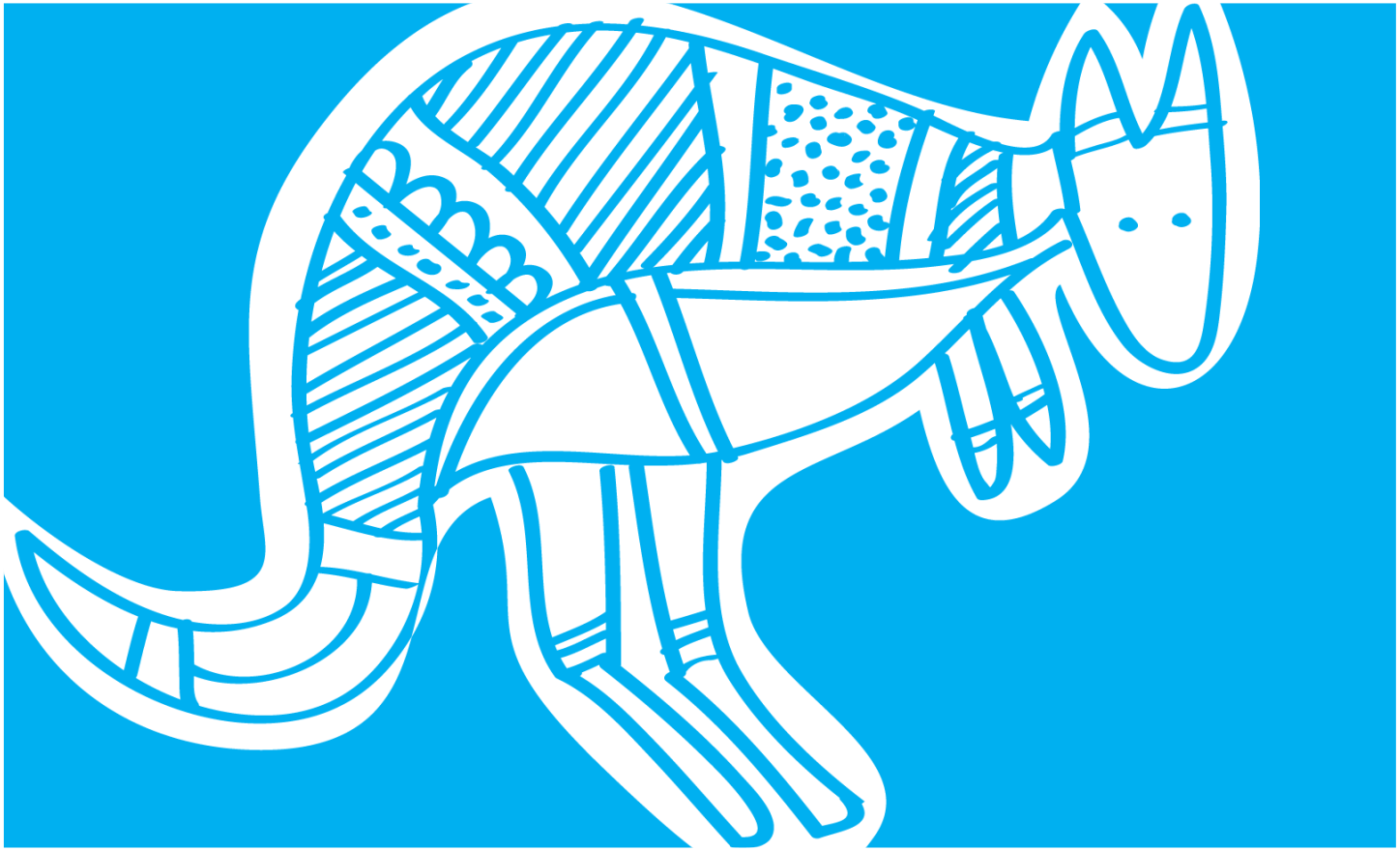
# Mater Mothers' Alignment 1

November 4, 2023

# Acknowledgement of Traditional Owners



**The Turrbal and Jagera peoples**


I wish to acknowledge that not all those who are pregnant or who have given birth identify as women. When I use the terms mother, woman or women during today's discussions, please know that I include those who have a different gender identify.

Artist: Chloe Trayhum
https://www.chloetrayhurn.com/

# Acknowledgments

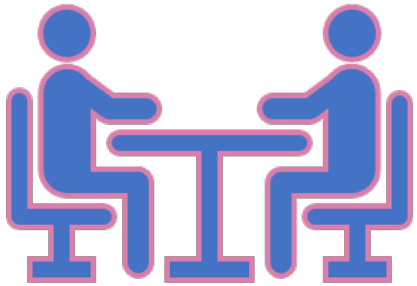
- MMH
- Dr Don Cave, Mish Hill
- Caroline Nicholson, Maree Reynolds, Mike Beckmann
- Anne Williamson & Erin Hutley GPLM
- The extended MMH GP Shared Care Alignment team
- BSPHN

# Getting the most out of your day

## ALL QUESTIONS WELCOME

- Please raise your hand at the relevant time
- You may be asked a question
- We are using QR codes to connect you to resources
- Phone out, but on silent!
  - If you need to take a call, please leave the room

Depending on the ‘depth of the dive’, we may have to take some questions on notice and get back to you with an answer post-program.



# *SESSION 1:*

| Time | Session | Who |
|---|---|---|
| 8:00 am | **Welcome:** course expectations, learning objectives | Dr Wendy Burton |
| 8:10 | **Models of care:**<br>Understanding Mater maternity care options | GP Liaison midwife (GPLM)<br>Anne Williamson |
| 8:20 | **Referrals:** What, why and how | Dr Wendy Burton |
| 8:35 | **What's new in the Zoo?**<br>Dr Wendy Burton | Dr Vishwas Ragunath<br>Obstetric physician<br>Dr Georgia Heathcote<br>Obstetrician |
| 9:00 | **Recurrent issues:**<br>GDM, thyroid disorders, obesity | Dr Vishwas Ragunath<br>Dr Georgia Heathcote |
| 9:25 | Aneuploidy screening and diagnosis Carrier Screening | Dr Scott Petersen |
| 9:55 | Recap | Dr Wendy Burton |
| 10:00 | Morning tea break | |

## *SESSION 2:*

| Time | Session | Who |
|---|---|---|
| 10:30 | **Physiotherapy** | Megan Newell<br>Physiotherapist |
| 10:40 | **Mental health** – general principals | Den Davies-Cotter CNC Perinatal Mental Health<br>Dr Wendy Burton |
| 10:55 | **Pharmacology** & pregnancy | Dr Treasure McGuire(Video)<br>Pharmacist |
| 11:10 | **Case work**<br>All<br>Dr Wendy Burton Facilitator<br>Dr Georgia Heathcote Obstetrician | Anne Williamson (GPLM)<br>Kirsty Lehmann<br>Young Women's Clinic<br>Laura Shoo<br>Young Women's MGP |
| 12:50 | **Conclusion** | Dr Wendy Burton |

# Program Goals

## Optimal patient experience

- Educate
- Update
- Equip
- Empower

## Facilitate

- Innovation
- Integration
- Communication

# No one knows everything!

We need to know

- Enough to make it worthwhile people coming to see us (Education)
- Where to look (Showcase resources)
- Who to call (Build relationships, inform, provide contact numbers)
- When and where to refer (Education, PAC, ED, ANC, Birth Suite)

# Learning objectives

This program is designed to enhance your understanding of:

1. GP Maternity Shared care guidelines
2. Routine antenatal screening recommendations
3. Models of care and how to access them
4. High risk pregnancy recommendations
5. Medical conditions such as gestational diabetes and thyroid disease in pregnancy

# Learning objectives

This program is designed to enhance your understanding of:

6. Appropriate screening options for fetal anomalies in general and specific situations
7. Physiotherapy services available to women and common ailments requiring treatment
8. Screening and management options for mental illness
9. Medications in pregnancy
10. Referral and communication pathways with MMH

# Mater Mothers
# Models of care

# MMH Models of care

1. Preconception / Fertility service
2. Midwifery Group Practice
3. Birthing in Our Community- BIOC
4. Refugee Service
5. CHAMP service
6. Risk Planning service
7. Bereavement Service
8. Obstetric MGP Diabetes (new)

Mater Mothers

# Specialised Models of Care (MOC)

Please assist appropriate triage by identifying risk factors such as:

- indigenous status
- refugee background
- social risk
- drug and alcohol use
- previous pregnancy loss

Women may choose to have GP share care, but their booking appointments and assessment will occur in the specialist clinic

# Antenatal Clinics, Models of Care

| | | |
|---|---|---|
| **OBSTETRIC**<br>• Obstetrician<br>• Obstetric registrar<br>• Midwife<br>• MMH Monday to Friday<br><br>**PREVENTION OF PRETERM BIRTH CLINIC** | **OBSTETRIC MEDICAL**<br>• Midwife and Obstetrician<br>• Obstetric registrar<br>• Obstetric physician<br>• MMH Monday to Friday | **GP SHARE CARE**<br>• Midwife history<br>• Obstetrician/Obstetric registrar at booking appointment<br>• GP routine visits<br>• MMH at K36 midwife/obstetrician or midwife at Brookwater + obstetrician via telehealth |
| **MIDWIVES CLINIC**<br>• MMH and Inala Monday –Friday<br>• Young Womens <21yrs Tues + Wed<br>• Norman Park – Thursday<br>• Brookwater –Monday<br>• RPM (Risk Planning Midwife) for women with high psychosocial risk factors<br>• MMH Monday and Thursday | **REFUGEE CLINIC**<br>• Midwife/Obstetrician<br>• Obstetric physician<br>• Social Worker<br>• MMH Tuesday and Wednesday | **BIOC Birthing in Our Community**<br>• Midwifery Group Practice for Aboriginal and Torres Strait Islander women or women with partners who identify as ATSI<br>• Midwives + Indigenous health workers Obstetrician/registrar at booking and when required |
| **OMGP OBSTETRIC MGP DIABETES**<br>• Known midwife continuity of care<br>• Obstetrician/Registrar<br>• Endocrinologist<br>• Diabetes Nurse Educator + dietitian | **PREGNANCY AFTER LOSS CLINIC**<br>• MMH early review if last pregnancy IUFD, stillbirth or neonatal death<br><br>**CHAMP**<br>• Recent or current drug and alcohol use<br>• MMH Wednesday | **MIDWIFERY GROUP PRACTICE**<br>• Coorparoo + Norman Park<br>• Inala + Acacia Ridge<br>• Coorparoo <21yo<br>• Refugee background Inala<br>• Telehealth consult with Obstetrician/ registrar at booking |

# Home recovery option

## Early discharge post caesarean section

At Mater public women can transfer home *24 hours post c/s*

**Eligibility criteria**

- maternal interest
- women who don't need an interpreter
- PHx of previous birth
- no history of diabetes
- BMI < 40
- homecare eligible
- adult support at home.

