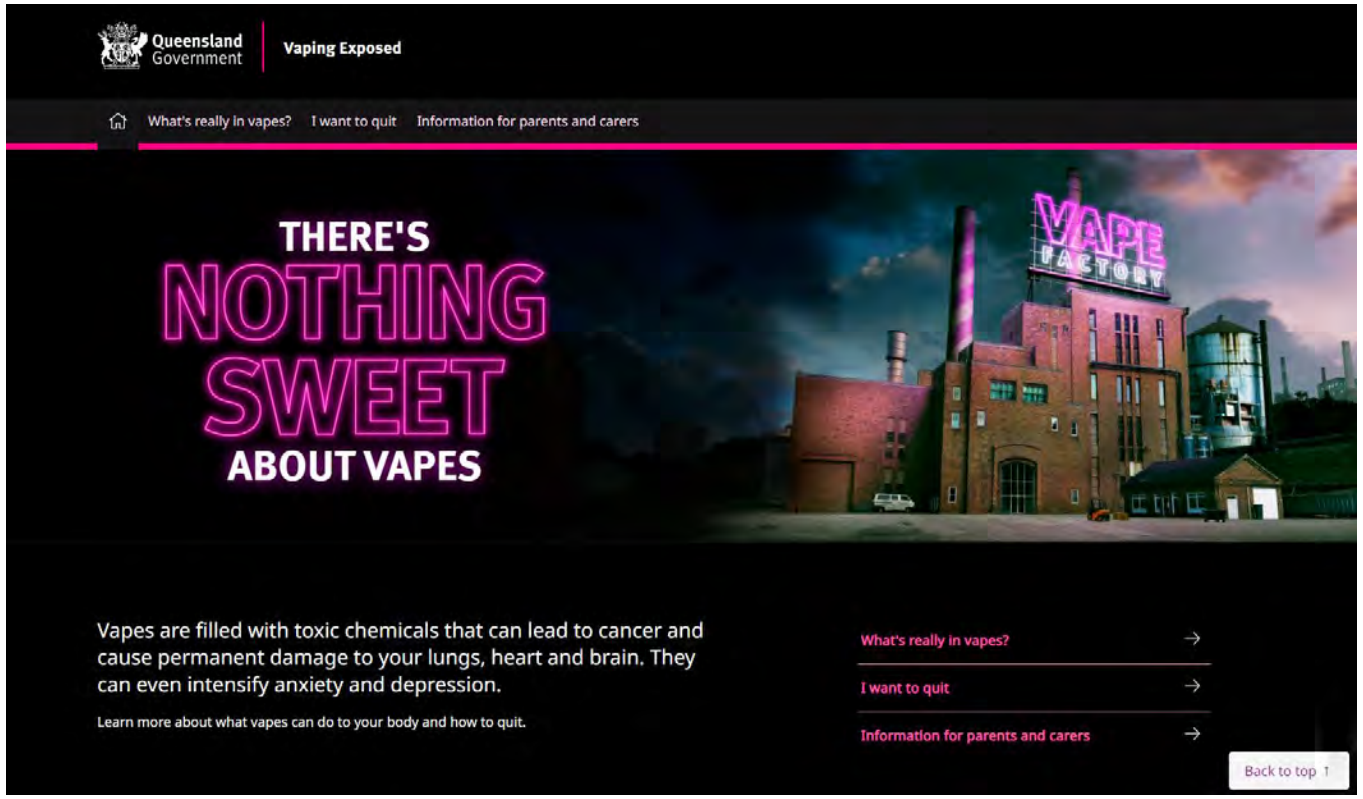
General practice version

Key messages

- Non-pharmacological interventions such as multi-session behavioural intervention (for example, as delivered by Quitline) are recommended as first-line therapy.
- Nicotine replacement therapy (NRT) in conjunction with behavioural intervention may be considered in women unable to achieve abstinence using non-pharmacological interventions alone.
- NRT can be introduced early in pregnancy to maximise health benefits from smoking cessation. NRT use should be regularly reviewed by a medical practitioner (general practitioner (GP) or obstetric care provider) as often as practicable.
- NRT should be used at the most effective dose for the shortest duration possible to minimise foetal exposure to nicotine.

https://www.quit.org.au/resources/maternity-health-professionals/training-and-resources-maternity-health-professionals/

But vaping is OK, isn't it?



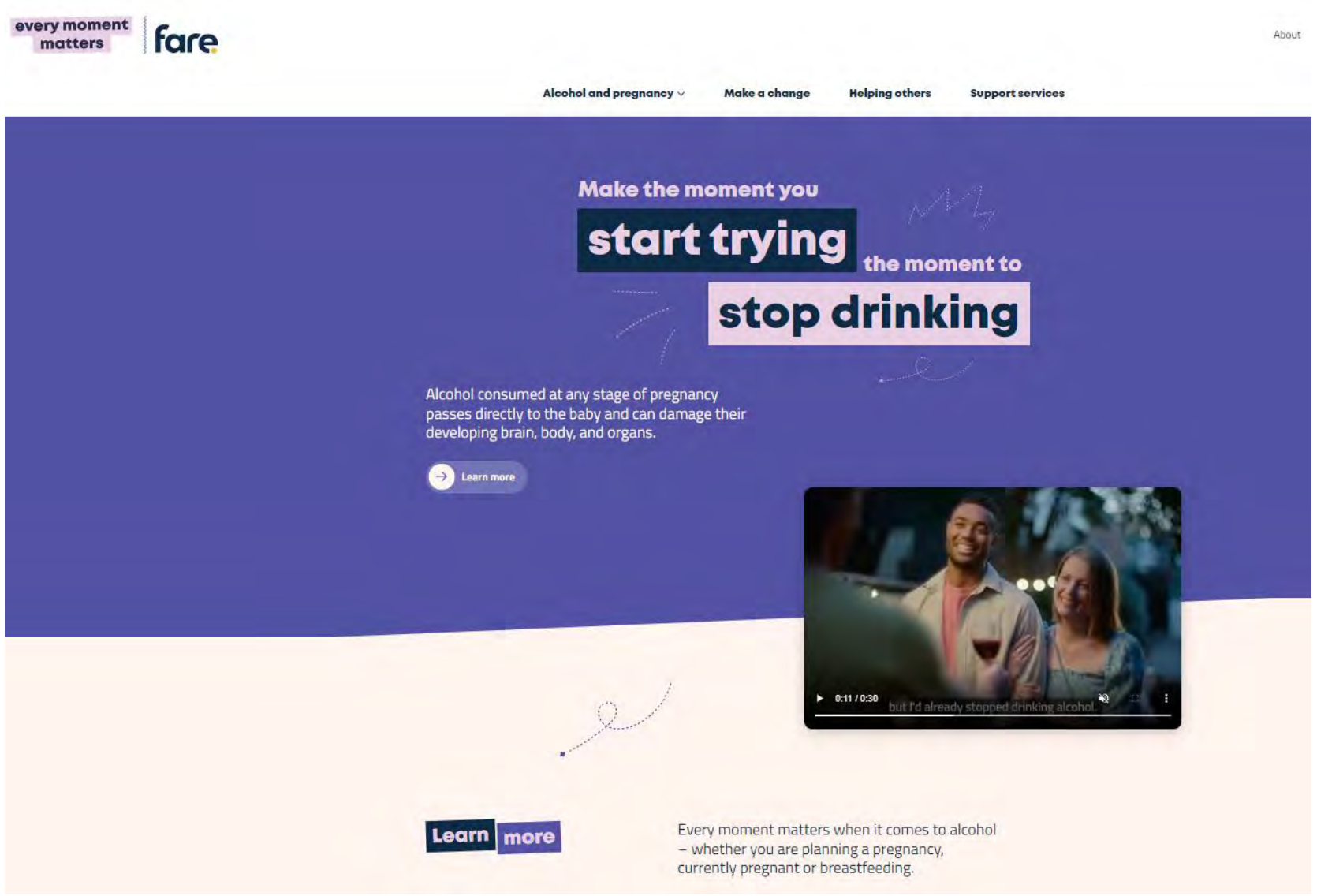
Vaping Exposed (initiatives.qld.gov.au)

Dr Karl's vape truths | Vape Truths Site (initiatives.qld.gov.au)

"Insufficient evidence as to how e-cigarette use relates to pregnancy and foetal outcomes, such as low birth weight, preterm birth, Apgar score and small-for-gestational-age birth, among exclusive e-cigarette users and dual users.

No available evidence as to how use of e-cigarettes affects other reproductive outcomes"
Electronic cigarettes and health outcomes: systematic review of global evidence _ Report for Australian Dept Of Health (April 2022)

Every Moment Matters



Foundation for Alcohol Research and Education (FARE)

How do you ask women about DV?

- **Every** woman – are you safe at home?

"In addition to the blood tests and ultrasound scans we recommend in pregnancy; we ask every woman questions about how she is feeling and if she is safe. Anxiety, depression and domestic violence are common conditions, and they may occur for the first time or get worse in pregnancy."

"Are you safe?"

- DFV screening for ALL at 28/40 visit (to claim 16591 Item Number)

Resources

- Domestic Violence Hotline 1800 811 811(Immediate refuge 24/7)
- 1800Respect 1800 737 732 (Counselling 24/7)
- DVConnect Mensline 1800 600 636
- Queensland Government domestic and family violence resources for
  - Cultural and linguistically diverse communities
  - Women with disability

- REFERRAL TO DFV LOCAL LINK/Centre for Women and Co.
- Facilitate **early referral** to hospital is best GP strategy for pregnant women
- Flag concerns/suspicions
- Enable social worker support

THE CENTRE FOR WOMEN & CO.

Specialist Domestic Violence & Women's Wellbeing Services

Domestic and Family violence specialist service - Centre for Women & Co.

https://bsphn.org.au/community-health/commissioning/domestic-and-family-violence

Recognise, Respond, Refer program:

Offers **one-point of referral** for patients affected by domestic and family violence, as well as **advice and support for general practices** to enable better identification & response to domestic and family violence.

REFERRALS TO DFV LOCAL LINK - Eligible for referral to DFV Local Link if:

- affected by domestic & family violence, including perpetrators seeking behavior change support
- a patient of a general practice in the Brisbane South region.

Can provide the following for referred patients via telephone or face-to-face (at a general practice or at The Centre for Women and Co.)

- undertake a risk assessment
- provide initial support and advice on next steps
- connection with appropriate supports/services
- safely and securely provide feedback to referrer on outcomes of referral.

GENERAL PRACTICE DFV SUPPORT AND ADVICE

DFV Local Link can also provide the following to general practice staff over the phone or via practice visits:

- confidential advice on managing patients affected by DFV
- information sessions re primary care role in responding to DFV
- connection to RACGP accredited DFV training opportunities
- support to implement practice-level measures to enable safe and supportive responses to DFV in the general practice

DFV Local Link service is for General Practices only, but midwives and other medical staff can contact the DFV services directly on the contact information provided.

For secure referrals: search for "The Centre for Women & Co." on Medical Objects. (Medical Objects: CT4114000YV)
Available: Mon - Fri 9am – 4pm
Closed weekends and Public Holidays

DFV Local Link Coordinator for Redlands and Logan Regions
redlandslocallink@centreforwomen.org.au
loganlocallink@centreforwomen.org.au
Contacts: 0460 626 502 | 0482 811 980
or FAX: 07 3144 5602

99 Steps: DFV support CALD Women - Logan& Beenleigh through Access Gateway
https://www.ssi.org.au/our-services/domestic-family-violence/99-steps/
Phone: 07 3412 8282 or email:
acsl.99Steps@ssi.org.au

Beaudesert/Jimboomba Service - (Scenic Rim) currently operated by YFS - Phone: 0417 078 108 ; https://www.yfs.org.au/
Email: LocalLink@yfs.org.au

Brisbane South Service:
Brisbane Domestic Violence Service (BDVS)
Phone: 3217 2544; https://bdvs.org.au/
Email: bdvs@micahprojects.org.au

STATISTICS TELL US THAT LESS THAN ONE THIRD OF WOMEN IMPACTED BY DOMESTIC AND FAMILY VIOLENCE DISCLOSE THEIR EXPERIENCE TO PROFESSIONALS.

Some reasons why include:

- shame & embarrassment
- belief the abuse is normal or they are somehow to blame
- fear of the abuser and consequences of disclosing
- belief or hope that the perpetrator will change
- fear of judgement from others
- belief that it is their job to manage the situation and keep other family members safe.

For women and children from culturally and linguistically diverse backgrounds, the pressure NOT to disclose is even more real. Fears around disclosure can be compounded by the person using violence as a tool for further control and abuse.

For example, many families are totally reliant on the person using violence (e.g. financially and because their English is better) and have great fear about leaving the relationship due to lack of resources.

The person using violence can also threaten to harm family members in the victim's country of origin or to send the victim home without their children to maintain control over them.

DOMESTIC AND FAMILY VIOLENCE IS NEVER OKAY IN ANY CULTURE OR RELIGIOUS BACKGROUND, ALTHOUGH SOMETIMES PEOPLE TRY TO USE THIS AS AN EXCUSE.

CALD Booklet

Working with women from culturally and linguistically diverse backgrounds who have experienced DFV.

READ OUR BOOKLET

https://www.centreforwomen.org.au/s/CFW99Steps-BOOKLETONLINE.pdf

Queensland Government domestic and family violence resources for CALD communities

Domestic and family violence resources

These resources provide information and contact details about where to get help for victims of domestic and family violence (DFV), as well as information for family and friends who suspect someone they know is being abused. There is also information for people who use violence or abuse about how to get help.

If you would prefer a hard copy, you can order resources online. When ordering hard copies, quantity limits apply. Orders can only be delivered to Queensland addresses and orders for regional and remote areas should be placed as soon as possible due to extended postage times.

Please visit the Publication Portal if you are seeking copies of professional practice standards and principles.

Find below a list of resources about DFV in other languages. The resources include brochures, wallet cards and posters.

Please click on your language to show the relevant resources. Content under the headings is hidden unless expanded.

- English
- Aboriginal and Torres Strait Islander
- Ahmaric አማርኛ
- Arabic عربی
- Bengali বাংলা
- Bosnian
- Burmese မြန်မာ
- Chinese simplified 简体中文
- Chinese traditional 繁體中文
- Croatian Hrvatski
- Dinka Thuɔŋjäŋ
- Farsi/Persian فارسی
- Filipino Tagalog
- French Français
- Hindi हिंदी
- Indonesian Bahasa Indonesia
- Italian Italiano
- Japanese日本語
- Korean 한 국 어
- Malay Bahasa Malaysia
- Oromo Afan Oromo
- Portuguese Português
- Punjabi ਪੰਜਾਬੀ
- Russian Русский
- Samoan Faa-Samoa
- Serbian Српски
- Somali Soomaali
- Spanish Español
- Swahili Kiswahili
- Tamil தமிழ்
- Thai ไทย
- Turkish Türkçe
- Vietnamese Việt ngữ

Takeaways:

- mToP prescribing available for all, but training recommended and must be < 63days and intrauterine on USS
- Termination Nurse Navigator for MSHHS available if eligible
- Discuss CONTRACEPTION at first consult/follow up, especially LARCs
- ADAPT clinic - provide as much information as you can
- Provide Psychosocial History in referral – allows wrap around services to be mobilised for women (& their families) if referral identifies these risks

Pharmacology and pregnancy

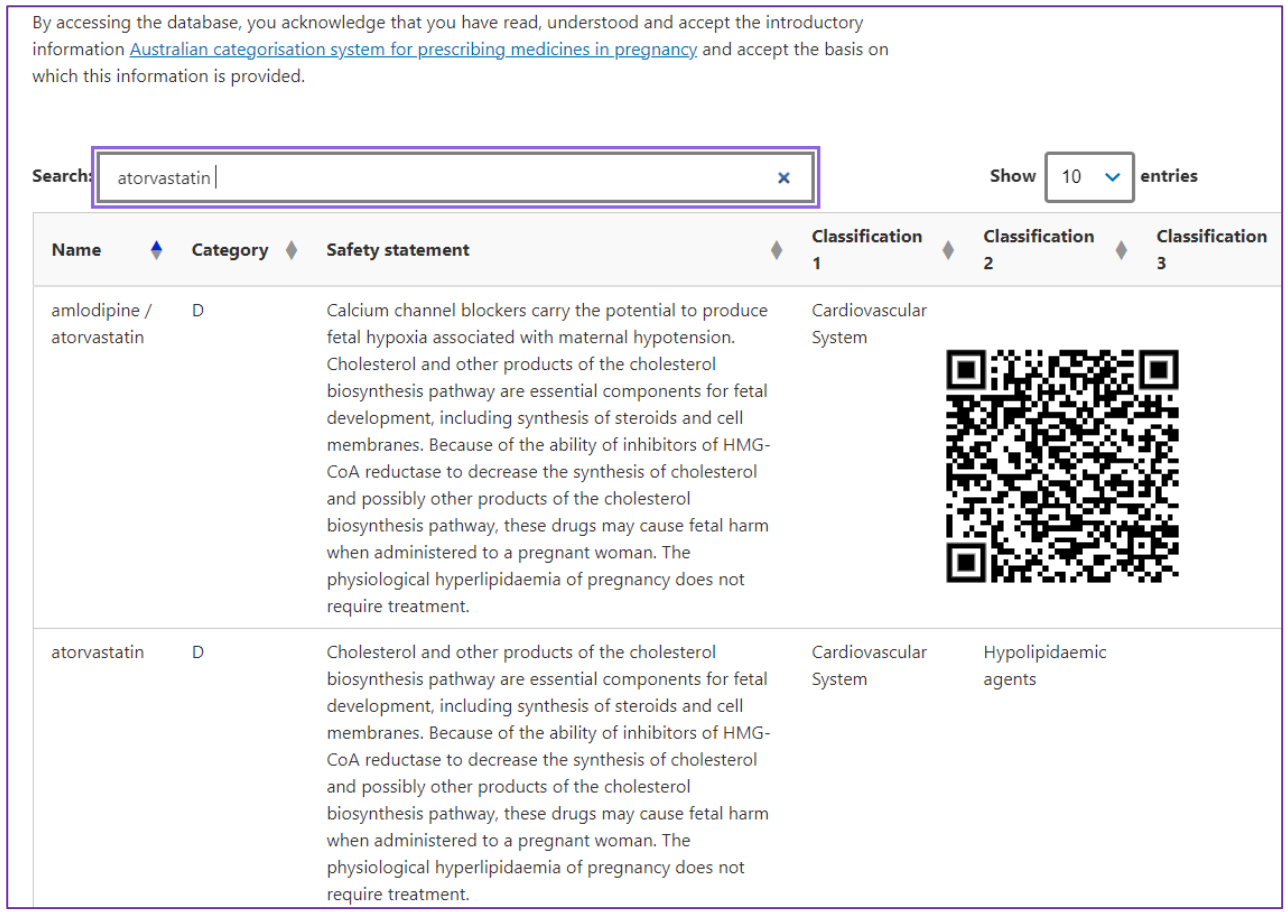
Dr Treasure McGuire, Pharmacologist

Medication in pregnancy and breastfeeding

Q&A

Introduction - general pharmological principles including supplements and CAMS	Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML & Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University		Video (≈17 mins)
General principles, organogenisis, ADEC categories	Dr Wendy Burton, MBBS Chair, MMH MSC Alignment Committee Maternity Lead, GMSBML & Dr Treasure McGuire, Pharmacist and Pharmacologist Mater, UQ and Bond University		Video (≈10 mins)

Pharmacology and pregnancy – Resources

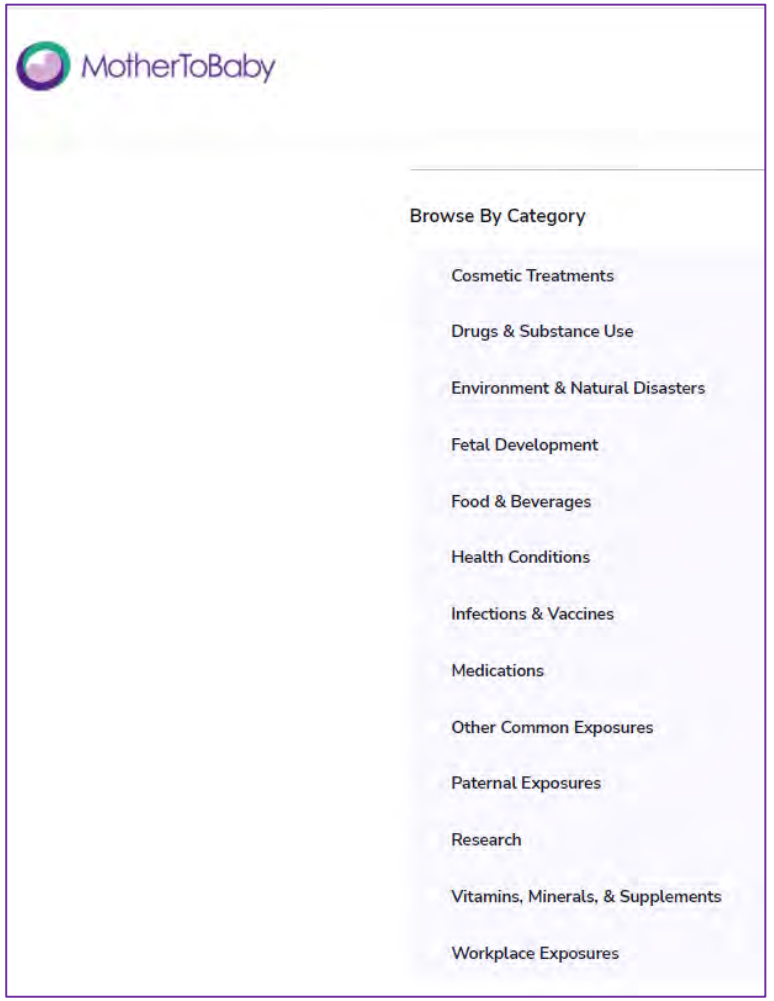


By accessing the database, you acknowledge that you have read, understood and accept the introductory information Australian categorisation system for prescribing medicines in pregnancy and accept the basis on which this information is provided.

Search: atorvastatin × Show 10 entries

Name	Category	Safety statement	Classification 1	Classification 2	Classification 3
amlodipine / atorvastatin	D	Calcium channel blockers carry the potential to produce fetal hypoxia associated with maternal hypotension. Cholesterol and other products of the cholesterol biosynthesis pathway are essential components for fetal development, including synthesis of steroids and cell membranes. Because of the ability of inhibitors of HMG-CoA reductase to decrease the synthesis of cholesterol and possibly other products of the cholesterol biosynthesis pathway, these drugs may cause fetal harm when administered to a pregnant woman. The physiological hyperlipidaemia of pregnancy does not require treatment.	Cardiovascular System		
atorvastatin	D	Cholesterol and other products of the cholesterol biosynthesis pathway are essential components for fetal development, including synthesis of steroids and cell membranes. Because of the ability of inhibitors of HMG-CoA reductase to decrease the synthesis of cholesterol and possibly other products of the cholesterol biosynthesis pathway, these drugs may cause fetal harm when administered to a pregnant woman. The physiological hyperlipidaemia of pregnancy does not require treatment.	Cardiovascular System	Hypolipidaemic agents	

Health Professionals: TGA Prescribing medicines in pregnancy database
https://www.tga.gov.au/prescribing-medicines-pregnancy-database



Patients:
https://mothertobaby.org/fact-sheets/

Green group: Task 2 - Kate

- Kate is currently 32 weeks pregnant. Small for dates? Everyone is telling her she looks too small.
- She smokes 10 cigs/day
- Her symphysis-fundal height today is 29cms. The last SFH (@30weeks) was 29cms.
- Her hairdresser has been super helpful with advice and told her something is very wrong, and the baby might die!!!

Outline your assessment, considerations and next steps

Metro South Health

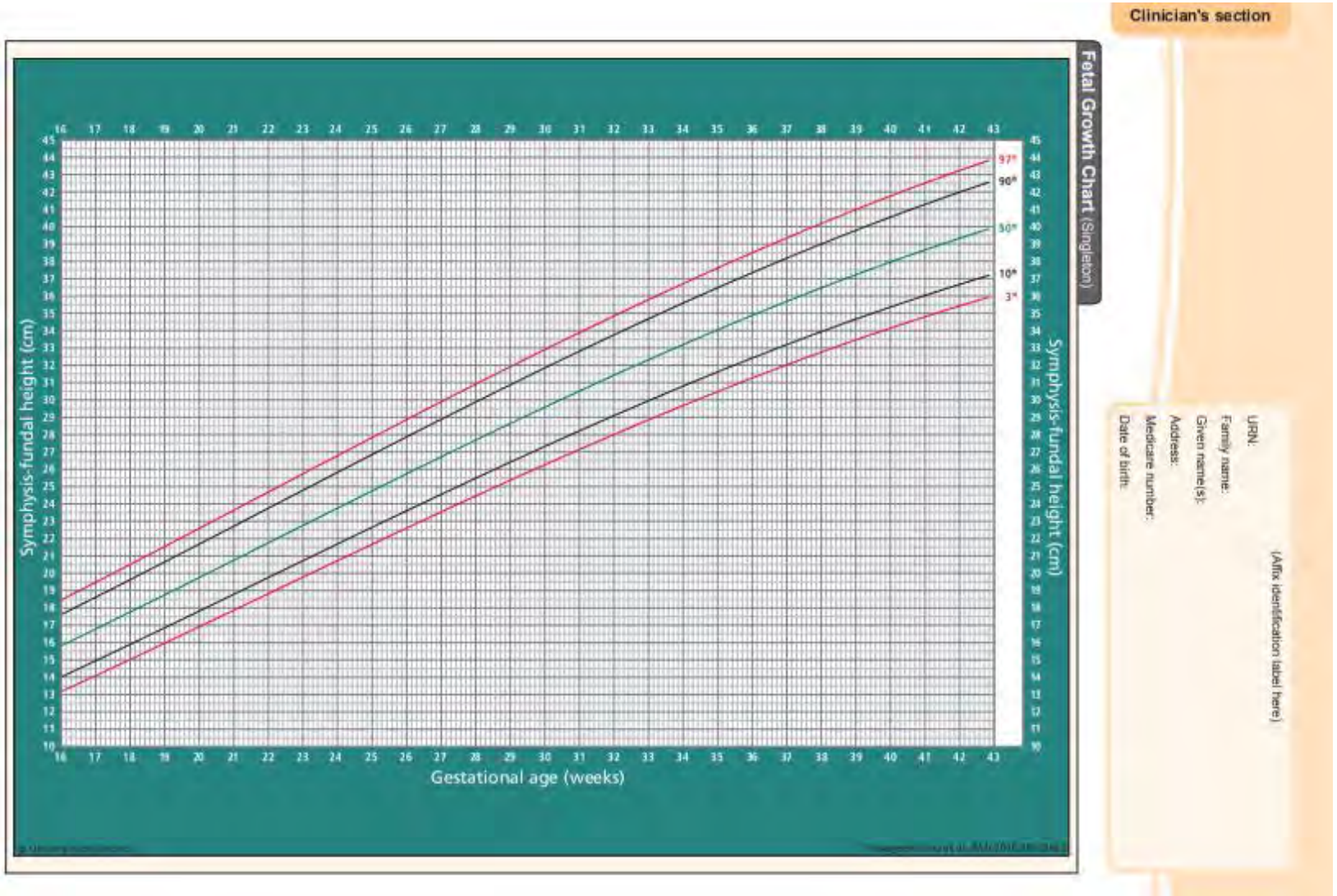
Safer Baby Bundle

Dr Rauf Rahman, Senior O & G Registrar
Department of Obstetrics and Gynaecology
Logan Hospital | Metro South Health

We care about you

Queensland Government

Standardised Fetal Growth Chart – in new version of PHR PLEASE USE IT!

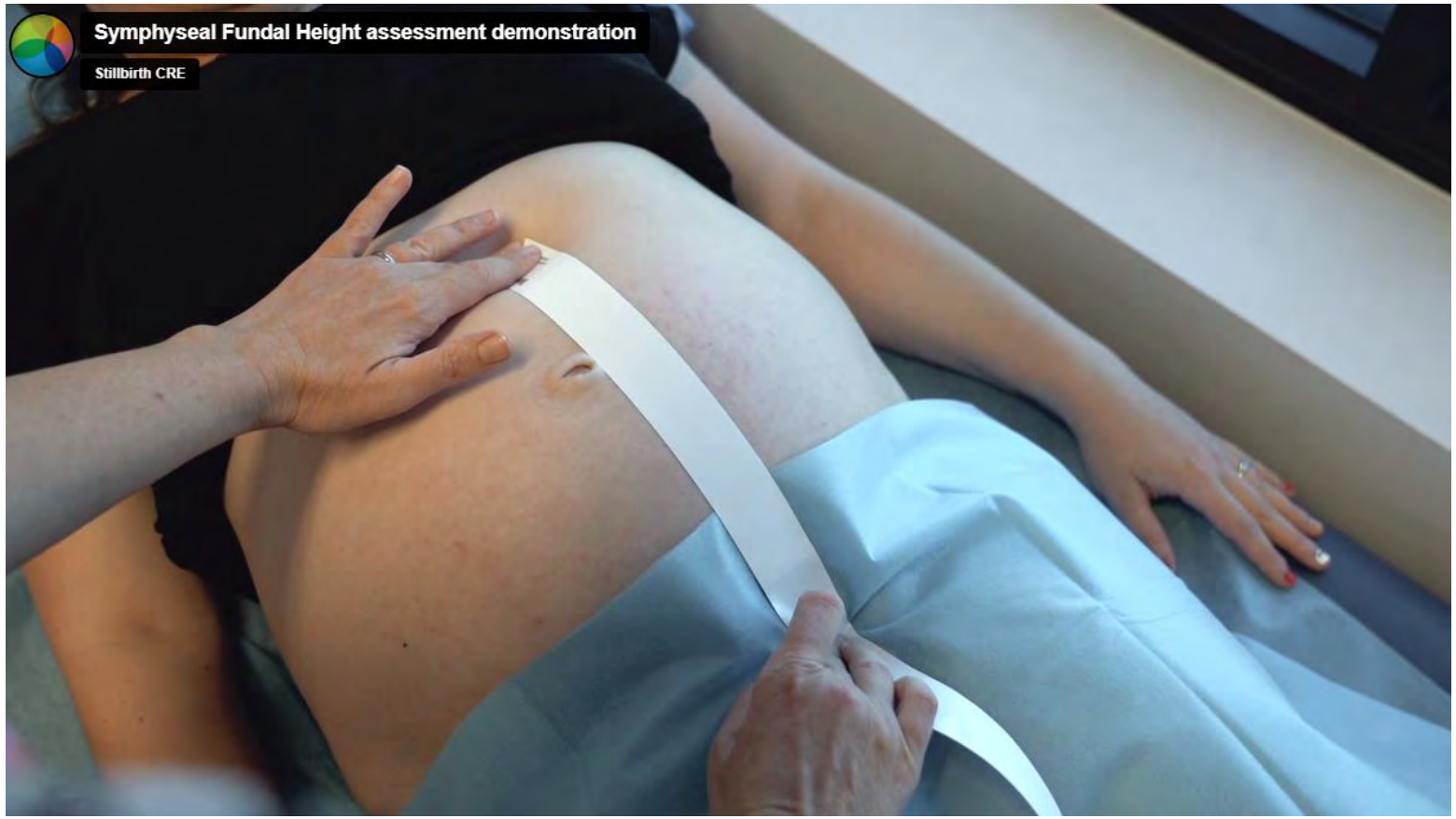


Arrange growth scan +/- notify Obstetrician if:

- slow growth
- static growth or
- drop < 10th percentile

https://metronorth.health.qld.gov.au/wp-content/uploads/2021/01/mn274.pdf or Pregnancy Health Record

Video – Symphysio - Fundal Height Measurement



- Reduction in Preventable Stillbirth (Safer Baby Bundle)
- Screening and management of SGA / FGR
- Recognition of antenatal risk factors
- Risk reduction strategies
- Decreased fetal movements

What can you and I do to assist with reducing preventable stillbirth rates?

Safer Baby Bundle Handbook and Resource Guide

Created as an informational support to assist maternity healthcare professionals with implementation of the Bundle.
Free and accredited CPD training for healthcare professionals is available from our [e-learning modules].

Resources

The Stillbirth CRE has developed a suite of parent resources, including translated and culturally adapted resources, and number of resources for clinicians to guide clinical care based on best practice evidence. These are available to download at no cost.

VIEW AND DOWNLOAD

[The Safer Baby Bundle | The Centre of Research Excellence in Stillbirth (stillbirthcre.org.au)]

Fetal Growth Restriction (FGR) Care Pathway

for singleton pregnancies

LEVEL 1

No FGR risk factors identified

More than 50% of FGR cases occur in women with NO identifiable risk factors[1]

LEVEL 2

Risk factors for FGR identified

- Age >35 years
- Nulliparity
- IVF singleton pregnancy
- Indigenous ethnicity
- Substance use: smoking, drugs
- BMI >30
- Previous late (>32 weeks) FGR/SGA
- Papp A <0.4 MoM

Antenatal complications

- Suspected FGR/SGA by SFH or USS (eg. slow growth, static growth, <10th centile)
- Pre-eclampsia
- Antepartum haemorrhage
- Congenital infection

Unsuitable for SFH measurements

- BMI >40
- Large uterine fibroids

Establishing the frequency and timing of ultrasound

- Review existing or newly arising risk factors
- Where facilities and expertise exist, consider Uterine Artery Doppler at 20-24 weeks
- Consider low dose aspirin (100-150mg nocte) to commence prior to 16 weeks gestation
- Level A/B ACM* consultation and referral guidelines
- Frequency of ultrasound surveillance based on number of FGR risk factors, prior history and service capability (consider ultrasound of fetal size and wellbeing at 28–30 and 34–36 weeks gestation)

Practice Point:

If Level 2 Risk factors – USS growth and Dopplers K28-30 + K34-36

[Safer Baby Bundle - Handbook and Resource Guide]

Assessing Fetal Growth

Assessment of fetal growth and well-being by USS in the third trimester should be considered:

- **Clinically SGA – fundal height is 3cm above or below expected for gestational age**
- **Risk factors for FGR**
- **Other clinical indication: decreased fetal movements**

If SGA biometry/ FGR on ultrasound, patient requires in hospital review and care:

- EFW or AC <10th centile
- Fall in interval growth on ultrasound
- Abnormal Dopplers or oligohydramnios

Early FGR: GA < 32 weeks, in absence of congenital anomalies	Late FGR:GA ≥ 32 weeks, in absence of congenital anomalies
AC/EFW < 3rd centile *or* UA-AEDF	AC/EFW < 3rd centile
Or	*Or at least two out of three of the following*
1. AC/EFW < 10th centile *combined with*	1. AC/EFW < 10th centile
2. UtA-PI > 95th centile *and/or*	2. AC/EFW crossing centiles >2 quartiles on growth centiles *
3. UA-PI > 95th centile	3. CPR < 5th centile *or* UA-PI > 95th centile

Gordijn SJ, Beune IM, Thilaganathan B, Papageorghiou A, Baschat AA, Baker PN, Silver RM, Wynia K, Ganzevoort W. Consensus definition of fetal growth restriction: a Delphi procedure. Ultrasound Obstet Gynecol. 2016 Sep;48(3):333-9

Small gestation age (SGA) ≤ 2SD below population norms (<10%)

- Normal Dopplers/DVP
- Static measure of size only
- Not growth assessment

Fetal growth restriction (FGR) implies a pathological restriction of genetic growth potential

- EFW may be within normal range

High Risk of early Fetal Growth Restriction

- Previous early < 32/40 fetal growth restriction/SGA +/- pre-eclampsia
- Previous stillbirth with FGR/SGA
- Maternal medical condit
  - Antiphospholipid sy
  - Renal impairment
  - Chronic hypertensio
  - Diabetes with vascu
  - Multiple pregnancy

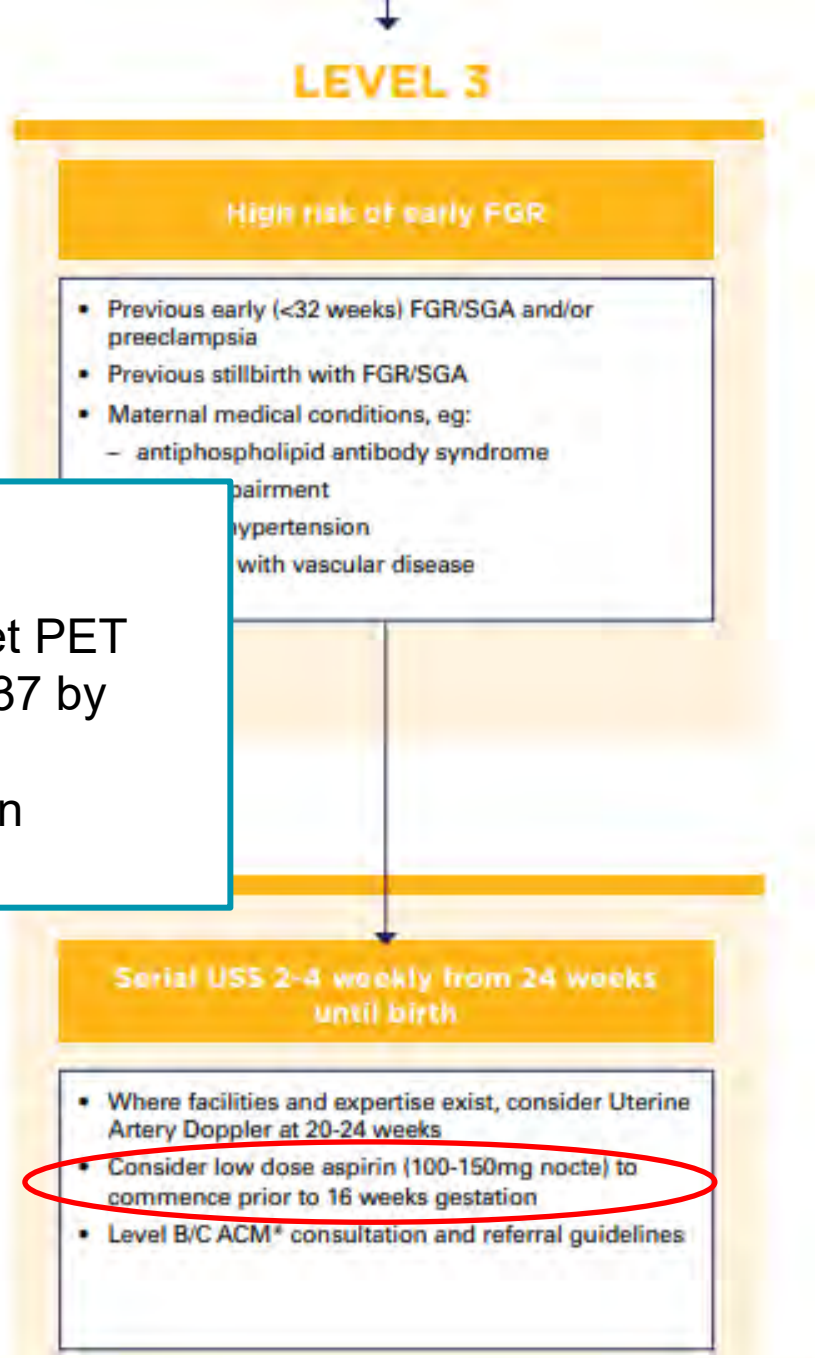
Practice Point:

Low dose aspirin reduces early onset PET (<K32) by up to 62%, and PET by K37 by 30%

- Good compliance = 76% reduction

COMMENCE ASPIRIN 100-150mg nocte PRIOR to 16 weeks

Early referral to hospital ANC



Fetal Growth Restriction (FGR) Care Pathway
for singleton pregnancies

Why does growth matter?