# Communication

## The importance of getting it right

Dr Wendy Burton

# Linking in to MMH

**Antenatal Clinic (ANC) receives 200-400 referrals *a week***

- ✓ **Information** = safe, effective and efficient triage
  - Medical, obstetric, social risk factors
  - Indications for early appointment
- ✓ Need **advice**? Contact the GP Liaison Midwife
- ✓ The use of an antenatal Smart Referral or the MMH **referral** template is mandatory. Please include ALL patient information requested.
- ✓ cc MMH ANC on *ALL* **investigations**

Mater
Misericordiae Ltd

# REFERRAL - ANTENATAL

**FAX NUMBER: (07) 3163 8053**

MHS Unit Record No.

Patient surname

Patient given names

Patient date of birth

**Do not fax from private or business numbers. GP fax only.**

## Patient details

**Residential address:**

Suburb: State: Postal code:

**Preferred contact:** ☐ Home ☎: ☐ Mobile ☎:

**Next of kin:** ☎:

Please advise all patients to bring their Medicare card when presenting to the Mater. Medicare ineligible patients will incur a fee for appointments/ treatment provided which is payable on presentation. Insurance provider and policy number must be provided before bookings can be processed.

**Medicare eligible?** ◯ Yes ◯ No Medicare no.: Card ref. no.: Expiry date:

**Private health insurance** name: Policy number:

**Indigenous status?** ☐ Aboriginal ☐ Torres Strait Islander ☐ Australian South Sea Islander ☐ Not Indigenous

**Does this patient identify as having a refugee background?** ◯ Yes ◯ No

**Interpreter required?** ◯ Yes ◯ No Language: **Special needs** e.g. Carer:

This referral is for an initial consultation with a Doctor for the planning and co-ordination of care for this pregnancy. Women will be subsequently offered a choice of appropriate models of care. To improve efficiency and reduce waiting times, this named referral will be shared with other specialists. The consultation may be bulk-billed to Medicare Australia with NO out of pocket expenses for this patient.

## Referral

**Referral date:**

Dear Dr Michael Beckmann (Director, Mothers Babies and Women's Health Services)

**Thank you for seeing this woman whose LNMP was** **and whose EDC is**

She is **G** **P** **Height** **Weight** **BMI**

**This patient is high risk and requires early assessment ?** ◯ Yes ◯ No If "Yes", specify details below

## Past genetic, medical ,surgical, and obstetric history:

Binding margin - do not write. Do not reproduce by photocopying. All clinical form creation and amendments must be conducted through Health Informatics.

REFERRAL - ANTENATAL 100

06/16
Ver. 6.00
F1828

Clear form




*Continued on page 2 ➔*

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Misericordiae Ltd

REFERRAL - ANTENATAL

FAX NUMBER: (07) 3163 8053

MHS Unit Record No.

Patient Surname

Patient Given Names

Patient Date of Birth

**Medications:** (attach patient summary if necessary)

**Allergies:**

## Models of care

**I have discussed models of care and this woman would like:**

**GP Shared Care?** ◯ Yes ◯ No

I have completed the MMH alignment program: ◯ Yes ◯ No.

**Midwifery Care?** ◯ Yes ◯ No

**Midwifery Group Practice?** ◯ Yes ◯ No Second choice if **Midwifery Group Practice** full?

## Relevant investigations (attach investigations or results)

**Pathology service provider:** ☐ Mater ☐ S & N ☐ QML

1. **Pap smear up to date?** ◯ Yes ◯ No
   Result: ◯ Normal ◯ Abnormal
2. **Down Syndrome screening discussed?** ◯ Yes ◯ No
   Testing accepted? ◯ Yes ◯ No
   Referral given? ◯ Yes ◯ No
3. **First trimester HbA1c for BMI > 30, previous GDM, maternal age ≥ 40, or previous macrosomic baby?** ◯ Yes ◯ No
4. **18/40 morphology ultrasound ordered?** ◯ Yes ◯ No
6. **FBC?** ◯ Yes ◯ No
7. **Rubella serology?** ◯ Yes ◯ No
8. **Urine M/C/S?** ◯ Yes ◯ No
9. **HIV?** ◯ Yes ◯ No
10. **Syphilis serology?** ◯ Yes ◯ No
12. **Blood group & antibody?** ◯ Yes ◯ No
13. **Hepatitis B serology?** ◯ Yes ◯ No
14. **Hepatitis C serology:** ◯ Yes ◯ No

## Referring clinician (Please complete all fields clearly or affix stamp)

Referring clinician name: Provider number:

Address:

Phone number: Fax number:

Signature: Email address:

## Mater staff use only

Date received:

☐ **Referral accepted** Age: EDC: Current gestation:

☐ **Referral declined** ☐ Out of Area ☐ Other

☐ GP Notified Date sent: ☐ Woman notified Date notified:

☐ **First appointment midwife and obstetrician** ☐ Woman notified of first appointment on

☐ **Medicare eligilbe** ☐ Medicare ineligible AND insured ☐ Medicare ineligible, NOT insured

Sent to billing office date: Sent to billing office date:

**Notes:**

**Midwife name:** **Signature:** **Date:**

Binding margin - do not write. Do not reproduce by photocopying. All clinical form creation and amendments must be conducted through Health Informatics.

Print form

# Please attach copy AND cc MMH

**Relevant investigations** (attach investigations or results)

1. **Pap smear up to date?** ○ Yes ○ No
   Result: ○ Normal ○ Abnormal
2. **Down Syndrome screening discussed?** ○ Yes ○ No
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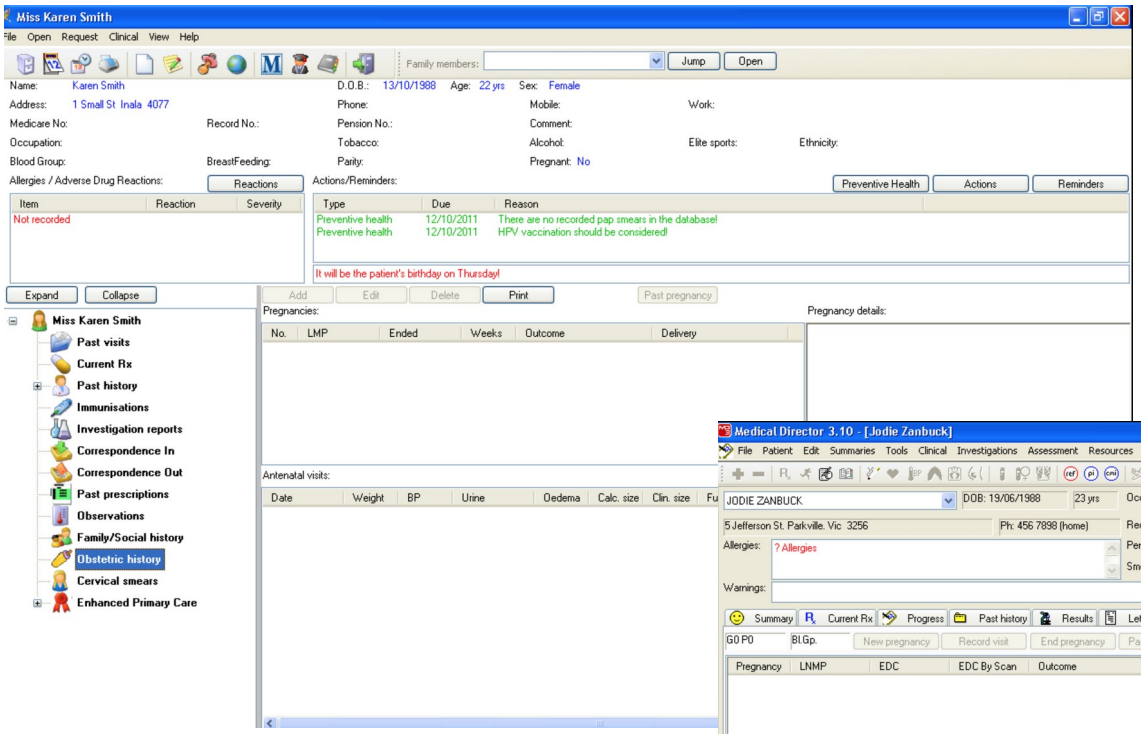
14. **Hepatitis C serology:** ○ Yes ○ No