IUFD
Association with pathology
Pre-eclampsia

Metabolic syndrome
T2DM
Cardiovascular outcomes

INTRAPARTUM

ANTENATAL

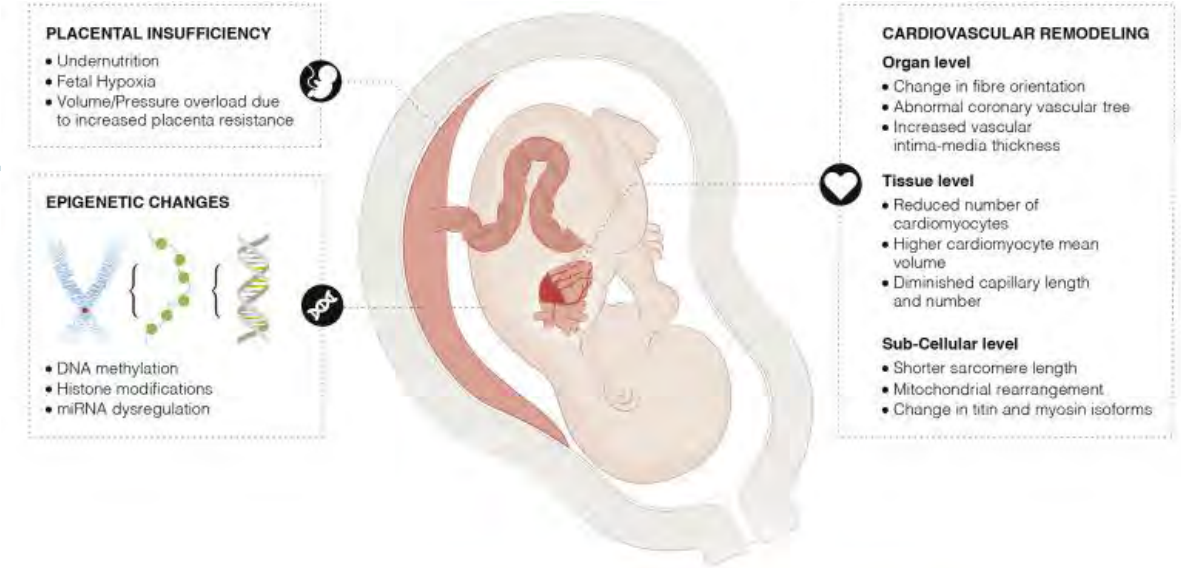
LONG TERM

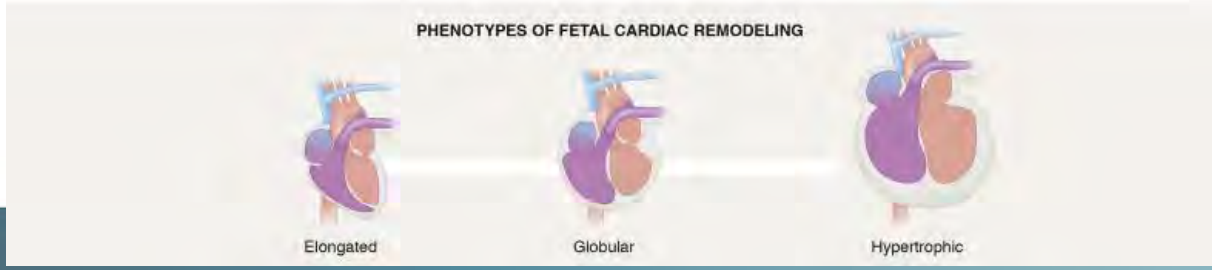
Timing of delivery
Mode of delivery (fetal distress in labour)
Site of delivery (Logan 1.5kg)

Practice Point:

Constitutional (the 'normal small' baby) **can ONLY be diagnosed postnatally**

Pathological causes of FGR: placental insufficiency, TORCH infection, structural anomalies, chromosomal / genetic anomaly





Safer Baby Bundle

WORKING TOGETHER TO REDUCE STILLBIRTH

The Safer Baby Bundle resources are based on five key areas to support healthcare professionals with new strategies to help reduce stillbirths.

Decreased Fetal Movement (DFM) Care Pathway

for women with singleton pregnancies from 28+0 weeks' gestation

Safer Baby Bundle

INITIAL RESPONSE

- All women who report a concern of decrease in strength and/or frequency of fetal movements should undergo immediate assessment.
- Presentation should not be delayed through efforts to stimulate the baby by food or drink, or by requesting women to phone back after a period of concentrating on fetal movements.

CLINICAL ASSESSMENT

- Listen to fetal heart by hand held or cardiotocography (CTG) Doppler.
- Detailed fetal movement history, ascertained from the woman.
- Clinical history and examination to assess for co-existing conditions and symptoms such as bleeding and pain.
- Risk factors for stillbirth should be identified. (see list)

CARDIOTOCOGRAPHY (CTG)

- Interpretation of antenatal CTG tracings should be in accordance with local guidelines.
- No further investigations are required for women if (1) normal CTG and clinical assessment; and (2) no risk factors identified; and (3) first presentation for DFM; and (4) no maternal concerns of DFM at time of assessment.

Element 3: Raising awareness and improving care for women with decreased fetal movements

Element description

Supporting women to be aware of their baby's movements from 28 weeks' gestation onwards and to contact their health care provider if they are concerned, and ensuring health care providers follow the best available evidence when caring for women who report DFM.

Actions

1. Provide information brochure* and advice on DFM to all pregnant women by the 28th week of pregnancy and remind women of the importance of reporting DFM at subsequent contacts and discuss with women the importance of being aware of DFM and to report concerns without delay.
2. Undertake clinical examination of all women who report DFM according to the DFM care pathway** including risk factor screening for stillbirth/fetal growth restriction, review history of fetal movements, clinical investigations and medical consultation.
3. Investigations should include the following: auscultation of fetal heart rate by handheld Doppler, cardiotocography (CTG), consideration of ultrasound for undetected FGR, consideration of fetomaternal haemorrhage (FMH) test.
4. Ensure informed, shared decision-making about timing of birth based on gestational age, findings of clinical investigations and the presence or absence of stillbirth risk factors.

Altered fetal movements (AFM)

- Early reporting of DFM and or **changed** fetal movements is vital – immediate review indicated.
- Good antenatal education has been shown to reduce the time a woman waits to show health seeking behaviour after noting a change to fetal movements.
- Educate at EVERY visit post 28 weeks re checking movements + SIDE SLEEPING
- DANGER of home fetal heart monitors – have led women to delay seeking help by falsely being reassured /misinterpreting the 'snapshot' presence of a heartbeat (?fetal) as well-being of the unborn baby.

How to observe for Altered Fetal Movements

OUT	IN
Kick charts	Watch for **change** in pattern, frequency or strength of movement - "get to know your baby's own unique pattern of movements"
Cold water/ sweet drinks	Third trimester - encourage to **start every sleep** lying on side from 28 weeks
Reassurance without review	May monitor with an App, BUT not linked to a set number of movements per day
Check fetal heart with home Doppler	**URGENT assessment required if maternal concern** re FM or change to movements > 24 weeks gestation (absent, reduced, weaker or very vigorous) Advise woman to present for assessment - If ≥ 28 weeks advise urgent presentation (Do not wait!)

Flowchart: Altered Fetal Movement – Qld Clinical Guidelines
https://www.health.qld.gov.au/__data/assets/pdf_file/0029/729461/f-fetalmovement.pdf

In Australia and Aotearoa New Zealand late gestation stillbirth rates (> 28 weeks) are approximately 26% and 37% higher respectively than other high-income countries with the lowest rates.

Stillbirth disproportionately affects:
Aboriginal and/ or Torres Strait Islander women (10.6 compared to 6.7 per 1000 births overall)
Migrant and refugee populations, rural and remote communities and socio-economically disadvantaged women also face significantly increased risks.

New 2024 edition: Care Around Stillbirth and Neonatal Death (CASaND) Clinical Practice Guideline

[Stronger Bubba Born | Looking after Bubba for all our Mob]

Culturally adapted resources in many languages - [Clinician Resources | Stillbirth CRE eLearning]

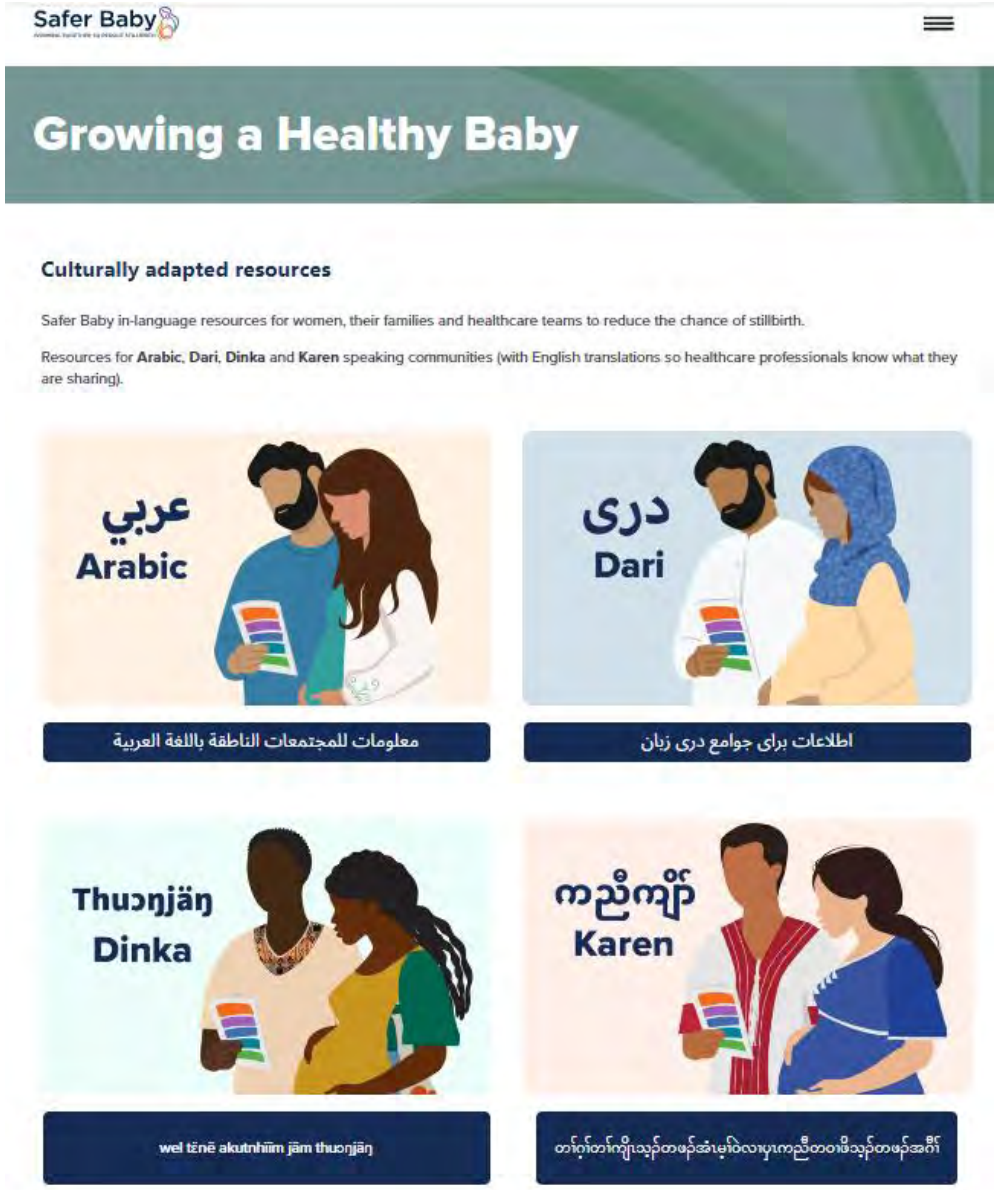
SBB – Multilingual Resources

Translated resources

Safer Baby resources have been translated word for word into 25 languages, and culturally adapted for four languages. Select the language below.

Arabic (adapted)	Bengali	Burmese
Chinese	Dari (adapted)	Dinka (adapted)
English (master)	French	Greek
Hindi	Indonesian	Italian
Karen (adapted)	Korean	Kurdish
Maori	Mongolian	Nepalese
Portuguese	Punjabi	Samoan
Spanish	Tagalog	Thai
Tigrinya	Tongan	Turkish
Ukrainian	Urdu	Vietnamese

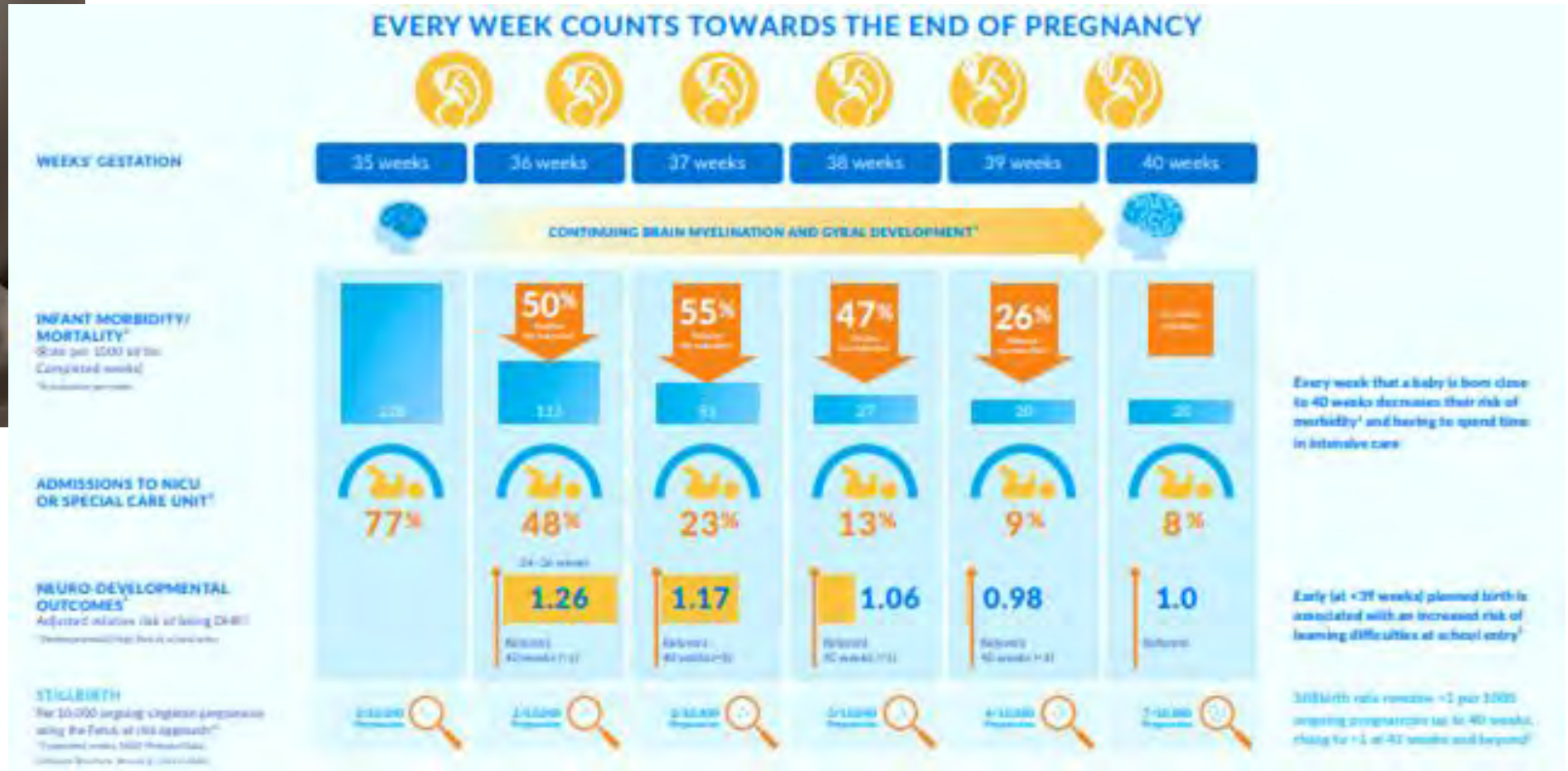
[Translated Resources | Safer Baby - Working Together to Reduce Stillbirth]



[Home | Growing a Healthy Baby]

Women and Babies Research | The University of Sydney

Supported by Sydney HealthPartners



Recent research demonstrating that for babies born before their due date – every week that a baby is born before 40 weeks can impact their health - whether that's increasing their need for medical treatment at birth or related to brain development and future learning difficulties.

Resources- brochures, posters, learning modules

- Safer Baby Bundle https://stillbirthcre.org.au/researchers-clinicians/download-resources/
- Stillbirth – Centre of Research Excellence - Parents page
- Care and support after the loss of a baby – Evidence-based resources for parents and families - https://carearoundloss.stillbirthcre.org.au/
- Care Around Stillbirth and Neonatal Death (CASaND) Clinical Practice Guideline - 2024 Edition - https://learn.stillbirthcre.org.au/learn/casand/
- 24/7 Red Nose Australia Grief & Loss Support Helpline on 1300 308 307
- "Living with Loss" Program – Stillbirth Centre of Research Excellence new online support program (coming May 2024)

Takeaways:

- Plot fundal height for gestational age for **all** (from 24/40)
- Safer Baby Bundle - smoking cessation, sleep on side from 28/40, immediate review with altered/change in fetal movements, CAUTION with home dopplers!
- If risk factors for FGR or PET - commence low dose Aspirin from first TM (before 16 weeks)

Metro South Health

Quality healthcare every day

Physiotherapy Services

Women's, Men's and Pelvic Health Physiotherapy

Metro South

Christie Dobson
Pelvic Health Physiotherapist
Redland Bay Satellite Hospital
Bayside Health Ph: 07 3299 8858

ICARE² values

INTEGRITY COMPASSION ACCOUNTABILITY RESPECT ENGAGEMENT EXCELLENCE

Queensland Government

Logan Hospital Service

Inpatient

- Maternity Inpatient Unit
- Post Surgical

Outpatient

- Antenatal/Postnatal Classes
- Antenatal/Postnatal individual appointments
- Pelvic floor dysfunction
- Men’s health
- Pelvic Health Clinic

Redland Hospital Service

Inpatient

- Maternity Inpatient Unit (2hrs each weekday)

Outpatient

- Antenatal / Postnatal classes
- Antenatal /Postnatal individual appointments
- Pelvic floor dysfunction
- Colorectal/ anorectal physiotherapy

Maternity Inpatient Unit

Education/training provided to mothers:

- Education regarding pelvic floor function
- Prevention of strain
- Posture care
- Good bladder and bowel habits
- Return to exercise and ADL's
- Baby handling and development
- Ax and Mx of DRAM and referral if necessary

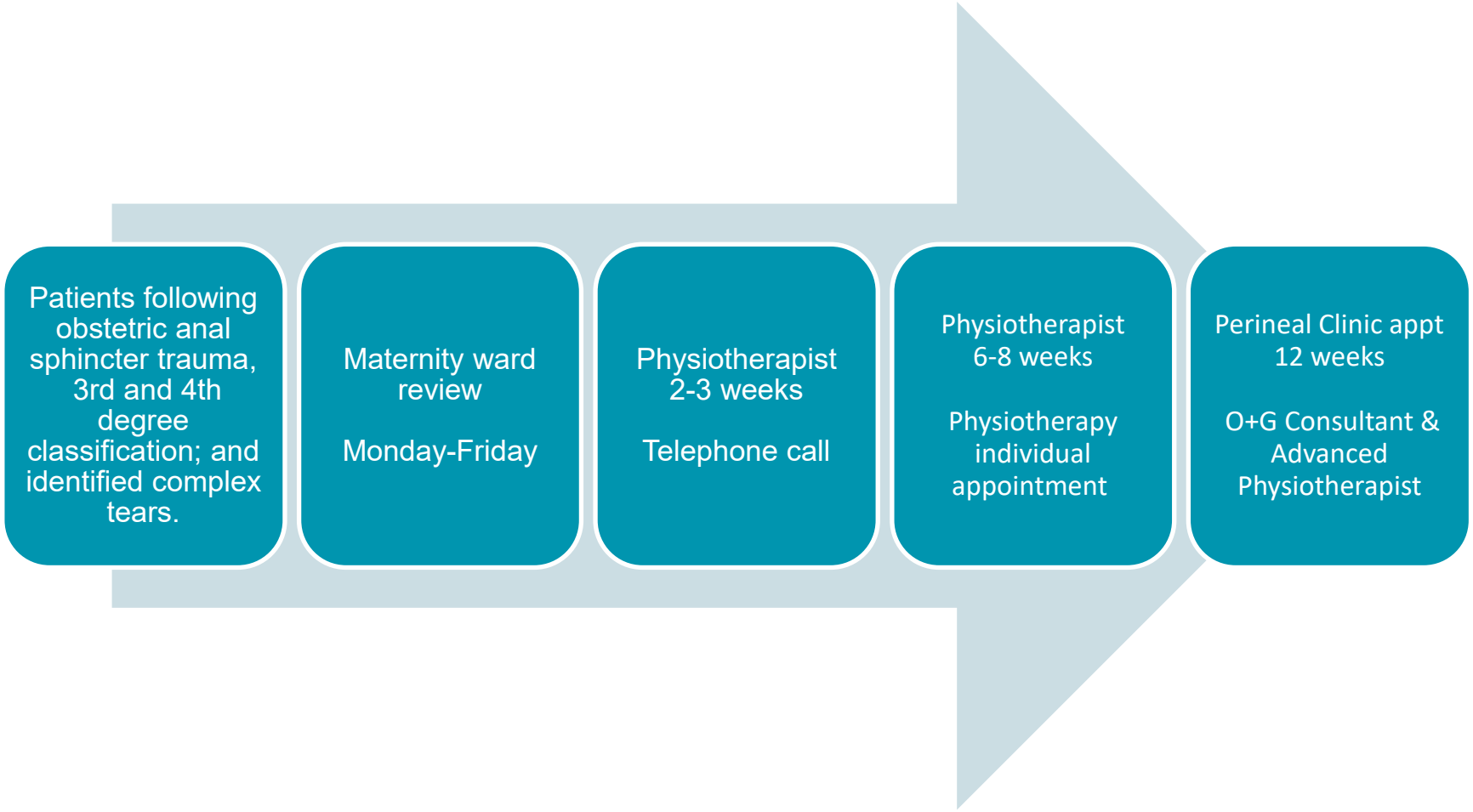
*Although all women are not able to be seen face to face, each woman will receive the **physiotherapy educational handout**. This includes an invitation for the women to attend the postnatal classes.*

Women's Health (Antenatal & Postnatal)

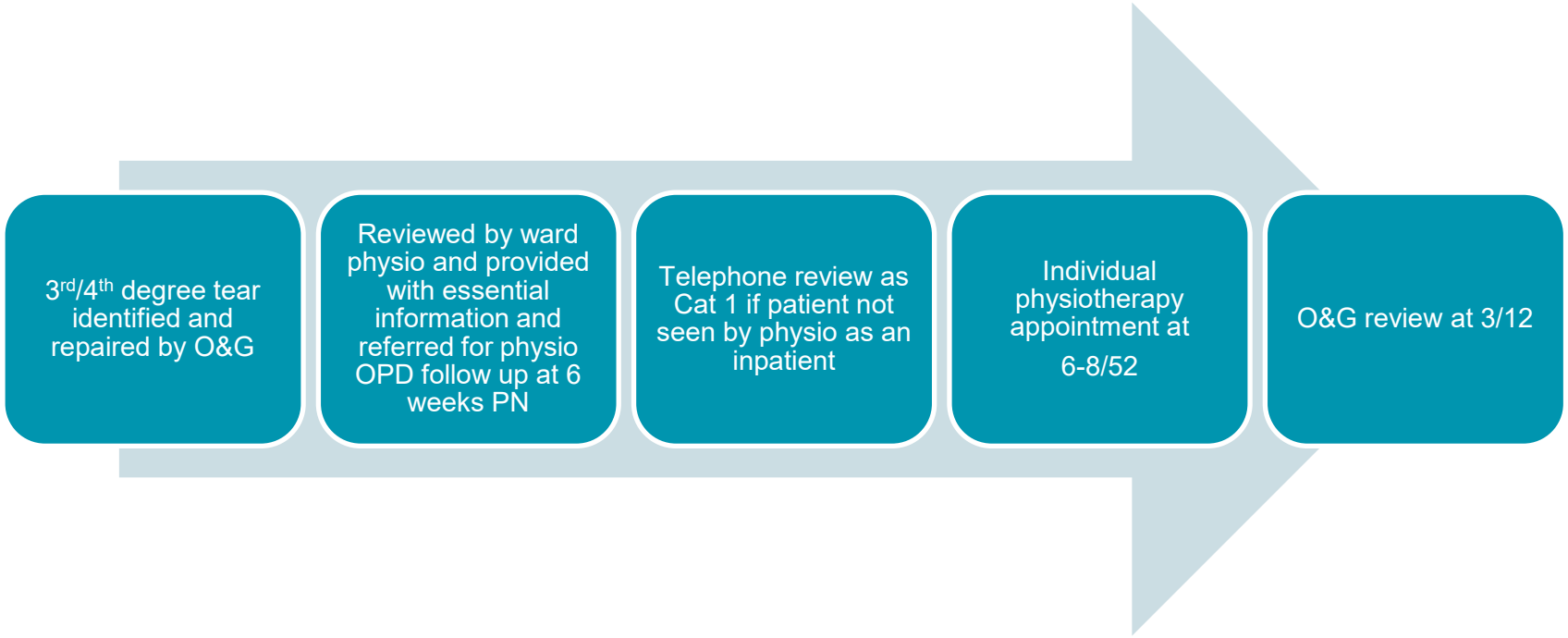
- Physiotherapy Antenatal Workshop
- Physiotherapy Antenatal Pain Class
- Physiotherapy Postnatal Education and Exercise Classes

*** Please note: referrals can be made to the service outlining the individual requests. The senior physiotherapist will triage into the most appropriate area within the service.*

Logan Hospital Perineal Clinic



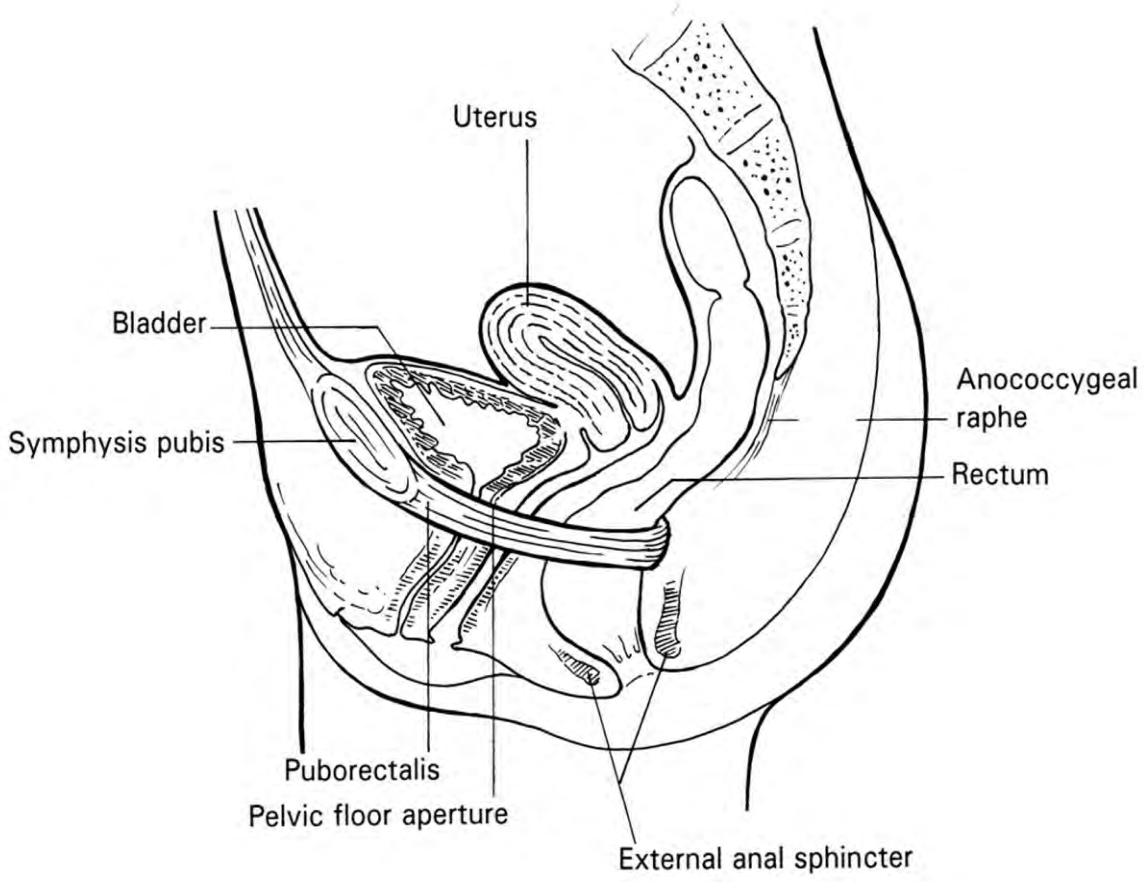
Redland Hospital OASI Management

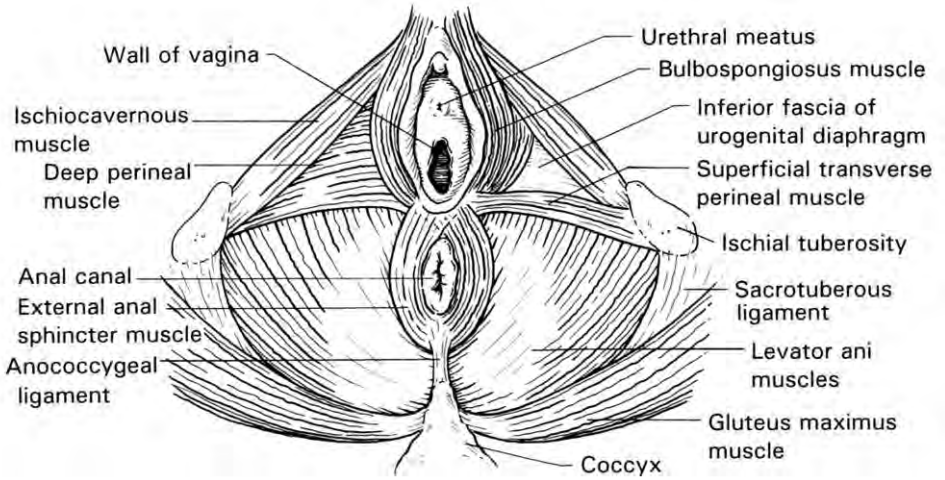


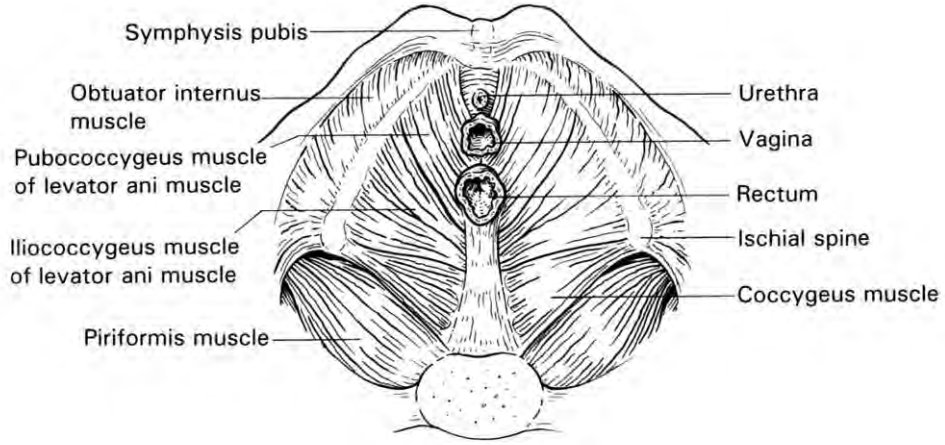
Pelvic Floor Dysfunction

- Urinary/Bladder Dysfunction
- Ano-rectal dysfunction
- Pelvic organ prolapse
- Pelvic pain syndromes
- Acute postnatal conditions

This includes perinatal, post gynaecological surgery and male patients with these symptoms.




Wall of vagina
Ischiocavernous muscle
Deep perineal muscle
Anal canal
External anal sphincter muscle
Anococcygeal ligament
Urethral meatus
Bulbospongiosus muscle
Inferior fascia of urogenital diaphragm
Superficial transverse perineal muscle
Ischial tuberosity
Sacrotuberous ligament
Levator ani muscles
Gluteus maximus muscle
Coccyx

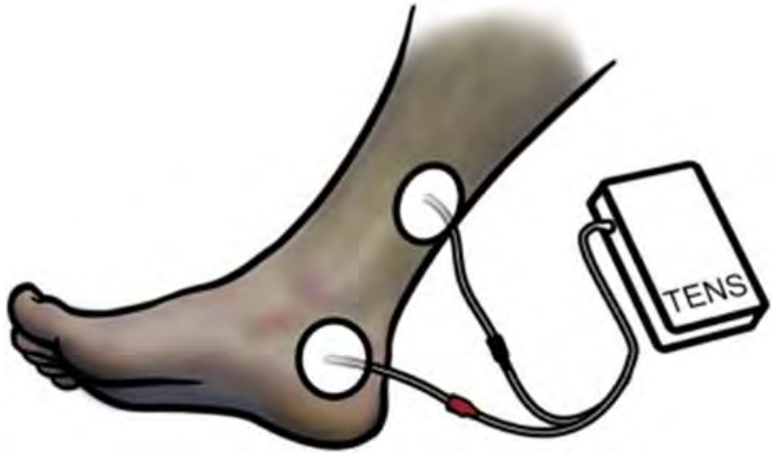

Symphysis pubis
Obtuator internus muscle
Pubococcygeus muscle of levator ani muscle
Iliococcygeus muscle of levator ani muscle
Piriformis muscle
Urethra
Vagina
Rectum
Ischial spine
Coccygeus muscle

Physiotherapy Management

- Education
- Exercise
- Pelvic floor training
  - Strengthening
  - Coordination
  - Endurance
  - Electrical Stimulation
  - Downtraining
  - Biofeedback

Physiotherapy Management

- Bladder management
  - Bladder retraining
  - Bladder diary assessments
  - Voiding strategies
  - Neuromodulation



- Bowel Management
  - Defecation position and dynamics
  - Bowel Routine
  - Stool type modification
  - Bowel diary assessments
  - Biofeedback
  - Neuromodulation

Physiotherapy Management

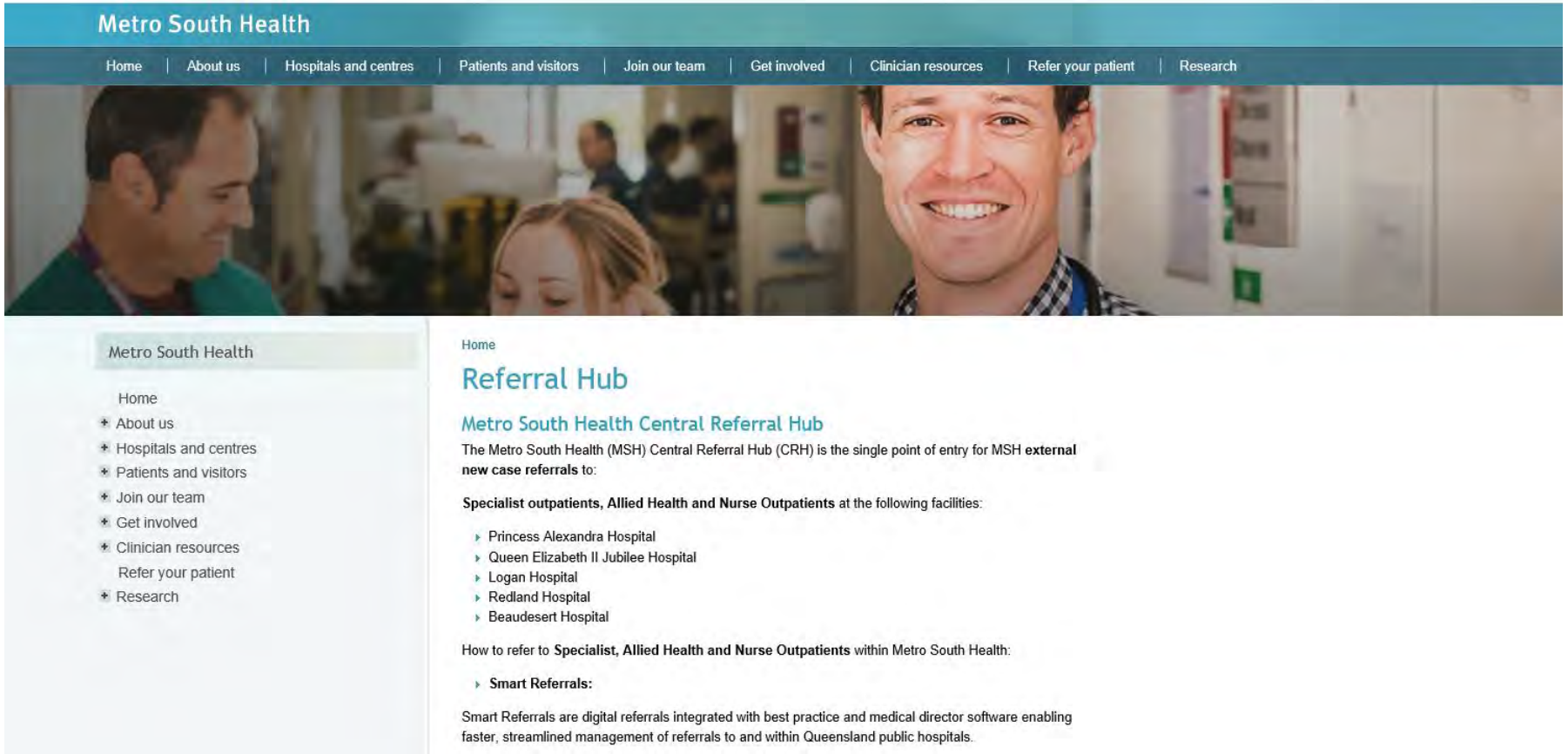
- Pessaries
- Pain management
  - Pain neuroscience educa
  - Downtraining
  - Biofeedback
  - Desensitisation
  - Soft tissue release
  - Vaginal trainers/dilators
  - Neuromodulation
  - DRAM management

Referrals

- **General Practitioner**
  - SMART referral
  - Electronic referral to Central Referral Hub
- Internal Referral through e-Blue slip
  - Perinatal services
  - Pelvic floor muscle dysfunction
  - Men's Health
- Pelvic Health Clinic
  - Refer to specialist and the referral will be triaged through to the PHC (for appropriate conditions)
  - Assessment / early intervention to support the Specialist waiting list

How to refer?

https://metrosouth.health.qld.gov.au/referral-hub



Contact details: if unable access to smart referrals

Central Referral Hub: Electronic Referral preferred

- Fax 1300 364 248 (least preferred as issues with fax)

Redland Hospital

- Further enquiries: Janene Stephens– Advanced Physiotherapist
- Telephone: 3488-3116; Fax: 3488-3223
- Email: Redland-Allied-Health@health.qld.gov.au

Logan and Beaudesert Hospitals

- Further enquiries: Melanie Walkenhorst - Clinical Lead Physiotherapist
- Telephone: 3299 8858; Fax: 3299 8280

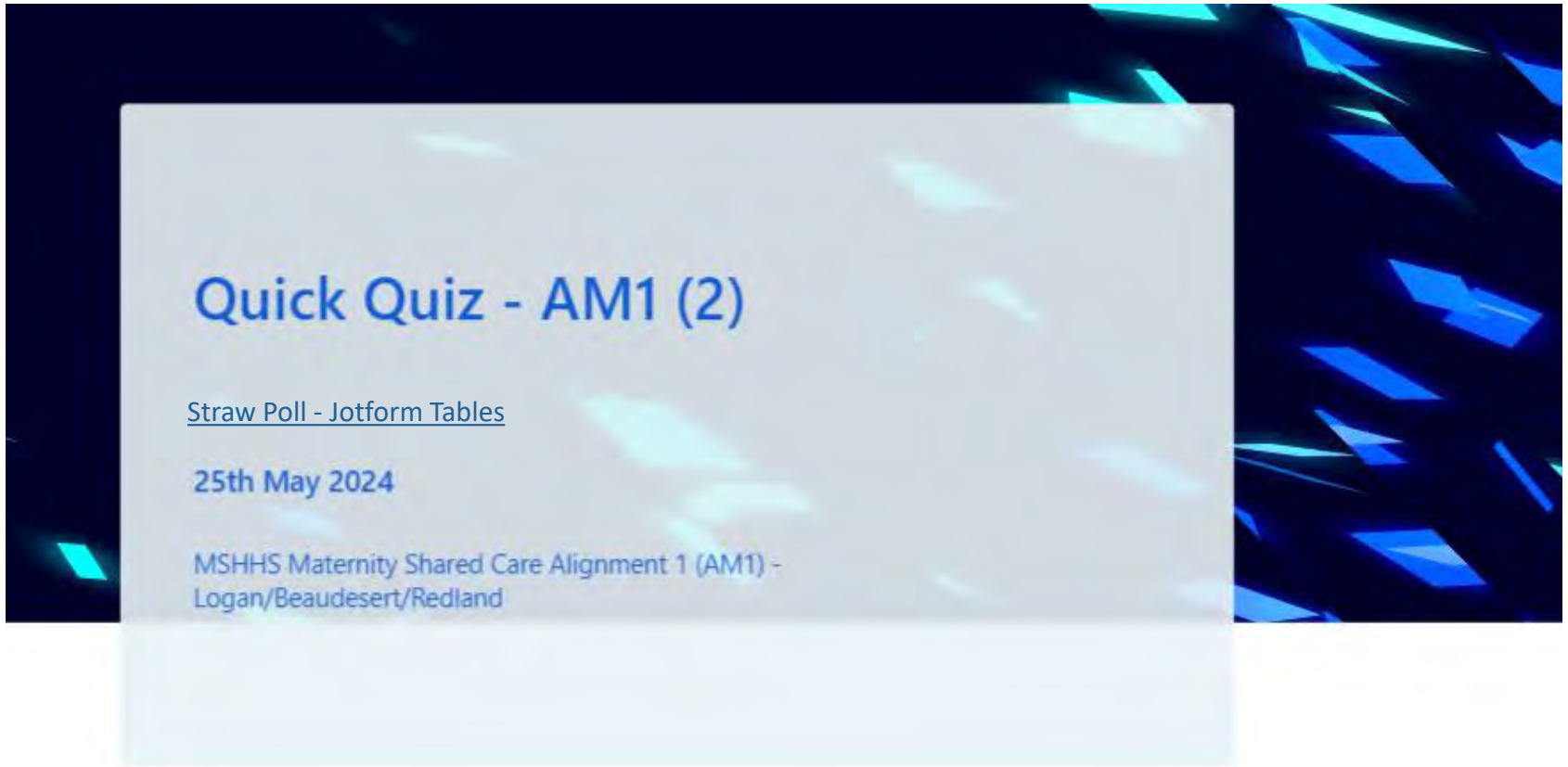
Session 3

Time	Session	Presenter	Delivery
1:15pm	Quick Quiz	Dr Kim Nolan	ALL
1:25 pm	Task 2 Breakout group – Case Discussions	Breakout	Facilitated groups
1:45 pm	Pink Group (Task 2) - Presentation Topic: Early Pregnancy Bleeding; PUL; EPAU; Anti D use	Group Spokesperson Dr Jessica Phillips-Yelland	Case Discussion – ALL PowerPoint presentation
2:15 pm	Red Group (Task 2) - Presentation Topic: Diabetes in Pregnancy	Group Spokesperson Julia Prince, Diabetes Educator	Case Discussion – ALL PowerPoint presentation
2:45 pm	Green Group (Task 2) - Presentation Topic: Thyroid disease in pregnancy; Obesity in pregnancy including Dietitian Presentation (post bariatric surgery recommendations)	Group Spokesperson Dr Dianna Luong - Endocrinologist Naomi Scolari - Dietitian (VOPP)	
3:30 pm	Blue Group (Task 2) - Presentation Topic: Hypertension and MAC	Group Spokesperson Dr Premjit Gill	Case Discussion – ALL PowerPoint presentation
3:55 pm	Alignment requirements & certification Instruction re completion of quiz online + evaluation	Dr Kim Nolan	

Quick Quiz - AM1

https://form.jotform.com/232751181815051

Microsoft Forms (office.com)



Straw Poll - Jotform Tables

Varicella Zoster Serology will not help in an immunised woman.

- Clear history of varicella/immunisation or known IgG positive – no action required
- Poor clinical history OR no history of varicella and no history of immunisation – check IgG levels
  - If positive, no action required
  - If negative, notify the obstetric team, ZIG if within 96 hours of exposure, Acyclovir after 96 hours and/or ASAP after the rash has emerged if the woman is >20 weeks, a smoker or asthmatic
- Discuss with Obstetrician if symptoms, but liaise by phone before referral in
- Patient Fact Sheet - https://mothertobaby.org/fact-sheets/varicella/pdf/

Asymptomatic Bacteriuria

- Asymptomatic bacteriuria – 2-10% incidence in pregnancy; symptomatic UTI 5-10%
- Increases likelihood of pyelonephritis – up to 30% in affected women
- First TM screening reduces number of women/1000 who develop pyelonephritis from
  - 23.2 with no testing
  - 11.2 with urine culture (Rouse et al; Obstet Gynecol 86: 119–23 - 1995).
- ? Association between asymptomatic bacteriuria & preterm birth/pre-eclampsia /hypertension/acute kidney injury & sepsis may be ONLY if develop pyelonephritis
- Asymptomatic bacteriuria may increase LBW/FGR but ? confounding factors e.g., other genitourinary infections, socioeconomic status
- Antibiotic treatment 75% (-90%) effective in clearing asymptomatic bacteriuria
  - Cochrane review concluded standard short course (4-7 days) was most effective treatment of asymptomatic bacteriuria
- Pyelonephritis – need min 48/24 IV antibiotics (refer to ED if < 20/40 and MAC if > 20/40)
- + oral Rx for total 10-14/7, and follow up urine culture 1-2/52 post treatment completion

1. Australian Pregnancy Care Guidelines – Section 9.9 Asymptomatic Bacteriuria (accessed 12/4/2024) - Australian Pregnancy Care Guidelines (magicapp.org)
2. https://www.cochrane.org/CD000491/PREG_duration-treatment-asymptomatic-bacteriuria-during-pregnancy
3. Smaill FM & Vazquez JC. 2019. Antibiotics for asymptomatic bacteriuria in pregnancy. Cochrane Database of Systematic Reviews, Issue11. https://www.cochranelibrary.com/cdsr/doi/10.1002/1465185
4. Urinary Tract Infection in Pregnancy (sahealth.sa.gov.au)

Asymptomatic Bacteriuria

- Escherichia coli - most common pathogen (70- 80 % of isolates).
- Other organisms: Klebsiella pneumonia (3-5%), Proteus mirabiliis (5%), Staphylococcus saprophyticus (3%), Enterobacter species (3%), group B streptococcus (GBS) (2-5%) & other Proteus species (2%)
- GBS = coloniser organism; whilst identification warrants intrapartum antibiotic prophylaxis* , unclear whether antibiotics in asymptomatic pregnant woman is helpful.
- ANTIBIOTIC CHOICE – guided by sensitivities remembering:
  - First line – Cephalexin or Amoxycillin (guided by sensitivities)
  - Trimethoprim – avoid in 1st TM (folic acid antagonist, associated with increased risk congenital malformations)
  - Nitrofurantoin should be avoided close to birth (> 36/40 – risk neonatal haemolysis)
  - Amoxicillin + clavulanate - used if resistance to other antibiotic options
- If recurrent (2+ courses of antibiotics in pregnancy), consider low dose suppressive therapy.
- If post-coital UTI's consider low dose suppressive therapy or post-coital prophylaxis

NOTIFY BOOKING HOSPITAL of TREATMENT COMMENCED, and *if GBS identified.

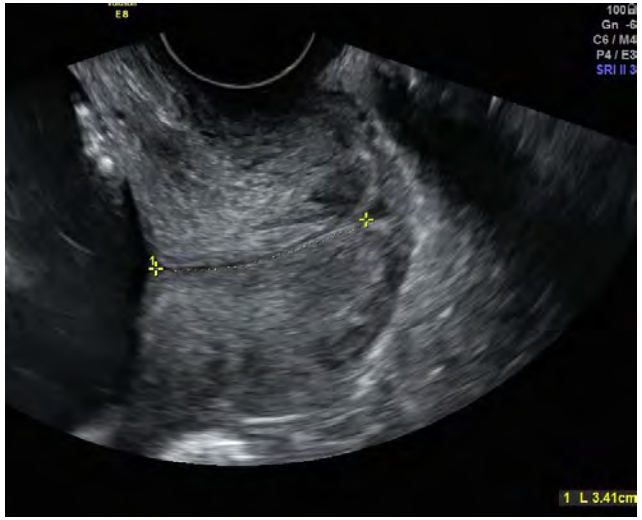
Mid-Pregnancy Cervical Length

- Measurement of cervix length to be included in all mid-pregnancy scans, conducted routinely at 18-20 weeks' gestation, as well as for any other scan between 16 and 24 weeks.
  - Closed length from internal to external os
  - TA: >35mm is considered adequate
  - TV: <25mm is considered short
- TA-USS the cervix is stretched by the full bladder, therefore a ***true length*** of the cervix is performed with an empty bladder via TV-USS.
- Universal screening is cost-effective
  - Easy to perform
  - Prescribing progesterone cheaper than cost of PTB

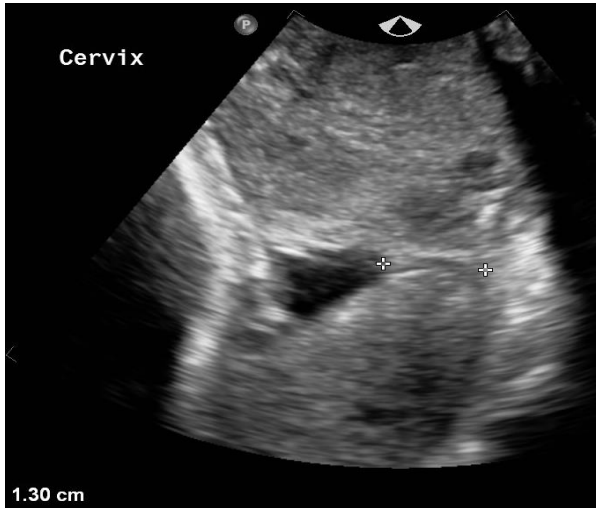
Measurement of the length of the cervix at all mid-pregnancy scans.

Recommendation: With morphology scan request, include on same form “progression to TV-USS if cervical length is < 35 mm” (usually provided at no extra cost to patient)
If TV-USS < 25mm - urgent referral and commence natural vaginal Progesterone pessaries (200 mg nocte) the same day

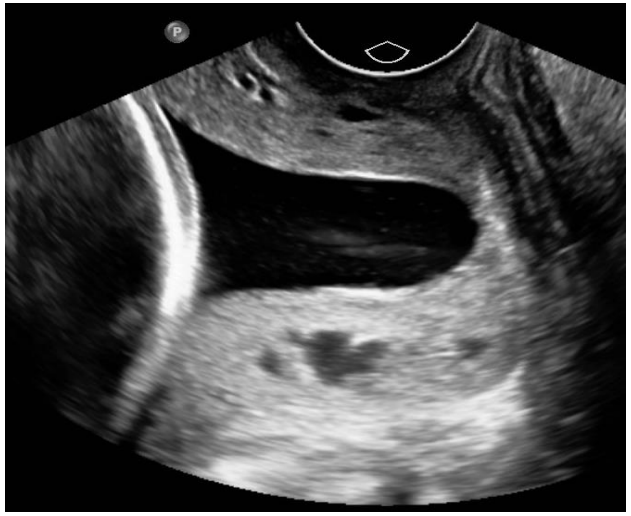
The short cervix on trans-vaginal scan 16 – 24 weeks



Normal
(34 mm)



Short with open cervix
(13 mm)

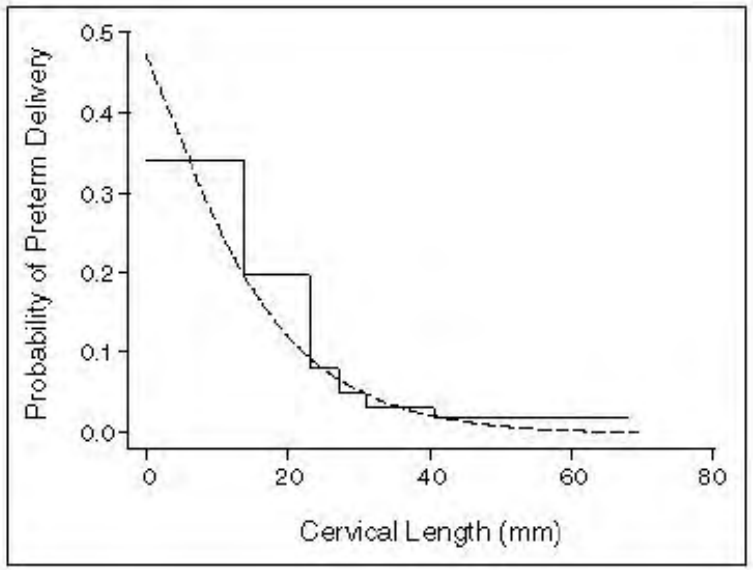


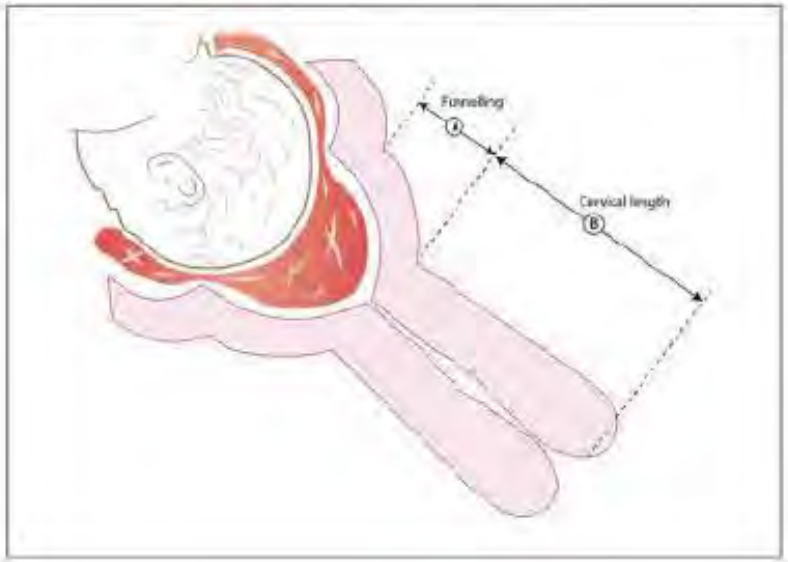
Open cervix

Natural vaginal progesterone pessaries will halve the risk of preterm birth in women with a short cervix in mid-pregnancy

Management of threatened premature labour

Cervical shortening is predictive of risk of premature delivery





THE LENGTH OF THE CERVIX AND THE RISK OF SPONTANEOUS PREMATURE DELIVERY

Iams JD, Goldenberg RL, Meis PJ, et al. The length of the cervix and the risk of spontaneous premature delivery. N Engl J Med 1996;334:567-572 DOI: 10.1056/NEJM199602293340904

Australian Preterm Birth Alliance

Point 5: Consider prophylactic progesterone therapy from 16–24 weeks gestation in women with a singleton pregnancy and prior spontaneous PTB (RR 0.66 - from 27.5% to 18.1%)

• If indicated, recommend vaginal progesterone suppository 200 mg daily until at least 34 /40, or rupture of membranes or birth, whichever occurs first

Point 3: Recommend immediate progesterone therapy for asymptomatic women with an incidentally diagnosed short cervix on TVCL assessment in the second trimester, and contact booking hospital obstetrician

Preterm births: leading cause of death in children < 5yrs, with one in 11 babies born prematurely in Australia. Earlier baby is born, more likely to experience neonatal death or complicated medical problems/ extended NICU admission, and increased risk of ongoing lung disease, disability (blindness/deafness/cerebral palsy) and ongoing intellectual and developmental delay.

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Pink Group: Task 2 – Julia

- 28-year-old female presents with vomiting and pinky PV bleed at 8 weeks of pregnancy
- Pale pink coloured ? PV discharge for 1/7 with lower abdominal pain since the weekend
- BP 90/60, PR 104.
- Known Rh neg blood group
- Smoker 10/day

Set out your initial assessment and referrals.

Metro South Health

Early pregnancy bleeding

Dr Jessica Phillips – Yelland
GP, DRANZCOG Adv
Senior Medical Officer – True Relationships and Reproductive Health
Medical Officer – ATSICHS Logan

We care about you

Queensland Government

Bleeding in Early pregnancy

- 20 - 40% of women experience vaginal bleeding in1st TM of pregnancy
- Most common diagnoses are threatened miscarriage and ectopic pregnancy
- Often diagnosis cannot be made at onset of symptoms … singular or serial scans and /or bloods may be required

Alternative diagnosis of vaginal bleeding in early pregnancy

- Endometrial implantation (very early gestational bleeding)
- Cervical , vaginal lesions- polyps, ectropion, malignancy
- Uterine infection
- Gestational trophoblastic disease in the setting of unusually high bHCG and USS findings
- Ectopic pregnancy - diagnosis is vital as it can be life threatening condition

RESOURCE: Miscarriage and Ectopic Pregnancy - https://brisbanesouth.communityhealthpathways.org/12527.htm

GP assessment

- History:
  - expected gestational age
  - blood loss
  - pain assessment
  - contraceptive use
  - assisted reproduction status
  - pelvic infections/STI's, previous ectopic
- Serious clinical symptoms of syncope, chest pain, short of breath
- ? Shoulder tip pain i.e., rupturing or ruptured ectopic
- Cervical screening history
- Rh negative blood group
- Any condition that may increase risk of miscarriage
  - Previous miscarriage
  - Thrombophilia
  - Previous cervical incompetence

GP assessment

- Abdominal examination for rigidity, rebound, guarding, distension
- Fundal height
- Consider Speculum examination and inspection of vagina and cervix
- Bimanual examination for uterine size, dilatation of cervical os, pelvic tenderness, cervical motion tenderness, presence of tissue in open cervix
- Send for TVS/ USS or to EPAU service and/or ED if unstable and suspicion of ectopic (rising βHCG in serial testing can still be seen in an ectopic in 21% of cases)
- Counselling/ refer for support if suspected miscarriage

Haemodynamic instability

- Initial clinical assessment is vital to establish existing haemodynamic instability, and anaemia
- Immediate transfer to ED via QAS for significant vaginal blood loss and/or abdominal pain as haemodynamically instability may not be clinically evident in young women even after significant blood loss
- Look for
  - Hypotension
  - Tachycardia or arrythmia
  - Peripheral cyanosis
  - Confusion

Miscarriage definitions

Threatened miscarriage	Incomplete miscarriage	Inevitable miscarriage	Complete miscarriage
Is defined as bleeding that occurs before the 20th week of pregnancy, usually with no pain. Cervix remains closed, and pregnancy continues	Incomplete passage of products of conception	Cervix will be open - Miscarriage or expulsion of products is imminent or in the process of happening.	Pregnancy is diagnosed as having ended - further management by medical or surgical intervention is not required.
No specific treatment for a threatened miscarriage	Risk of infection	Increased bleeding	USS will confirm an empty uterus
Abstain from sexual intercourse/"take it easy"	Risk of increased bleeding	Increased pain	Dropping βHCG levels

From Queensland Clinical Guidelines – Early Pregnancy Loss
https://www.health.qld.gov.au/__data/assets/pdf_file/0033/139947/g-epl.pdf

Patient information re Miscarriage –https://www.health.qld.gov.au/__data/assets/pdf_file/0026/621197/ed-miscarriage.pdf

Ectopic pregnancy - Qld Clinical Guideline: Early Pregnancy Loss

Classic ectopic symptoms include:

- Amenorrhea 6-8 weeks post LNMP
- Shoulder tip pain and or rectal pain
- Abdominal pain
- PV bleeding
- β-hCG >2000 IU/L and TVS with no IUP, complex adnexal mass and/or free fluid - High probability of ectopic pregnancy (stable women only)

Risk factors:

- Previous ectopic
- Past PID/endometriosis/tubal surgery/IUD use > 2 yrs
- Infertility (increased risk with length of)
- Age 40+ yrs
- Smokers

80% of maternal deaths occurring in the first TM are due to ectopic pregnancy.

Pregnancy of unknown location (PUL)

- An Intrauterine pregnancy (IUP) is one where a yolk sac is seen
- NO yolk sac = a PUL
- If you have no yolk sac, especially if the β-hCG is > 800-1000, be **VERY CAUTIOUS!**
- IUP can usually be seen with β-hCG levels above 800
- Threshold of 1500 will detect 98% of IUPs (Pitfall: multiple pregnancy)
- β-hCG >10 000, should be a fetal heartbeat
- An IUP *almost* always excludes ectopic (heterotopic awareness when risk factors)

Diagnosing an early pregnancy loss

Don’t just read USS scan reports, get used to looking at the measurements on the scan pictures:

- Once crown rump length (CRL) is 7mm, there should be a heartbeat. If not, then it is a miscarriage
- If CRL is < 7mm (even if report says it is a missed miscarriage) it is too early to call, repeat USS in a week
- If there is no CRL yet, go by sac size
- Once sac size is 25mm, there should be a fetal pole, if not then this is an anembryonic pregnancy (old term blighted ovum)
- If the mean sac diameter (MSD) < 25mm, repeat scan (estimate TVS interval based on expected normal gestational sac growth rate of 1 mm/day - to avoid repeated inconclusive TVS)

Guideline: Early Pregnancy Loss (health.qld.gov.au) – www.healthhttps://www.health.qld.gov.au/__data/assets/pdf_file/0033/139947/g-epl.pdf

Diagnosing an early pregnancy loss

- If CRL or MSD grows over a week then repeat scan in a week, even if only grown by 1mm, **any growth is growth**, and you can't diagnose an early pregnancy loss while there is growth
- If CRL or MSD gets smaller over 2 scans a week apart or fails to grow at all, then you can diagnose a missed miscarriage
- If CRL or MSD growing slowly, then a drop in HCG level (done at same lab) is enough to diagnose a missed miscarriage

- B-HCG usually **doubles** every 48hrs between 5-10 weeks' gestation in a viable IUP (85% have > 66% increase)
- If B-HCG is slowly rising by < 50%, usually non-viable IUP, or ectopic (99% accuracy)
- Rapidly rising levels - consider multiple or molar pregnancy
- Single isolated level is less useful for uncertain clinical scenarios

Early Pregnancy Assessment Unit - Logan Hospital

- Assist in management < 20/40
  - with incomplete miscarriages & investigate causes of pain.
  - of non-viable pregnancies that have opted for conservative/medical care
- Manage
  - confirmed stable ectopic pregnancies (for medical/conservative Rx) or
  - pregnancies of unknown location that are stable but require follow up.
  - persistent vaginal bleeding without confirmed diagnosis, pre and post end of pregnancy (e.g., miscarriage, termination, ectopic)
  - can arrange surgical management for missed miscarriage/ anembryonic pregnancies
  - molar pregnancy and gestational trophoblastic disease

Open on weekdays from 8am – 4pm, by appointment only.

Contact EPAU Nurse Navigator/Midwife or Obstetric Registrar to arrange review

Phone: 2891 8456 / FAX: 3089 2016

Early Pregnancy Assessment Unit - Logan Hospital

- **DO NOT** look after women with Hyperemesis requiring IV fluids (send to ED), or if narcotic pain relief is required. Can assist with chronic hyperemesis gravidarum.
- Women with clinically suspected unstable ectopic (shoulder tip pain, rebound tenderness, abdominal rigidity, tachycardia, unstable BP) should be directed urgently to ED (via QAS prn)

For all non - ED referrals made initially by phone please send a detailed referral to MSH Central Referral Hub stating:

- Reason for referral and indicate current gestation/LMP, Expected Date of Birth (EDB), Past Obstetric (and Medical History if relevant), and clinical findings
- Blood results if available, especially Blood Group/Antibody Screen
- Quantitative HCG levels if available
- USS reports if available

Early Pregnancy Assessment Unit (Logan Hospital only) – Refer Your Patient

Early Pregnancy Assessment

Logan Hospital EPAU – Early Pregnancy Assessment Unit

Specialist area in Logan Hospital - deals specifically with problems in early (< 20/40) pregnancy.

Open on weekdays from 8am – 4pm, by appointment only.

Contact EPAU Nurse/Midwife or Obstetric Registrar to arrange review

Phone: 3299 8456 / FAX – 3089 2016

Outside EPAU times, contact Obstetric Registrar on call or send to ED if urgent concerns

Redland Hospital

Phone On-Call Obstetrician 3488 3111 or Registrar – on their advice may be booked for next "Early Pregnancy Clinic" OR refer to the Emergency Department

(don't rely on referral via CRH arriving at Redland Hospital in a timely manner – PHONE first!)

Beaudesert Hospital Phone On-Call GP Obstetrician 5541 9174 OR refer to the Emergency Department

Most common problems are vaginal bleeding or pain.

Hemodynamically unstable women should be directed to ED.

So, remember ……..

- 7mm

– CRL at which should be a heartbeat on TVUS

- 25mm

– Should be a fetal pole within the uterus

- 1500 U/l

– HCG level at which intrauterine pregnancy should be detectable on TVUS

- X 2 every 48/24

– HCG level should rise in viable pregnancy (at 5-10/40)

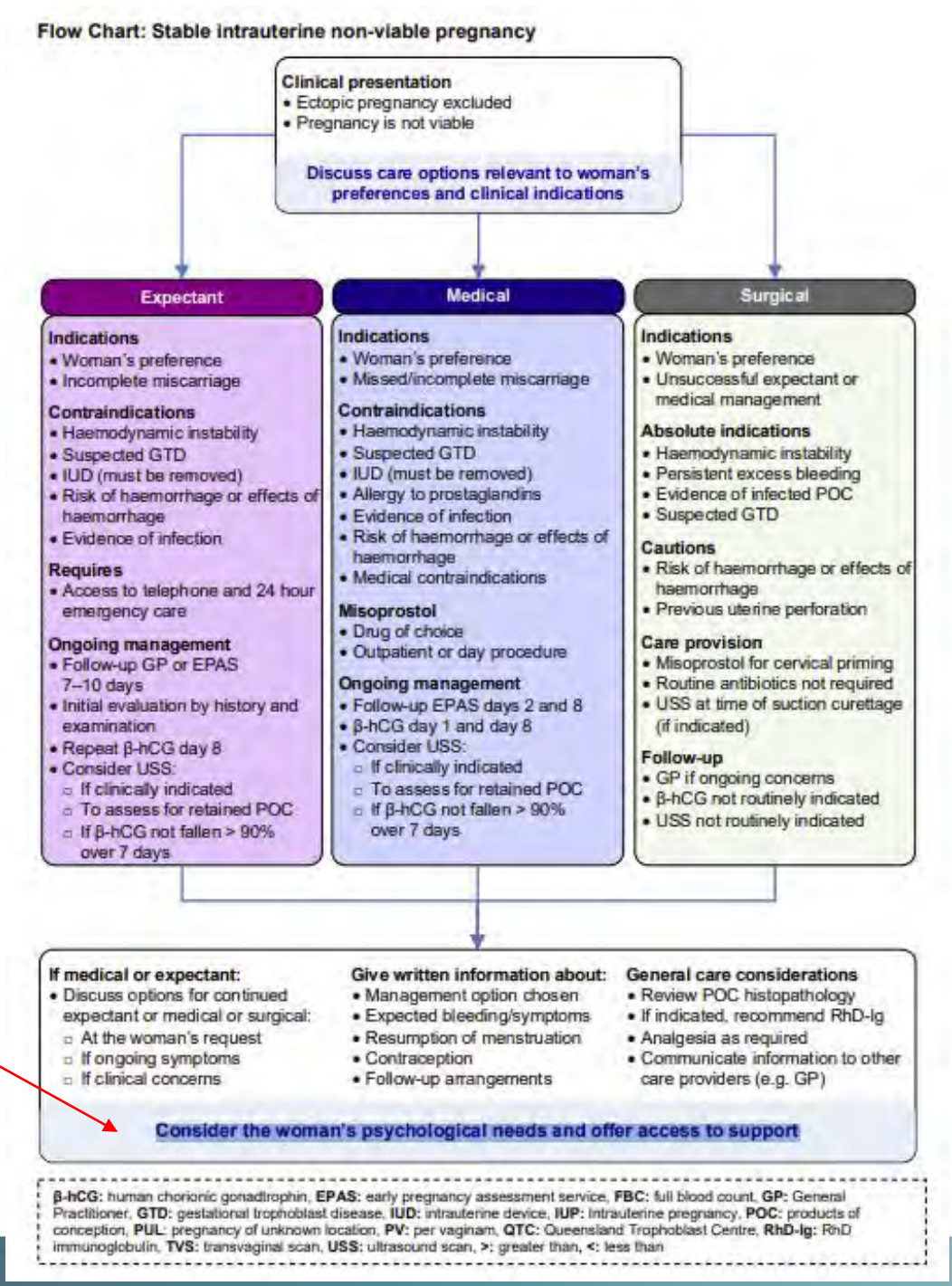
Incomplete miscarriage treatment options

All women should be counselled and offered all options from the time of early pregnancy loss diagnosis, with ALL options being valid choices, guided by the woman's preference and any acute clinical considerations.
Early Pregnancy Loss - Queensland Clinical Guideline

Type	Treatment	Effectiveness
Expectant	Follow up required within 7/7 with repeat β-hCG day 8. USS if PV bleeding persisting after 2/52 OR if painful, heavy bleeding OR if β-hCG level has not fallen more than 90%. May be managed by GP, with O & G input/advice if required - Phone On call Consultant O&G/Registrar	Proportion who subsequently require surgery varies widely between 2% - 44% (may be explained by management bias). Timeframe to complete miscarriage is unpredictable and often more overall bleeding than surgical management. Less successful and longer duration of bleeding in missed miscarriage. No difference in short- or long-term emotional distress
Medical management – Misoprostol (+/- Mifepristone)	Initiated by the hospital or by approved GP prescribers (Training available at www.ms2step.com.au)	80-85% for incomplete miscarriage <13/40 10% c/o excessive pain/bleeding ? May need D & C 1% hospitalisation - heavy bleeding/infection
Surgical management	Available at Logan, Redland and Beaudesert Hospital.	More immediate outcome with less follow-up Usual risks of procedure and anaesthesia

Early pregnancy loss - Queensland Clinical Guidelines

In all circumstances, but especially expectant and medical management, **consider the woman's psychological needs and offer access to support**.



? Place of Vaginal Progesterone in Luteal Phase

- May be indicated in support of the luteal phase in women with recurrent bleeding/threatened miscarriage (continued until second TM (through to week 16))
- Progesterone support of the luteal phase and in the first trimester (C-Obs 29a) (ranzcog.edu.au) - "current evidence for the use of progestogen support in threatened miscarriage is limited by methodological inconsistencies. Whilst the current evidence shows potential benefit, further well-designed clinical trials would add strength to the current evidence base."
- For women who become pregnant with in-vitro fertilisation (IVF), the use of progesterone supplements is beneficial and improves pregnancy outcomes" - Consensus based recommendation
- Not PBS subsidised yet for this indication, but recently (Nov 2022) TGA approved for- *Treatment of unexplained threatened miscarriage in women with bleeding in the current pregnancy and a history of at least three or more previous miscarriages*
- Cost of pessary – micronised progesterone pessary – "Utrogestan" private prescription for out-of-pocket cost of around $9 per day or $90 per box.

Rhesus D negative women

Anti D for:

- completed miscarriage at any gestation
- threatened miscarriage after 12 weeks (unless worried about compliance)
- antepartum hemorrhage
- Consider if regular recurrent or persistent bleeding in 1st trimester
- abdominal trauma sufficient to cause bleeding
- interventions such as ECV, amniocentesis, CVS, ToP.
- ectopic or molar pregnancy
- postpartum if baby Rh positive

Recent QCG Change : Rh D immunoglobulin **no longer recommended** for medical or surgical ToP before 10+0 weeks gestation.

Guideline for the prophylactic use of Rh D immunoglobulin in pregnancy care: https://blood.gov.au/anti-d-0

Anti-D administration in pregnancy

- Give within 72 hours
- Dose: 250 IU before, 625 IU after 12 weeks – slow, deep IM injection
- Routine Anti D (625 IU) at **28** and **34-36 weeks**
- Document in the Pregnancy Health Record
- Can be ordered for women and stocks held in general practice - obtained from QML and Mater upon receipt of signed and completed request form & delivered by their routine courier service.
  - Mater Blood Bank Fax 07 3163 8179
  - QML Blood Bank QML Request for Anti-D form or via Phone: 3146 5122; FAX: 3371 9029 or QML_BriBBLab@qml.com.au
- If sending women into the hospital for Anti D, please send with a letter with a copy of the result confirming their blood group.
- Appointments preferred/phone ahead
- Parent Information re Rh Neg Blood Type https://www.health.qld.gov.au/__data/assets/pdf_file/0017/140804/c-epl-rhdnegative.pdf

On the PHR ……routine anti D prophylaxis

Please record the routine administration on page a10 of the clinician's section of the PHR.

Clinician's section

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Medicare number:

Date of birth:

Immunisation

All vaccinations are required to be reported to the Australian Immunisation Register. *Complete signature log on page a1.*

Rh D immunoglobulin (Rh D negative women only) Blood group:	☐ 28 weeks If *no*, reason:		Initials:
	Date given: ___ / ___ / ___	Batch number:	
	☐ 34–36 weeks If *no*, reason:		Initials:
	Date given: ___ / ___ / ___	Batch number:	
dTpa (diphtheria, tetanus and pertussis) vaccine *(recommended 20–32 weeks)*	☐ Discussed ☐ Declined	Gestation: weeks	Initials:
	Date given: ___ / ___ / ___	Batch number:	
COVID-19 vaccination	☐ Declined ☐ Yes ☐ Up-to-date	Date last given: ___ / ___ / ___	Initials:
Influenza vaccine *(recommended at any gestation)*	☐ Declined ☐ Yes ☐ No	Gestation: weeks	Initials:
	Date given: ___ / ___ / ___	Batch number:	
Other	Specify:	Gestation: weeks	Initials:
	Date given: ___ / ___ / ___	Batch number:	

Where can a women get her Anti-D?

- If you *don't* have access to anti–D, please send the woman to
  - Logan Hospital's ED if it is for early pregnancy bleeding
  - EPAU if under 20 weeks with recurrent or heavier bleeding

- If for routine prophylaxis, a short appointment for anti-D administration can be organised by phoning ANC (Phone: 2891 8527) or if bleeding later in pregnancy can send to the Maternity Assessment Unit (MAU)
- If she is bleeding or it is her 28-week injection, send with a copy of her recent blood group and antibody result
- No blood group and antibody test is required for the 34-week injection if it has been done at 28 weeks

What's coming?

1574 – Non-Invasive Prenatal Testing (NIPT) for fetal Rhesus D genotype

Page last updated: 15 February 2021

- Fetal Rhesus D status tested via NIPT on maternal blood sample from 11 weeks.
- Benefit of not requiring antiD immunoprophylaxis if all fetuses predicted to be Rh D negative.
- New Guideline based on scientific evidence & consensus among clinical experts but is not a policy statement on funding and supply arrangements for the national provision of NIPT.
- N.B. Lifeblood (Red Cross) has not been approved to provide NIPT checking RhD for the purpose of targeted antenatal RhD immunoprophylaxis

Other red cell antibodies…

- **ALL** women – test for blood group antibodies at the first antenatal visit, and at 28 weeks
- Rh negative women with no Rh (D) antibodies in early pregnancy – test **AGAIN** for the presence of antibodies before administration of Anti-D at K28
- Antibody testing should be performed EVEN if the woman is Rh (D) positive as **other red cell antibodies can be of clinical significance**

(Netherlands study * - positive antibody screen incidence 1:80, with 1:300 incidence of antibodies other than anti-D)

Risks to the fetus	Risks to the mother
Fetal anaemia	Haemolytic transfusion reactions
Haemolytic disease of the newborn/ hyperbilirubinemia	HDFN risk is greatest with anti D, anti C, anti-kell
Hydrops fetalis	
Premature birth	
Premature death	

Takeaways:

- Early pregnancy bleeding is common and often able to be GP managed, with CAUTION in all cases with Pregnancy of Unknown Location (PUL)
- βHCG > 1500 – 2000 with empty uterus +/- risk factors for ectopic → REFER!
- AntiD not required for threatened miscarriage < 12/40 or ToP < 10/40, but for completed Mc at any stage and with APH/abdo trauma/ectopic/interventions (usually all hospital managed)

Metro South Health

Thankyou

We care about you

Queensland Government

Red Group: Task 3 - Moana

- Moana is aged 38 and happy to be pregnant again with her second baby (new partner)
- Positive pregnancy test at home yesterday
- Did pregnancy test 3/52 ago, which was negative. Not sure when she fell pregnant, as periods irregular with the last one 9 weeks ago.
- First baby was 4.7kg at birth – 15 years ago
- Her BMI is now just over 35 - she never lost the weight she gained in her first pregnancy. No personal or family history of GDM.

Outline your assessment, considerations and next steps

GDM & Diabetes In Pregnancy

Julia Prince

Midwife/ RN / CDE (BNurse, MMid, GradCert Diabetes Education)

January 2023

Gestational Diabetes (GDM)

- Defined as glucose intolerance in pregnancy
- One of most common medical complications of pregnancy
  - Affects 1:7 Australian women,
  - 14% of pregnancies worldwide,
  - 18 million births each year!
  - 27% of Logan births

Cause is still unknown…

(Plows et al., 2018).

THERE ARE TWO MAIN ISSUES:

1. DOES A WOMAN HAVE UNDIAGNOSED DIABETES?

2. HOW BEST TO TEST FOR GDM?

“What is happening?” ask our patients

The pancreas is an organ in the body responsible for producing hormones, known as insulin & glucagon, which regulate levels of glucose in the blood.