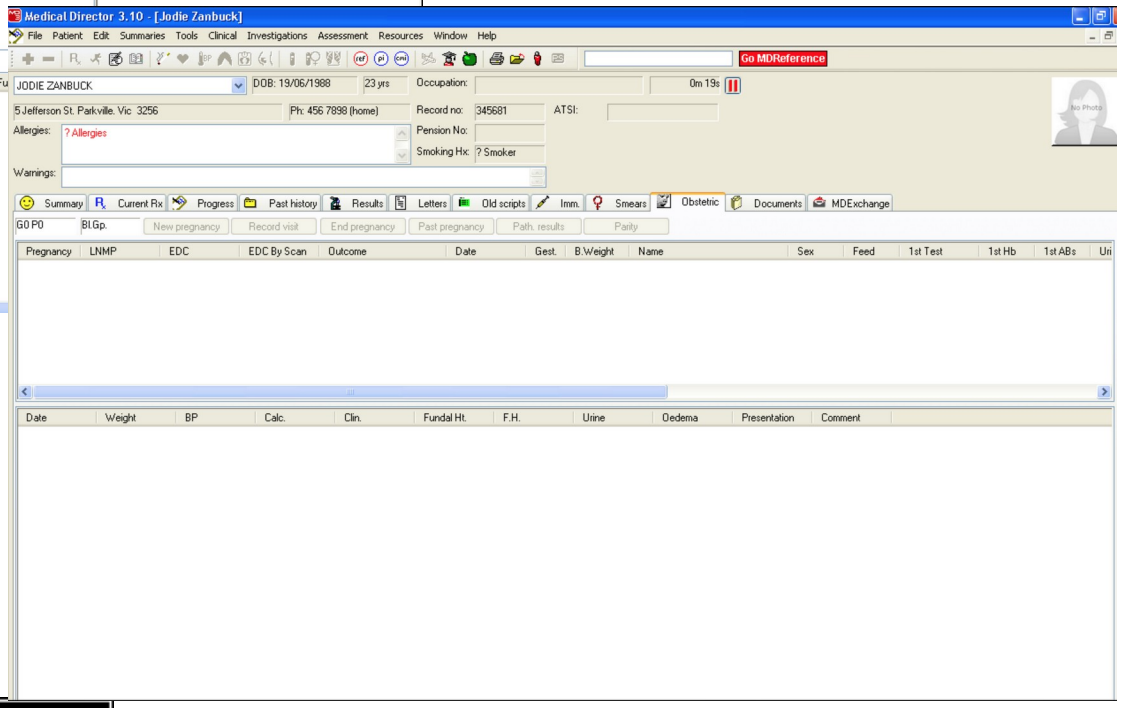
Copy of results in referral = helpful for triage
cc results to MMH
Printed copy of reports in the Pregnancy Health Record OR copied to My Health Record
= immediate access to clinical information
**Press print!**

# Booking In

- Low risk women must complete information online before their antenatal booking appointment or it will be rescheduled
- A **link** is sent via SMS *mobile phone number must be correct* (women to notify ANC of any contact changes )
- *If unable to be contacted their booking will be cancelled*
- Women who need an interpreter have a longer booking appointment, not the online version. Identify them!

# Where are you entering your observations?

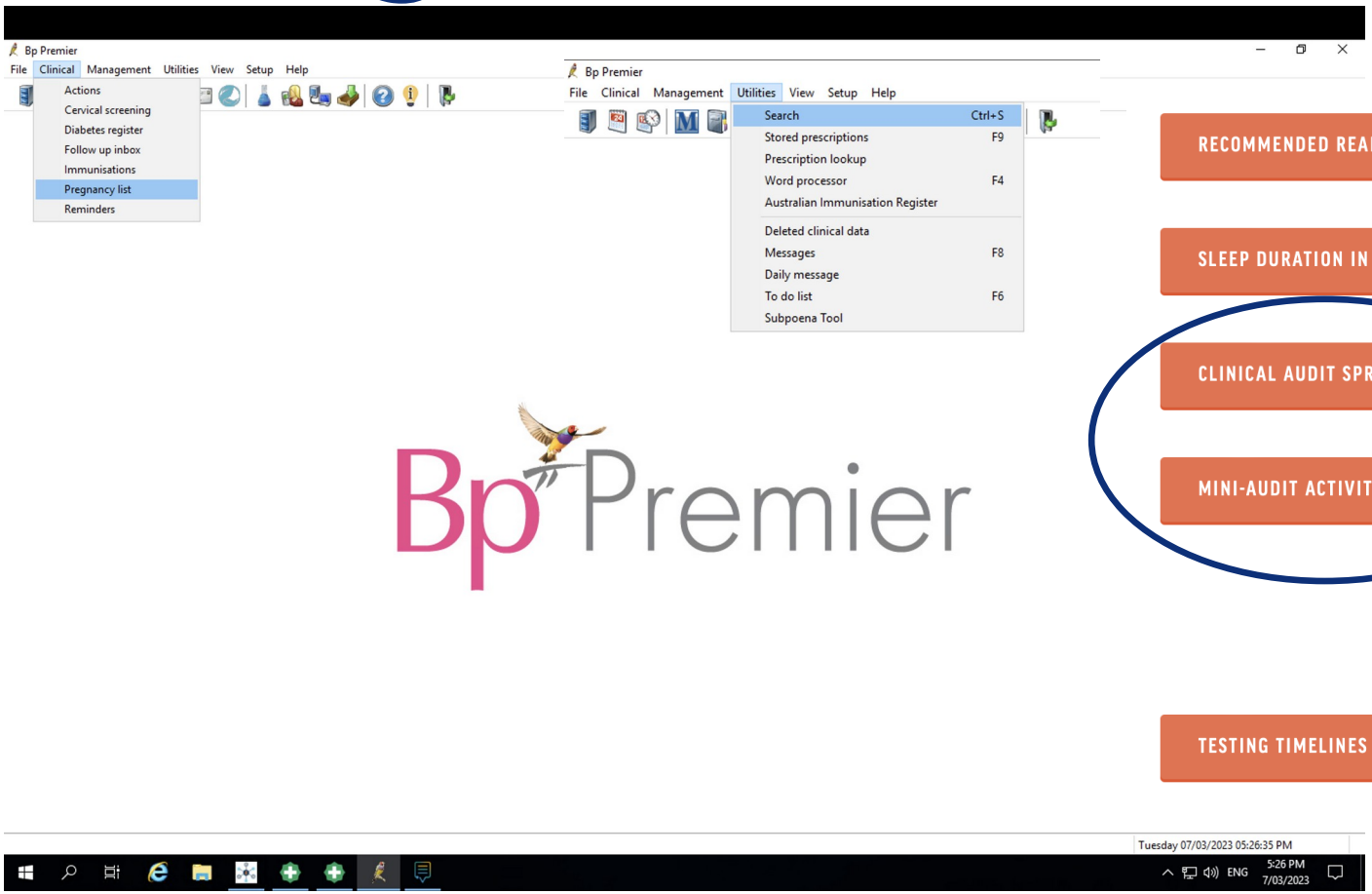



## Use the obstetric tabs

- *easy to enter data
- *print a copy for PHR
- *ready for digital PHR
- *easy to see who you are caring for

# Clinical audit capacity (MD, go to “search”)




RECOMMENDED READING AFTER BABY IS BORN

SLEEP DURATION IN CHILDREN

CLINICAL AUDIT SPREADSHEET

MINI-AUDIT ACTIVITY

TESTING TIMELINES

# Who is responsible for abnormal results?

## *You*

***If you order it, you are responsible for follow up and referrals***

- The cc result is not seen by clinicians until contact with the woman is made
- What to you do with what you have found is in the MMH GP Maternity Shared Care Guideline
- Unsure?  Who can you call?

# Who can you call?

**For clinical advice or if a woman requires urgent review:**

- Obstetric consultant:

  M-F 8.30-4.30 3163 1330

  24hrs 3163 6612

- Obstetric reg: 3163 6611 (24hrs)
- Obstetric Medicine registrar via switch 3163 8111

**The GP Liaison office**

Mon - Fri 0730 - 1600 for all your questions

- Telephone 07 3163 1861 mobile 0466 205 710 (you can leave a message) or
- Email GPL@mater.org.au

# Referral process

**- what to do with what you know**
**- what to do with what you find**

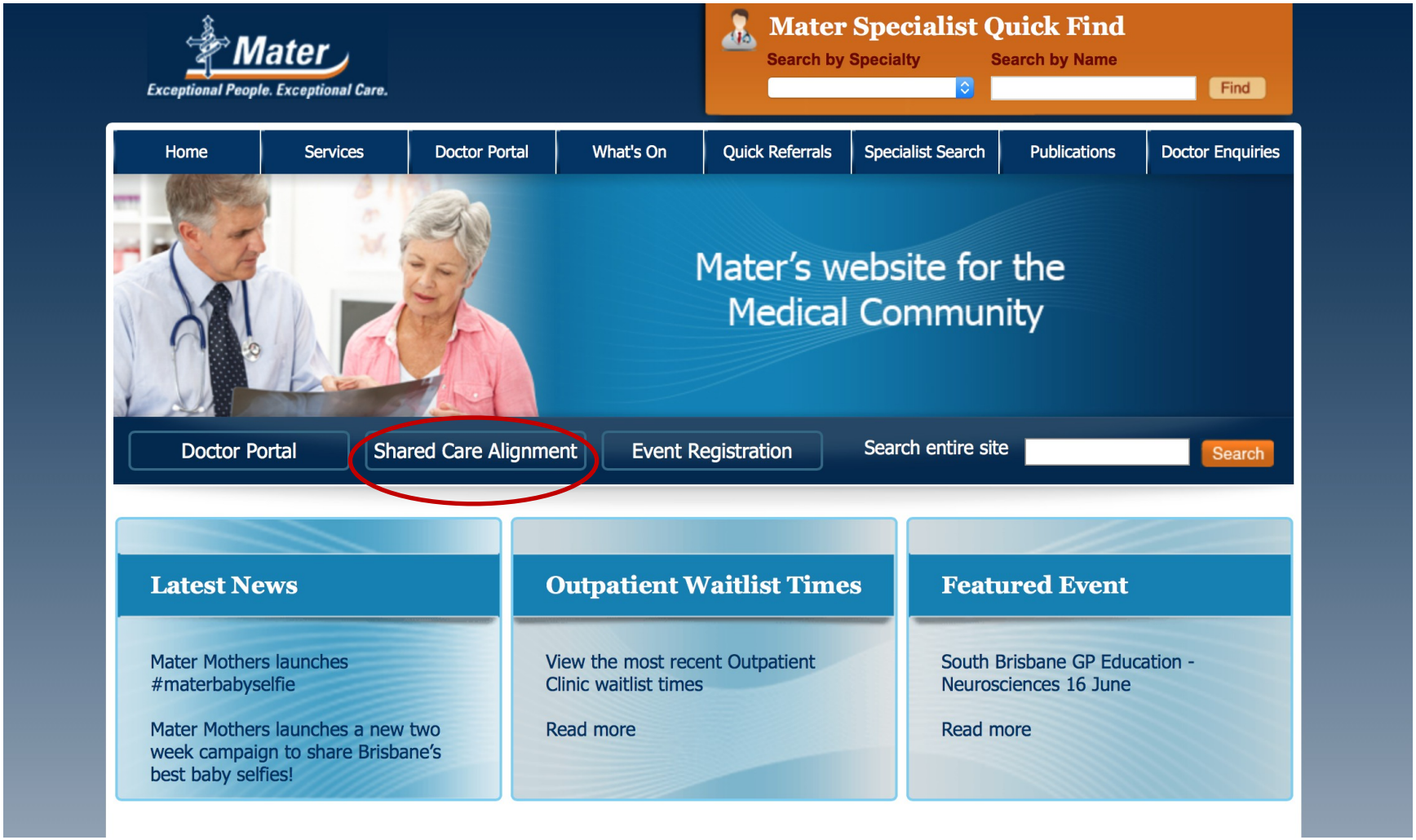
- Women with ***pre-existing*** **medical conditions** identified in the antenatal referral don't need separate referrals to specialist clinics. The obstetrician will sort it out at the first visit
- If a woman develops a complication *after* referral, notify ANC with correspondence and results (Fax 3163 8053 or send electonically) a new referral is not required
- OGTT positive?  REFER her into ANC

**If immediate referral is needed, refer the woman to PAC (24/7)**

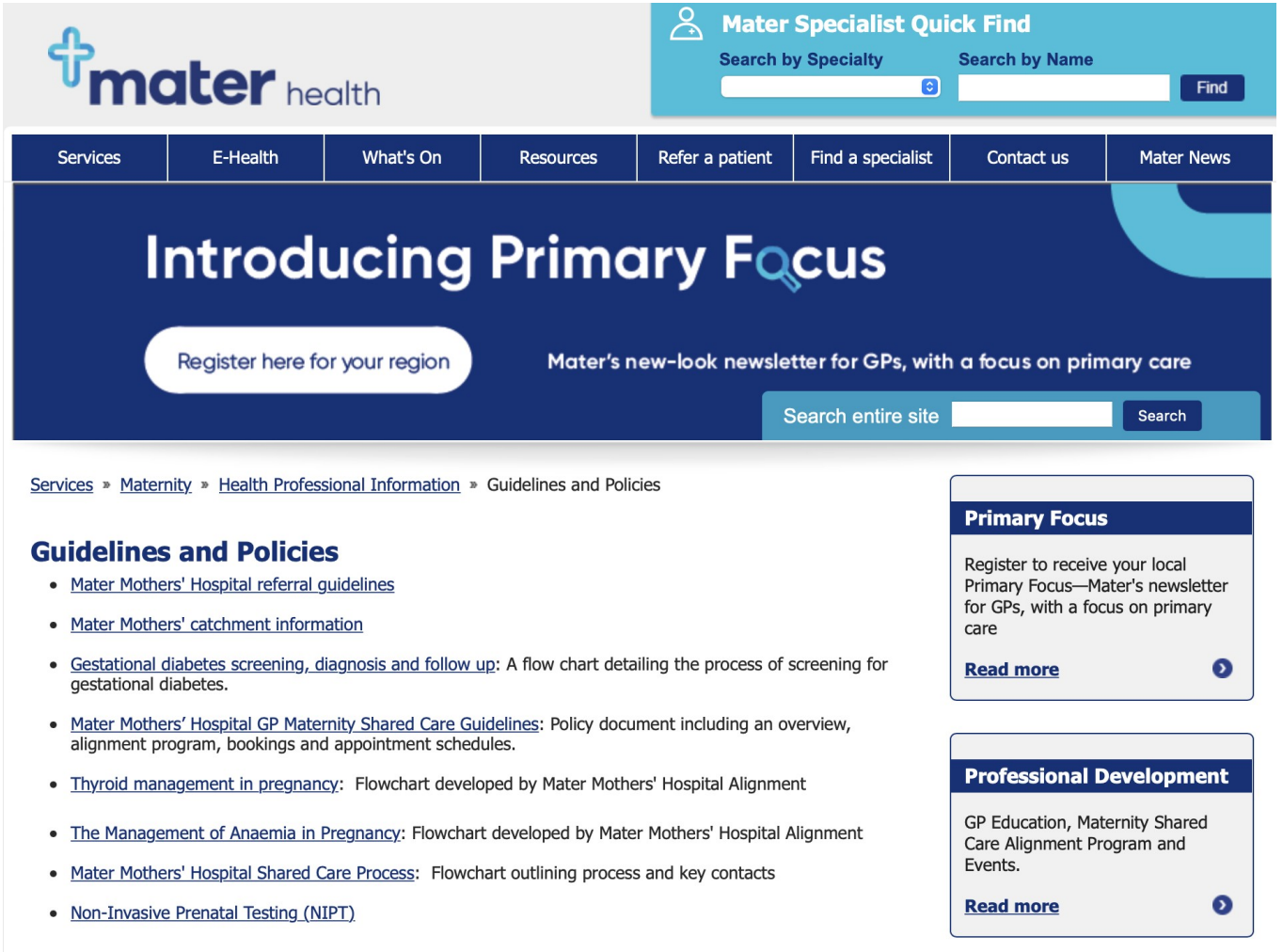
# The referral pathway

- All women should be referred to their local obstetric hospital
- A comprehensive referral ensures appropriate triage
- Local obstetricians will liaise with or refer women onto MMH prn
- If complications arise, contact her *local* obstetric service, they can sort it out

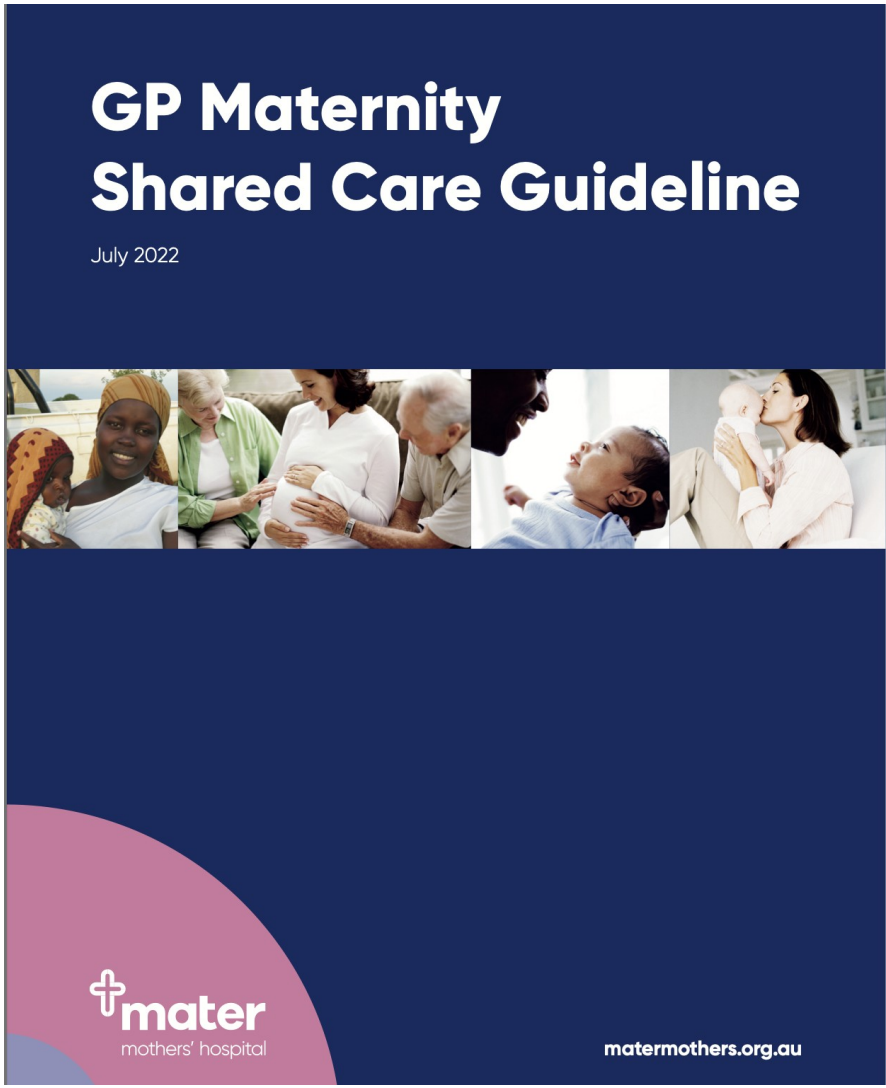
# www.materonline.org.au



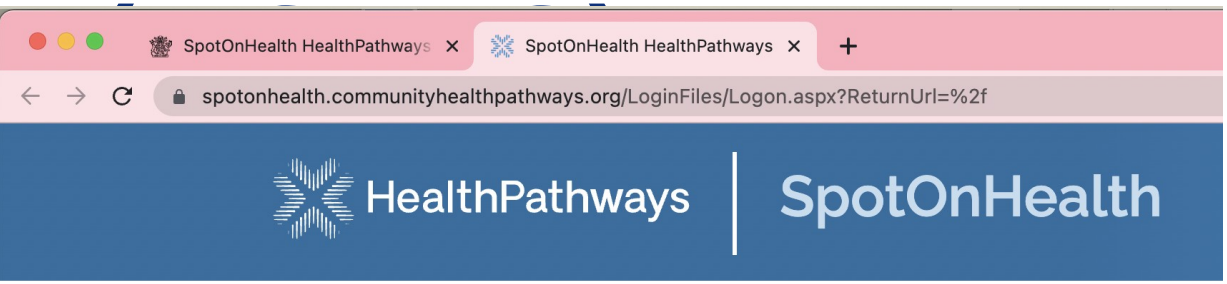
www.materonline.org.au/services/maternity/health-professional-information/guidelines-and-policies