When we eat food, the carbohydrate in food breaks down to glucose which enters the bloodstream.

The pancreas releases insulin to move glucose out of the blood vessels and into our cells for energy.

This balance maintains normal blood glucose levels.

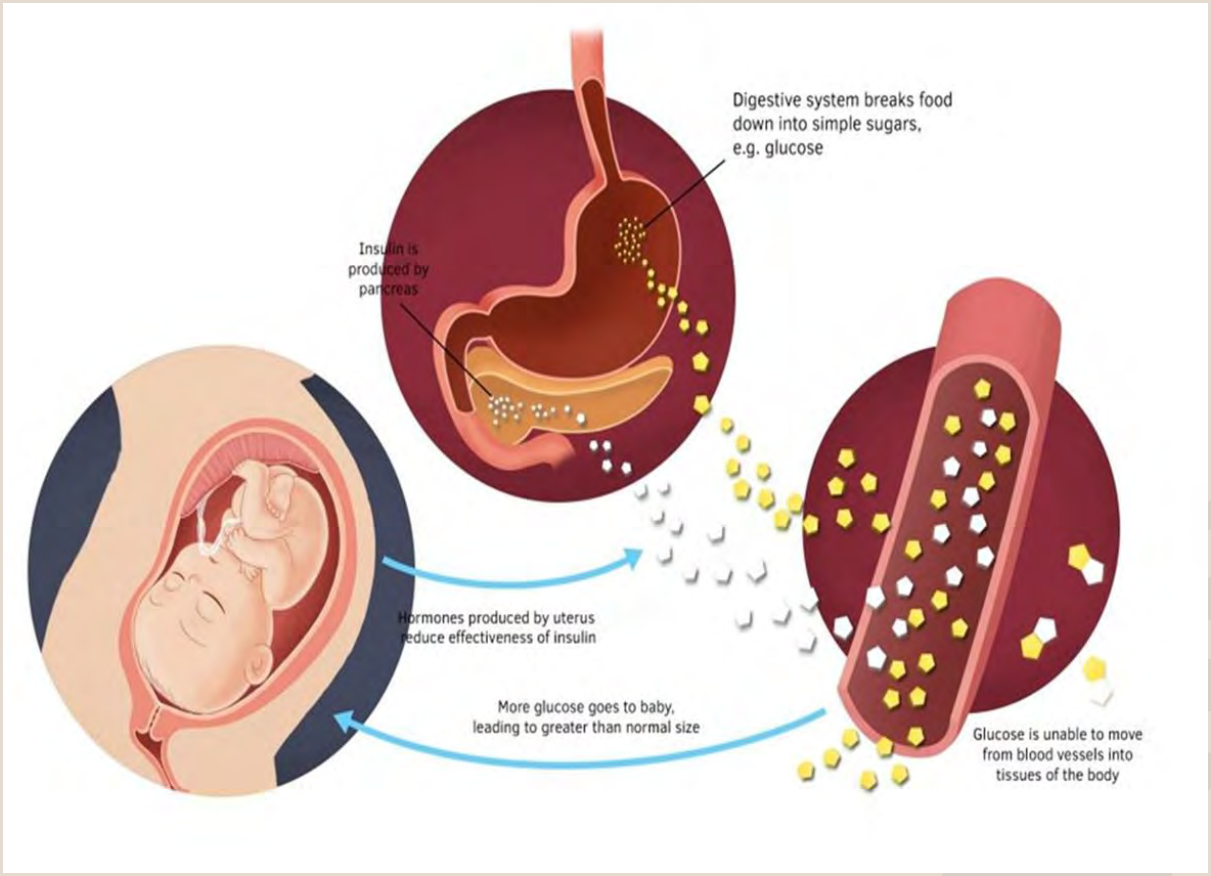
(National Diabetes Services Scheme NDSS, 2021)

In GDM...

Placental hormones rise during pregnancy to ensure enough glucose is received by the baby for normal growth and development (Dunning & Sinclaire, 2020). Placental hormones including growth factor, prolactin, progesterone and cortisol can reduce the actions of the mother's insulin, leading to insulin resistance.

The placenta is the barrier between mother and baby environments.

During GDM, the placenta is exposed to higher-than-normal blood glucose levels, which may then result in increased growth of the baby, (though rarely some can also have low birth weight) (Plows et al., 2018).



https://app.healthand.com/au/topic/general-report/gestational-diabetes

What is an OGTT?
Oral Glucose Tolerance Test

Woman at 24-28 weeks' gestation (or earlier if risk factors)
Fast for 8 hours, includes no smoking
Fasting blood glucose level via blood test
Consumes a drink containing 75g fast acting carbohydrate
Blood glucose level 1 hour post drink and 2 hours post drink via blood test

-If woman vomits before 2 hrs- Fasting BGE normal - repeat test using Maxolon not Ondansetron
-If fasting ≥ 5.1mmol- diagnostic of GDM

Diagnosis BGE using OGTT
Fasting ≥ 5.1mmol/L
1 hr ≥ 10 mmol/L
2 hr ≥ 8.5 mmol/L

HbA1c- 1st trimester only, if OGTT not suitable
(weight loss surgery- dumping syndrome, rapid gastric emptying)

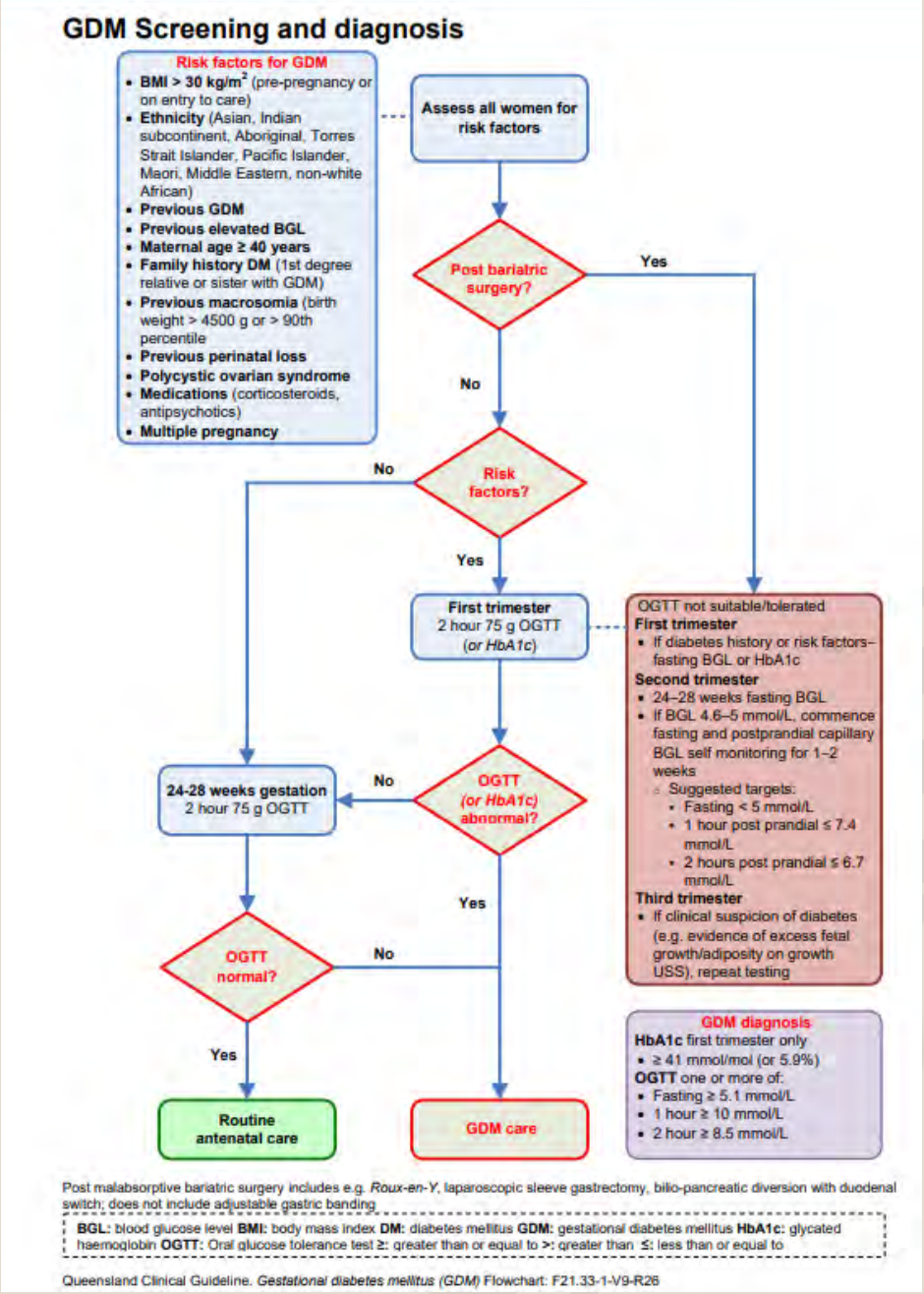
If known diabetes, refer and notify ASAP – NO OGTT NEEDED

Result ≥ 41mmol/mol
(or 5.9%) GDM.
>6.5% (48mmol/mol)
=T2DM

Screening and diagnosis of GDM: Queensland Clinical Guidelines

Qld Clinical Guidelines

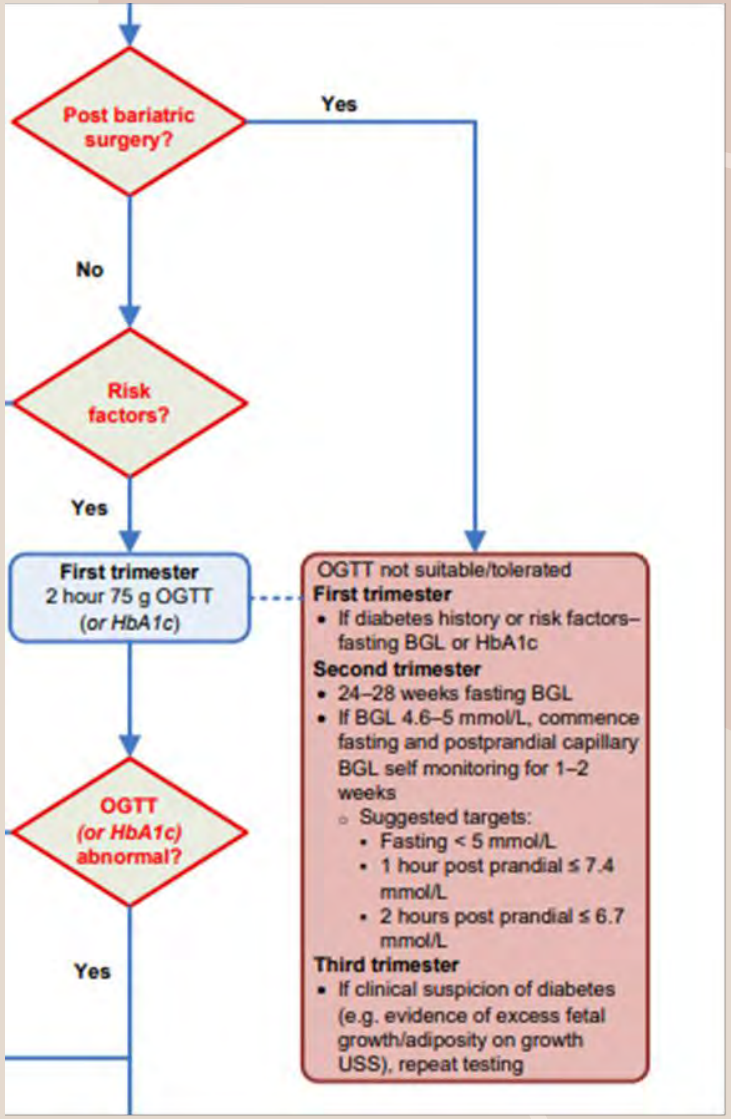
https://www.health.qld.gov.au/__data/assets/pdf_file/0023/950504/f-gdm-diagnosis.pdf



Previous Bariatric Surgery- Testing for GDM

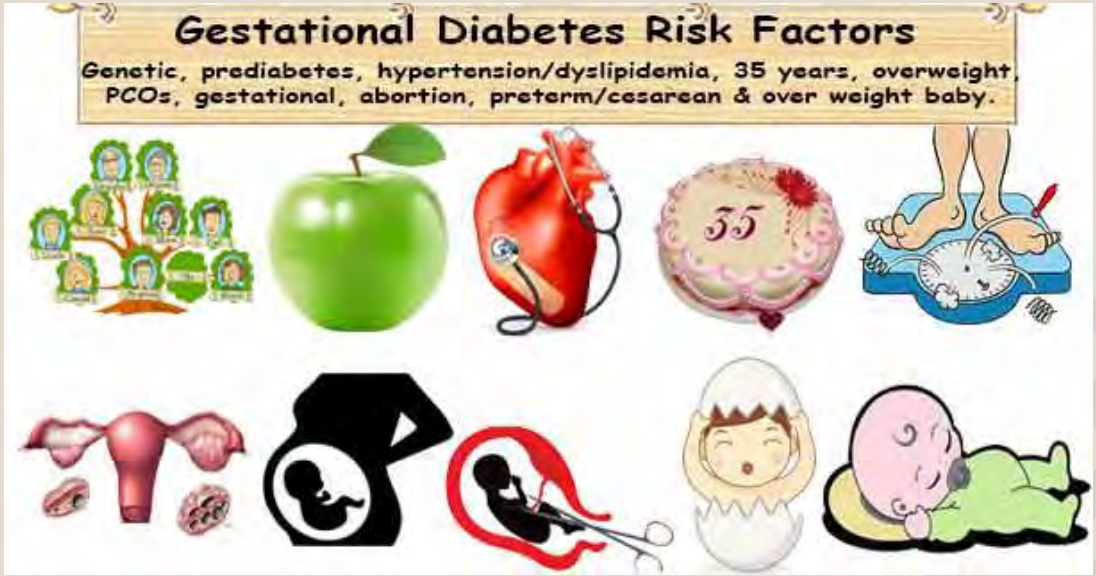
If previous bariatric surgery, OGTT not suitable

- 1st trimester - fasting BGL and HbA1c
- 2nd trimester - 24–28 weeks
- 3rd trimester - If clinical suspicion or evidence of fetal hyperinsulinaemia on USS, commence BGL testing



Risk factors for GDM

- BMI >30
- Ethnicity (Asian, Indian, Aboriginal, Torres Strait Islander, Pacific Islander, Māori, Middle Eastern, non-white African)
- Family/ personal history GDM
- Maternal age ≥40
- Family history diabetes mellitus
- Previous macrosomia (birth weight >4500g or > 90 percentile)
- Previous perinatal loss
- Polycystic ovarian syndrome
- Certain medications (corticosteroids, antipsychotics), and
- Multiple pregnancy



https://healthy-ojas.com/diabetes/gestational-risk.html

(Queensland Clinical Guidelines, 2022)

This can result in…

Mother - increased risk of:

- pre-eclampsia
- hypertension
- preterm birth
- induction of labour
- caesarean section
- developing type 2 diabetes

Baby - increased risk of:

- macrosomia
- shoulder dystocia
- nerve palsy
- hypoglycaemia
- respiratory distress
- hyperbilirubinemia
- developing type 2 diabetes
- fetal death

Increased maternal and fetal surveillance is required

(Nankervis et al., 2018) (Queensland Clinical Guidelines, 2022)

Ongoing monitoring

Mothers will need to start self-blood glucose monitoring from diagnosis and continue for the remainder of the pregnancy and after baby is born for 24 hours (if medicated).

Recommended follow up Oral Glucose Tolerance Test (OGTT) at 6 weeks post birth and then yearly screening for Type 2 Diabetes (Parsons et al., 2018).

50-70% of women with GDM develop Type 2 Diabetes later in life (Dunning & Sinclaire, 2020).

GP should arrange:

- HbA1c every 1-3 years (depending on other risk factors)
- Repeat HbA1c prior to or early in next pregnancy
- NDSS reminder once registered
- Follow up other risk factors for macrovascular disease

Patient Resource : Gestational diabetes mellitus – Important postnatal information (health.qld.gov.au)

LONG TERM EFFECTS OF GDM

- GDM usually resolves after birth, however...
- Mum - increased risk of GDM in future pregnancies
  - increased risk of developing Type 2 Diabetes
  - increased risk of cardiovascular disease
- Baby - increased risk of future obesity, cardiovascular disease, Type 2 Diabetes and GDM (Plows et al., 2018).
- Breastfeeding is encouraged and helps to reduce these risks (Dunning & Sinclaire, 2020).

THE GOOD NEWS

https://quotesgram.com/good-news-everyone-futurama-quotes/

GDM can be managed
Self-management principles

- Healthy lifestyle
- Exercise
- Self-monitoring of blood glucose levels
- Education
- Guided pharmacotherapy
- These interventions can also reduce pregnancy weight gain (Kokic et al., 2018).
- 70-85% of women with GDM show improvements (Johns et al., 2018).

https://ade.adea.com.au/wp-content/uploads/2018/09/gestational-diabetes-550x550.jpg

HEALTHY EATING

-3 meals per day plus 2-3 healthy snacks spread out over the day

-2-3 serves (30-45g) of good carbohydrate foods at each meal & 1-2 serves (15-30g) for snacks

(1 serve = 15g CARB = 1 slice of bread OR 1 apple OR 1 small potato)

1 KFC twister wrap = 44g CARBS =3 serves

-decrease food high in saturated fats

-choose foods which are high in fibre

-variety of foods which provide nutrients:

-iron (found in red meat, chicken, fish, legumes)

-folate (found in dark green leafy vegetables) and

-iodine (found in fish, bread, dairy foods)

Fasting too long can elevate fasting BGL's, encourage women to have supper before bed.

(National Diabetes Services Scheme NDSS, 2021)

RECOMMENDED EXERCISE IN PREGNANCY

Walking
Stationary cycling
Aerobic exercise
Dancing
Resistance exercises (e.g. weights, elastic bands)
Stretching exercises
Yoga
Hydrotherapy, water aerobics

Thirty minutes of physical activity on most days of the week

(Berghella & Saccone, 2017).

EXERCISE IN PREGNANCY

- Lowers incidence of excessive pregnancy weight gain
  - High blood pressure disorders
  - Preterm birth
  - Caesarean delivery
  - Birthweight concerns
- HIGHER CHANCE OF: Vaginal delivery

- (Berghella & Saccone, 2017).

MANAGEMENT

The combination of healthy diet and exercise is the first line therapy for management of GDM

- Refer to a dietitian
- Encourage continued exercise

(Nankervis et al., 2018), (Queensland Clinical Guidelines, 2022).

SELF-MONITORING BLOOD GLUCOSE

- **Close monitoring of blood glucose is essential to GDM management of and avoiding the associated complications**

- **Self-test x4 per day**
  Fasting (8 hrs), 2hrs post breakfast/ lunch dinner (only water, no tea/ coffee in those 2hrs)

- **Target ranges for blood glucose levels in pregnancy are:**

  - fasting ≤5.0mmol/L,
  - 2 hours postprandial ≤6.7mmol/L

****Above 5 to drive when on insulin**

https://www.diabetes.co.uk/diabetes_care/blood_glucose_monitor_guide.html

(Queensland Clinical Guidelines, 2022), (Dunning & Sinclair, 2020).

PHARMACOTHERAPY

- **Oral Metformin tablets**
- **Insulin injections**

- **Approximately 27% will require insulin therapy**

- **Insulin requirements should be anticipated to rise**

- **Should cease after the birth of the baby**

(Queensland Clinical Guidelines, 2022).

Metformin XR

- Derived from French lilac.
- Primary therapeutic effect- reduction of hepatic glucose production.
- Common side effects: nausea, indigestion, abdominal cramps/ bloating, diarrhoea, most abate over time, taking with meals helps.
- Associated with 20-30% lower levels of B12 in blood- these should be monitored and may contribute to anaemia with long term use.
- Limited long term safety information.
- Metformin does cross the placenta, but there have been no teratogenic problems.
- Commencement dose 500mg daily, orally with food
- Titrate dose according to BGL's- Maximum dose 2000mg daily

Breastfeeding

- **Breastfeeding is encouraged**
- **Antenatal expressing of colostrum from 36 weeks**
- **Benefits to mother and baby short and long term**

(Nankervis et al., 2018), (Queensland Clinical Guidelines, 2022).

https://depositphotos.com/vector-images/breastfeeding-drawing.html

Referrals

DIABETES EDUCATOR

NATIONAL DIABETES SERVICES SCHEME (NDSS)

BLOOD GLUCOSE TEST STRIPS AT REDUCED PRICE. IF COMMENCES ON INSULIN, UPDATE TO OBTAIN INSULIN PEN NEEDLES FOR FREE

NATIONAL GESTATIONAL DIABETES REGISTER

(SENDS REMINDER FOR REPEAT OGTT TO WOMAN & GP)

DIETITIAN

SOCIAL WORKER/ PSYCHOLOGIST

GDM – Logan Hospital Management

- Notify ANC *ASAP* once diagnosis is made - send referral back to ANC (SMART REFERRAL for GDM preferred) noting "New diagnosis of GDM" & include a copy of the OGTT

    - For optimum care patient should be seen within 1 week
    - Single VIRTUAL group session with a Diabetes Educator /Dietitian within 1-2/52
    - No longer low risk, care transferred back to the hospital

- Endocrinologist at Logan Hospital now working in ANC – assists with pre-pregnancy diabetics/ more complex cases.
- Midwife Navigator for GDM to assist women who have difficulty in negotiating the care pathway.

GDM – Logan Hospital Management

- FREE GDM testing kits provided by hospital
- One-on-one reviews with Dietitians (following group session)
- BGLs reviewed by Dietitians, Midwives/ Obstetricians

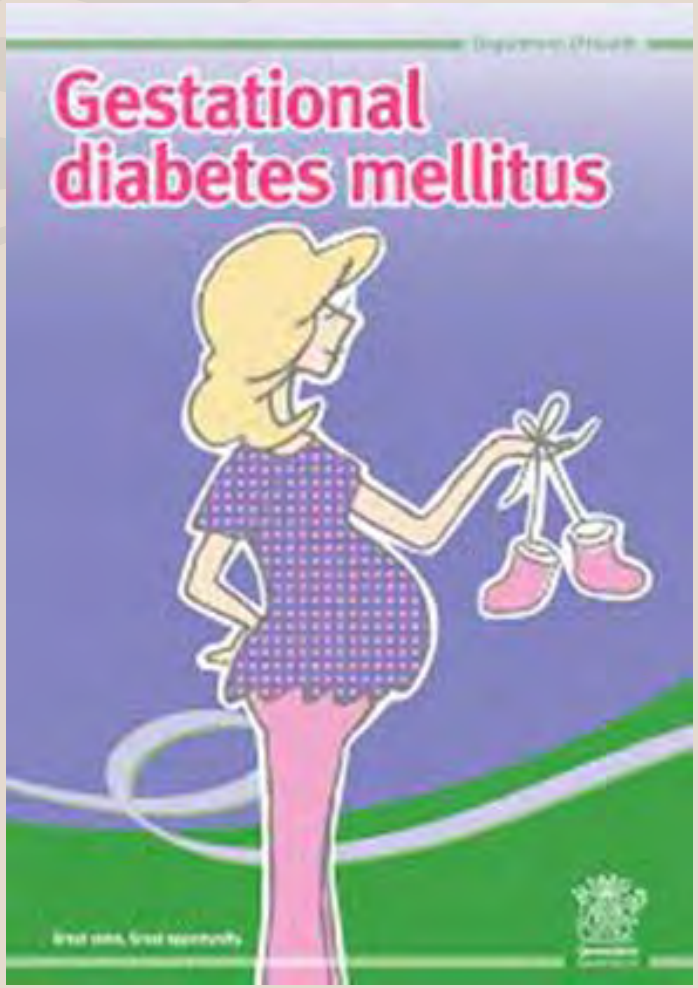
Women requiring insulin are managed by Endocrinologists, GDM Navigator and Diabetes Educator

- Mother App for women on Insulin or Type 2 DM only (at this stage)
- Beaudesert Hospital manages own GDM women - diet or Metformin, refer to Logan Hospital if Insulin required.

GDM – Redland Hospital Model of Care

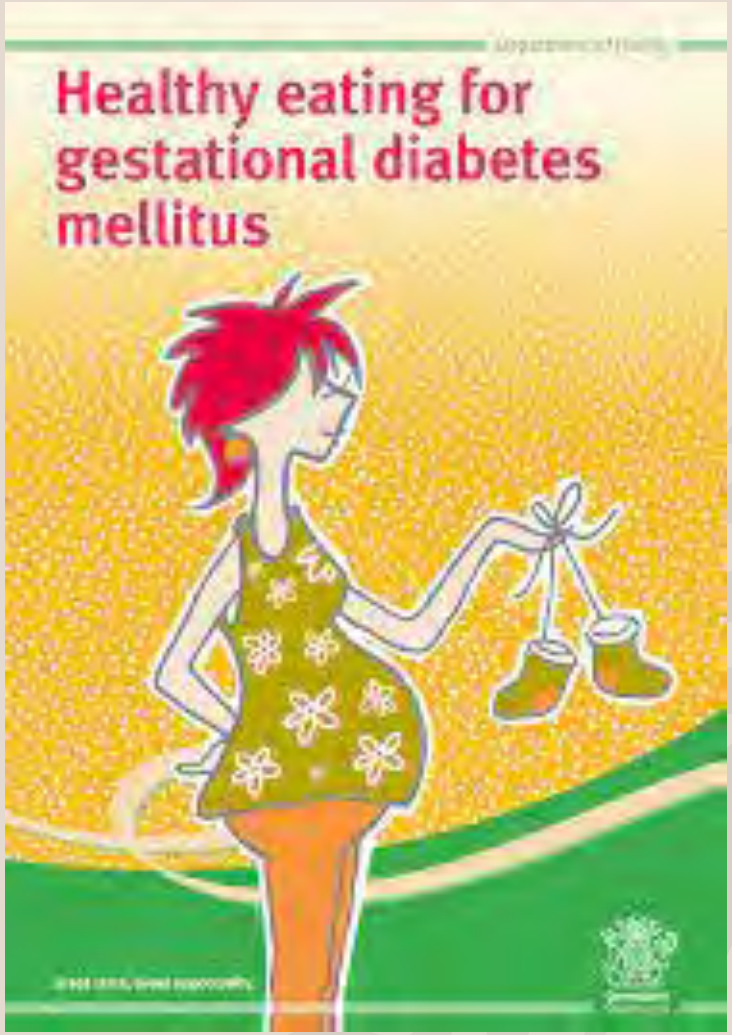
- Most will be seen at Redland on one-one basis for education. Please note if women need an interpreter
- Women are advised to purchase & use a glucometer and sent through details of M♥Ther which includes patient education. Notify if unlikely to be able to manage or access or manage the M♥Ther App
- Midwife and Dietitian call all women within the 1-2 weeks
- Dietitian referral made for all first diagnosed GDM women
- Will be seen by obstetrician in the following 1-2 weeks for review of BSL readings and Pregnancy assessment
- Separate Endocrinology referral not required – ANC may liaise/consult prn
- Further review of readings will be undertaken via the M♥Ther app or hospital appointments as required
- At present, women with GDM are transferred to an obstetric MOC where they are reviewed every 2-4/52 as clinically appropriate.
- Dietitian input is available where required (one day/week at present)

Information Pamphlets



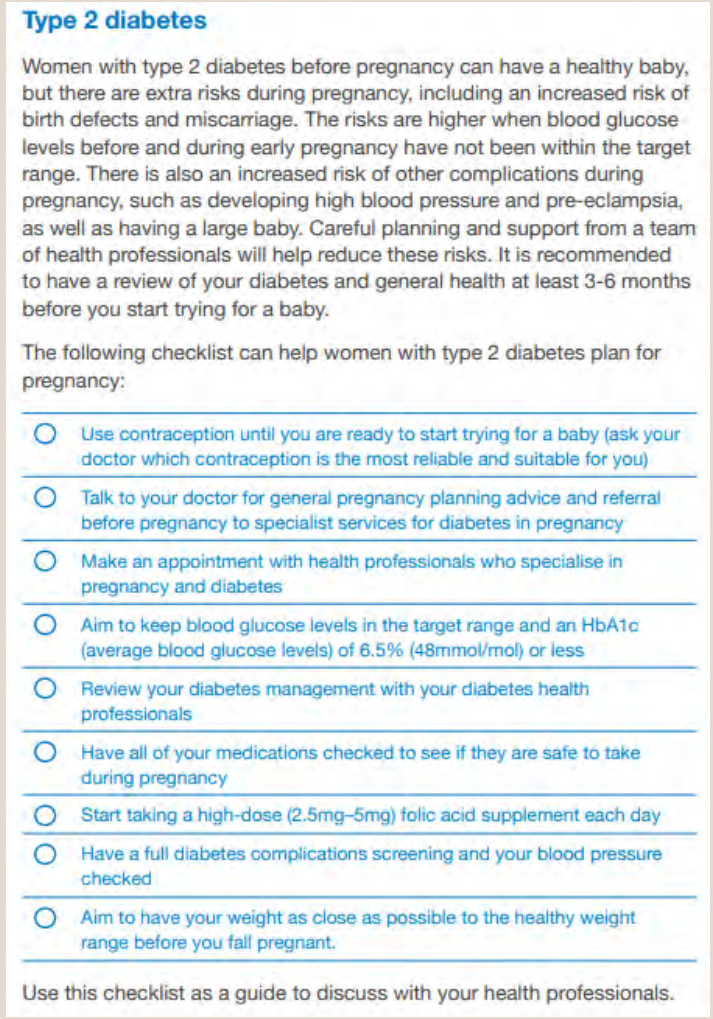
https://www.health.qld.gov.au/__data/assets/pdf_file/0030/621588/sdcn-gdmbooklet.pdf

https://www.health.qld.gov.au/__data/assets/pdf_file/0021/621615/sdcn-whatisbrochure.pdf



https://www.health.qld.gov.au/__data/assets/pdf_file/0021/370074/diab_gdm_colour.pdf

NDSS website: Life after GDM and so much more …..



Type 2 diabetes

Women with type 2 diabetes before pregnancy can have a healthy baby, but there are extra risks during pregnancy, including an increased risk of birth defects and miscarriage. The risks are higher when blood glucose levels before and during early pregnancy have not been within the target range. There is also an increased risk of other complications during pregnancy, such as developing high blood pressure and pre-eclampsia, as well as having a large baby. Careful planning and support from a team of health professionals will help reduce these risks. It is recommended to have a review of your diabetes and general health at least 3-6 months before you start trying for a baby.

The following checklist can help women with type 2 diabetes plan for pregnancy:

- ○ Use contraception until you are ready to start trying for a baby (ask your doctor which contraception is the most reliable and suitable for you)
- ○ Talk to your doctor for general pregnancy planning advice and referral before pregnancy to specialist services for diabetes in pregnancy
- ○ Make an appointment with health professionals who specialise in pregnancy and diabetes
- ○ Aim to keep blood glucose levels in the target range and an HbA1c (average blood glucose levels) of 6.5% (48mmol/mol) or less
- ○ Review your diabetes management with your diabetes health professionals
- ○ Have all of your medications checked to see if they are safe to take during pregnancy
- ○ Start taking a high-dose (2.5mg–5mg) folic acid supplement each day
- ○ Have a full diabetes complications screening and your blood pressure checked
- ○ Aim to have your weight as close as possible to the healthy weight range before you fall pregnant.

Use this checklist as a guide to discuss with your health professionals.

Resources for patients and clinicians….

https://www.ndss.com.au/health-professionals/support-services/online-learning/ - CPD available with online learning

https://www.ndss.com.au/wp-content/uploads/resources/booklet-gestational-diabetes-life-after.pdf
https://www.ndss.com.au/wp-content/uploads/fact-sheets/fact-sheet-understanding-gestational-diabetes.pdf
https://www.ndss.com.au/wp-content/uploads/resources/booklet-gestational-diabetes-caring-for-yourself-and-baby.pdf

Something to consider….

- If insulin requirements are reducing in 3rd trimester, this could indicate serious issues with baby, as this means the placenta is not producing the hormones which cause insulin resistance.

- Regardless of GDM, birthing a baby over 4500g increases the risk of maternal diabetes later in life by 20%. These women should be offered earlier & more frequent screening for type 2 diabetes.

(Miller, C. & Lim, E., 2021)

thank you

Julia Prince

References

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Pre-existing Diabetes in Pregnancy

Management

Preconception management of patient with diabetes

Management during pregnancy

1. Optimise management of type 1 and type 2 diabetes.
2. If the patient has pre-existing diabetes, or a diagnosis of gestational diabetes mellitus (GDM) or diabetes mellitus (DM) in pregnancy, request urgent non-acute obstetric and maternity assessment for multidisciplinary management and education. For optimum care patient should be seen within 1 week.
3. Optimise lifestyle factors:
   - Manage specific lifestyle risk factors (SNAP):
     - Smoking
     - Nutrition
     - Alcohol
     - Physical activity
   - Consider requesting allied health support or lifestyle modification programs to support patients in making lifestyle changes, using Chronic Disease Management items if eligible.
4. Advise the patient to self-monitor BGLs, aiming for recommended targets, and to arrange GP review if targets not met.
5. Monitor BGLs:
   - If BGL is elevated on 2 occasions at the same test point within 1 week, medications may be necessary:
     - Review diet and physical activity.
     - If unable to improve glycaemic control through lifestyle, consider medications.

Diabetes in Pregnancy - Community HealthPathways SpotOnHealth (Brisbane South)
- https://spotonhealth.communityhealthpathways.org/79572_1.htm

[Diabetes in Pregnancy - Community HealthPathways SpotOnHealth (Brisbane South)](https://spotonhealth.communityhealthpathways.org/79572_1.htm) - https://spotonhealth.communityhealthpathways.org/79572_1.htm

- If BGL is elevated on 2 occasions at the same test point within 1 week, medications may be necessary:
  - Review diet and physical activity.
  - If unable to improve glycaemic control through lifestyle, consider medications.

Medications

Metformin – does cross the placenta, but there appear to have been no teratogenic problems.

- Commencement dose of metformin is 500 mg per day orally, with food.
- Standard (SR) or slow release (XR) metformin may be used – maximum dose 2000 mg per day orally.
- Titrate dose according to BGLs
- Review BGLs within 3 days of commencement. Up to 50% of women with GDM treated with metformin will require supplemental insulin to achieve glycaemic targets.

Insulin – safe to use in pregnancy.

- There is no evidence for superiority of a specific insulin or insulin regimen for GDM.
- Insulin requirements may be anticipated to rise throughout the third trimester as a result of increasing maternal insulin resistance. Tends to plateau at 36 to 38 weeks.
- The Insulin dose can be titrated every two to three days as required, with increments of 2 to 4 units (no greater than 20% dose increase), until targets are met, or the woman experiences hypoglycaemia.

- If average BGL over 1 week is elevated (BGL at the same time each day) medications are usually necessary.
- Medications are usually initiated by the specialist team – if indicated, request urgent non-acute obstetric and maternity assessment or seek obstetric and maternity advice. See also Diabetes Medications.

6. Ensure patient is monitored regularly during pregnancy for:
   - diabetic retinopathy.
   - pre-eclampsia.
   - fetal growth.
   - ketonuria or proteinuria on urine dipstick.
7. Suggest that the patient register with the NDSS National Gestational Diabetes Register.

Managing hyperglycaemia in pregnancy

- Nausea and vomiting in pregnancy may affect blood glucose control.
- Excellent glycaemic control recommended - risk of fetal abnormalities increases with higher HbA1c at conception /during first trimester. Ideally optimise glycaemic control before conception
- Risks associated with diabetes in pregnancy can be reduced but not eliminated, by aiming for BSLs as close to non-diabetic range as possible, ensuring risks of maternal hypoglycaemia are minimised.
- Good control reduces risk of spontaneous abortion, congenital abnormalities, pre-eclampsia, retinopathy progression and stillbirth
- Self-monitoring of BSLs and/or continuous glucose monitoring helps determine if medication adjustment and/or commencement of insulin is required and assesses risk of hypoglycaemia.
- Higher folate supplementation (2.5-5 mg per day) recommended – start one month before pregnancy & continuing until 12/40 (reduce risk of neural tube defects)
- Advise retinal examination prior to conception and during each TM for type 1 & 2 diabetics (more frequent if retinopathy is present). If have active, moderate–severe non-proliferative retinopathy or proliferative retinopathy should undergo pre-pregnancy testing if not had in last 6 months- to see if retinopathy is stable enough for pregnancy.
- Test renal function if not done within preceding 3/12. Elevated creatinine or estimated GFR <45 mL/min/1.73 m^2 or albumin-to-creatinine ratio >30 mg/mmol = indication for pre-pregnancy nephrology assessment.

Management of type 2 diabetes: A handbook for general practice - Type 2 diabetes, reproductive health and pregnancy - RACGP

Community Diabetes Chronic Disease Nurse

The Chronic Disease Diabetes Nursing Service offers education, information, management and support to Adult clients diagnosed with all types of diabetes. Education and self-management strategies are offered to all clients to assist in the day to day managing of their diabetes which may include referrals, resources, and equipment such as apps, blood glucose meters, insulin delivery devices and continuous glucose monitoring (CGM) as relevant.

This service is provided by Diabetes Nurse Educators and a Nurse Practitioner (NP is Logan Only).

In scope

- Adults 16 years over - Exception - clients <18 accepted by Endocrinologist, QEII Hospital.
- Newly diagnosed T1 Diabetes not requiring hospital admission
- Type 1 Diabetes
- New T2D on OHA's/ injectables/ and/or Insulin
- Pre pregnancy planning
- Early Pre-existing Diabetes excluding Brisbane south (note: This is on confirmation of pregnancy and prior to first Hospital Antenatal Appointment)
- Recent presentation to ED or admission with DKA (Diabetic Ketoacidosis)
- Recent presentation to ED or admission with Hyperglycaemic Hyperosmolar Syndrome
- Major or problematic episode(s) of hypoglycaemia
- Existing diabetes with recent unintentional weight loss (>5% of bodyweight over a month period)
- Diabetes requiring optimisation in the presence of severe vascular complications, for example stage 3 CKD, proliferative retinopathy, gastroparesis
- Diabetes requiring optimisation in the presence of uncontrolled risk factors for chronic vascular disease (CVD)
- Unsatisfactorily managed diabetes with recent deterioration despite escalation of therapy (HbA1c 64-86mmol/L or 8-10%)
- Self- management education or difficulties in managing diabetes in the absence of adequate community resources
- Diabetes with eating disorders

MSHHS Community Diabetes Chronic Disease Nurse

Category 1 - Pregnancy in clients with pre-existing diabetes on confirmation of pregnancy & prior to being seen by a hospital service

Category 2 - Pre-pregnancy planning

This service is provided by Diabetes Nurse Educators and Nurse Practitioner (NP is Logan Only)

Referral sent via Smart Referral or e-referral (Secure Messaging)

Phone: 07 3338 9082

https://metrosouth.health.qld.gov.au/referrals/community/chronic-disease-diabetes/diabetes-nurse

Key points for Diabetes in Pregnancy screening & management

- EARLY identification of pre-existing diabetes (preferably pre-conception) and risk of gestational diabetes
- Commence 2.5 - 5mg Folate ideally preconception and optimise BSL control
- Screen those at risk as per Queensland Health Guidelines for GDM
- EARLY referral to Antenatal clinic if already diabetic or at risk with an abnormal OGTT (or HbA1c)
- Continue Metformin (and Insulin) and manage until seen at HIGH-RISK Clinic
- Ideally commence education, dietary measures and BSL monitoring but ensure seen early in hospital clinic
- Smoking cessation highly recommended
- FOLLOW UP by GP essential for ever….. these women are at high risk of chronic disease

Green group: Task 3 - Kirra

- Kirra is 28 years old. G6P4 (+1) at 14 weeks gestation.
- Identifies as an Aboriginal and Torres Strait Islander woman.
- She has been stable on 100 mcg of thyroxine o.d. for several years and is taking no other medication.
- Her BMI is 40.