# Guidelines MMH



# Spot on Health Pathway




Welcome

Sign in to HealthPathways

Username

Brisbane

Password

*Forgot password?*

South

Show

Remember me

Sign In


54 RESULTS FOUND FOR 'antenatal'

- (•) Web pages
- ( ) PDFs/forms/documents
- ( ) All

**Antenatal** Care - Routine

**Antenatal** Care - Initial

Maternity Models of Care

**Antenatal** Care

Bleeding in RhD Negative Women

Venous Thromboembolism (VTE) Risk in Pregnancy

Perinatal Mental Illness

Acute Obstetric and Maternity Assessment

Pregnancy Planning

Sexual Health Check

Plagiocephaly

Acute Paediatric Surgery Assessment

Mater Doctor Portal

# Guidelines-State (Qld)

Queensland Government

Queensland Health

Contact us | Help Search

Public health & wellbeing | Clinical practice | Health system & governance | Employment | Research & reports | News and alerts

Home > Queensland Clinical Guidelines

## Queensland Clinical Guidelines

**Translating evidence into best clinical practice**

### Maternity & Neonatal

Clinical guidelines and supporting resources

- Maternity
- Neonatal
- Standard care
- Operational frameworks

### NeoMedQ

Search the Queensland Neonatal Medicines Formulary.

### Adult Diabetes

Adult inpatient management of steroid induced hyperglycaemia

- Guideline
- Supplement

### Consumers

Information for women, parents and carers

- Consumer information
- Consumer representation

### Additional Guidance

Guidelines developed by others

- Maternity guidelines
- Neonatal guidelines

### Learning and Resources

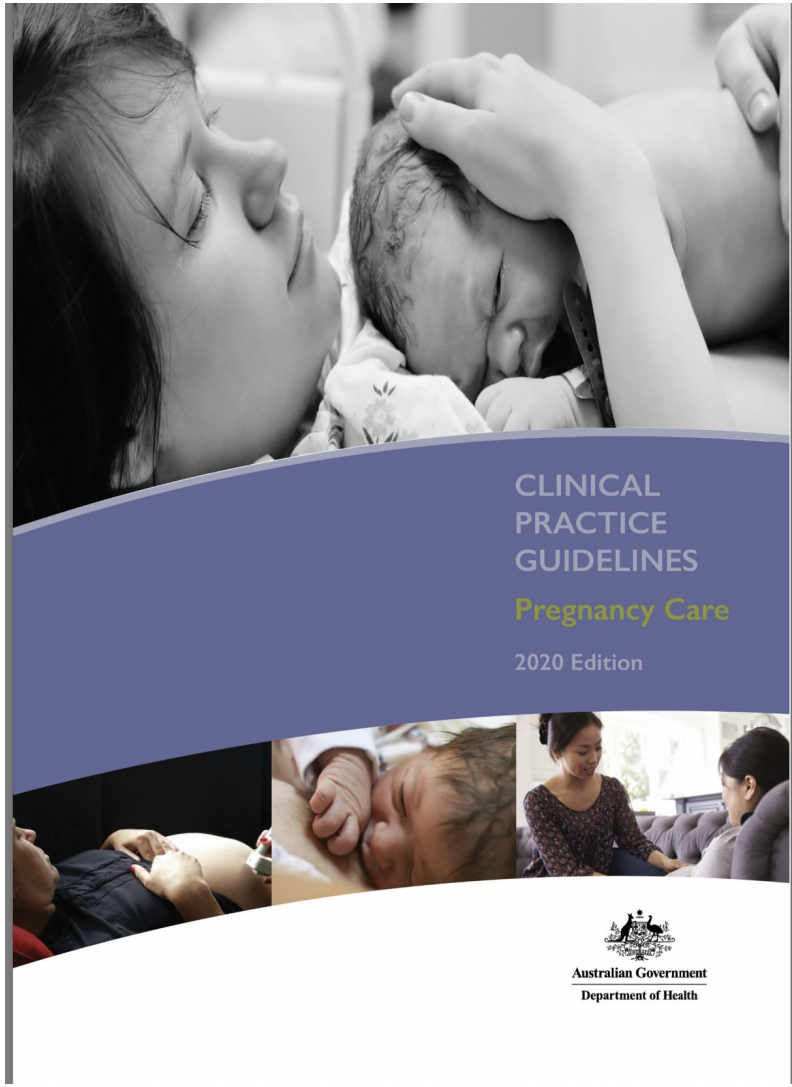
Education and implementation resources

- Presentations
- Knowledge assessments
- Videos
- Implementation checklist

# Guidelines-National

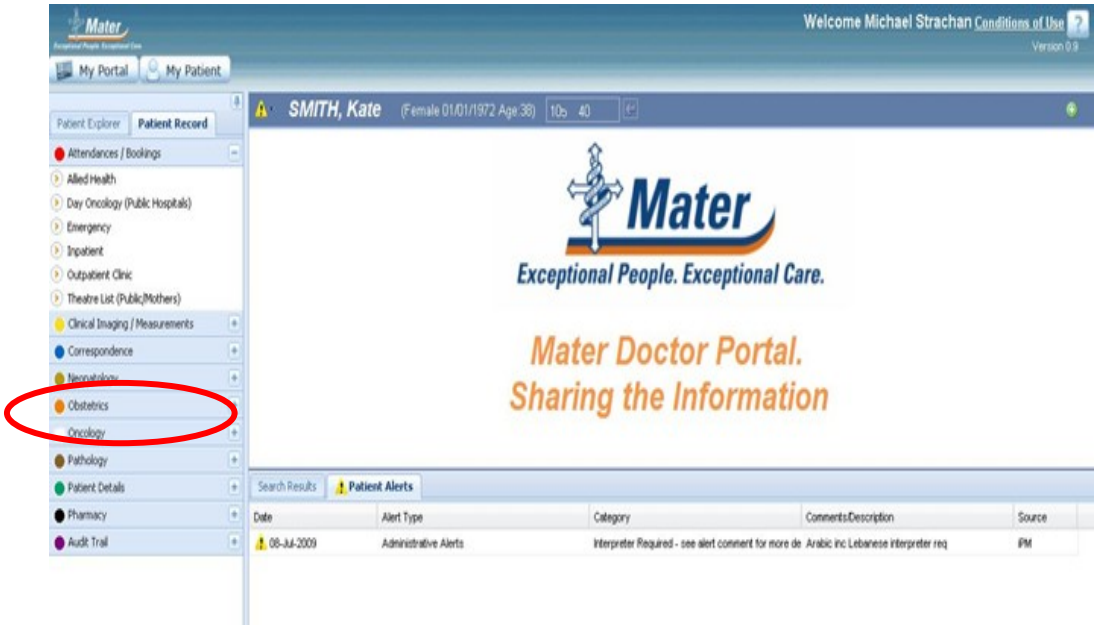
Contains | Search | Done

https://www.health.gov.au/resources/publications/pregnancy-care-guidelines



# Mater Doctor Portal

Mater's version of the Health Provider Portal




Interested? Indicate on the feedback form for this session

# MMH catchment area

- Refer all women to their local service. If you are uncertain, or if time is critical = contact GPLM

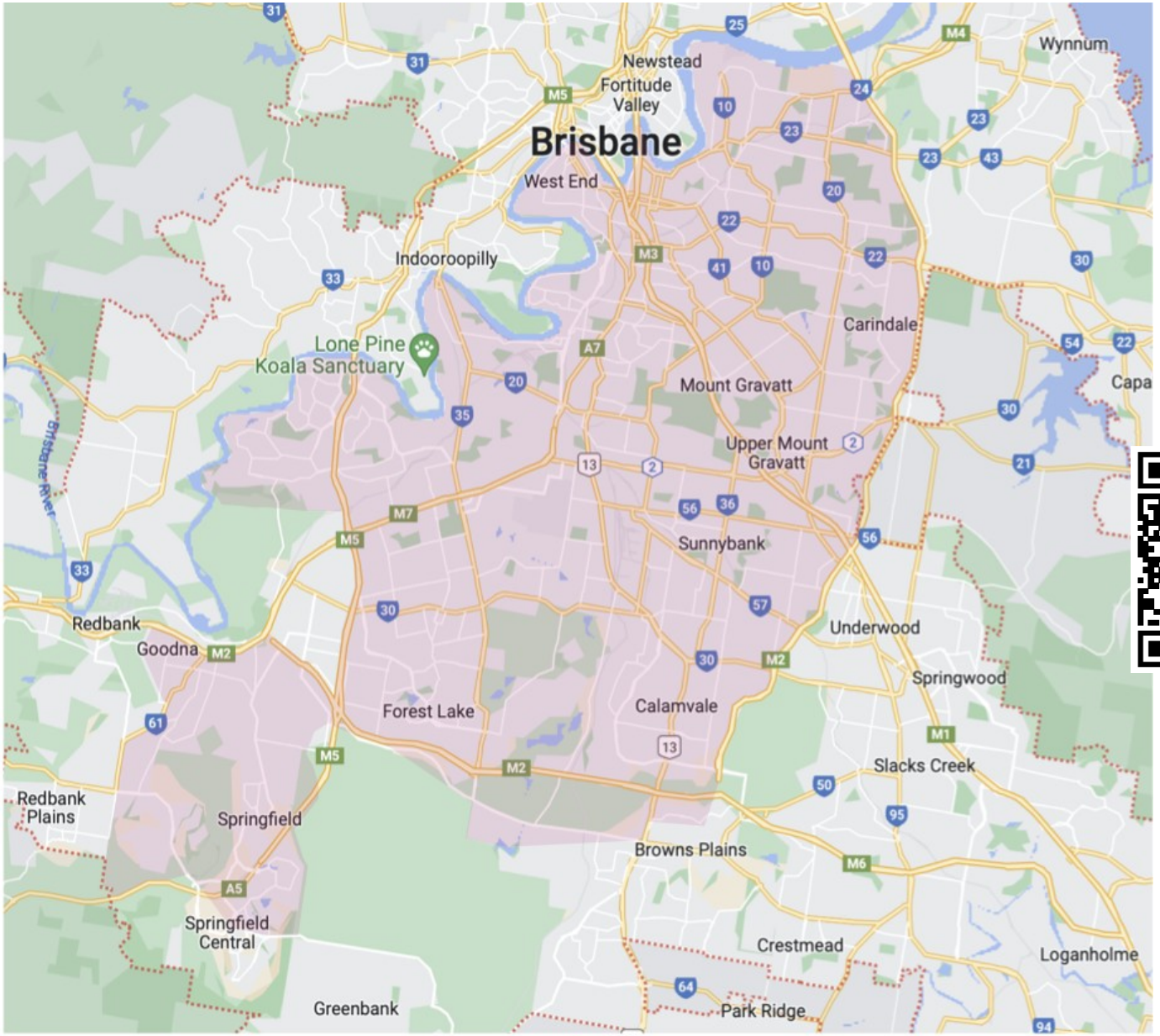
- **Private** hospital, **public** births
- **Local** hospital, **tertiary** referral centre