What are the next steps?

What changes if her BMI is now 32 after having undergone bariatric surgery last year?

Metro South Health

Thyroid Disease and Obesity in the Pregnant Patient

Dr Dianna Luong
Staff Specialist - Endocrinology | Logan Endocrine and Diabetes Service (LEADS)
Metro South Health

We care about you

Queensland Government

Thyroid disease and pregnancy

Thyroid physiology in pregnancy

- Thyroid gland increases in size by 10% in iodine replete countries, and 20-40% in iodine deficient countries
- 50% increase in T4, T3 and iodine requirements
- Increase in renal iodine excretion
- Increase in thyroid-binding globulin
- βhCG has thyroid stimulating effects

2017 Guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease During Pregnancy and the Postpartum.

Why is thyroid disease important?

Hyperthyroidism

Miscarriage

Preeclampsia

Pulmonary Hypertension (uncontrolled)

Pre-term delivery

Infection

Fetal / neonatal hyperthyroidism

Placental abruption

Increased perinatal mortality

Hypothyroidism

Infertility

Miscarriage

Pre-term delivery

PPH

Gestational hypertension

Placental abruption

Low birth weight

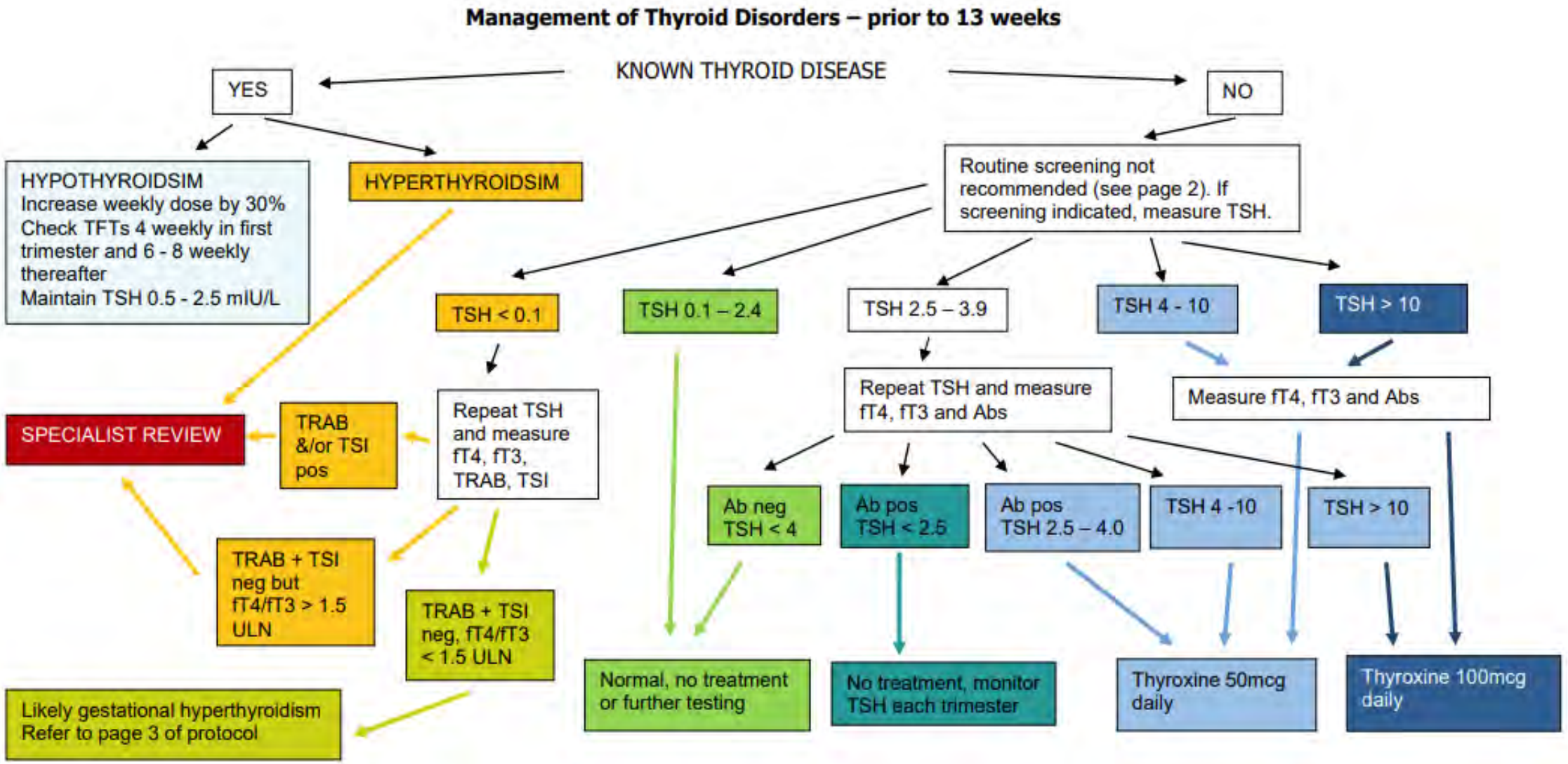
Perinatal mortality

Reduced IQ in offspring

Routine testing **NOT RECOMMENDED** in pregnancy unless:

- Current or previous treatment for thyroid dysfunction (hyper or hypothyroidism, thyroid surgery, neck irradiation)
- Symptomatic – thyroid dysfunction and/or goitre
- > 30 years old
- Known positive thyroid antibodies (TPOAb, TgAb)
- Family history of thyroid disease
- Morbid Obesity (BMI >40)
- Coeliac disease / Type 1 Diabetes / Pernicious Anaemia / Addison's disease
- History miscarriages, infertility, pre-term delivery
- Use of Amiodarone, Lithium or recent IV CT contrast

Thyroid disorders in pregnancy, Women's and Newborn Services, RBWH



Thyroid disorders in pregnancy, Women's and Newborn Services, RBWH

Gestational transient thyrotoxicosis (Gestational hyperthyroidism)

- **Elevated fT4 (usually <1.5x ULN)** and/or **low or suppressed TSH**
- Up to 10% of women in 1st trimester have low or suppressed TSH
- Up to 3% will have elevated fT4
- Thyroid stimulating effect of HCG (>200,000 IU/L)
- **Hyperemesis gravidarum, multiple gestation**, hydatidiform mole, choriocarcinoma
- Is not associated with negative pregnancy outcomes
- Does not require treatment
- Differentiate from Grave's disease by absence of TSH receptor antibody (TRAb)
- Monitor TFTs in 2nd trimester
- Resolves by 16-20 weeks' gestation
- (differential: autonomous thyroid nodule)

When to refer…?

- Monitor fT4, fT3, TSH every 4-6 weeks
- Refer only if fT4/fT3 increases beyond 1.5x ULN ***or*** TSH is persistently <0.4 after 20 weeks gestation
- Monitoring can cease once fT4, fT3 and TSH are within normal range for gestation

Hypothyroidism

Target TSH

- Gestation-specific reference ranges (differs between labs)

- **Pre-conception - <2.6**
- **1st trimester - <2.6**
- 2nd trimester - <3.0
- 3rd trimester - <3.0

Already on Levothyroxine?

- **Increase dose by 30% (if pre-conception TSH at target)**
  - (extra 2 doses during the week)

- Target TSH 0.5-2.5
- Check TFTs 4 weekly in 1st trimester
- 6-8 weekly in 2nd and 3rd trimester

Thyroid disorders in pregnancy, Women's and Newborn Services, RBWH

Practical guide (not already on levothyroxine)

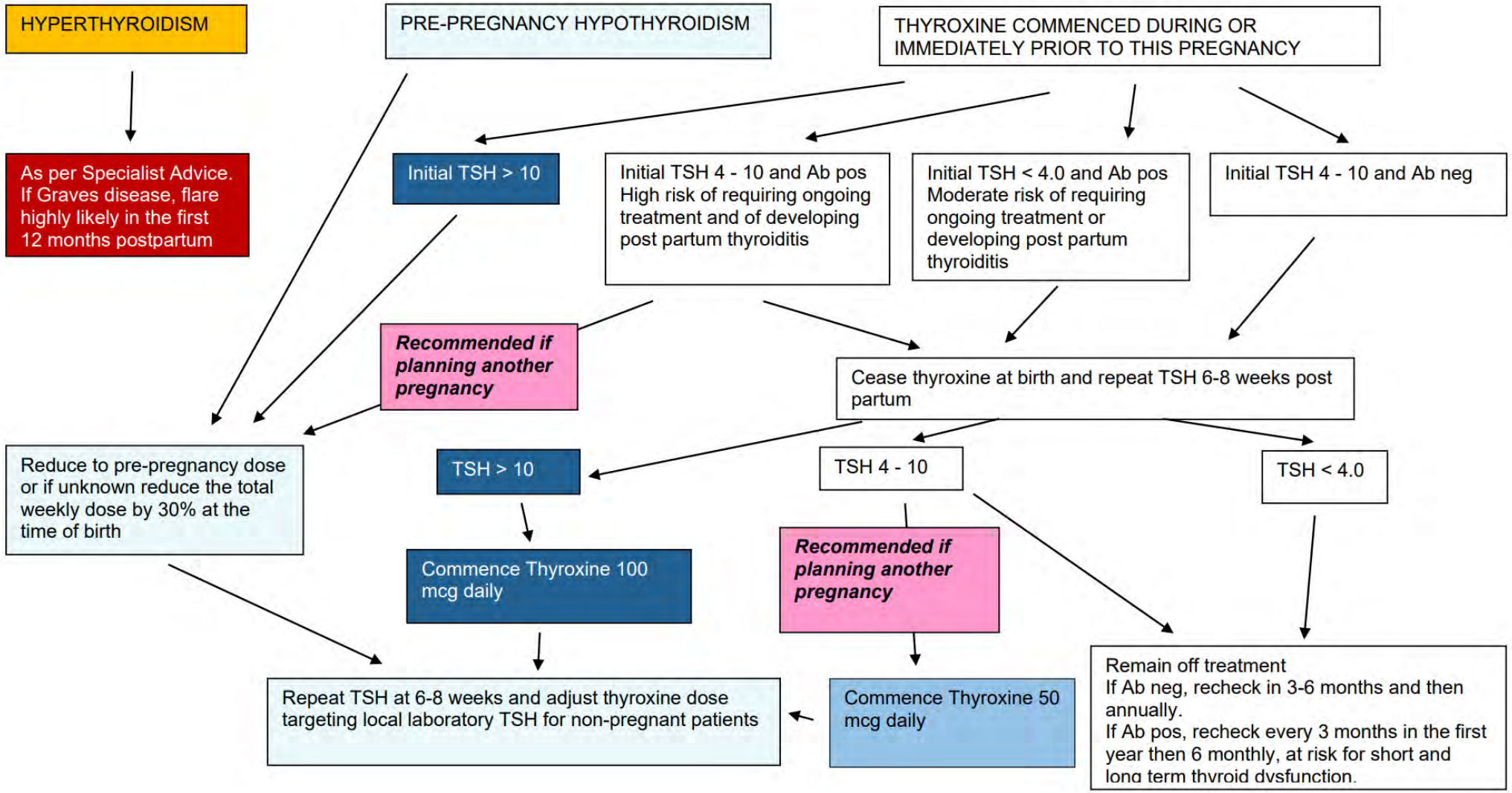
- **TSH <2.6** – no LT4

- **TSH 2.5 - 3.9** – TPOAb and TgAb
  - Ab positive – LT4 50mcg daily
  - Ab negative – no LT4

- **TSH 4.0 - 10.0** – LT4 50mcg daily
- **TSH >10.0** – LT4 100mcg daily

- If commenced on LT4, check TFT in 4 weeks
- Target TSH lower half of gestation-specific range (or 0.5-2.5)
  - If TSH > target, increase thyroxine by 25microg/day
  - If TSH <target, reduce thyroxine by 25microg/day
- Repeat TFTs every 4 weeks and adjust accordingly.
- Once dose stable / TSH in range, check TFT every 6-8 weeks

Management of Thyroid Disorders – Postpartum



Thyroid disorders in pregnancy, Women's and Newborn Services, RBWH

Postpartum

LT4 prior to pregnancy

- Return to pre-pregnancy dose (if TSH <4.0 pre-pregnancy)
- If dose unknown or if initial TSH >4.0, reduce weekly dose by 30%
- TFT 6-8 weeks, target TSH non-pregnant adult reference ranges

Postpartum

Commenced LT4 during (or just prior to) pregnancy

- **Initial TSH <4.0 <u>and</u> antibody positive**
- Cease LT4
- TFT 6-8 weeks, target TSH non-pregnant adult reference range

- If TSH 4.0-10.0, restart LT4 50mcg daily (if planning pregnancy)

  or

- TFT 3 monthly 1st year postpartum, 6 monthly thereafter

- If TSH >10.0, restart LT4 100mcg daily

Postpartum

Commenced LT4 during (or just prior to) pregnancy

- **Initial TSH 4.0-10.0 and antibody <u>negative</u>**
  - Cease LT4
  - TFT in 6-8 weeks
  - TSH <4.0 – stay off LT4
  - TSH 4.0-10.0 – LT4 50mcg daily (if planning pregnancy)

    or
  - TFT 3-6 monthly

- **Initial TSH 4.0-10.0 and antibody <u>positive</u>**
  - LT4 at 70% of 3rd trimester weekly dose (if planning pregnancy)
  - Check TFT in 6-8 weeks

    or
  - Cease LT4 and TFT 6-8 weeks
  - TFT 3-6 monthly

- **TSH >10.0** – Commence LT4 100mcg daily

Postpartum

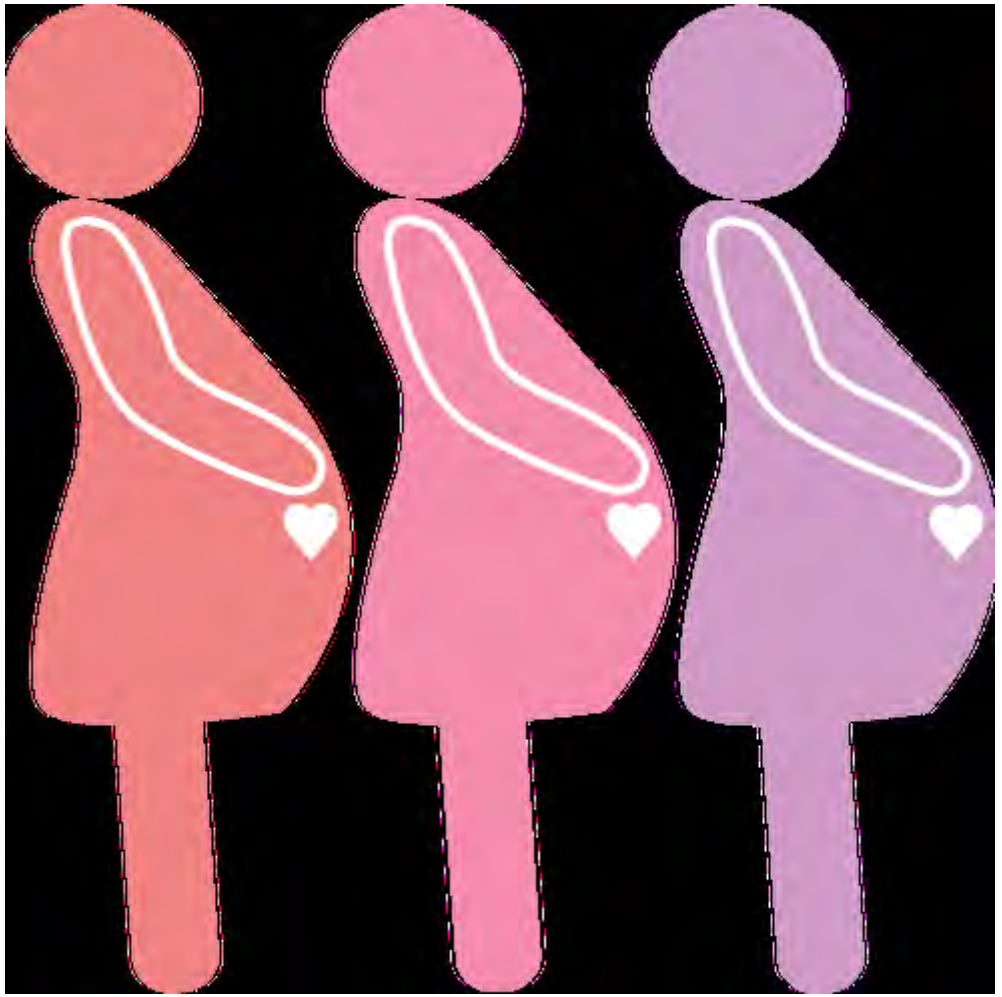
Commenced LT4 in pregnancy

- Initial TSH >10.0
- Continue LT4 at 70% of 3rd trimester dose
- TFT 6-8 weeks

Hyperthyroidism

- Graves' disease most common (pathological) cause
- **Mild hyperthyroidism carries little maternal/fetal risk**
- TSH, fT4, fT3, TRAb for any low/suppressed TSH
- **Refer early for thyrotoxicosis / subnormal TSH in pregnancy**
- Check TFT every 4-6 weeks until seen by specialist
- PTU up till 16 weeks, Carbimazole after that
- PTU associated with less severe embryopathy risk
- Anti-thyroid drugs disproportionately affect fetus
- Target fT4 high normal or mildly elevated (<1.5x ULN)
- TRAb at 26-30 weeks (predicts risk of fetal/neonatal thyrotoxicosis)
- **High risk of postpartum flare of Graves'**

Obesity in pregnancy



What is the BMI of pregnant women that triggers additional care and planning needs?

BMI of >30

Queensland Clinical Guidelines

Obesity and pregnancy (including post bariatric surgery) - Queensland Clinical Guidelines (August 2021)
https://www.health.qld.gov.au/__data/assets/pdf_file/0019/142309/g-obesity.pdf

MSHHS maternity population

- **68%** of people in Logan area are obese, ? 40-50% in Redland
- Around **22% of women who are pregnant are obese** (across Qld) & 24% overweight
- **31%** of pregnant Aboriginal/Torres Strait Islander women have a BMI 30 kg/m2 or above, versus **21%** of non-Aboriginal/Torres Strait Islander women
- “Pre-pregnancy BMI greater than 25 kg/m^2 and excessive Gestational Weight Gain (GWG) are both implicated in up to 30% of pregnancy complications”
- Past bariatric surgery numbers – approx. 5-7/month at Logan Hospital, but growing incidence over few years (0.5% in Qld 2014 - 2019 - from QCG)

From: Obesity and pregnancy (including post bariatric surgery) - Queensland Clinical Guidelines” (August 2021) https://www.health.qld.gov.au/__data/assets/pdf_file/0019/142309/g-obesity.pdf

and "Queensland Mothers and Babies 2018–2019" - Report of the Queensland Maternal and Perinatal Quality Council 2021 – available at Queensland Maternal and Perinatal Quality Council | Clinical Excellence Queensland | Queensland Health (published Sept 2022)

Maternal Obesity: Risks for the mother

- Increased rate of subfertility
- Type 2 diabetes and associated sequelae
- **Hypertensive disorders of pregnancy**
- **Thromboembolism**
- Obstructive sleep apnoea
- Higher incidence induction of labour and Caesarean section
- Complications in labour resulting in birth trauma / instrumental birth
- Anaesthetic complications
- Post operative complications
- Higher PPH incidence
- Postnatal complications i.e. Delayed lactogenesis/breastfeeding difficulties, **thromboembolism** postnatal depression
- Higher maternal death rate

Maternal Obesity: Risks for the baby

- Increased risk of miscarriage/recurrent miscarriage/**foetal anomaly**
- Reduced reliability of cfDNA testing (NIPT).
- Limitations on clinical assessment and ultrasound screening for fetal anomaly and growth – higher risk missed IUGR/anomalies
- Increased risk pregnancy complications e.g. **macrosomia, shoulder dystocia**, birth trauma, stillbirth
- Increased risk perinatal complications e.g. respiratory distress, jaundice, hypoglycaemia and increased perinatal death.
- **Ongoing risks of childhood obesity and diabetes**

Not a good thing!

Intergenerational impact of maternal obesity

Influence of maternal obesity on the long-term health of offspring

Keith M Godfrey [1], Rebecca M Reynolds [2], Susan L Prescott [3], Moffat Nyirenda [4], Vincent W V Jaddoe [5], Johan G Eriksson [6], Birit F P Broekman [7]

- Increased risks of obesity, coronary heart disease, stroke, type 2 diabetes, and asthma
- Poorer cognitive performance and increased risk of neurodevelopmental disorders

The first GP visit …

- **Early referral** - Maternity Services including relevant information
  - Dietitian (if available)
- And initiate the following
  - Early GDM screening (HbA1c if K <12/40 or OGTT)
  - 2.5mg-5mg folic acid daily (preconception/first TM) - increased congenital anomaly risk (esp. neural tube defects) and higher incidence folate deficiency
  - Baseline E/LFT and urinary protein:creatinine ratio
  - Dating scan - Early USS best for calculating EDB. Ongoing clinical assessment can be difficult!
  - Arrange detailed anomaly scan - increased congenital anomaly risk
  - Commence discussion re appropriate weight gain in pregnancy for BMI (chart, if possible, on weight tracker)

Early GDM Screening

If high risk, HbA1c if <12 weeks (first trimester), or arrange early OGTT

Risk factors for GDM are:

- BMI >30 (pre-pregnancy or on entry to care)
- Ethnicity (Aboriginal and Torres Strait Islander, Pacific or South Sea Islander, Indian subcontinent, South-East Asia, Middle Eastern or African)
- Previous GDM
- Previous elevated BGL
- Maternal age > 40 years
- Family history DM (1st degree relative or sister with GDM)
- Previous macrosomia (birth weight >4500g or > 90th percentile)
- Previous perinatal loss
- Polycystic ovarian syndrome
- Medications (corticosteroids, antipsychotics)
- Multiple pregnancy
- **Post Bariatric Surgery**

The first GP visit …

Consider the following:

- Aspirin 150mg OD
  - depending on risk factors for pre-eclampsia
- Antenatal thromboprophylaxis
  - “Antenatal and postnatal thromboprophylaxis according to risk” Flowchart

https://www.health.qld.gov.au/__data/assets/pdf_file/0035/944927/f-vte-risk.pdf

Low dose aspirin (and calcium)

High risk for developing pre-eclampsia	
1 or more risk factors	Previous hypertensive disorder during prior pregnancy
	Chronic kidney disease or renal impairment
	Multi-fetal gestation
	Pre-existing chronic hypertension
	Pre-existing T1 or T2 diabetes mellitus
	Autoimmune disorders e.g. SLE, APLS
Moderate risk for developing pre-eclampsia	
2 or more risk factors	Advanced maternal age (>40)
	Obesity (BMI ≥35)
	Nulliparity
	Family history of pre-eclampsia
	Interpregnancy interval ≥10 years
	Assisted reproduction technologies
	SBP >130mmHg and/or DBP >80mmHg

- Aspirin 150mg nocte
- Taken **before** 16 weeks (preferably 10-12 weeks)
- Cease at 34-37 weeks

- Calcium 1500mg daily if dietary intake <1000mg daily

And throughout antenatal care visits

- Weight at each (counsel woman and chart on weight tracker for BMI)
- Urinary protein (if hypertension/pre-eclampsia risk)
- BP (with the right size cuff)
- OGTT repeat at 24-28/40 if first one was negative

With the obstetrician….

- Anaesthetic referral if BMI >40 if available
- Serial scans if BMI>50 for fetal growth
- If weight could impact transfer of care or birth decisions, recalculate BMI at approximately 36/40 or earlier (e.g. at 32/40)
- Discussion about timing of birth

Target gestational weight gain

Target Weight Gains

*Calculations assume a 0.5–2kg weight gain in the first trimester for single babies.

Refer to dietitian if multiple pregnancies, as different goals required. Dietary and physical activity requirements discussed. Refer to Queensland Clinical Guideline: *Obesity and pregnancy* for further information.

Pre-pregnancy BMI (kg/m^2)	Rate of gain 2nd and 3rd trimester (kg/week)*	Recommended total gain range (kg)
Less than 18.5	0.51	12.5 to 18
18.5 to 24.9	0.42	11.5 to 16
25.0 to 29.9	0.28	7 to 11.5
≥30.0	0.22	5 to 9

Useful tools

- See page b4 of the PHR or use a weight tracker for BMI Weight Tracker for BMI
- Use pre-pregnancy BMI if known as baseline or BMI at first Antenatal visit (or assume gain of 0.5-2kg in first TM)

"Obesity and pregnancy (including post bariatric surgery)" - Queensland Clinical Guidelines (August 2021)

https://www.health.qld.gov.au/__data/assets/pdf_file/0019/142309/g-obesity.pdf

4.2 Gestational weight gain

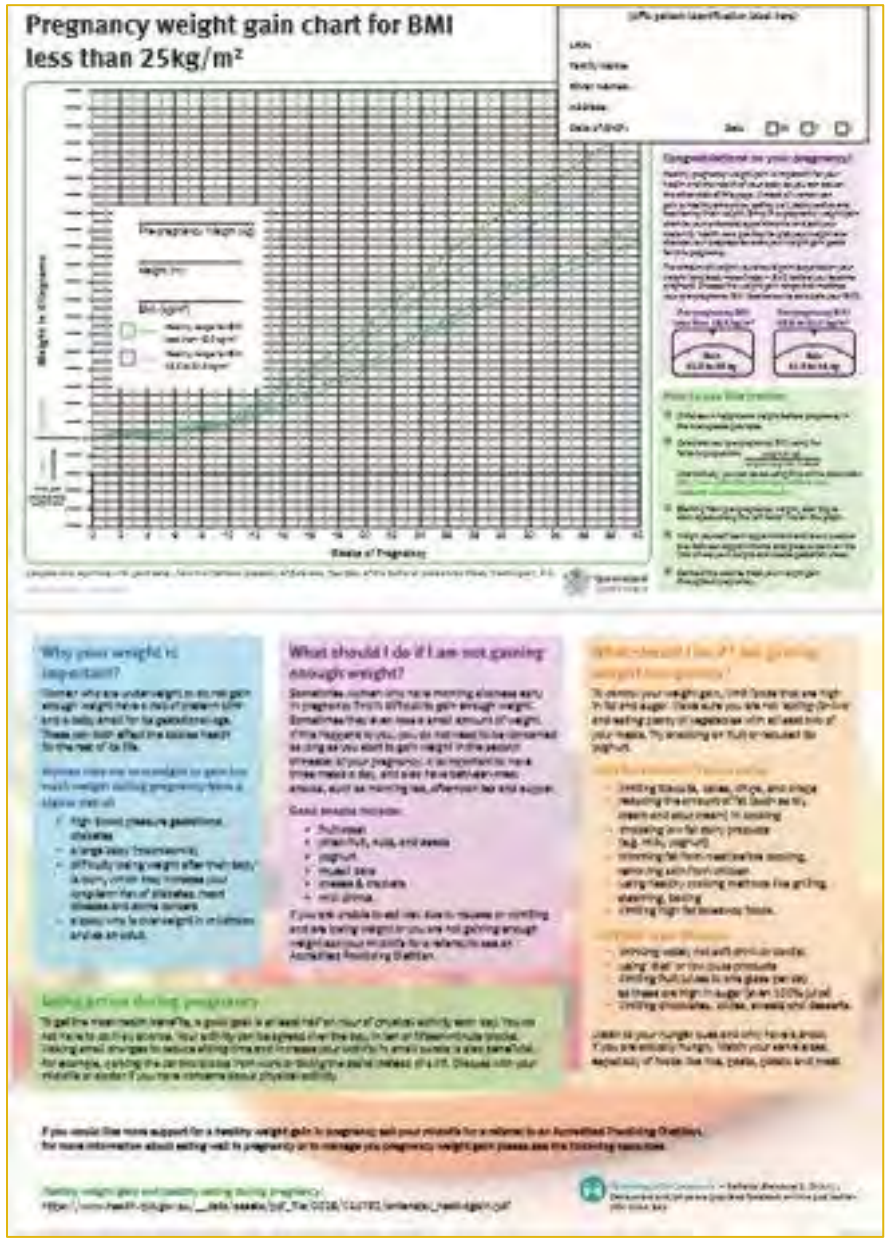
GWG recommendations are based on those of the Institute of Medicine[41,65] with variations added for women of Asian ethnicity.[44]

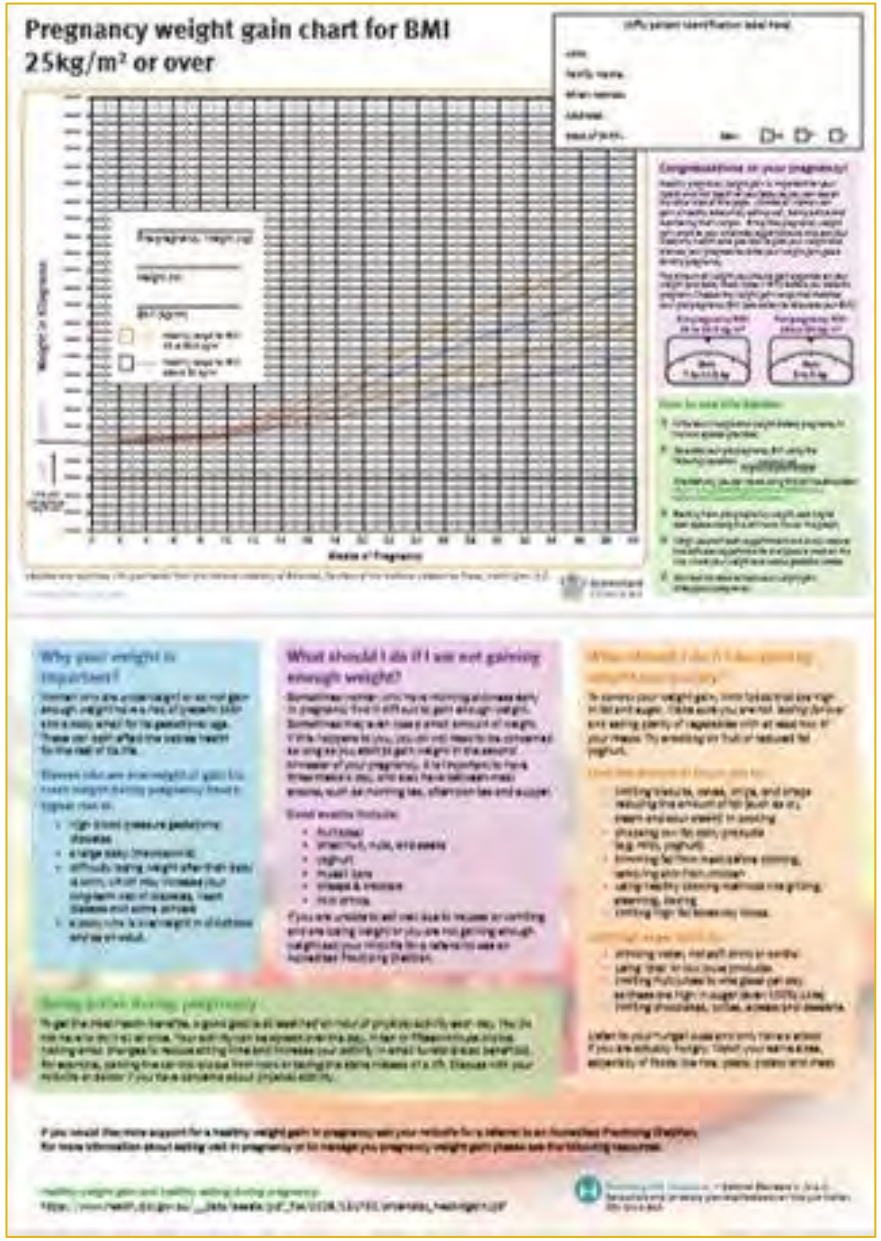
Table 9. Recommended gestational weight gain

Pre-pregnancy BMI (kg/m²)	**Singleton pregnancy weight gain**		
Non-Asian background	**1st trimester total weight gain** (kg)	**2nd and 3rd trimester** (kg/week)	**Total** (kg)
Less than 18.5	0.5–2 kg	0.5	12.5–18
18.5 to 24.9		0.4	11.5–16
25.0 to 29.9		0.3	7–11.5
Greater than or equal to 30.0		0.2	5–9
Asian background			
Less than 18.5	0.5–2 kg	0.5	12.5–18
18.5 to 22.9		0.4	11.5–16
23.0 to 27.5		0.3	7–11.5
Greater than 27.5		–	7
Twin and triplet pregnancy	**Twin or triplet pregnancy weight gain**		
18.5 to 24.9	–		17–25
25.0 to 29.9			14–23
Greater than or equal to 30.0			11–19

New table in updated guidelines with GWG recommendations including variations added for women of Asian ethnicity.

https://www.health.qld.gov.au/__data/assets/pdf_file/0019/142309/g-obesity.pdf





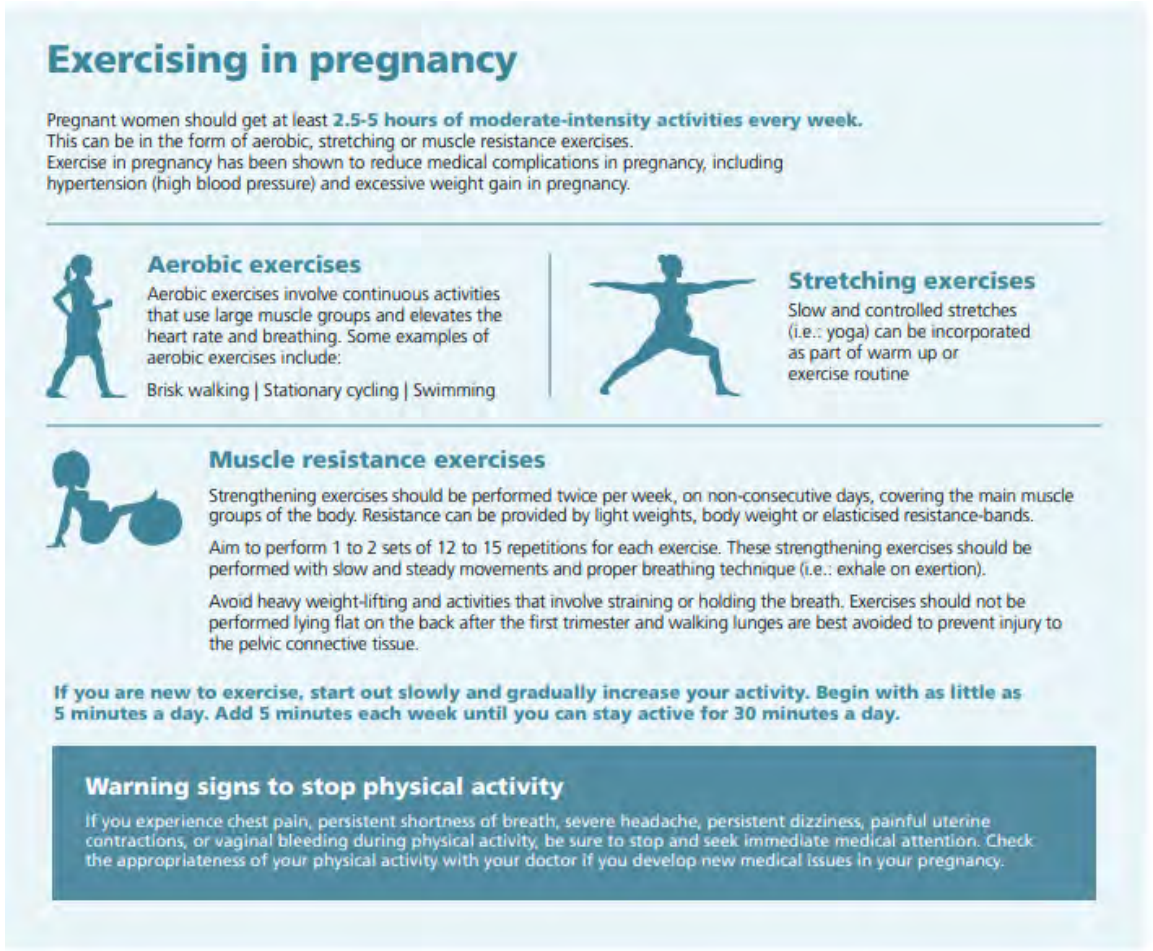
Available to download BMI < 25 kg/m2 ; BMI > 25 kg/m2

In an ideal world…..

The provision of preconception/inter-conception care would be gold standard because

- ↑ chances of conception by reducing BMI to <30 (5-10% reduction if obese)
- prepregnant weight excess may be more of a risk than excess weight gain in pregnancy
- Women gaining one to two BMI units from one pregnancy to the next increase their risk of gestational hypertension, GDM or LGA birth by 20–40%.

So, as GPs, what can we do?



Exercising in pregnancy

Pregnant women should get at least **2.5-5 hours of moderate-intensity activities every week.**
This can be in the form of aerobic, stretching or muscle resistance exercises.
Exercise in pregnancy has been shown to reduce medical complications in pregnancy, including hypertension (high blood pressure) and excessive weight gain in pregnancy.

Aerobic exercises

Aerobic exercises involve continuous activities that use large muscle groups and elevates the heart rate and breathing. Some examples of aerobic exercises include:

Brisk walking | Stationary cycling | Swimming

Stretching exercises

Slow and controlled stretches (i.e.: yoga) can be incorporated as part of warm up or exercise routine

Muscle resistance exercises

Strengthening exercises should be performed twice per week, on non-consecutive days, covering the main muscle groups of the body. Resistance can be provided by light weights, body weight or elasticised resistance-bands.

Aim to perform 1 to 2 sets of 12 to 15 repetitions for each exercise. These strengthening exercises should be performed with slow and steady movements and proper breathing technique (i.e.: exhale on exertion).

Avoid heavy weight-lifting and activities that involve straining or holding the breath. Exercises should not be performed lying flat on the back after the first trimester and walking lunges are best avoided to prevent injury to the pelvic connective tissue.

If you are new to exercise, start out slowly and gradually increase your activity. Begin with as little as 5 minutes a day. Add 5 minutes each week until you can stay active for 30 minutes a day.

Warning signs to stop physical activity

If you experience chest pain, persistent shortness of breath, severe headache, persistent dizziness, painful uterine contractions, or vaginal bleeding during physical activity, be sure to stop and seek immediate medical attention. Check the appropriateness of your physical activity with your doctor if you develop new medical issues in your pregnancy.

A **systematic review and meta-analysis** (117 randomised trials with 34,500 pregnancies) showed:

- Nutritional programs decrease overall maternal/neonatal morbimortality, and gestational diabetes, preterm delivery, admission of newborns to intensive care, etc
- Physical activity programs and combined physical activity/nutrition programs have proven effects on maternal morbimortality.
- Other types of interventions only control weight gain.

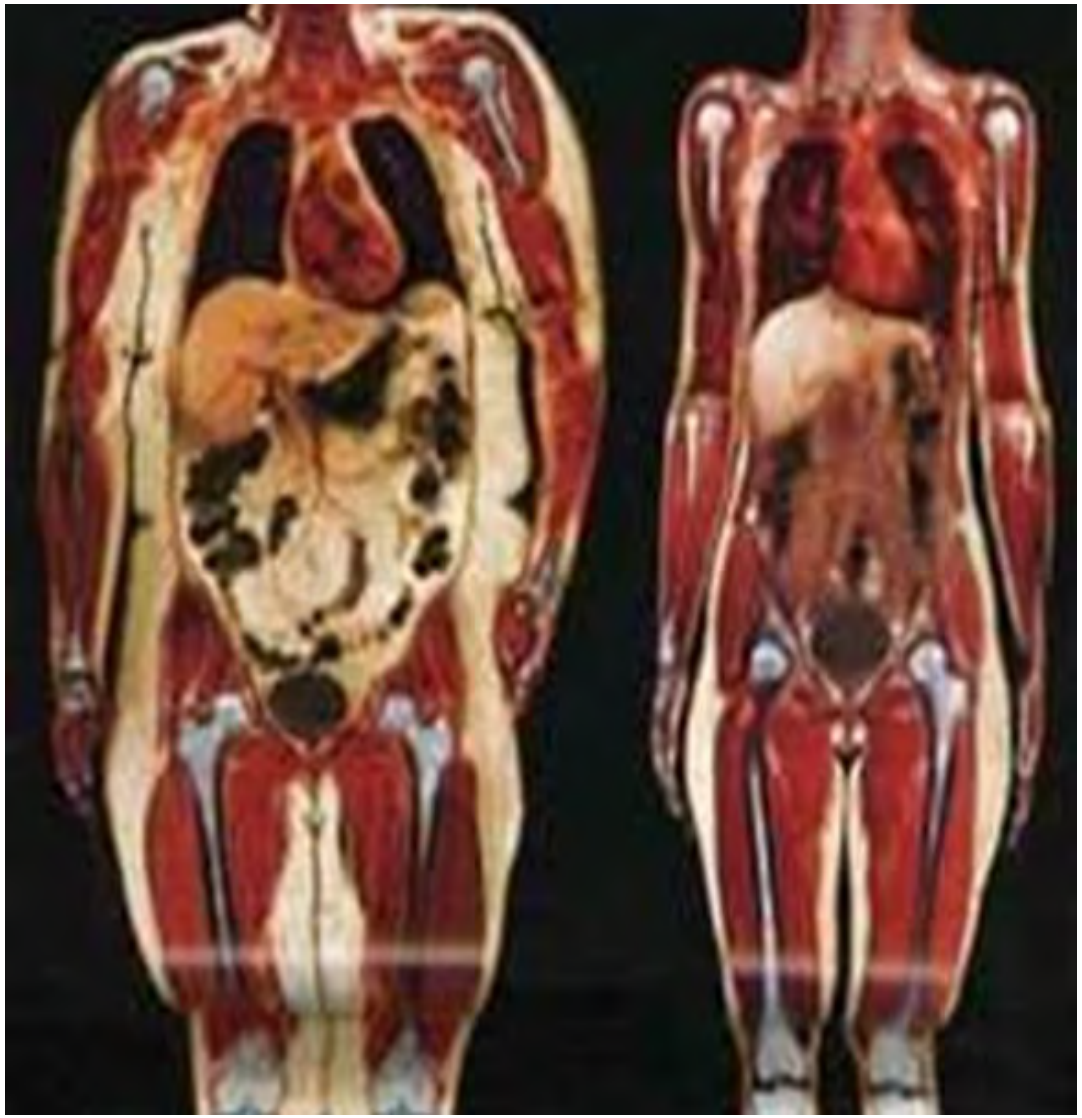
Source: Association of Antenatal Diet and Physical Activity–Based Interventions With Gestational Weight Gain and Pregnancy Outcomes. A Systematic Review and Meta-analysis. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2787201

Prenatal advice

CONSIDER:

- Bariatric surgery
- Metformin
- Inter-pregnancy weight reduction

Behold the benefits of seeing an enthusiastic dietitian….



So back to Kirra…..

If she has undergone bariatric surgery and BMI is now 32 – what changes to our management and that at the hospital?

Queensland Clinical Guidelines

Obesity and pregnancy (including post bariatric surgery) - Queensland Clinical Guidelines (August 2021)
https://www.health.qld.gov.au/__data/assets/pdf_file/0019/142309/g-obesity.pdf

Impact of previous bariatric surgery on pregnancy

Table 24. Pregnancy outcomes following previous bariatric surgery

Aspect		Impact
Woman	Risk	• Increased rates of nutritional deficiencies and malabsorption issues[152] • Increased risk of unplanned pregnancy
	Benefit	• Reduced rates of: ○ GDM[153] ○ Hypertensive disorders[153] ○ Post term pregnancy[152] ○ IOL[154] ○ Epidural use[154] ○ Labour dystocia[154] ○ Obstetric anal sphincter injury[154] ○ PPH[153,154] ○ CS[153], and CS following previous CS[154]
Baby	Risk	• Increased rates of: ○ FGR[153] ○ SGA infants[152,153] ○ Preterm birth[152,153] ○ Stillbirth[152] ○ Congenital abnormalities[152] ○ Neonatal unit admission[152]
	Benefit	• Reduced rates of: ○ Neonatal resuscitation[154] ○ LGA infants[152,153]

Obesity and pregnancy (including post bariatric surgery) - Queensland Clinical Guidelines (August 2021)

Considerations post bariatric surgery

- Pregnancy planning
- Time from bariatric surgery 12-18 months
- Weight gain in pregnancy
- Nausea and vomiting
- Nutrition
- Steatorrhoea
- Hypoglycaemia

Metro South Health

Dietitian – Redland Hospital

Naomi Scolari
Dietitian – Redland Hospital

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Appendix C: Suggested pregnancy nutrient and biochemical screening post bariatric surgery

	Laboratory test	Pre conception	First trimester	2nd and 3rd trimester	Lactation (3 monthly)	Additional measurements/notes
Full blood count		✓	✓	✓	✓	
CHEM20*	Electrolytes Sodium, Potassium, Chloride, Creatinine, Chem Panel	✓	✓	✓		Order individual tests or if all required complete as part of a *CHEM20
	Albumin	✓	✓	✓	✓	
	Calcium	✓	✓	✓	✓	
	Magnesium	✓	✓	✓	✓	
	Phosphate	✓	✓	✓	✓	
	Liver function tests	✓	✓	✓	✓	
	Renal Panel	✓	✓	✓	✓	
Thyroid function—thyroid stimulating hormone (TSH)		✓	✓			At physicians' discretion Add on free thyroxine (FT4) if TSH abnormal
C Reactive Protein		✓	✓		✓	Baseline screen, then at physician's discretion. If systemic inflammation, risk of inaccurate plasma nutrient levels (e.g. vitamins A, B^6, C, D, selenium, zinc). Repeat after resolves
Iron studies		✓	✓	✓	✓	Includes ferritin and transferrin saturation
Vitamin D—25 OH		✓	✓	✓	✓	
Vitamin B_{12} (Cobalamin)		✓	✓	✓	✓	Folic acid supplementation may mask deficiency
Methylmalonic acid (MMA)		✓	✓	✓	✓	Sensitive index of vitamin B_{12} status At physicians' discretion
Folate (Serum)		✓	✓	✓	✓	
Zinc protoporphyrin		✓	✓	✓		
Vitamin A		✓	✓	✓	✓	
Retinol Binding Protein		✓	✓	✓	✓	
Vitamin B_1 (Thiamine diphosphate whole blood—THIAM)		✓				If repeated vomiting
Serum copper and ceruloplasmin			✓			Ceruloplasmin: copper carrying protein
Selenium			✓			
Vitamin E—Alpha-tocopherol (VITE)		If symptomatic anaemia or steatorrhea				
Vitamin B_6 (Pyridoxine)		If multiple or severe deficiencies				
Vitamin C		If deficiency suspected				

Source: Shawe J, et al. Pregnancy after bariatric surgery: Consensus recommendations for periconception, antenatal and postnatal care. Obesity Reviews 2019;20(11):1507-22; Ciangura C, et al. Clinical Practice Guidelines for Childbearing Female Candidates for Bariatric Surgery, Pregnancy, and Post-partum Management After Bariatric Surgery. Obesity surgery 2019;29(11):3722-34; Mechanick JI, et al. Clinical Practice Guidelines for the perioperative nutrition, metabolic and nonsurgical support of patients undergoing bariatric procedures – 2019 Update. Endocrine Practice 2019;25(Supplement 2):1-75; Pathology Queensland communique, January 2021. O'Kane M, Parretti HM, Pinkney J, Welbourn R, Hughes CA, Mok J, et al. British Obesity and Metabolic Surgery Society Guidelines on perioperative and postoperative biochemical monitoring and micronutrient replacement for patients undergoing bariatric surgery—2020 update. Obesity Reviews 2020;21(11):e13087.

Guideline: Obesity and pregnancy (including post bariatric surgery) (health.qld.gov.au)

Appendix D: Recommendations for routine micronutrient supplementation post bariatric surgery

Nutrient	Daily supplements after bariatric surgery		Daily upper limit in pregnancy and lactation		Notes
	Preconception	Pregnancy and lactation	14 to 18 years	19 to 50 years	
Folic acid	5 mg	5 mg	800 micrograms	1,000 micrograms	One month prior to pregnancy and up to 12 weeks gestation
Iodine	150 micrograms	150 micrograms	900 micrograms	1,100 micrograms	
Calcium	1,200–1,500 mg	1,200–1,500 mg	2,500 mg	2,500 mg	Adjusted for dietary calcium intake. May be combined in vitamin D supplement Avoid taking with iron
Iron	45–60 mg	50–80 mg	45 mg	45 mg	Take separate from calcium supplement and acid reducing medications
Vitamin A	5,000 IU	5,000 IU	9,300 IU	10,000 IU	Avoid exceeding an upper limit of 10,000 IU Vitamin A from retinol sources
Vitamin B_1	≥ 12mg	≥ 12mg	Not specified	Not specified	
Vitamin B_{12}	1 mg	1 mg	Not specified	Not specified	Dose dependent on frequency and route of administration
Vitamin D	≥ 1,000 IU	≥ 1,000 IU	3000 IU	3000 IU	Titrate dosage until serum levels of 25-hydroxyvitamin D >50nmol/L (30 ng/mL), accounting for cumulative content within other supplements
Vitamin E	15 mg	15 mg	300 mg/day (α-tocopherol equivs)	300 mg/day (α-tocopherol equivs)	Caution required in pregnancy
Vitamin K	90–120 micrograms	90–120 micrograms	Not specified	Not specified	Caution required in pregnancy
Copper	2 mg	2 mg	8 mg	10 mg	
Zinc	8–15 mg per 1 mg of copper	8–15 mg per 1 mg of copper	35 mg	40 mg	
Selenium	50 micrograms	50 micrograms	400 micrograms	400 micrograms	

Source: Shawe J,et al. Pregnancy after bariatric surgery: Consensus recommendations for periconception, antenatal and postnatal care. Obesity Reviews 2019;20(11):1507-22; Ciangura C, et al. Clinical Practice Guidelines for Childbearing Female Candidates for Bariatric Surgery, Pregnancy, and Post-partum Management After Bariatric Surgery. Obesity surgery 2019;29(11):3722-34; Mechanick JI, et al. Clinical Practice Guidelines for the perioperative nutrition, metabolic and nonsurgical support of patients undergoing bariatric procedures – 2019 Update. Endocrine Practice 2019;25(Supplement 2):1-75; NHMRC. Nutrient Reference Values for Australia and New Zealand. 2006; Australian Government Clinical Practice Guidelines: Pregnancy Care. 2018.

Guideline: Obesity and pregnancy (including post bariatric surgery) (health.qld.gov.au)

Pregnancy after bariatric surgery or with a weight above a healthy range

This information sheet aims to answer some commonly asked questions about weight during pregnancy.

IMPORTANT: This is general information only.
Ask your doctor or midwife about what care is right for you.

In Queensland about half of pregnant women have a weight above the healthy range.

Is your weight in the healthy weight range?

- calculating your body mass index (BMI) will inform you of your weight classification
- BMI is calculated by dividing body weight in kilograms by height in metres squared (kg/m^2)
- the healthy weight range is 18.5 to 24.9 kg/m^2
- when someone is over the healthy weight range it is much more than your clothing size or how you look, it may directly impact your health and wellbeing
- talk to your health care provider about your BMI

What words are used in health care about body weight

- health care providers commonly use words like 'BMI', 'healthy weight range', 'overweight', 'obese', and/or obesity classifications (e.g. class I, II, or III)
- BMI ranges are linked to these words indicating the chance of health problems (e.g. obese class III indicates a greater rate of health problems than obese class I)
- if you have a preference about the words used to talk about your weight, share them with your health care providers

Before you are pregnant

If you have had bariatric surgery, or you or your partner are above a healthy weight range, going to your GP for a health check is a good idea. Your GP can help you with:

- best timing of pregnancy related to your health
- screening tests to check for health issues related to body weight
- healthy eating, physical activity, and lifestyle choices
- vitamin and mineral tablets (often called supplements)
- referral to other health care professionals for support

Does having a weight above a healthy range affect pregnancy?

Many women have a pregnancy and birth experience no different to women in a healthy weight range. However, as BMI increases there is a greater chance of experiencing problems, such as

For women

- difficulty falling pregnant
- pregnancy loss or stillbirth
- gestational diabetes
- high blood pressure/pre-eclampsia
- blood clots

For babies

- birth defects such as spina bifida
- higher birth weight
- jaundice
- admission to a neonatal nursery
- childhood obesity

What if you have had bariatric surgery?

After bariatric surgery (surgery to assist with weight reduction, such as gastric sleeve, bypass or lap band) it is important you get enough nutrients including vitamins and minerals (also called micronutrients).

Vitamin and mineral tablets and extra blood tests are recommended in addition to a healthy diet.

It is best to plan a pregnancy after your micronutrient levels and your weight have stabilised. Enough nutrients are important to prevent problems like:

- birth defects
- slow growth of your baby during pregnancy
- baby born early (preterm/premature)
- lower birth weight
- stillbirth

Is extra care needed for pregnancy?

- see your doctor or midwife early in pregnancy so they can help work out the best care for you
- extra blood tests and ultrasound scans to check on baby's growth may be recommended
- you will likely be offered extra appointments (e.g. with a dietitian)

How much weight gain is ok?

Using a weight gain chart for pregnancy may help you keep track of your weight.

Recommendation
For all women in the first 12 weeks, a weight gain of 0.5 to 2 kgs–then
Then, if your BMI is 25–29 • a gain of 0.3 kg each week • with a total gain in pregnancy of 7 to 11.5 kg
Or if your BMI is 30 or more • a gain of 0.2 kg each week • with a total gain in pregnancy of 5 to 9 kg

Is there anything different for labour and birth?

Your healthcare team will discuss additional options and choices for your labour and birth. It depends on your own situation.

- Sometimes transfer to another hospital to give birth might be recommended
- a 'drip' or access to a vein may be recommended in case you need additional medications
- monitoring your baby's heart continuously throughout your labour may be recommended
- an anaesthetist may ask to see you in case you need an epidural or anaesthetic
- you may notice extra staff caring for you
- an injection to reduce the risk of bleeding when the placenta comes is recommended

Will you be able to breastfeed?

- yes, breastfeeding is recommended, and you will be supported to feed your baby however you choose
- you may find that you need some extra support with positioning your baby to feed and sometimes it takes a bit longer for your milk supply to increase
- if you have had bariatric surgery in the past your GP or dietitian will continue to monitor your vitamin and mineral levels during breastfeeding
- your healthcare team are there to support you, so ask for help when you need it

The early days

- try to get back on your feet as soon as you are able, to reduce your risk of blood clots
- care providers usually continue to visit you at home after discharge
- community child health clinics offer ongoing support with feeding and parenting

What about my weight after pregnancy?

It is important to continue to monitor your weight after your baby is born. The weight you gained during pregnancy should have come off by around six months after birth. This helps to reduce your chance of keeping weight on in the long term.

Maintaining the healthy lifestyle choices made during pregnancy may be an important step for you and your family. Talk to your GP or dietitian about ongoing support with your healthy lifestyle choices and timing of future pregnancies.

What can you do if you are feeling uncomfortable or unsupported?

Sometimes people can seem judgemental and critical about larger body sizes. This can be upsetting, cause distress or make some women feel uncomfortable. This experience makes some women put off seeing their health care providers.

Speaking up about uncomfortable feelings will help guide your health care provider to give the care that's best for you and your baby.

Consumer information: Pregnancy after bariatric surgery or with a weight above a healthy range

HEALTHY PREGNANCY HEALTHY BABY
Healthy pregnancy weight gain training

Healthy pregnancy weight gain is an important part of any healthy pregnancy to optimise pregnancy and future health outcomes for mothers and their offspring. Monitoring weight during pregnancy, coupled with a conversation between a woman and her health professional about progress, healthy eating and physical activity is a recommended part of routine care for all women.
This Healthy Pregnancy Healthy Baby, pregnancy weight gain training is designed to prepare health professionals to engage in respectful conversations about weight and lifestyle and equip them to deliver best practice care consistent with current evidence.

The content has been developed in consultation with a reference group of Queensland health professionals. The suite of online professional development resources is broken down into **7 short modules** with a total completion time of **90 minutes**. Each module will take around 10-15 minutes to complete including a knowledge check. The training is flexible, allowing learners to do one module and come back later to complete others. A certificate is available on completion of the post–training questionnaire.

This training package is suitable for any member of the multidisciplinary team caring for pregnant women including, midwives, obstetricians, physicians, general practitioners, practice nurses, dietitians, physiotherapists, and other allied health practitioners.

https://metronorth.health.qld.gov.au/health-professionals/healthy-pregnancy-healthy-baby

Dietary needs and special considerations

Module 7

Special considerations

Duration: approximately 16 minutes

By the completion of this module you should be able to:

- Describe an approach to discussing weight monitoring with women who have had, or currently have an eating disorder
- Describe the risks associated with weight loss and inadequate weight gain in women with a pre-pregnancy BMI > 30 kg/m^2
- Understand the weight gain recommendations for pregnant women who have had weight loss surgery.

Webinar 1: Women with a history of an eating disorder.

Watch the video >

Video: Stephanie Heard – approaching the topic of weight monitoring

Watch the video >

Webinar 2: Weight gain below recommendations in women with a pre-pregnancy BMI of 30 kg/m^2 or above and women who have had weight loss surgery.

Watch the video >

Take the Knowledge Check >

Additional Resources:

- National Eating Disorders Collaboration
- Butterfly Foundation
- Claydon et al, 2018. Waking up every day in a body that is not yours: a qualitative research inquiry into the intersection between eating disorders and pregnancy. BMC Pregnancy and Childbirth
- Kimmel et al, 2015. Obstetric and gynaecologic problems associated with eating disorders. International Journal of Eating Disorders
- Watson et al, 2017. Maternal eating disorders and perinatal outcomes: A three- generation study in the Norwegian Mother and Child Cohort Study (PDF)
- Mantel et al, 2019. Associations of maternal eating disorders with pregnancy and neonatal outcomes. JAMA Psychiatry
- Xu et al, 2017. Inadequate weight gain in obese women and the risk for small for gestational age (SGA): a systematic review and meta-

Takeaways

- Maternal obesity is common and rising in prevalence
- Maternal and fetal/neonatal risks, including long-term risks
- GP: Early OGTT/HbA1c, high-dose folate, low-dose aspirin
- GP: Discussion surrounding weight gain in pregnancy, nutritional intervention programs (dietitian), physical activity
- Bariatric surgery: Pregnancy planning, micronutrient screening and supplementation, watch for nausea and vomiting, watch for hypoglycaemia

Blue Group: Task 2 – Amina

- Amina is now 28/40 after a fairly uneventful pregnancy – has been seeing MGP midwife but presents with her husband today for both to have their Pertussis vaccination.
- She has a mild headache and a blood pressure of 138/88.
- Her BP was previously noted at 105/65.
- Quite stressed on arrival as she has a meeting at work and is worried she will be late back.

Outline your approach

What is different if her BP was 152/97?

Metro South Health

Hypertension in Pregnancy

Dr Prem Gill
Director Obstetrics and Gynaecology Department, Redland Hospital

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Hypertension in pregnancy

Chronic hypertension: BP ≥ 140 systolic +/- 90mmHg diastolic pre-pregnancy or < 20 completed weeks'

- Either essential hypertension or secondary (e.g., primary hyperaldosteronism, pheochromocytoma, obstructive sleep apnoea, renal artery stenosis, Cushing's syndrome).
- Women may also be diagnosed with chronic hypertension retrospectively, e.g., where women with hypertension in pregnancy remain hypertensive 3/12 following childbirth

Gestational hypertension: new onset >20 /40 without maternal or fetal features of preeclampsia + return of BP to normal within 3/12 post-partum.

- Includes women at presentation (up to 25%) who go on to develop preeclampsia but have not yet developed organ manifestations.
- Risk of transition to preeclampsia/adverse pregnancy outcome is higher with earlier onset of gestational hypertension.

If persistent high BP after 12 weeks post-partum - assess for possible underlying chronic hypertension.

Superimposed preeclampsia: preeclampsia superimposed on either pre-existing chronic hypertension, or pre-existing renal disease, or both, > 20/40

- With pre-existing proteinuria, diagnosing superimposed preeclampsia is often difficult as degree of proteinuria often increases during pregnancy.
- Substantial increased proteinuria & hypertension should raise suspicion of preeclampsia, warrant closer surveillance for other maternal systemic features or fetal effects of placental dysfunction.
- Where available, use of the sFlt-1/PlGF ratio can be used to 'rule out' placental dysfunction related increase in hypertension and proteinuria in these women

White coat hypertension: BP (≥ 140/90mmHg) in clinical setting with normal readings in non-clinical setting (ambulatory or home blood pressure monitoring).

- If noted in early pregnancy many progress to persistent hypertension after 20/40 (gestational hypertension) and 8% to preeclampsia

Masked hypertension BP readings in clinical setting with raised BP when measured in a non-clinical setting (ambulatory or home blood pressure monitoring). Outcomes if presents after 20/40 appear to equate with gestational hypertension patients

Severe (or acute) hypertension BP with systolic ≥ 160mmHg and/or diastolic ≥ 110mmHg. (confirmed with repeated measures).
This level of blood pressure has been associated with a greater risk of maternal and fetal adverse outcomes and urgent referral is needed for hospital/specialist review.

Adverse perinatal outcomes with hypertension

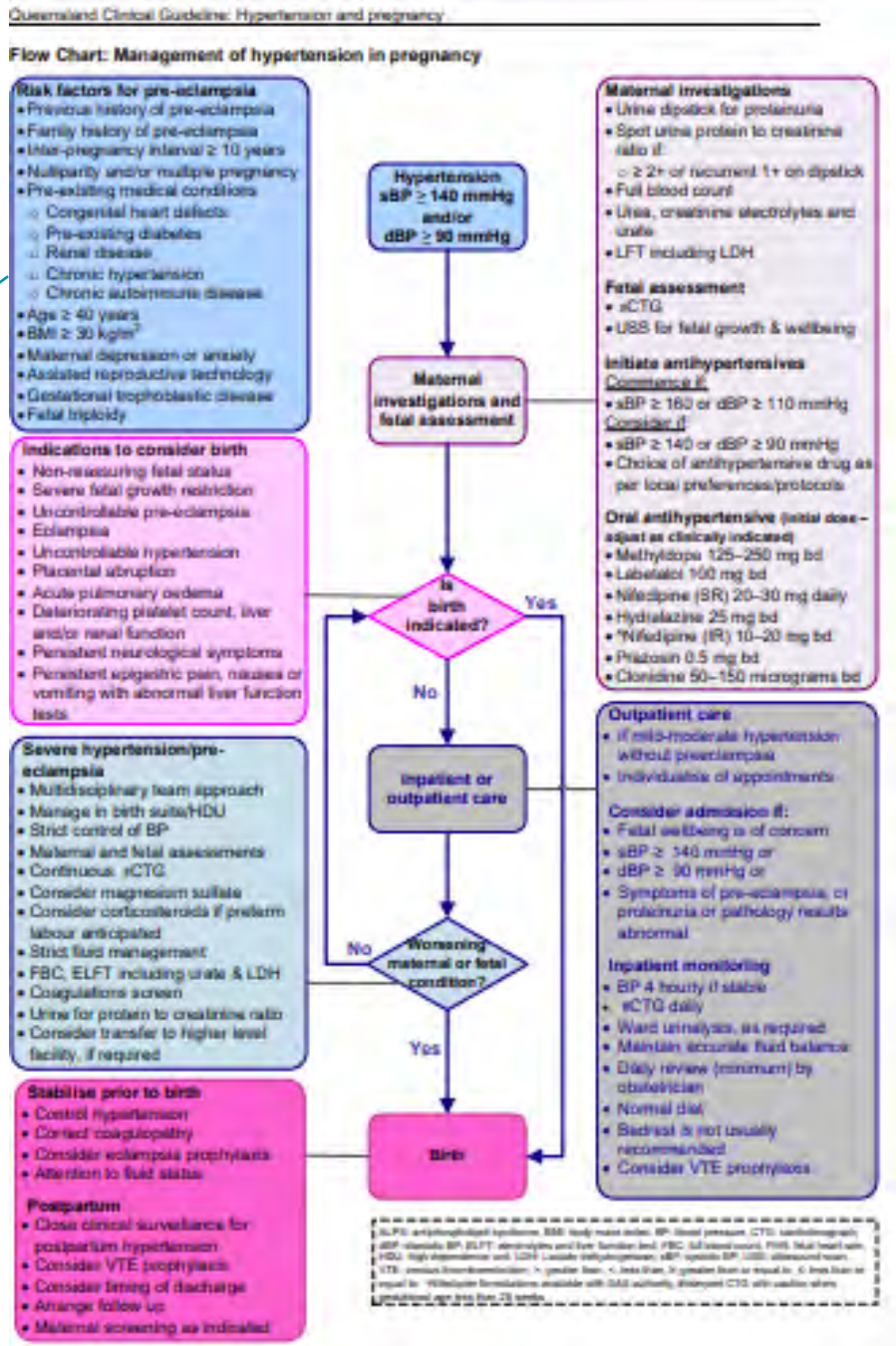
- Cerebral injury: haemorrhage, encephalopathies
- Placental abruption
- Pre-eclampsia/ eclampsia: 64% maternal mortality attributed to cerebral event
- Premature birth, SGA, admission to NICU
- Perinatal death

Queensland Clinical Guidelines –

Hypertension in Pregnancy Guidelines – February 2021

Risk factors for pre-eclampsia

- Previous history of pre-eclampsia
- Family history of pre-eclampsia
- Inter-pregnancy interval ≥ 10 years
- Nulliparity and/or multiple pregnancy
- Pre-existing medical conditions
  - Congenital heart defects
  - Pre-existing diabetes
  - Renal disease
  - Chronic hypertension
  - Chronic autoimmune disease
- Age ≥ 40 years
- BMI ≥ 30 kg/m^2
- Maternal depression or anxiety
- Assisted reproductive technology
- Gestational trophoblastic disease
- Fetal triploidy



Hypertension in pregnancy

Maternal investigations

- Urine dipstick for proteinuria
- Spot urine protein to creatinine ratio if:
  - ≥ 2+ or recurrent 1+ on dipstick
- Full blood count
- Urea, creatinine electrolytes and urate
- LFT including LDH

Fetal assessment

- CTG
- USS for fetal growth & wellbeing

Initiate antihypertensives

Commence if:

- sBP ≥ 160 or dBP ≥ 110 mmHg

Consider if:

- sBP ≥ 140 or dBP ≥ 90 mmHg
- Choice of antihypertensive drug as per local preferences/protocols

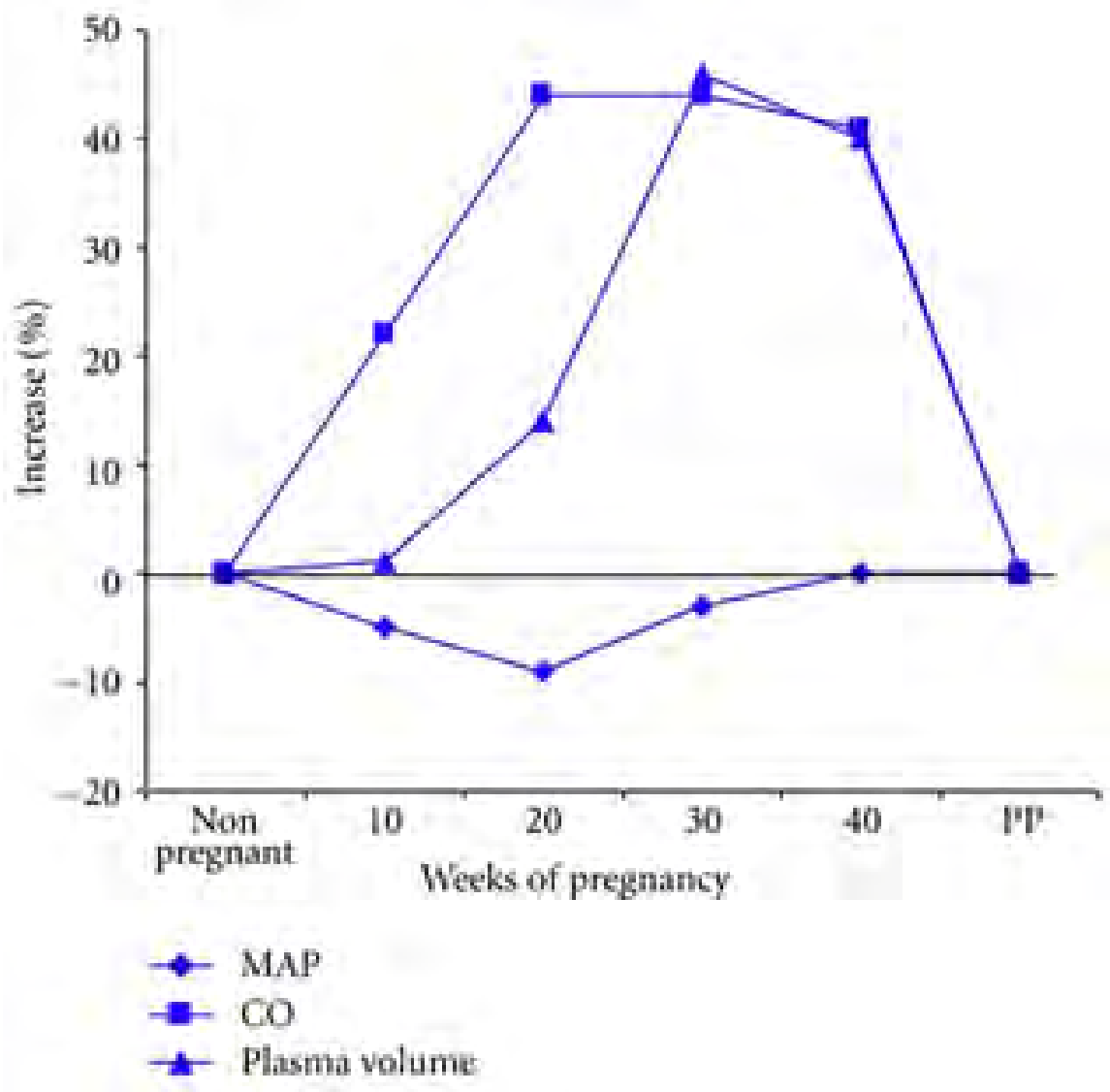
Oral antihypertensive (initial dose – adjust as clinically indicated)

- Methyldopa 125–250 mg bd
- Labetalol 100 mg bd
- Nifedipine (SR) 20–30 mg daily
- Hydralazine 25 mg bd
- ^Nifedipine (IR) 10–20 mg bd
- Prazosin 0.5 mg bd
- Clonidine 50–100 micrograms bd

Management of hypertension in pregnancy – Flowchart (Qld Clinical Guidelines)

When should you seek further advice and assessment?

- BP> 140/90 **and/or**
- persistent and/or severe headache
- visual abnormalities (scotomata, photophobia, blurred vision, or temporary blindness)
- upper abdominal or epigastric pain
- nausea, vomiting
- dyspnoea, retrosternal chest pain
- altered mental status
- hyper-reflexia.



Pre-eclampsia

Pre-eclampsia (PE) is the most common serious medical disorder of human pregnancy.

- Most common in primiparous women
- Family and personal history of pre-eclampsia is important

Signs and symptoms include

- Hypertension
- Renal dysfunction
- Proteinuria
- Oedema – hands, feet, face
- in severe cases dizziness, headaches and visual disturbances.

Untreated, it can lead to convulsions/other life-threatening problems for both mother and baby.

Pre-eclampsia occurs when a woman is pregnant, and currently, the only cure for it is to end the pregnancy, even if the baby premature.

Some at risk women may develop or have worsening symptoms in the immediate post-natal period – careful monitoring must extend into this period.

Pre-eclampsia

In Australia

- mild pre-eclampsia occurs in 5-10% of pregnancies
- severe pre-eclampsia in 1-2% of pregnancies
- pre-eclampsia and complications associated with this condition account for 15% of direct maternal mortality and 10% of perinatal mortality
- Pre-eclampsia is the indication for 20% of labour inductions and 15% of Caesarean sections.
- It accounts for 5-10% of preterm deliveries.

Worldwide, pre-eclampsia and its complications kill many tens of thousands of women and their babies each year

Source: The Women's Hospital

Pre-eclampsia – a multisystem disease

Defined as new onset of hypertension (systolic ≥140 mmHg and/ or diastolic ≥90 mmHg) after 20 weeks' gestation accompanied by one or more of the following signs of new onset organ involvement:

- **Renal involvement (any one of the following):**
  - Significant proteinuria – spot urine protein/creatinine ratio ≥ 30mg/mmol. Proteinuria is the most recognised additional feature after hypertension but should **not be considered mandatory** to make the diagnosis of preeclampsia
  - Serum creatinine > 90 µmol/L
- **Liver involvement:** Raised serum transaminases (from a normal baseline, in the absence of alternative diagnoses for such changes)
- **Haematological involvement (any one of the following):**
  - Thrombocytopenia (<150,000 µ/l)
  - Features of haemolysis: decreased haptoglobin with or without fragmented red cells, elevated LDH
  - Disseminated intravascular coagulation (in the absence of alternate diagnoses for such changes)

- **Neurological involvement (any one of the following):**
  - Convulsions (eclampsia)
  - Features of cerebral irritability: hypereflexia with sustained clonus, persistent headache, persistent visual disturbances (photopsia, scotomata, cortical blindness, posterior reversible encephalopathy syndrome, retinal vasospasm)
  - Cerebrovascular accident
- **Pulmonary oedema**
- **Features of placental dysfunction:**
  - Sonographic features of FGR or deceleration in fetal growth trajectory associated with abnormal umbilical artery Dopplers/oligohydramnios (in absence of alternate diagnoses for such changes).
  - Use of angiogenic markers (sFlt-1/PlGF ratio) has been shown to be valuable in 'ruling out' placental dysfunction with good negative predictive value.

Hypertension & evidence of end organ involvement should return to normal generally within 3 months.

Prophylactic Aspirin use in pregnancy to reduce Preterm PE and FGR

High Risk Factors - Women with any of the following:	**Moderate Risk Factors -** Women with more than one of the following:
o Hypertension - Chronic o Renal disease o Auto-immune diseases such as SLE, anti-phospholipid syndrome, scleroderma o Diabetes (Type 1 or Type 2) o Past history of pre-eclampsia (20%+ recurrence rate) or HELLP Syndrome o Multiple pregnancy o Age > 40yrs (and consider in adolescent pregnancy)	o Primiparous o BMI > 35 o Family history of pre-eclampsia (mother or sister) o More than 10 years since last pregnancy o Previous low birth weight infant or adverse pregnancy outcome o Low socioeconomic status

150 mg aspirin nocte

BEFORE 16 weeks' gestation

Ideally from 12 weeks'

until 34 weeks' - birth

What about calcium?

Calcium has been shown to reduce BP, relax smooth muscle, lower resistance in uterine and umbilical arteries. ***If woman has deficient calcium intake (< 1g/day), recommend supplementation (500-600mg) as may reduce severity & risk of pre-eclampsia and risk of preterm birth. Consider monitoring serum calcium if supplementing at high dose (> 1g/day)***

ASPRE trial

Using 1st TM combined screening:

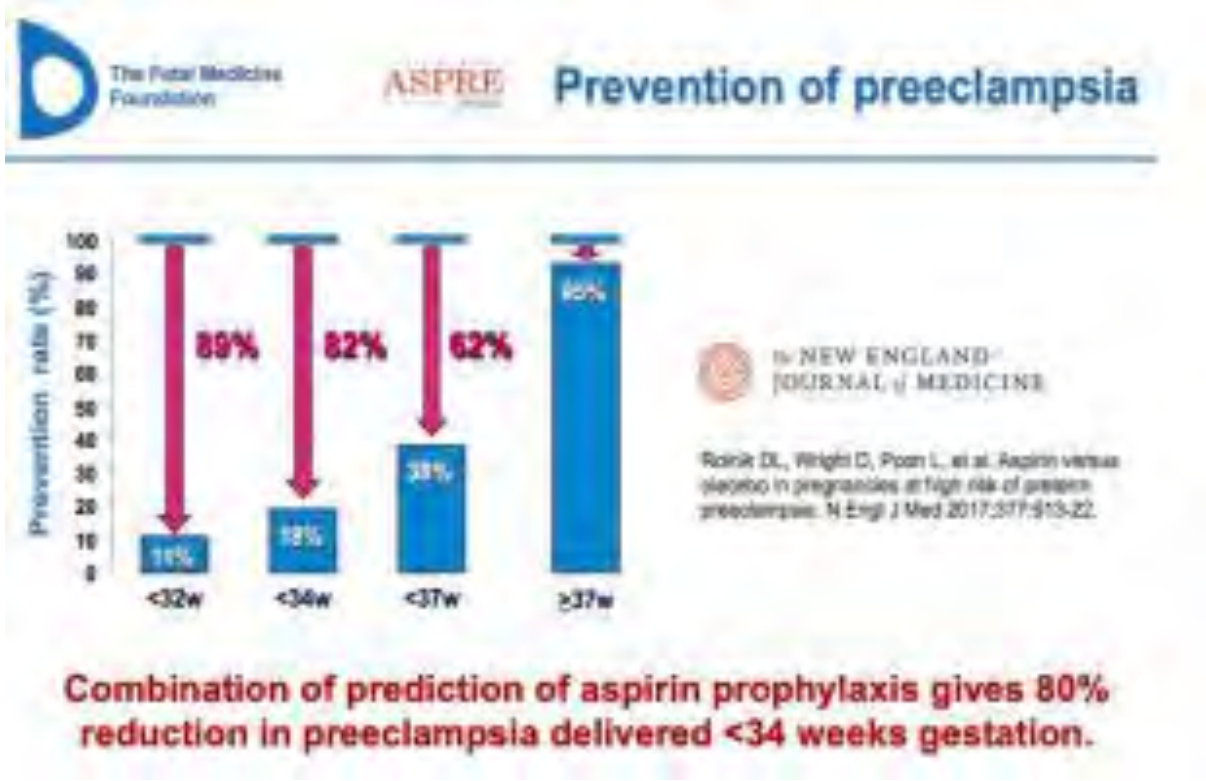
- maternal clinical factors,
- uterine artery pulsatility index (doppler USS)
- mean arterial pressure, and
- placental growth factor (PlGF)# at 11–13/40)

to determine **high risk** for **preterm PE**:

Aspirin use (150 mg daily) from 11-14/40 until 34-36/40 (singletons) reduced preterm PE incidence by:

- 62% reduction in the incidence of preterm pre-eclampsia (before 37/40)
- 82% reduction in the incidence of early onset pre-eclampsia (before 34/40)

PIGF – not Medicare funded



ASPRE trial: performance of screening for preterm pre-eclampsia - Rolnik - 2017 - Ultrasound in Obstetrics & Gynecology - Wiley Online Library - https://doi.org/10.1002/uog.18816
Volume 50 Issue 6Ultrasound in Obstetrics & Gynecology pages: 807-807 First Published online: Dec 4, 2017)

Further information at:
The Fetal Medicine Foundation

ASPIRIN IN PREGNANCY

Preeclampsia is a common pregnancy related condition that can be dangerous to the mother's and baby's wellbeing.
You may be at risk of preeclampsia if you have any of the following risk factors :

High blood pressure

Diabetes

Kidney Disease

Autoimmune disorder

Previous preeclampsia

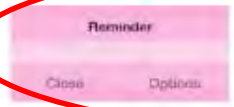
High risk on first trimester screening

However, your risk of preeclampsia can be reduced by 60-70% with the optimal use of aspirin

Start aspirin **before 16 weeks** of pregnancy

Take **150mg** daily (Either ½ of 300mg or 1 & ½ of non-coated 100mg aspirin)

Take aspirin everyday at **bedtime** until your doctor advises you to stop aspirin



Don't forget to take aspirin as it doesn't work if you miss even 10% of doses. **Use a reminder** to help you

Treatment with aspirin should not replace your antenatal care with your health care provider. Please discuss any concerns you may have with your health care provider.