- **High demand =** no routine low risk referrals outside catchment
  - Except indigenous women
  - Perhaps women requiring a specialist drug and alcohol service

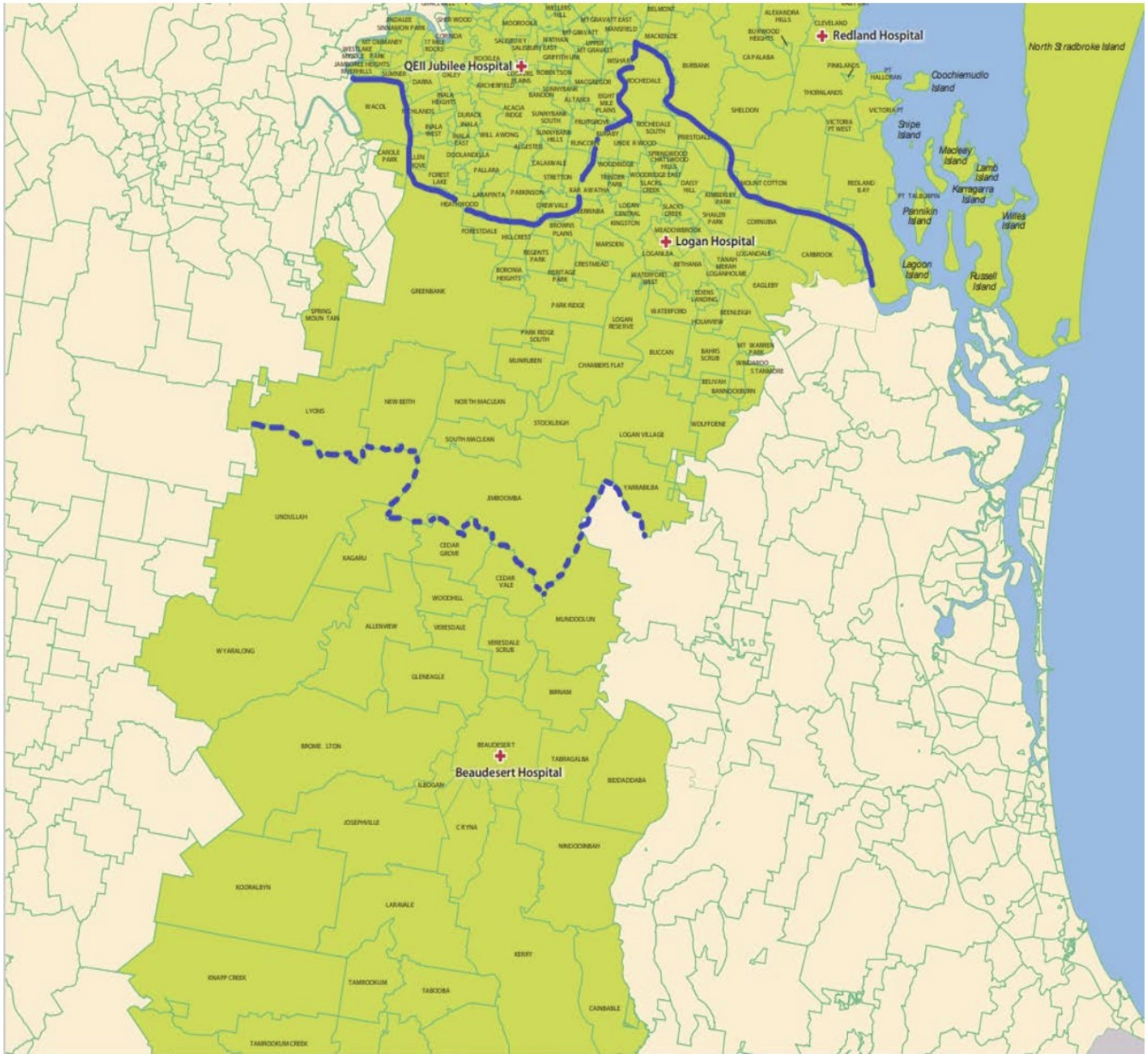
Proof of address is required

**Mater Mothers Private has no catchment restrictions**

# Mater Mother's Cat



# Logan & Beaudesert Catchment



# Please consider signing up

Mater has a consumer website
www.matermothers.org.au
with models of care information

Women who do not have a GP can use this list to locate an aligned GP

Indicate your interest and consent on the feedback form

- Yeronga
- Wynnum
- Wishart
- West End
- Waterford West
- Underwood
- Toombul
- The Gap
- Sunnybank Hills
- Stones Corner
- Springwood
- Spring Hill
- Slacks Creek
- Seven Hills
- Runcorn
- Rocklea
- Redbank Plains
- Purga
- Paddington
- Norman Park
- Nathan
- Mount Warren Park
- Morningside
- Meadowbrook
- Mansfield
- Macleay Island
- Laidley
- Keperra
- Jindalee
- Indooroopilly
- Holland Park
- Heritage Park
- Greenslopes
- Goodna
- Fernvale
- Eight Mile Plains
- Eagle Heights
- Darra
- Cornubia
- Cleveland
- Capalaba
- Calamvale
- Buranda
- Brookwater
- Bracken Ridge
- Belmont
- Bardon
- Auchenflower
- Annerley
- Acacia Ridge
- Yeppoon
- Woolloongabba
- Windsor
- Wellington Point
- Victoria Point
- Toowoomba
- Tingalpa
- Tenneriffe
- Sunnybank
- Stafford
- Springfield Lakes
- Southport
- Sinnamon Park
- Samford
- Rochedale
- Richlands
- Redbank
- Parkinson
- Oxley
- Newmarket
- Murrumba Downs
- Mount Ommaney
- Moorooka
- McDowall
- Manly West
- Loganlea
- Kuraby
- Kenmore
- Jimboomba
- Inala
- Hillcrest
- Hawthorne
- Greenbank
- Fortitude Valley
- Fairfield
- East Brisbane
- Durack
- Daisy Hill
- Coorparoo
- Carindale
- Cannon Hill
- Burpengary
- Bulimba
- Brookfield
- Bowen Hills
- Beenleigh
- Balmoral
- Ashgrove
- Algester
- Yarrabilba
- Woodridge
- Windaroo
- Wellers Hill
- Upper Mt Gravatt
- Toowong
- Thornlands
- Taringa
- Sumner Park
- St Lucia
- Springfield
- South Brisbane
- Sherwood
- Salisbury
- Robertson
- Redland Bay
- Red Hill
- Park Ridge
- Nundah
- New Farm
- Mt Gravatt
- Mount Cotton
- Middle Park
- Marsden
- Manly
- Loganholme
- Kingston
- Kangaroo Point
- Ipswich
- Holmview
- Highgate Hill
- Gumdale
- Graceville
- Forest Lake
- Everton Hills
- Eagleby
- Dunwich
- Crestmead
- Collingwood Park
- Carina
- Camp Hill
- Burleigh Waters
- Browns Plains
- Brisbane CBD
- Birkdale
- Beaudesert
- Bald Hills
- Ascot
- Albany Creek

# What's new in the Zoo?

Dr Wendy Burton

Dr Vishwas Raghunath
Nephrologist and Obstetric Physician

Dr Georgia Heathcote
Obstetrician

# Dr Vishwas Ragunath

Vishwas Raghunath is a Nephrologist and Obstetric Physician

He has a keen interest in the management of hypertensive disorders in pregnancy, preeclampsia, and the interplay with chronic kidney disease.

# Dr Georgia Heathcote

Dr Georgia Heathcote is an obstetrician gynaecologist who treats women at all life stages.

As an obstetrician, Dr Heathcote enjoys supporting women and their families during pregnancy and delivery and strives to create a safe and empowering experience.

As a gynaecologist she treats a wide range of conditions affecting people across their life, including menstrual problems, cervical abnormalities and menopause.

Dr Heathcote adopts a trauma-informed approach and has a special interest in persistent pelvic pain.