SOMANZ

Pre-eclampsia Screening – on the horizon ……

The new SOMANZ_Hypertension_in_Pregnancy_Guideline_2023 *
In addition to clinical risk factors, *which may detect as few as 41.55% cases that develop preterm pre-eclampsia,* a combined first trimester screen may be recommended. This screen would use a combination of maternal history, blood pressure, biochemistry (Papp-A or PLGF#) and uterine artery doppler to improve the detection rate for early preeclampsia.

Executive Summary of Recommendations

Chapter 2: Screening for women at risk of preeclampsia

Clinical question	Type of Recommendation	Recommendation	Rating of Recommendation
2. Screening for women at risk of developing preeclampsia			
2.1	Evidence based recommendation	The use of maternal risk factors (maternal characteristics, medical and obstetric history) to screen all pregnancies for risk of preeclampsia is strongly recommended (Table 2.1)	1A
2.2	Evidence based recommendation	The use of a combined first trimester screen (combined maternal features, biomarkers and sonography) to identify women at risk of developing preeclampsia is conditionally recommended based on local availability and access to the required resources.	2B

Early risk reduction interventions (LDA and closer monitoring) can then be targeted to those at greatest risk. Each additional screening test increases overall accuracy of prediction of preeclampsia.

Tests available across Queensland, however **routine use in all women is not currently recommended**.

Pilot study commenced at GCUH 2023 adapting UK online clinical decision support tool (app) to Australian guidelines - UK developed & validated (Tommy's National Centre for Maternity Improvement).

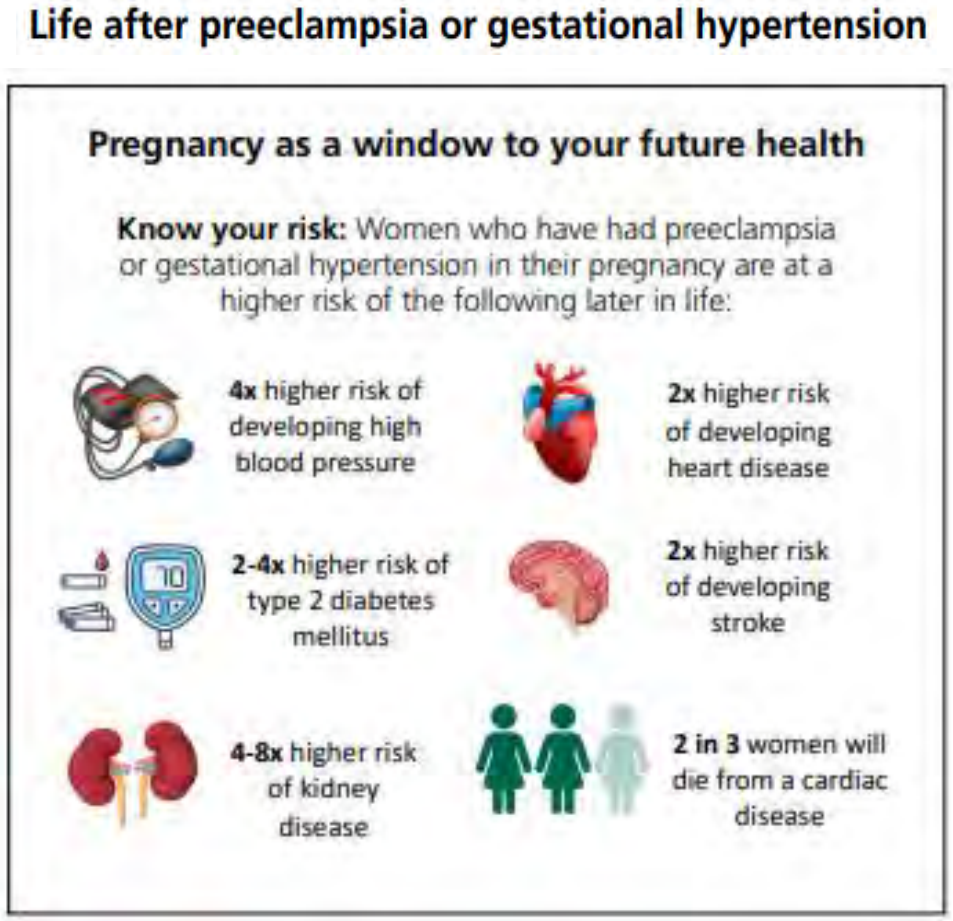
* Society of Obstetric Medicine of Australia and New Zealand;
# PIGF – not Medicare funded (is UK - NHS funded)

Hypertension in Pregnancy Guideline 2023 - SOMANZ

Appendix 2: Top 10 Points for Clinicians from the SOMANZ Hypertension in Pregnancy Guidelines 2023

1	Women with hypertension in pregnancy (Systolic BP ≥140 and/or diastolic BP ≥90mmHg) should be assessed for a diagnosis of a hypertensive disorder of pregnancy (HDP) – preeclampsia, gestational hypertension, chronic hypertension, super-imposed preeclampsia, white coat hypertension or masked hypertension[1]. (Part 1)*
2	All women should be assessed in the first trimester for their risk of developing preeclampsia, at a minimum, with clinical parameters (history and blood pressure assessment). Where available, combined first trimester screening, including uterine artery Doppler together with biomarkers, may enhance the risk assessment[2]. (Part 2)*
3	Initiate preventative strategies if a woman is identified to be at high-risk of preeclampsia. Preventative measures proven to be beneficial include: commencing aspirin 150mg daily (taken at night/bedtime) prior to 16 weeks of gestation, supplemental calcium (where assessed dietary calcium intake is <1g/day) and undertaking aerobic exercise as recommended as part of routine pregnancy well-being[3]. (Part 3)*
4	Proteinuria in pregnancy should ideally be assessed with a spot (random) urinary assessment rather than dipstick assessment alone. If dipstick assessment is the initial means of assessment, proteinuria should be confirmed with laboratory quantification. A urinary protein:creatinine ratio with a cut off of ≥30mg/mmol or where this is unavailable, a spot albumin:creatinine ratio with a cut off of ≥8mg/mmol can be used to diagnose proteinuria in pregnancy[4]. (Part 4)*
5	An angiogenic biomarker (sFlt-1/PlGF ratio) result of ≤38, used after 20 weeks gestation in conjunction with clinical assessment, can be used to rule out preeclampsia within 1-4 weeks of testing in symptomatic women where there is a clinical suspicion of preeclampsia. The sFlt-1/PlGF ratio should not replace clinical assessment. The use of the sFlt-1/PlGF ratio for diagnosis of preeclampsia, predictingdelivery or fetal outcomes and routine testing in asymptomatic women is not recommended until more data is available[5]. (Part 4)*
6	Women with gestational hypertension or chronic hypertension should have blood pressure controlled to a target of ≤135/85mmHg. This has been shown to be maternally beneficial without adverse effects to the fetus[6]. (Part 5)*
7	Home blood pressure monitoring or ambulatory blood pressure assessment [when assessed with validated machines] can be used to diagnose white coat or masked hypertension. Home blood pressure monitoring can be safely utilised in women with chronic or gestational hypertension with appropriate counselling but should not replace the minimum frequency of antenatal review based on the clinical scenario[7]. (Part 5)*
8	Where clinically possible, women with preeclampsia should have delivery initiated at ≥37 weeks gestation. At less than 37 weeks, delivery should be planned based on the clinical scenario with consideration for corticosteroids and magnesium sulphate in women at risk of early preterm delivery[8]. (Part 6)*
9	Non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided in the immediate post-partum period. In the absence of an alternative analgesic agent, the use of NSAIDs should be limited to short-term inpatient usage[9].(Part 7)*
10	Women should be informed of the longer-term risks associated with HDP (e.g. hypertension, cardiovascular disease, stroke, kidney disease). Strategies to optimise their future cardiometabolic profile and prevent preeclampsia/gestational hypertension in subsequent pregnancies should start prior to discharge and be ongoing. Women with a HDP postpartum should have an assessment of abnormalities identified in pregnancy (eg proteinuria, hypertension). Persisting clinical and biochemical abnormalities should be further evaluated and managed as appropriate[10]. (Part 8)*

Long Term Consequences – GPs need to follow up because…..



- Health data analysis from almost 90,000 women (Nurses' Health Study II) 1989 - 2017 suggests effects are long-lasting.
- One in seven women developed gestational hypertension /preeclampsia in one or more of subsequent pregnancies.
- In three-decade follow up, those who developed gestational hypertension/preeclampsia during pregnancy had **42% greater risk of dying before age 70 than those who didn't.**
- These women were more than **2 X as likely to die of cardiovascular disease** than those without hypertensive disorder during pregnancy.
- Links remained, even if women did not report persistent hypertension after birth.
- History of adverse pregnancy outcomes was linked to higher rates of hypertension, diabetes, renal disease, hyperlipidaemia, coronary artery disease, heart failure, stroke and vascular dementia
- Develop at younger age than those with uncomplicated pregnancies.
- Breastfeeding helped mitigate this risk.
- Also tied to higher IHD and stroke risk in offspring
- Increased depression/anxiety in those with PHx Preeclampsia

References:

- Hypertensive Disorders of Pregnancy and Subsequent Risk of Premature Mortality, Journal of the American College of Cardiology – March 2021 https://doi.org/10.1016/j.jacc.2021.01.018
- Society of Obstetric Medicine of Australia and New Zealand (SOMANZ) – Hypertension in Pregnancy Guideline – 2023 https://www.somanz.org/content/uploads/2024/01/SOMANZ_Hypertension_in_Pregnancy_Guideline_2023.pdf

Long Term Post Partum Care

Recommendations

8.1 Women should be informed of the long-term risks associated with preeclampsia, gestational hypertension and chronic hypertension and the importance of postpartum follow up prior to discharge from hospital (Information sheet 8.1). (PP)

8.2 Women should be reviewed by a health care provider within 1 week of discharge from hospital to ensure stable blood pressure post discharge and titrate medications accordingly. (PP)

8.3 At 3-6 months postpartum, a follow up review of blood pressure (consider a 24-hour blood pressure monitor if not previously done), urine protein assessment (uACR and/or uPCR), BMI and metabolic profile (fasting blood glucose and fasting cholesterol assessment) should be considered. Interventions for any abnormalities (i.e. further investigations, specialist referral, weight management, lifestyle changes, smoking cessation) should be discussed (Clinician summary sheet 8.1). (PP)

8.4 A yearly follow up of blood pressure, urine protein assessment, BMI and metabolic profile should be considered in identifying early abnormalities in the first 5-10 years postpartum (Clinician summary sheet 8.1). (PP)

8.5 At every review, women should be opportunistically screened for postpartum depression and anxiety. The Edinburgh Postnatal Depression Scale (EPDS) can be used as an initial screening tool (Clinician summary sheet 8.1)). (PP)

8.6 At every review, women should be counselled on the risk of preeclampsia and gestational hypertension in subsequent pregnancies and the importance of pre-conception medical optimisation, contraception (where indicated) and risk minimisation strategies (i.e.: prophylactic aspirin) (Clinician summary sheet 8.1). (PP)

- Counsel women on long-term risk at time of discharge with good communication/timely hospital discharge summary to the woman's GP (uploaded automatically to my Health Record)
- Risk BP escalation within first 1-4 weeks post-birth, so ensure GP review within 1 week of hospital discharge.
- Comprehensive review of BP (with 24-hour monitor if possible), urine protein assessment, renal function and LFT/platelet count at 3-6-month mark to ensure normalisation.
- Yearly follow up - BP, urine protein assessment, smoking cessation, BMI & metabolic profile should be considered in either following up on identified abnormalities or identifying early abnormalities in first 5-10 years postpartum.
- Preeclampsia is associated with an increased risk of postpartum depression, so at every review, women should be opportunistically screened for postpartum depression and anxiety.
- At every review, women should be counselled on risk of preeclampsia and gestational hypertension in subsequent pregnancies and importance of pre-conception medical optimisation, contraception (where indicated) and risk minimisation strategies (i.e.: prophylactic aspirin)

Hypertension in Pregnancy Guideline 2023 - SOMANZ

Medical condition or complication develops after referral/booking

SMART REFERRAL with **ADDED INFORMATION sent via CRH**

or forward a new letter to ANC with results attached, and problem CLEARLY identified or

If advice required or URGENT - **PHONE** first

- Logan - Phone: 2891 8811(Triage Midwife) or 2891 8027 (Obstetric Registrar on-call), FAX: 3299 8082
- Redland – Phone (On-call Obstetric Registrar) – 3488 3758,FAX 3488 3436
- Beaudesert – Phone:Triage Midwife – 5541 9144 or GP Obstetrician on-call – 5541 9174, FAX: 5541 9132

IF REFER BACK THROUGH THE CENTRAL REFERRAL HUB

- mark as URGENT **AND** CONTACT MATERNITY TEAM DIRECTLY

Maternity Assessment Clinic (MAC) - Logan and Redland Hospital

- For pregnancy related conditions > 20 weeks' gestation
- You should contact the MAC before you send a woman for review
- How serious is the woman's condition? Consider QAS transfer

Most common presentations:

- Suspected preterm labour
- Uncertainty about or assessment for premature rupture of membranes
- Change in fetal movements
- Review of hypertension
- Bleeding after 20 weeks' gestation

For Beaudesert Hospital: Contact Triage Midwife – 5541 9144 or GP Obstetrician on Call – 5541 9174

Takeaways:

- Systolic BP ≥ 140 and/or diastolic BP ≥ 90 – requires URGENT review at the Maternity Hospital (Call the obstetrician/registrar on call + provide a handover via phone and in writing)
- Women with only high BP (gestational or chronic hypertension) should have the BP controlled to a target BP of <135/85mmHg in pregnancy
- LOW DOSE ASPIRIN for those identified on personal or family history, or clinical findings – 150 mg at night from before 16 weeks
- GP follow up ongoing ……. higher risk of chronic hypertension, cardiovascular disease, stroke, kidney disease and death.

Metro South Health Brisbane South Health Pathways

Brisbane South HealthPathways

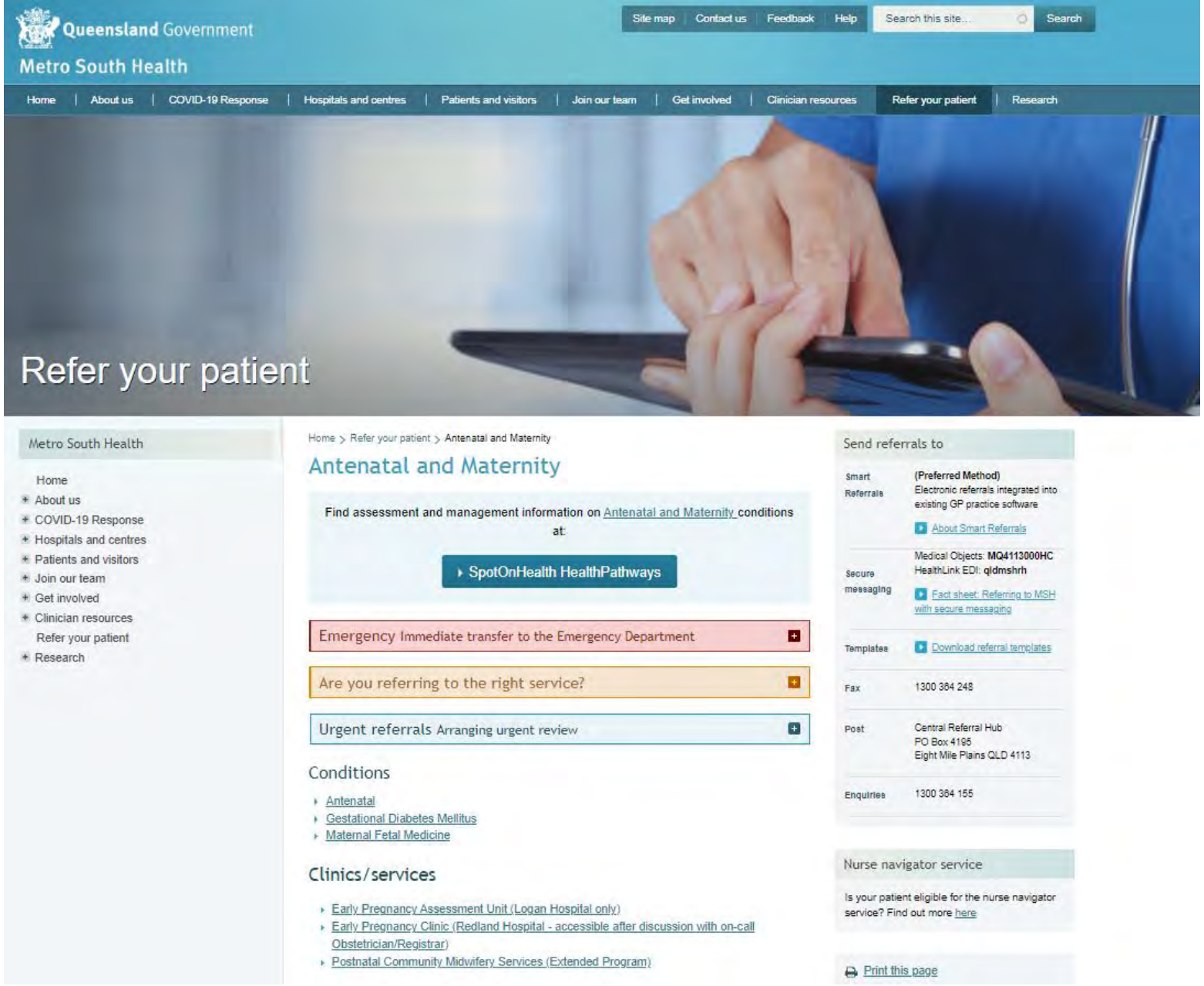
What is Brisbane South HealthPathways?

Brisbane South HealthPathways provides clinicians in the greater Brisbane South catchment with web-based information outlining the assessment, management and referral of over 550 conditions.

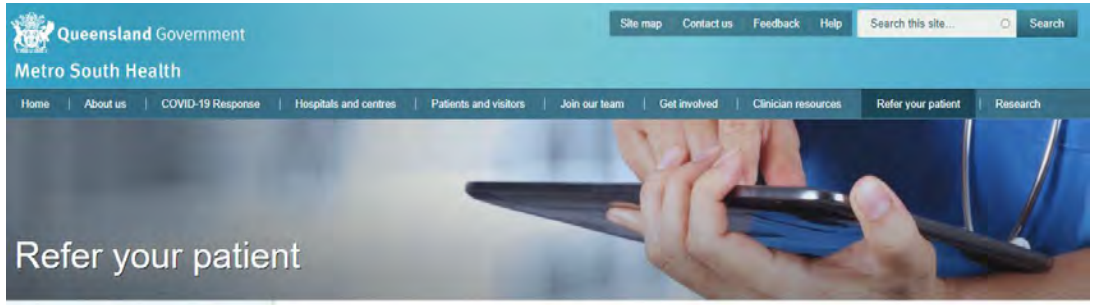
It is designed to be used at point of care primarily by general practitioners but is also available to specialists, nurses, allied health and other health professionals.

Log in to HealthPathways

https://metrosouth.health.qld.gov.au/brisbanesouth-healthpathways



https://metrosouth.health.qld.gov.au/referrals/antenatal



Home > Refer your patient > General Practice Liaison Officer (GPLO) Program

General Practice Liaison Officer (GPLO) Program

Metro South GPLO Team are here to assist

The GP Liaison Officers (GPLO's) are available to support and assist GP's with:

- face to face, phone or email support
- providing information and guidance on referral pathways and navigating Metro South Health services including Refer Your patient – Metro South Health and SpotOnHealth HealthPathways
- assistance with GP Smart referrals - training support and troubleshooting
- supporting clinical handover between primary and secondary care, including assistance with updating your practice details in the STS address book for electronic communication and secure messaging
- being an escalation point and communication pathway for feedback.
- assistance with registration to the Health Provider Portal to gain read-only online access to your patients' Queensland Health (QH) records

Contact details:

Email: GPLO_Programs2@health.qld.gov.au
Telephone: 1300 364 155 (option 2) Mon-Fri 8am-4pm

General Practice Liaison Officer (GPLO) Program Metro South Health

GPLO Maternity Shared Care Team Metro South

The Metro South GPLO Maternity Shared Care team are based at Logan Hospital, but work liaising between Metro South Maternity services and GPs across the hospital catchments. The team comprises of GP Liaison Dr Kim Nolan, a highly experienced women's health specialist GP and GP Liaison Midwife Manager Lisa Miller. The team are available to assist with patient queries, referrals, patient handover, and to liaise with the obstetric team on your behalf. We currently run several GP Alignment Education events each year which are designed to assist GPs in providing high level maternity shared care within Metro South.

Latest event

- **Saturday 11 November 2023**: Metro South GP Maternity Shared Care Alignment 1 - Logan/Beaudesert/Redland

Contact details

Dr Kim Nolan
M.B.B.S; DRANZCOG; FRACGP; DCH
GPLO General Practitioner – Maternity
Obstetrics and Gynaecology Department
Logan Hospital
Phone: 07 2891 5754
Email: Kim.Nolan@health.qld.gov.au

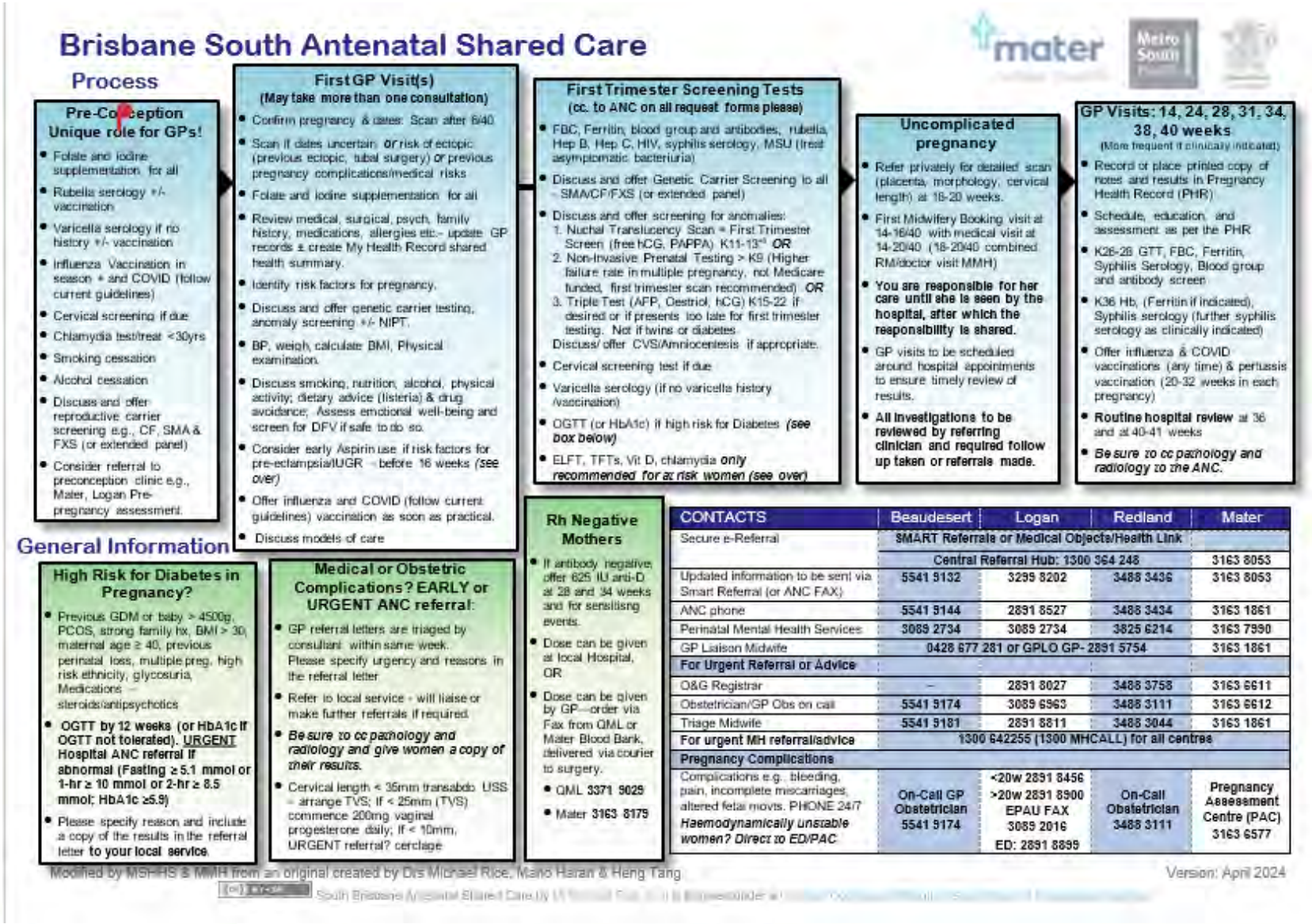
Lisa Miller
General Practice Liaison Midwife Manager
Women's & Children's Services | Logan Bayside Health Network
Logan Hospital
Phone: 0482 677 946
Email: Lisa.Miller3@health.qld.gov.au

https://metrosouth.health.qld.gov.au/referrals/general-practice-liaison-officer-gplo-program

Summary of routine investigations

- Routine first trimester Antenatal Screen = FBC, Blood group and antibodies, Ferritin, Rubella, Hep B, Hep C, HIV, Syphilis and MSU m/c/s (+ CST if due)
- Morphology Scan – check cervical length > 35mm (TA-USS) and proceed to TV-USS if < 35mm
- Women with BMI > 30 to have first trimester OGTT if K>12 , E/LFTs urinary protein/creatinine ratio as well as the above
- 26–28-week bloods = FBC, Ferritin, OGTT and Blood group and antibodies, Syphilis Serology
- 36-week bloods = FBC, Syphilis serology for all and consider repeat Ferritin (if previously low)

Brisbane South Antenatal Shared Care Summary – April 2024



Brisbane South Antenatal Shared Care

Process

Pre-Conception Unique role for GPs!

- Folate and iodine supplementation for all
- Rubella serology +/- vaccination
- Varicella serology if no history +/- vaccination
- Influenza Vaccination in season + and COVID (follow current guidelines)
- Cervical screening if due
- Chlamydia test/treat <30yrs
- Smoking cessation
- Alcohol cessation
- Discuss and offer reproductive carrier screening e.g., CF, SMA & FXS (or extended panel)
- Consider referral to preconception clinic e.g., Mater, Logan Pre-pregnancy assessment.

First GP Visit(s)
(May take more than one consultation)

- Confirm pregnancy & dates: Scan after 6/40
- Scan if dates uncertain, or risk of ectopic (previous ectopic, tubal surgery) or previous pregnancy complications/medical risks
- Folate and iodine supplementation for all
- Review medical, surgical, psych, family history, medications, allergies etc:- update GP records ± create My Health Record shared health summary.
- Identify risk factors for pregnancy.
- Discuss and offer genetic carrier testing, anomaly screening +/- NIPT.
- BP, weigh, calculate BMI, Physical examination.
- Discuss smoking, nutrition, alcohol, physical activity; dietary advice (listeria) & drug avoidance; Assess emotional well-being and screen for DFV if safe to do so.
- Consider early Aspirin use if risk factors for pre-eclampsia/IUGR – before 16 weeks *(see over)*
- Offer influenza and COVID (follow current guidelines) vaccination as soon as practical.
- Discuss models of care

First Trimester Screening Tests
(cc. to ANC on all request forms please)

- FBC, Ferritin, blood group and antibodies, rubella, Hep B, Hep C, HIV, syphilis serology, MSU (treat asymptomatic bacteriuria)
- Discuss and offer Genetic Carrier Screening to all – SMA/CF/FXS (or extended panel)
- Discuss and offer screening for anomalies:
  1. Nuchal Translucency Scan + First Trimester Screen (free hCG, PAPPA) K11-13[6] *OR*
  2. Non-Invasive Prenatal Testing > K9 (Higher failure rate in multiple pregnancy, not Medicare funded, first trimester scan recommended) *OR*
  3. Triple Test (AFP, Oestriol, hCG) K15-22 if desired or if presents too late for first trimester testing. Not if twins or diabetes

  Discuss/ offer CVS/Amniocentesis if appropriate.
- Cervical screening test if due
- Varicella serology (if no varicella history /vaccination)
- OGTT (or HbA1c) if high risk for Diabetes *(see box below)*
- ELFT, TFTs, Vit D, chlamydia *only recommended for at risk women (see over)*

Uncomplicated pregnancy

- Refer privately for detailed scan (placenta, morphology, cervical length) at 18-20 weeks.
- First Midwifery Booking visit at 14-16/40 with medical visit at 14-20/40 (18-20/40 combined RM/doctor visit MMH)
- **You are responsible for her care until she is seen by the hospital, after which the responsibility is shared.**
- GP visits to be scheduled around hospital appointments to ensure timely review of results.
- **All investigations to be reviewed by referring clinician and required follow up taken or referrals made.**

GP Visits: 14, 24, 28, 31, 34, 38, 40 weeks
(More frequent if clinically indicated)

- Record or place printed copy of notes and results in Pregnancy Health Record (PHR)
- Schedule, education and assessment as per the PHR
- K26-28 GTT, FBC, Ferritin, Syphilis Serology, Blood group and antibody screen
- K36 Hb, (Ferritin if indicated), Syphilis serology (further syphilis serology as clinically indicated)
- Offer influenza & COVID vaccinations (any time) & pertussis vaccination (20-32 weeks in each pregnancy)
- **Routine hospital review** at 36 and at 40-41 weeks
- ***Be sure to cc pathology and radiology to the ANC.***

General Information

High Risk for Diabetes in Pregnancy?

- Previous GDM or baby > 4500g, PCOS, strong family hx, BMI > 30, maternal age ≥ 40, previous perinatal loss, multiple preg, high risk ethnicity, glycosuria, Medications – steroids/antipsychotics
- **OGTT by 12 weeks (or HbA1c if OGTT not tolerated). URGENT Hospital ANC referral if abnormal (Fasting ≥ 5.1 mmol or 1-hr ≥ 10 mmol or 2-hr ≥ 8.5 mmol; HbA1c ≥5.9)**
- Please specify reason and include a copy of the results in the referral letter **to your local service.**

Medical or Obstetric Complications? EARLY or URGENT ANC referral:

- GP referral letters are triaged by consultant within same week. Please specify urgency and reasons in the referral letter
- Refer to local service – will liaise or make further referrals if required.
- ***Be sure to cc pathology and radiology and give women a copy of their results.***
- Cervical length < 35mm transabdo USS – arrange TVS; If < 25mm (TVS) commence 200mg vaginal progesterone daily; If < 10mm, URGENT referral? cerclage

Rh Negative Mothers

- If antibody negative offer 625 IU anti-D at 28 and 34 weeks and for sensitising events.
- Dose can be given at local Hospital, OR
- Dose can be given by GP—order via Fax from QML or Mater Blood Bank, delivered via courier to surgery.
  - QML 3371 9029
  - Mater 3163 8179

CONTACTS	Beaudesert	Logan	Redland	Mater
Secure e-Referral	SMART Referrals or Medical Objects/Health Link			
	Central Referral Hub: 1300 364 248			3163 8053
Updated information to be sent via Smart Referral (or ANC FAX)	5541 9132	3299 8202	3488 3436	3163 8053
ANC phone	5541 9144	2891 8527	3488 3434	3163 1861
Perinatal Mental Health Services	3089 2734	3089 2734	3825 6214	3163 7990
GP Liaison Midwife	0428 677 281 or GPLO GP- 2891 5754			3163 1861
For Urgent Referral or Advice				
O&G Registrar	–	2891 8027	3488 3758	3163 6611
Obstetrician/GP Obs on call	5541 9174	3089 6963	3488 3111	3163 6612
Triage Midwife	5541 9181	2891 8811	3488 3044	3163 1861
For urgent MH referral/advice	1300 642255 (1300 MHCALL) for all centres			
Pregnancy Complications				
Complications e.g., bleeding, pain, incomplete miscarriages, altered fetal movts. PHONE 24/7 *Haemodynamically unstable women? Direct to ED/PAC*	On-Call GP Obstetrician 5541 9174	<20w 2891 8456 >20w 2891 8900 EPAU FAX 3089 2016 ED: 2891 8899	On-Call Obstetrician 3488 3111	Pregnancy Assessment Centre (PAC) 3163 6577

Modified by MSHHS & MMH from an original created by Drs Michael Rice, Mario Haran & Heng Tang

Version: April 2024

Available at [GP Maternity Share Care Education Event webpage]

[GP Maternity Shared Care Alignment 1 (AM1) - Logan/Beaudesert/Redland | Metro South Health]

Maternity GP Shared Care
Additional Information and Advice

Additional Tests – chlamydia, ELFT, TSH/TFTs, Vit D, TORCH serology

- Chlamydia–test women < 30 years old and other high-risk women by first-pass urine PCR.
- ELFTs recommended for obese women (BMI > 30), hypertension or known or suspected renal or liver disease.
- Routine TFTs *are not* recommended in low-risk pregnant women. TSH generally drops in first trimester with the rise in HCG. If a woman has a TSH lower than the lab reference range, check free T4/T3—if these are normal, the woman *does not* need referral, if elevated, they will need clinical review, possibly referral – liaise with your local team.
- Women with pre-existing hypothyroidism should have a TSH <2.5 in first trimester and <3.0 in the rest of the pregnancy. Lab reference ranges will reflect pregnancy recommendations if the woman is identified as being pregnant. Weekly doses usually need to go up by 30% during pregnancy, which is an extra 2 doses/week. Advise women to commence the higher dose as soon as they know they are pregnant.
- Vitamin D levels or supplementation are recommended for obese *or* dark-skinned women *or* those with little sun exposure *or* who cover themselves for religious or cultural reasons. Levels <50 may require supplements of 2000 IU/day. Levels <15 require higher doses and re-test after 3 months.
- Toxoplasma, cytomegalovirus, and herpes serology should *not* be performed routinely. If risk factors indicate a need for testing, please include risk in your referral as follow-up tests or other investigations or management may be needed.

Nutrition and Supplements

- Folate - 0.5 mg for all low risk, 5 mg if high risk (diabetic, obese, previous, or familial neural tube defect, anticonvulsants). Start one month before conception & continue to 12 weeks.
- Iodine 150mcg/day - recommended preconception, during pregnancy and while breastfeeding (folate + iodine supplement is available)
- 2-3 serves daily of calcium-rich food/drink (1g/day) OR add 500mg minimum daily supplement. RANZCOG recommend universal 400IU/day Vitamin D (e.g., 600mg Ca + 1000IU Vit D)
- Iron only needed if deficiency is identified however low dose is included in all pregnancy supplements. Avoid Vit A in pregnancy.
- Added supplements needed for women post Bariatric Surgery – seek Dietitian input.
- Avoid or limit intake of large/predatory fish due to mercury content (Orange Roughy /Sea Perch, Shark/Flake, Swordfish, Marlin etc.)

Early Low Dose Aspirin (100-150mg)

Commence before 16/40, stop at 36/40 to reduce incidence of placental disorders such as Pre-eclampsia & fetal growth restriction (FGR), preterm birth & perinatal mortality in those at increased risk. Take in the evening.

High Risk Factors - recommend if patient has one or more of:

- Hypertension
- Renal disease
- Auto-immune diseases e.g., SLE or anti-phospholipid syndrome
- Diabetes (Type 1 or Type 2)
- Previous History of pre-eclampsia

Moderate Risk Factors – consider if two or more are present:

- Primiparous
- BMI > 35
- Age > 40
- Multiple pregnancy
- Family history of pre-eclampsia (mother or sister)
- More than 10 years since last pregnancy

Preventing Infections

- Toxoplasmosis - Avoid feeding raw/undercooked meats to pets, avoid cat faeces/litter, wear gloves when gardening.
- Cytomegalovirus - Good hand hygiene; Care with urine, saliva, nappies of young children
- Influenza and COVID Vaccination at any stage antenatally and pertussis vaccinations between 20-32 weeks (but up to time of delivery if missed, requires two weeks to be fully effective)
- Listeriosis - Avoid soft cheeses, un-pasteurised milk, pate, raw eggs, hot dogs, undercooked and deli meats, reheated leftovers, precut fruit, bean sprouts.

More Online Information and Education

for GPs interested in Antenatal Care are available through:

- General Practice Liaison Officer (GPLO) Program webpage: https://metrosouth.health.qld.gov.au/referrals/general-practice-liaison-officer-gplo-program
- Mater Mothers www.materonline.org.au (Click on Shared Care Alignment for a range of resources for GPs) www.matermothers.org.au (Click on Mater Mothers' Hospital for resources for women)
- www.maternity-matters.com.au has consumer and clinician resources and links to reputable websites.