**Salmon Building, 537 Stanley St, South Brisbane**
**Ph 07 3180 0048 Email: info@georgiaheathcote.com.au**

# Medicare funding for Carrier Status testing

From Nov 1, 2023

- Spinal Muscular Atrophy
- Cystic Fibrosis
- Fragile X Syndrome


**88%** of carriers have no family history[1]

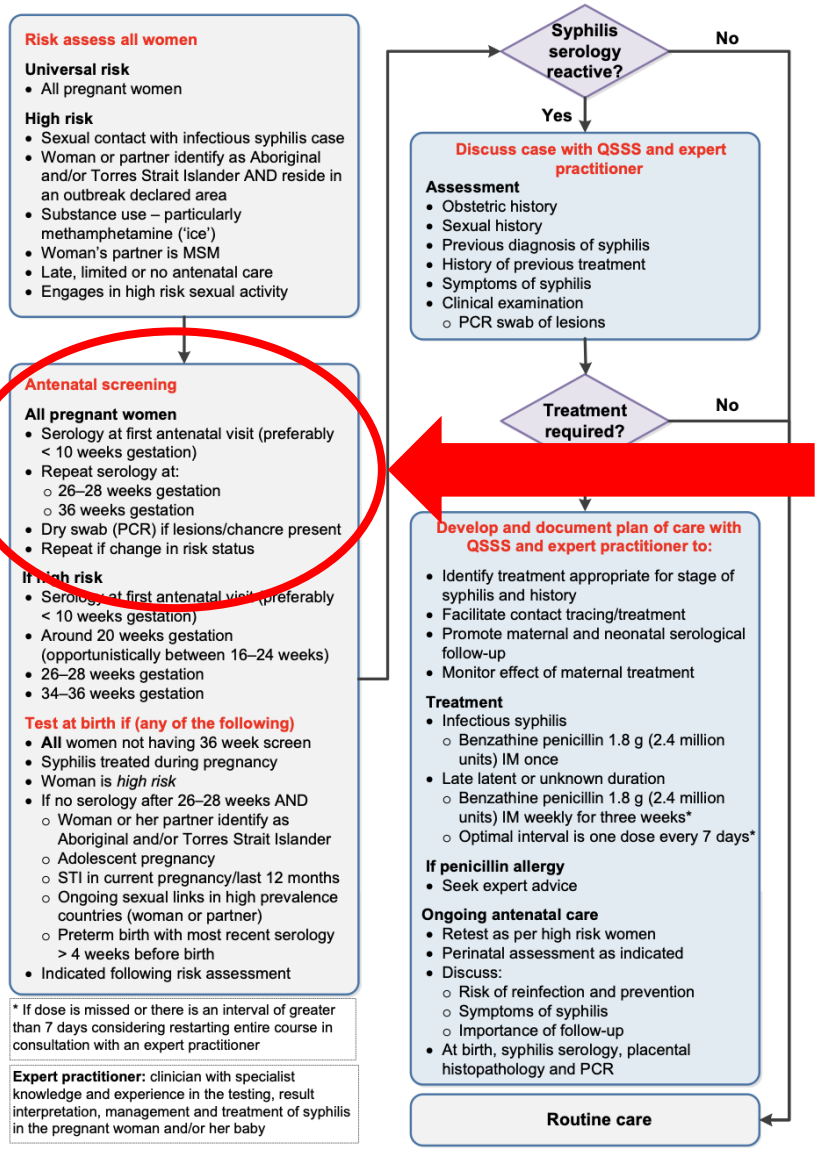
Medicare Criteria

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

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

*The rebate only applies ONCE per lifetime*

**Flow Chart: Antenatal care**




**IM:** intramuscular injection, **MSM:** Men who have sex with men, **PCR:** Polymerase Chain Reaction **QSSS:** Queensland Syphilis Surveillance Service, **STI:** sexually transmitted infection, **<:** less than ≤ less than or equal to

Queensland Clinical Guidelines: Syphilis in pregnancy. Flowchart version: F18.44.1-V5-R23



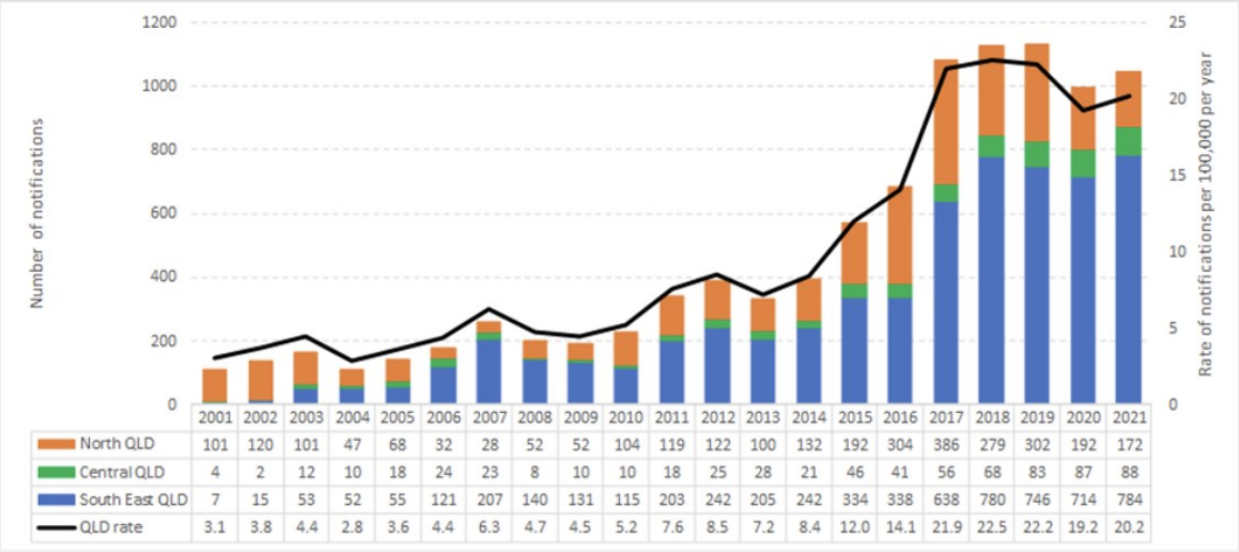
# Syphilis screening

Test every woman, every trimester (with consent)

- If we test everybody, we miss nobody

# Why?
# Because congenital syphilis is devastating, and it's not just one isolated population

Between 2001 and 2021, 41 cases of congenital syphilis were reported in Queensland, 29 of which were in Aboriginal and Torres Strait Island infants. Of these, 13 were associated with intrauterine foetal death/stillbirth or the babies died after birth.




| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| North QLD | 101 | 120 | 101 | 47 | 68 | 32 | 28 | 52 | 52 | 104 | 119 | 122 | 100 | 132 | 192 | 304 | 386 | 279 | 302 | 192 | 172 |
| Central QLD | 4 | 2 | 12 | 10 | 18 | 24 | 23 | 8 | 10 | 10 | 18 | 25 | 28 | 21 | 46 | 41 | 56 | 68 | 83 | 87 | 88 |
| South East QLD | 7 | 15 | 53 | 52 | 55 | 121 | 207 | 140 | 131 | 115 | 203 | 242 | 205 | 242 | 334 | 338 | 638 | 780 | 746 | 714 | 784 |
| QLD rate | 3.1 | 3.8 | 4.4 | 2.8 | 3.6 | 4.4 | 6.3 | 4.7 | 4.5 | 5.2 | 7.6 | 8.5 | 7.2 | 8.4 | 12.0 | 14.1 | 21.9 | 22.5 | 22.2 | 19.2 | 20.2 |

# Omega 3 (the very long story sh

Cochrane systematic review indicated that omega-3 supplementation from early-mid pregnancy until birth reduces the risk of early preterm and preterm birth

The Australian Pregnancy Care Guidelines include a recommendation for supplementation in those whose levels are low

Universal supplementation is *not* recommended as supplementation of those with high levels of Omega 3 is associated with an *increase* in preterm birth

Testing for Omega 3 is not Medicare funded in Australia. It should be offered before 20 weeks, preferably in the first trimester

There is not a standard way to represent the findings across Australia, so unless you are in South Australia where they have standards in place, testing may leave you with a result you can not interpret.

Like folic acid, humans absorb Omega 3s differently, making it hard to be confident about serum levels from dietary sources, however deficiency is unlikely if fish is eaten twice weekly

# PV bleeding

Are they haemodynamically stable?

Is baby alive?

- Incomplete miscarriage – expectant, medical or surgical options

Where is baby (intra or extra uterine)?

What blood type?

- Threatened miscarriage first trimester, anti-D not required
- mTOP less than 9 weeks, anti-D not required
- Completed miscarriage, STOP, anti-D is required. Consider also for those who may not re-present with a completed miscarriage

Are they OK?

# PV Bleeding – PV Progesterone support?

TGA approved (2022)

- "UTROGESTAN 200 mg (soft capsule) is now also indicated 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. Use in women with less than three miscarriages may be warranted in those with reduced chances of future pregnancy such as those undergoing IVF treatment with limited viable egg and/or embryo availability or advanced fertility age. However, the benefit of treatment in clinical trials was limited to women with three or more miscarriages"
- Note: *not PBS listed for this indication*
- PBS listed for IVF and preterm birth prevention (short cervix or history of spontaneous preterm birth, from 16 weeks)

# Progesterone pessaries for threatened miscarriage

"The usual dose is 400 mg (two pessaries) twice a day (morning and night).

Treatment should be initiated at the first sign of vaginal bleeding during the first trimester of pregnancy and should continue to at least the sixteenth week of gestation."

Cost: $91 (Chemist Warehouse) for 42 pessaries = ~ $9/day for treatment

# The key strategies to **prevent preterm birth**

## More than 26,000 Australian babies are born too soon each year.

New research discoveries have led to the development of key strategies to safely lower the rate of preterm birth and are continuing to make pregnancies safer for women and their babies.


No pregnancy to be ended until at least 39 weeks unless there is obstetric or medical justification.


Measurement of the length of the cervix at all mid-pregnancy scans.


Use of natural vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm.


If the length of the cervix continues to shorten despite progesterone treatment, consider surgical cerclage.


Use of vaginal progesterone if you have a prior history of spontaneous preterm birth.


Women who smoke should be identified and offered Quitline support.


To access continuity of care from a known midwife during pregnancy where possible.