Early Pregnancy Complications (<20 weeks)

- Nausea and vomiting - decrease iron (but continue iodine and folate), try ginger, acupressure, pyridoxine 75 mg/day in divided doses, doxylamine (Cat A) Metoclopramide (Maxolon Cat A) and Phenothiazines like Prochlorperazine (Stemetil Cat C, po/pr/iv, safe in first trimester); Ondansetron may be effective but is relatively expensive. Even mild dehydration/ketonuria may benefit from IV fluids.
- Bleeding: check blood group and antibodies. Threatened miscarriage in rhesus-negative women without antibodies after 12 weeks requires anti-D, before 12 weeks anti-D is not required unless the miscarriage completes, or you are concerned the woman may not re-present.
- Bleeding and pain: consider ectopic pregnancy!
- Consider advice from, or referral to, early pregnancy assessment unit (EPAU), pregnancy assessment centre (PAC) or emergency department at booking hospital (appointments may be required)

Beaudesert 5541 9111; Logan MAC 2891 8811
Redlands 3488 3111; Mater PAC 3163 6577

Late pregnancy complications (>20 weeks)

- Bleeding – can do spec exam but avoid PVE. Exclude cervical dilatation. Re-check placental site on original morphology scan. Rhesus negative mums need anti-D
- Abdominal pain - can do spec exam but no PVE. Exclude cervical dilatation. Anti-D may be required for abruption.
- Ruptured membranes - Review at hospital preferred. Can do spec exam but no PVE.
- Fundal height > 3cm above or below expected for gestational age – arrange USS & if IUGR confirmed, refer to ANC by Fax and Phone Obstetrician/Registrar; if LGA confirmed, refer back through ANC
- Perceived change in fetal movements beyond 28 weeks or no FH detected – arrange IMMEDIATE hospital review.
- Most should be referred to booking hospital birth suites, pregnancy/maternity assessment/observation units or Emerg. Dept.

Beaudesert 5541 9111; Logan MAC 2891 8811
Redlands 3488 3111; Mater PAC 3163 6577

Modified by MSHHS & MMH from an original created by Drs Michael Rice, Mano Haran & Heng Tang. Edited & updated by Drs Kim Nolan, Michael Rice, Wendy Burton & Maggie Robin – April 2024
www.materonline.org.au | www.https://metrosouth.health.qld.gov.au/referrals/general-practice-liaison-officer-gplo-program

So much information ……
So little time!!!

Help us construct an information handout (QR codes) for pregnant patients/couples to be given in those first 1-2 GP visits.

Send us your favourite and most useful website/online resource.

Thank You in anticipation!

Who can you call at Logan Hospital?

	Contact Numbers
GPLO Maternity Team - GPLO GP – Maternity - GPLO Midwife Manager	 Telephone: 2891 5754 (Tues/alt Fri) Telephone: 0482 677 946
Antenatal Clinic Reception (8 am- 4 pm Mon to Fri)	Telephone: 2891 8527 Fax: 3299 8202
Triage Midwife	Telephone: 2891 8811
Women's, Men's & Pelvic Health Physiotherapy (Logan/Beaudesert Hospitals)	Telephone: 2891 8858 Fax: 3299 8280
O & G Registrar	Telephone: 2891 8027 or via Switchboard
Obstetrician on Call	Telephone: 3089 6963 or via Switchboard
Early Pregnancy Assessment Unit (K<20)	Telephone: 2891 8456 Fax: 3089 2016
Maternity Assessment Clinic (Complications K>20)	Telephone: 2891 8900
Postnatal Community Midwifery Service	Telephone: 3089 2814

Who can you call at Redland Hospital?

	Contact Numbers
Antenatal Clinic Reception (8 am- 4 pm Mon to Fri)	Telephone: 3488 3434; Fax: 3488 3436
Triage Midwife	Telephone: 3488 3044
Maternity Assessment Unit	Telephone: 3488 4075 (Mon-Fri 0930-1800) or by Fax: 3488 4432
Women's, Men's and Pelvic Health Physiotherapy	Telephone: 3488 3222 Fax: 3488 3223
O & G Registrar	Telephone: 3488 3758 or via Switchboard
Obstetrician on Call	Telephone: 3488 3111 or via Switchboard
Pregnancy Complications	Contact On-Call Obstetrician – 3488 3111
Perinatal Mental Health Service	Telephone: 3825 6214

Who can you call at Beaudesert Hospital?

	Contact Numbers
Antenatal Clinic Reception (8 am- 4 pm Mon to Fri)	Telephone: 5541 9144 FAX: 5541 9132
Triage Midwife	Telephone: 5541 9144
Women's, Men's & Pelvic Health Physiotherapy (Logan & Beaudesert Hospitals)	Telephone: 2891 8858 Fax: 3299 8280
GP Obstetrician/Rural Generalist on Call	Telephone: 5541 9174

Item numbers for MSC

16500 Rebate $42.40 Antenatal Attendance
91853 (video) **91858** (telephone) equivalent of 16500

16591 Rebate $128.15 “Planning and management, by a practitioner, of a pregnancy if:
(a) the pregnancy has progressed beyond 28 weeks’ gestation ***AND***
(b) the service includes a ***mental health assessment (including screening for drug and alcohol use and domestic violence****) of the patient; and*
(c) a service to which item 16590* applies is not provided in relation to the same pregnancy
Payable once only for a pregnancy”
*(*16590 = planning to undertake delivery for a privately admitted patient)*

Postnatal item numbers

16407
Postnatal professional attendance (other than a service to which any other item applies) if the attendance:
(a) is by an obstetrician or general practitioner; and
(b) is in hospital or at consulting rooms; and
(c) is between 4 and 8 weeks after the birth; and
(d) lasts at least 20 minutes; and
(e) includes a mental health assessment (including screening for drug and alcohol use and domestic violence) of the patient; and
(f) is for a pregnancy in relation to which a service to which item 82140 applies is not provided (participating RM)

Payable once only for a pregnancy
Fee: $78.95 **Benefit:** 75% = $59.25 85% = $67.15

16408
Home visit for woman who was admitted privately for the birth. Midwife (on behalf of and under the supervision of the medical practitioner who attended the birth), Obstetrician or GP can claim. 1-4 weeks post-partum, at least 20 min duration
Fee: $58.80 **Benefit:** 85% = $50.00

To apply the best practice share care models in antenatal and postnatal care, we all need to be

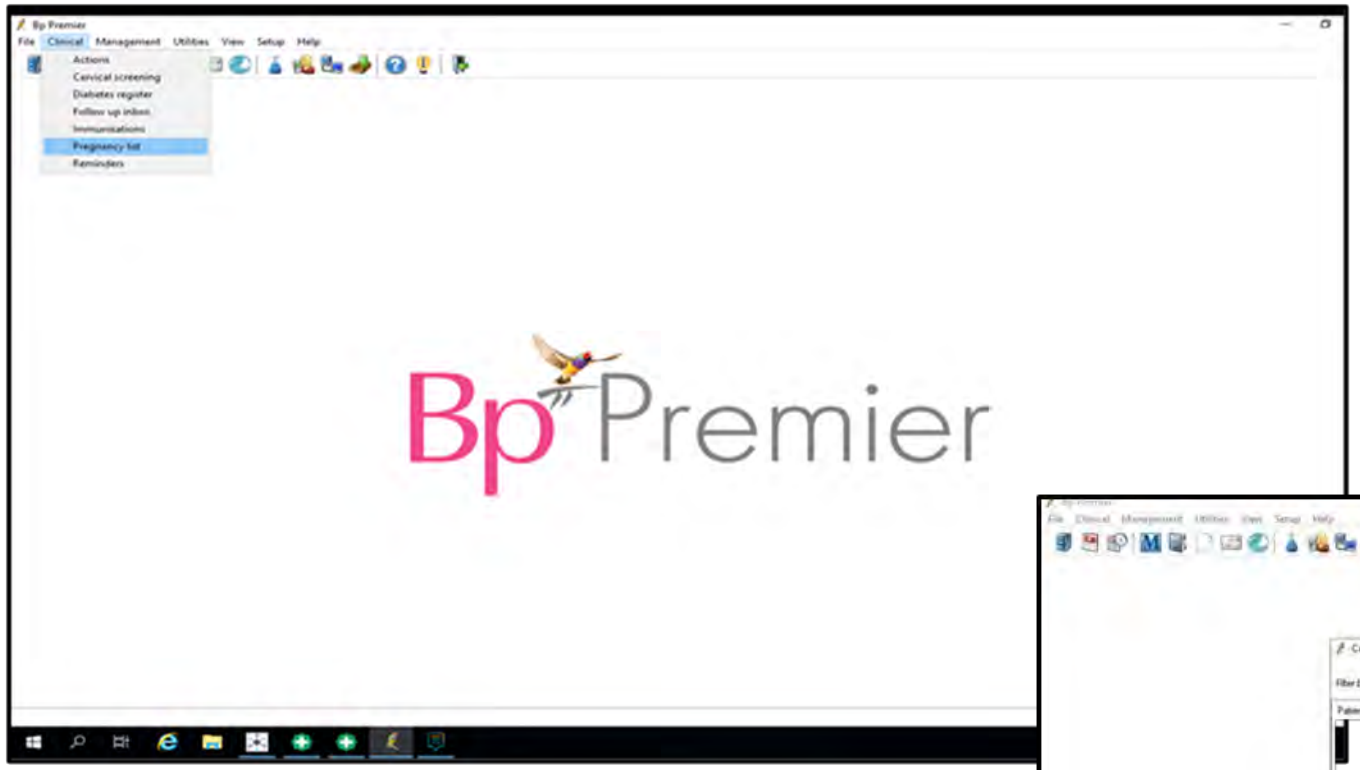
Clinically competent

Up to date

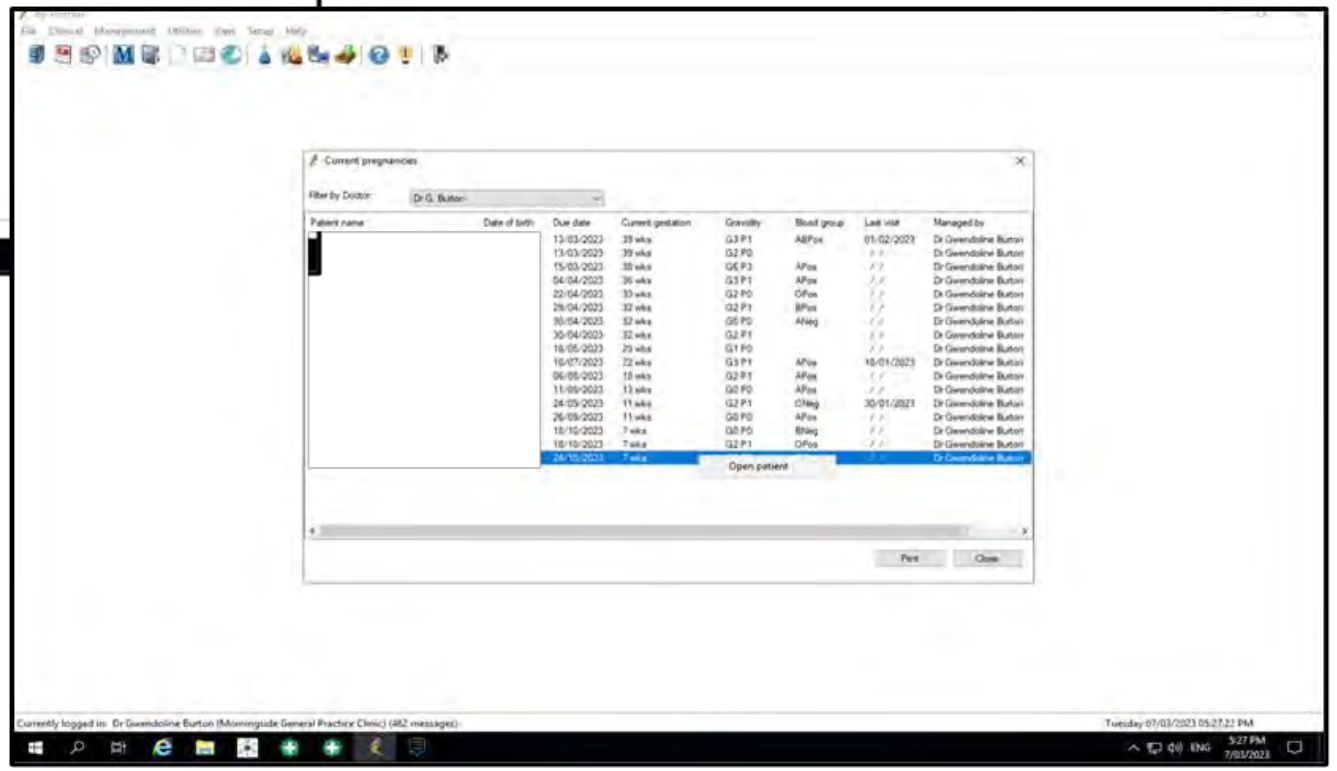
Following the Guidelines

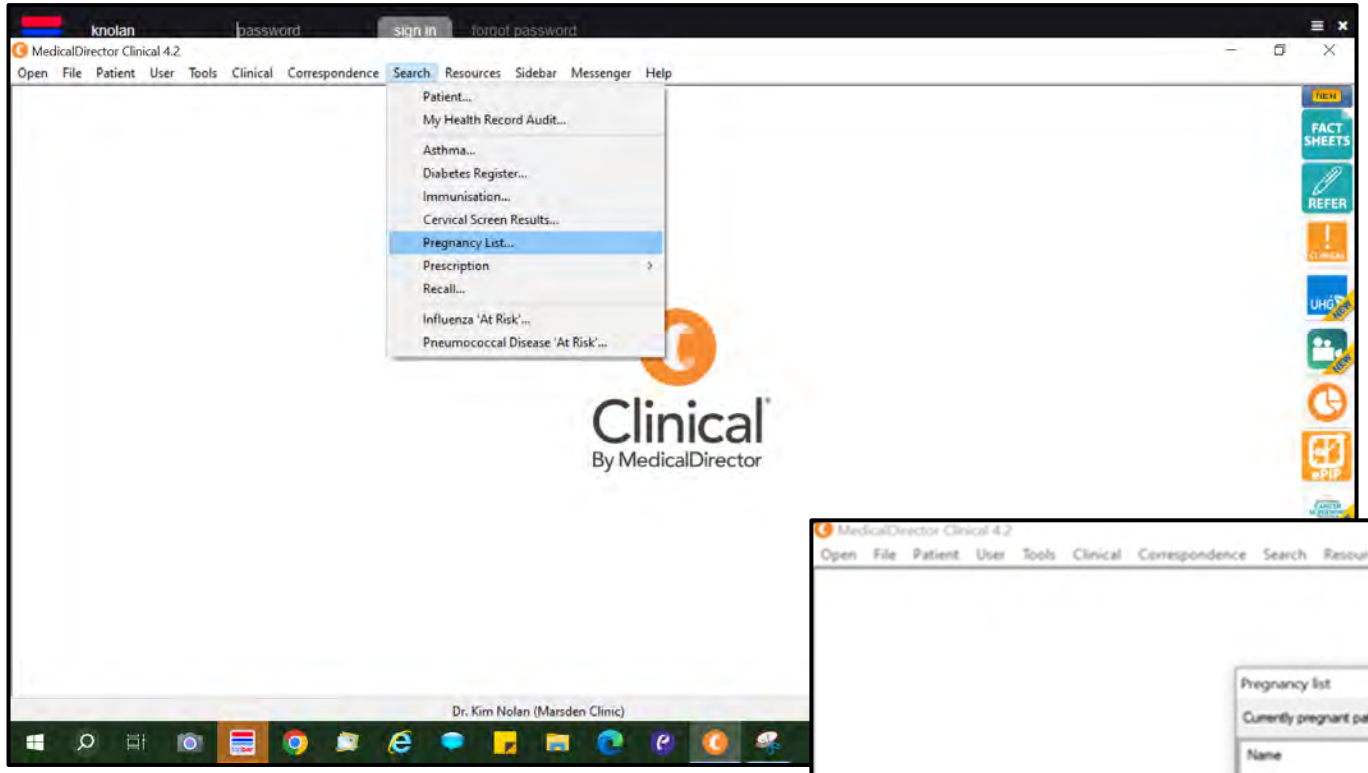
Thinking

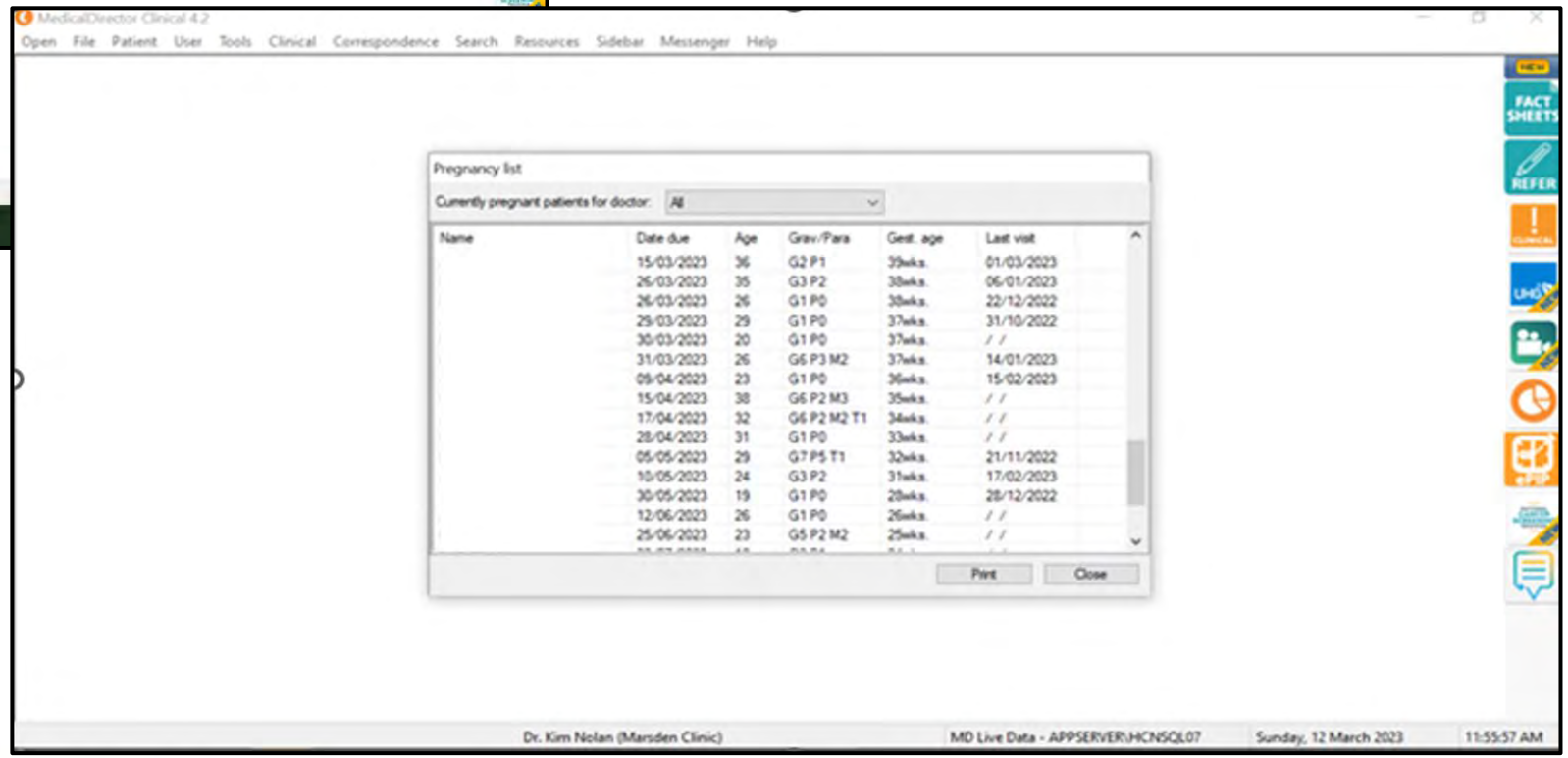
Communicating



Auditing your practice population from your software is easy (and CPD points count)

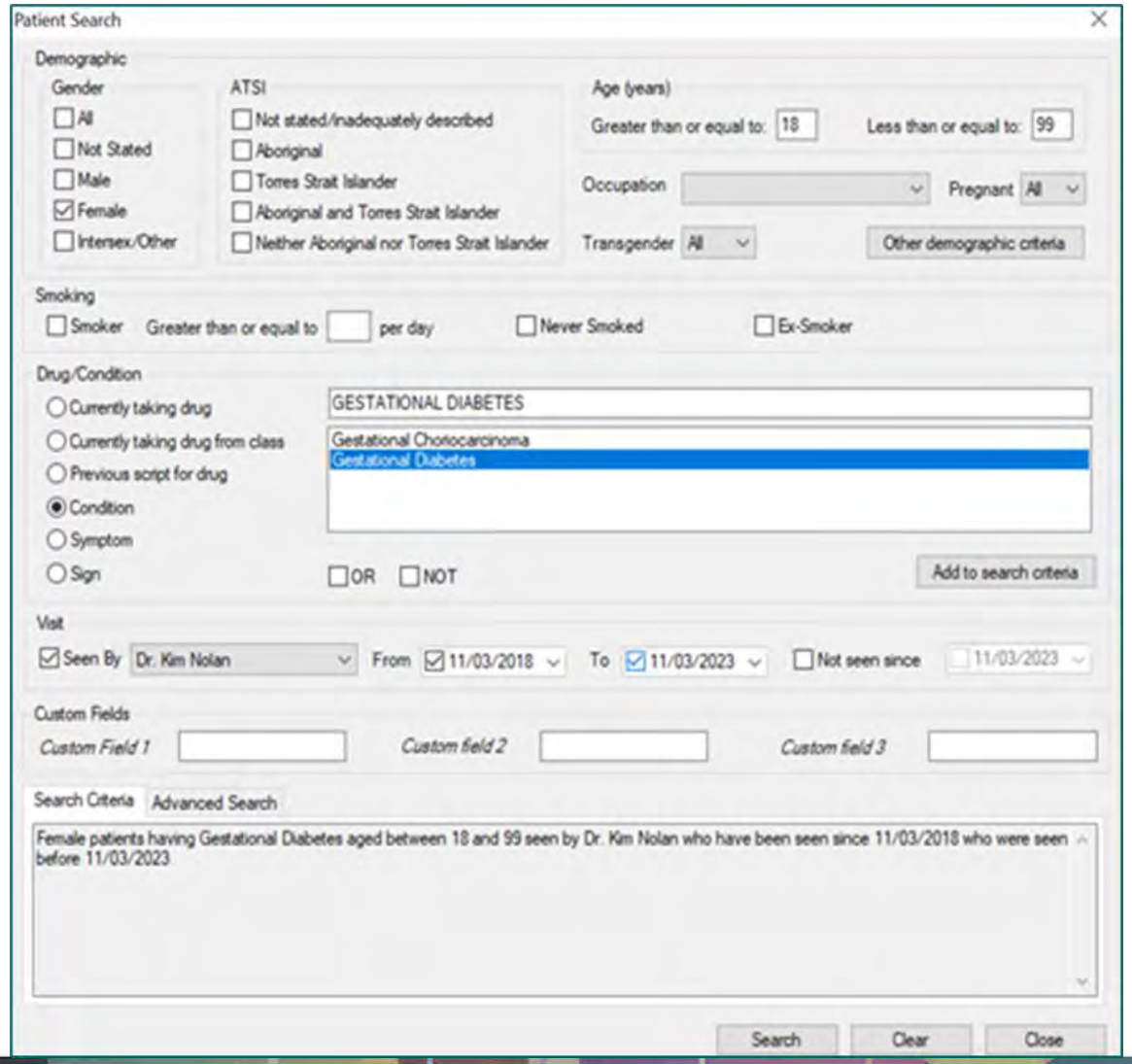



knolan
password
sign in
forgot password
MedicalDirector Clinical 4.2
Open File Patient User Tools Clinical Correspondence Search Resources Sidebar Messenger Help
Patient...
My Health Record Audit...
Asthma...
Diabetes Register...
Immunisation...
Cervical Screen Results...
Pregnancy List...
Prescription
Recall...
Influenza 'At Risk'...
Pneumococcal Disease 'At Risk'...
Clinical
By MedicalDirector
Dr. Kim Nolan (Marsden Clinic)


MedicalDirector Clinical 4.2
Open File Patient User Tools Clinical Correspondence Search Resources Sidebar Messenger Help
Pregnancy list
Currently pregnant patients for doctor: All
Name | Date due | Age | Grav/Para | Gest. age | Last visit
15/03/2023 36 G2 P1 39wks. 01/03/2023
26/03/2023 35 G3 P2 38wks. 06/01/2023
26/03/2023 26 G1 P0 38wks. 22/12/2022
29/03/2023 29 G1 P0 37wks. 31/10/2022
30/03/2023 20 G1 P0 37wks. / /
31/03/2023 26 G6 P3 M2 37wks. 14/01/2023
09/04/2023 23 G1 P0 36wks. 15/02/2023
15/04/2023 38 G6 P2 M3 35wks. / /
17/04/2023 32 G6 P2 M2 T1 34wks. / /
28/04/2023 31 G1 P0 33wks. / /
05/05/2023 29 G7 P5 T1 32wks. 21/11/2022
10/05/2023 24 G3 P2 31wks. 17/02/2023
30/05/2023 19 G1 P0 28wks. 28/12/2022
12/06/2023 26 G1 P0 26wks. / /
25/06/2023 23 G5 P2 M2 25wks. / /
Print
Close
Dr. Kim Nolan (Marsden Clinic)
MD Live Data - APPSERVER\HCNSQL07
Sunday, 12 March 2023
11:55:57 AM

Audits (including Miniaudits) of your maternity patients

To audit how many of your GDM patients diagnosed in last 5 years have had follow up HBA1C in 1-3 years (or early OGTT in next pregnancy) and in whom you have undertaken CVS risk assessments.



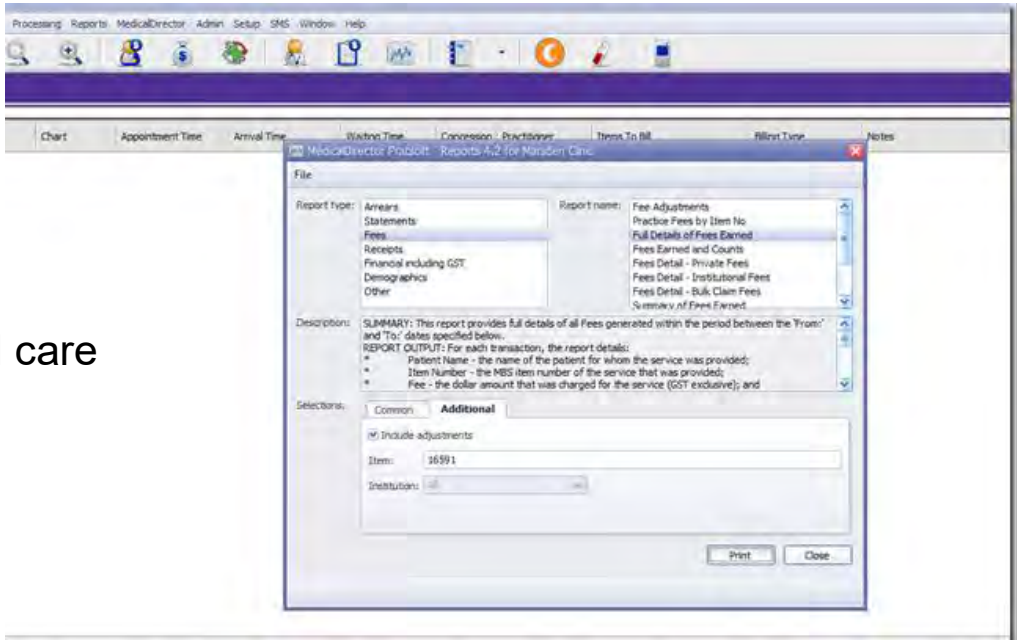
Reviewing Performance/ Measuring Outcomes Activities

Activity	Audits (including mini audits)
Similar activities	Quality improvement activity, PDSA (Plan Do, Study, Act)
Activity type	MO, RP
Description	Audits use data to evaluate the effectiveness of a healthcare team's (or solo GP's) clinical practices to ensure quality and safety of patient care. **Audits** can be time-intensive and whilst predominantly MO activity, can include other activity types. Review of current evidence for audit planning, or capacity building to conduct the audit, is EA activity. Conversations and quality improvement activities based on audit results tend to be a mix of MO and RP activity. **Mini audits** enable GPs to monitor their care quality and safety using an audit methodology but applied to a narrow focus and sample size. Mini audits can be conducted over the course of several clinical days, by the GP without colleague involvement, making them ideal MO and RP activity for locums and part-time GPs.
How to record	**Quick Log** For recording of mini audits only **GP-led Activity** Using this form for Audits will enable you to summarise your audit, and one GP can record the activity for multiple GPs on their behalf
How to evidence	Mini audits require 4-5 sentences that describe your audit scope, the data you gathered, and what you did as a result. Audits will generate substantial evidence that we advise you retain for three years. Evidence may include your audit template and or reflection on results and further action.

RACGP - **CPD Handbook for GPs**
https://www.racgp.org.au/FSDEDEV/media/documents/Handbook.pdf

Suggested Maternity Audit Topics

- Your software will be able to compile a list of all the pregnant patients you have billed a 16591 to (likely to be your shared care cohort) e.g., for the last 3-5 years
- Going back through the list, you can then check completion of:
  - EPDS completion
  - Smoking /Alcohol history
  - Pertussis vaccinations
  - Pregnancy outcomes
  - Number of antenatal visits (before 12/40) and during shared care
  - GDM screening if indicated



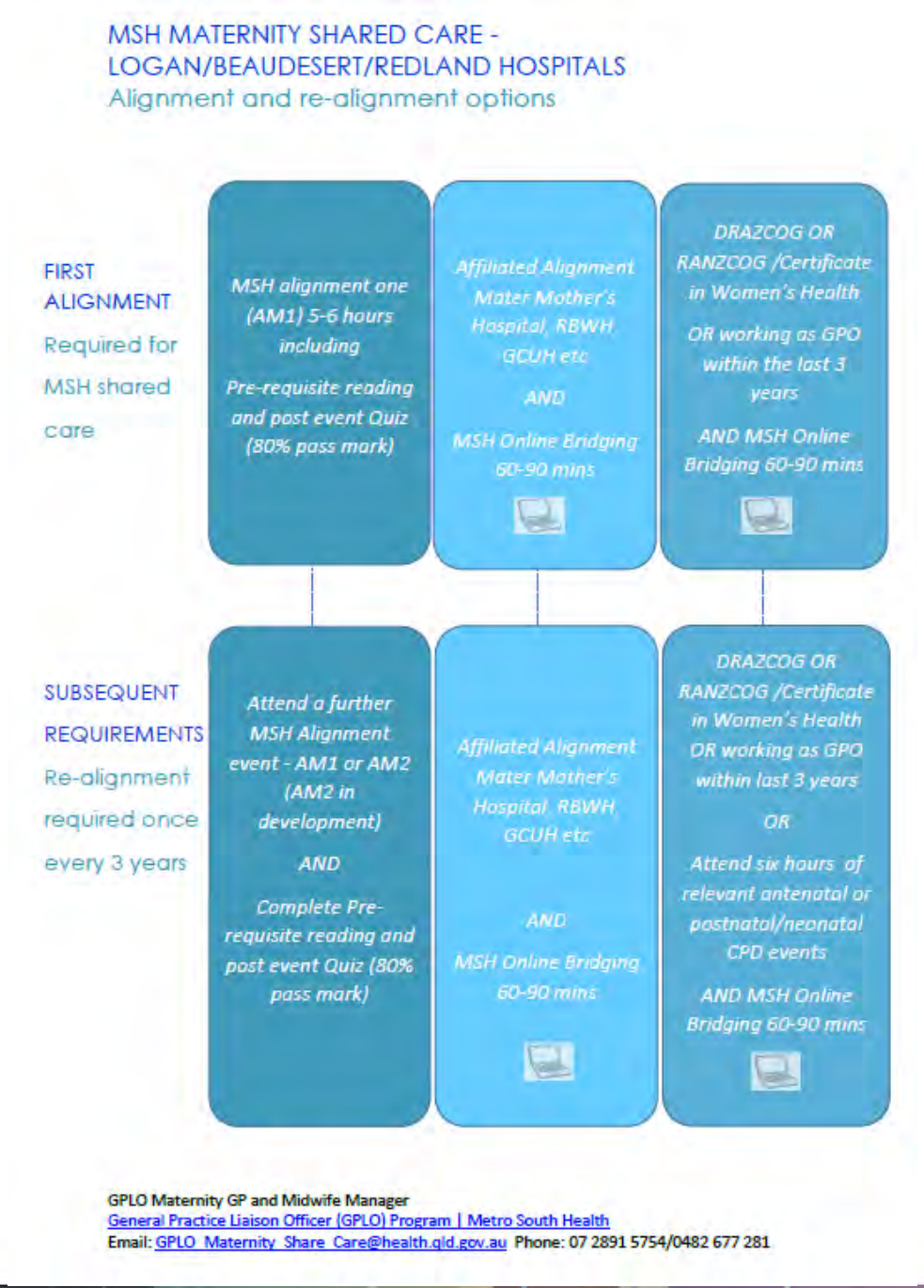
Can you think of other measures to audit?

- Look at gaps identified
- What do the gaps tell you about the women in your care/the service you provide?
- Devise an intervention based upon your gaps and repeat the assessment in 6-9 months

Share your results with us!

May publish some in our newsletter, and certainly more research into GP Maternity care is needed.

How to be aligned with MSHHS



GPLO Maternity GP and Midwife Manager
General Practice Liaison Officer (GPLO) Program | Metro South Health
Email: GPLO_Maternity_Share_Care@health.qld.gov.au Phone: 07 2891 5754/0482 677 281

- Undertake Knowledge Assessment – link sent by email (80% pass mark) in week after event
- Undertake Evaluation/Feedback – link to be forwarded – please let us know what we did well and what we could do better!
- Please log your own CPD points – recommended as Educational Activity CPD points (5 hrs) and Reviewing Performance Points (1.5 hrs)
- Alignment will need to be undertaken (or an alternative) every 3 years.

Maintaining Alignment

To maintain your alignment after the next 3 years, you must either:

- repeat one Alignment Seminar - you can repeat a MSHHS Alignment
  OR an affiliated Alignment (MMH/RBWH/Nambour/West Moreton/GCUH)
  + complete the online bridge including Q&A.

OR

- attend six hours of relevant antenatal or postnatal/neonatal CPD education and complete online bridge including Q & A. The CPD events DO NOT need to be with the Metro South Health Services

OR

- Complete a RANZCOG Diploma or Certificate in Women's Health + complete the online bridge

We are hoping to commence an Alignment 2 (and then 3) in next 12-18 months in MSHHS.

MSH Maternity Shared Care Online Bridging Programme

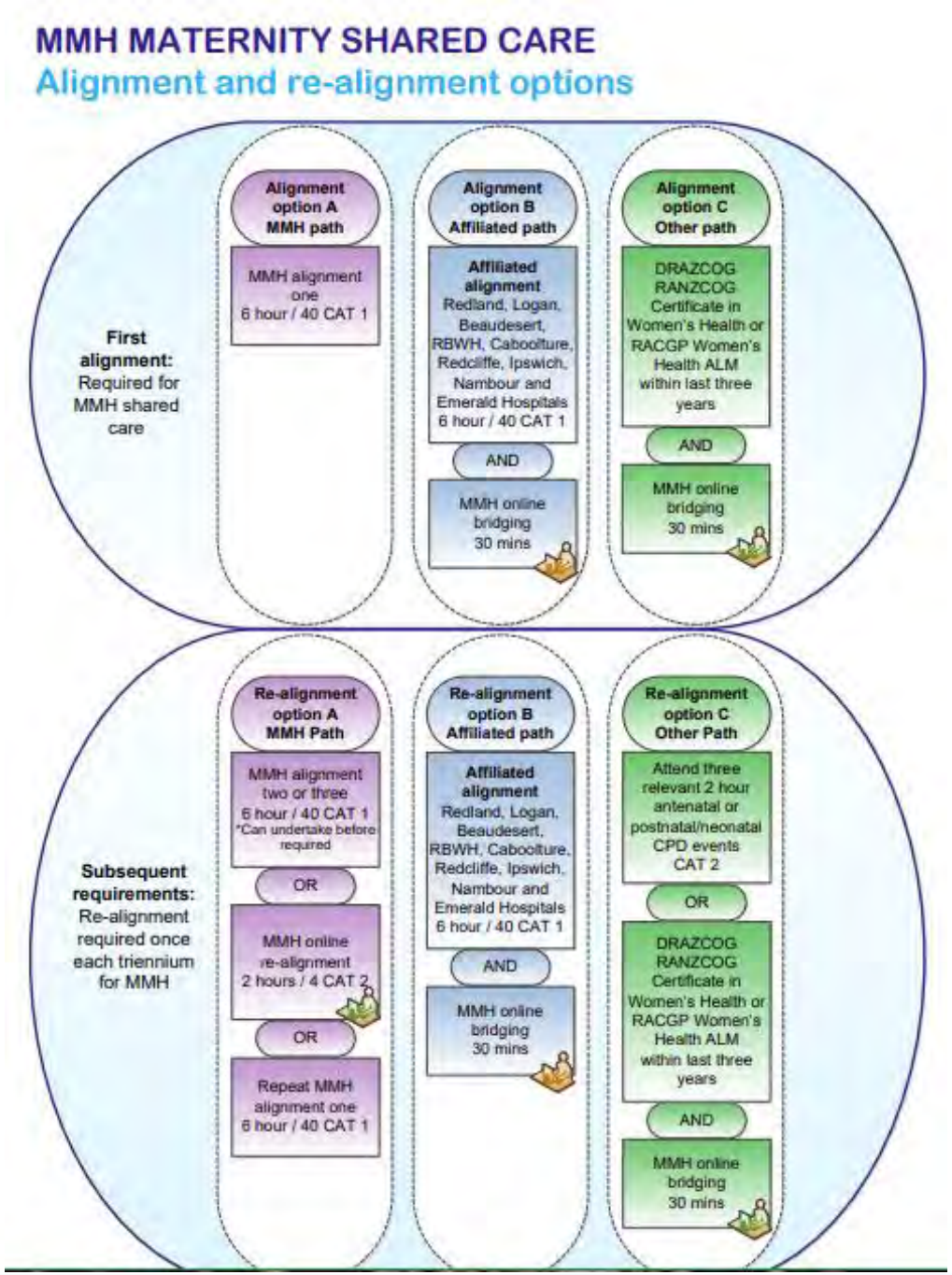
- Programme is delivered via an interactive online learning module including an exam/quiz to complete.
- Available to GPs who are currently aligned to Shared Care at MMH (or an alternative SEQ Alignment) and wish to align with MSH.
- Takes approximately 1- 1 ½ hours to complete.
- Once complete, GPs will receive notice of completion which can be claimed as Continuing Professional Development (CPD), logged through the RACGP member portal or other associations.
- To access the MSH GP Maternity Shared Care Online Bridging Program, please email us on GPLO_Maternity_Share_Care@health.qld.gov.au

MMH Alignment

- To become aligned with MMH you can participate in an Alignment event run by MMH (AM1/AM2/AM3 and soon to be AM4)

OR

- after a MSHHS Alignment, GPs will need to complete MMH's online bridge including Q&A – accessed by contacting the MMH Alignment team and forwarding a copy of your certificate from completion of this event.
- MMH GP Liaison Midwife - Telephone 07 3163 1861, mobile 0466 205 710 or email GPL@mater.org.au



Thank you …. and three more things...

- Let us know if you would be happy to have your contact information available for pregnant women who don't have a regular GP.
- MSHHS will hold your contact details – Alignment stays with the doctor, not the practice, so let us know if you move practice.
- Provide an updated email address so that we will be able to contact/update you in the future and forward our newsletter "Maternity in Focus" every few months

GPLO_Maternity_Share_Care@health.qld.gov.au

Good afternoon and thank you!