AUSTRALIAN
Preterm Birth
Prevention
ALLIANCE

**These strategies have been approved and endorsed by the Australian Preterm Birth Prevention Alliance.**

# Cervical length measurement
(Point 2)

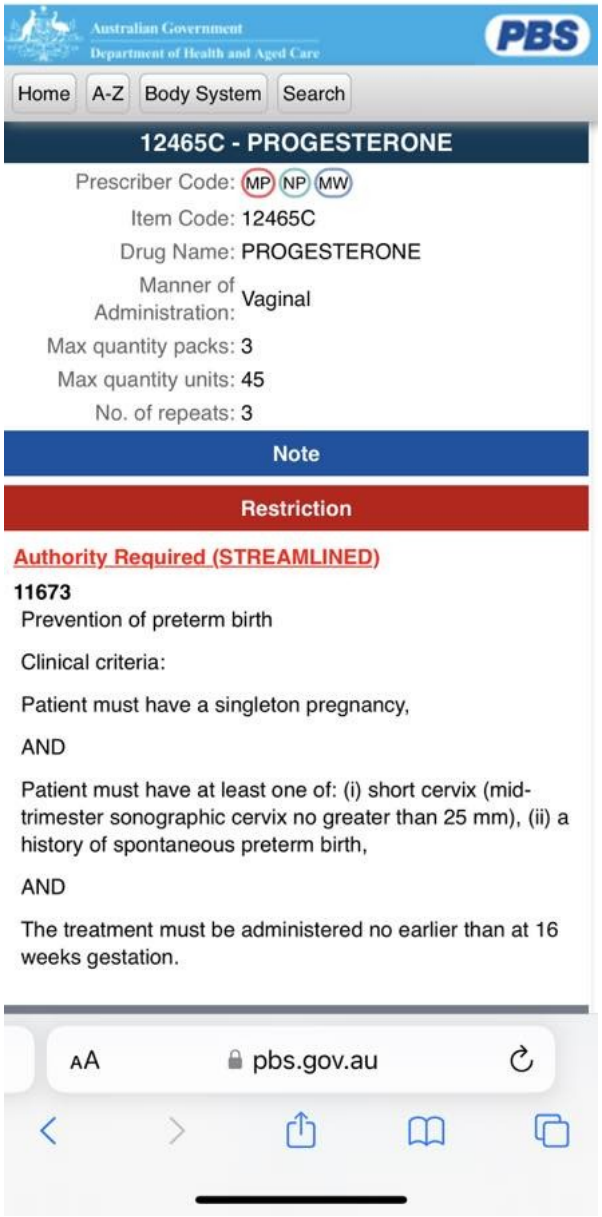
- Best efficacy between 16 and 24 weeks
- Offer transvaginal (TV) if significant Hx preterm birth/cervical surgery
- Otherwise, routine transabdominal (TA) screening at morphology
- Cut off TA: cervical length 35 mm (full bladder)
- TV if < 35 mm TA or cervix cannot be seen across its entire length with certainty
- Cut off TV: 25 mm
- If shorter: urgent referral and commence natural vaginal Progesterone pessaries (200 mg nocte) *the same day*

## Point 3

Use of vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm. This treatment should continue until 36 weeks gestation.

## Point 5

Vaginal progesterone 200mg pessaries are also to be prescribed for any case in which there is a history of spontaneous preterm birth in a previous pregnancy between 20 and 34 weeks gestation. The treatment is used each night from 16 to 36 weeks' gestation.



# Prophylactic aspirin use in pregnancy to reduce pre-eclampsia (PE) and intrauterine growth restriction (IUGR)

**100 - 150 mg aspirin nocte**
BEFORE 16 weeks gestation, ideally from 12 weeks, until birth

Source: AJGP October 2022

**High Risk Factors**

Women with any of the following:

- Hypertension
- Renal disease
- Auto-immune diseases such as SLE or anti-phospholipid syndrome
- Diabetes (Type 1 or Type 2)
- Past history of pre-eclampsia
- Assisted conception with oocyte donation

**Moderate Risk Factors**

Women with two or more of the following:

- Primiparous
- BMI > 35
- Age > 40
- Multiple pregnancy
- Low socioeconomic status
- Personal history of low birth weight
- Previous adverse pregnancy outcomes
- Family history of pre-eclampsia (mother or sister)

**What about calcium?**

Calcium has been shown to reduce BP, relax smooth muscle, lower resistance in uterine and umbilical arteries. If a woman has deficient intake, **≥ 0.5 g/day is recommended**

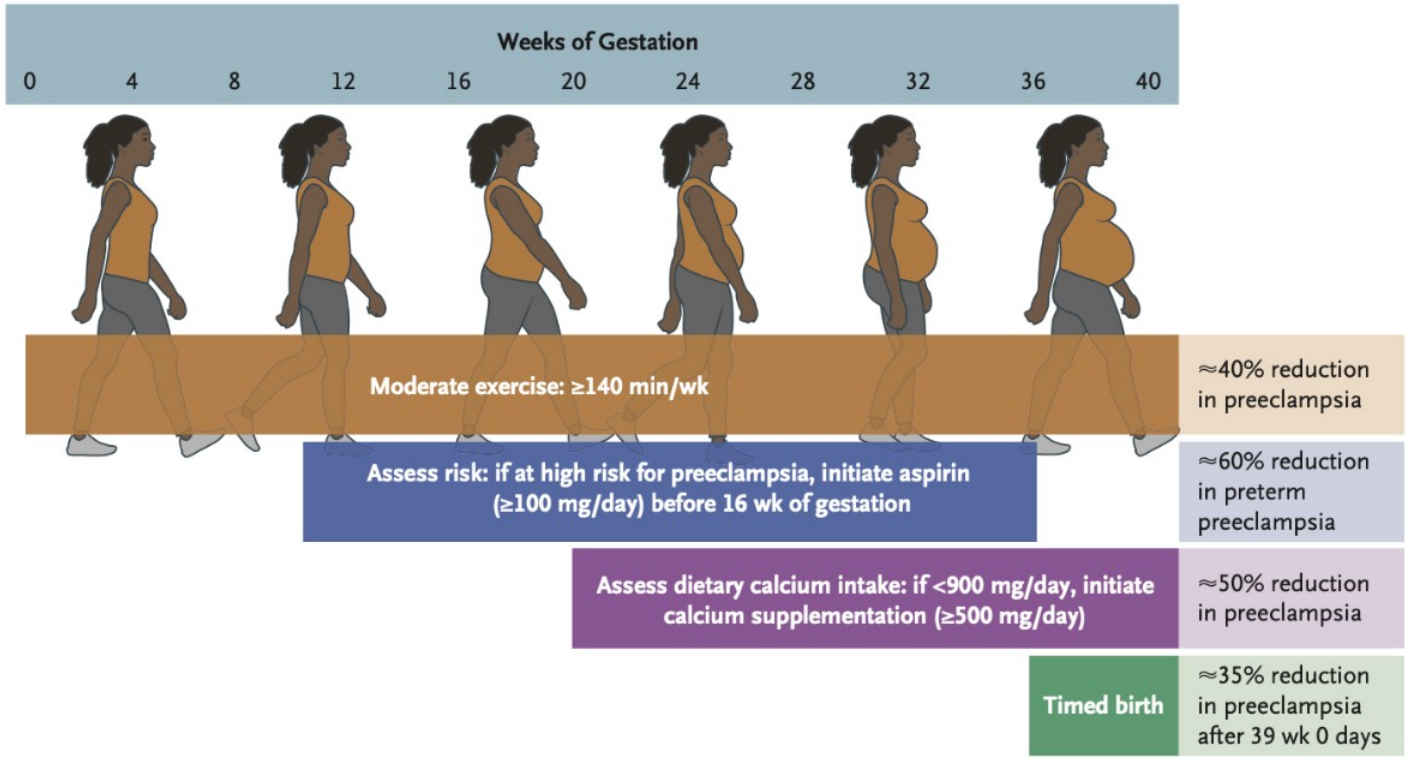



**Figure 2. Prevention of Preeclampsia.**

Pregnant women should be encouraged to exercise to reduce the risk of preeclampsia and for general health. Before 16 weeks' gestation, women at high risk for preeclampsia should be identified and offered aspirin (≥100 mg per day). Women in low-calcium-intake populations should be offered supplemental calcium, at a dose of at least 500 mg per day, in the second half of pregnancy. Low-risk nulliparous women benefit from labor induction during the 39th week of gestation, between 39 weeks 0 days and 39 weeks 4 days of gestation.

# Prevention of Preeclampsia

**Source: N Engl J Med 2022;386:1817-32.**
**DOI: 10.1056/NEJMra2109523**

# Watch this space…

SOMANZ* has a Hypertension in Pregnancy Guideline 2023 which is *out for public consultation* and, in addition to the risk factors identified previously, 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 |

* Society of Obstetric Medicine of Australia and New Zealand

# Recurrent issues:

GDM
Thyroid disorders
Obesity

Dr Vishwas Raghunath
Nephrologist and Obstetric Physician

Dr Georgia Heathcote
Obstetrician

# Testing for Diabetes in Pregnancy

- First trimester **HbA1c** (or OGTT) for women at high risk of GDM
- Routine OGTT (24 – 28 weeks) for all women not previously noted as abnormal (HbA1c NOT suitable)
- OGTT diagnostic criteria changed in 2015
- MMH and QHealth follow the ADIPS, not the RACGP, diagnostic criteria

Let's revisit

# HbA1c

- HbA1c can be used as a diagnostic test for diabetes in *first trimester*
- HbA1c of **≥5.9%** (41mmol/mol) required for a diagnosis of GDM
- **>6.5%** (48mmol/mol) to diagnose type 2 diabetes
- This DOES NOT replace the GTT for women after first trimester, or in the 6-8 weeks postpartum
- HbA1c can be used for **long term follow** up of women with a past history of GDM, for early pregnancy or preconception testing in a high-risk woman.

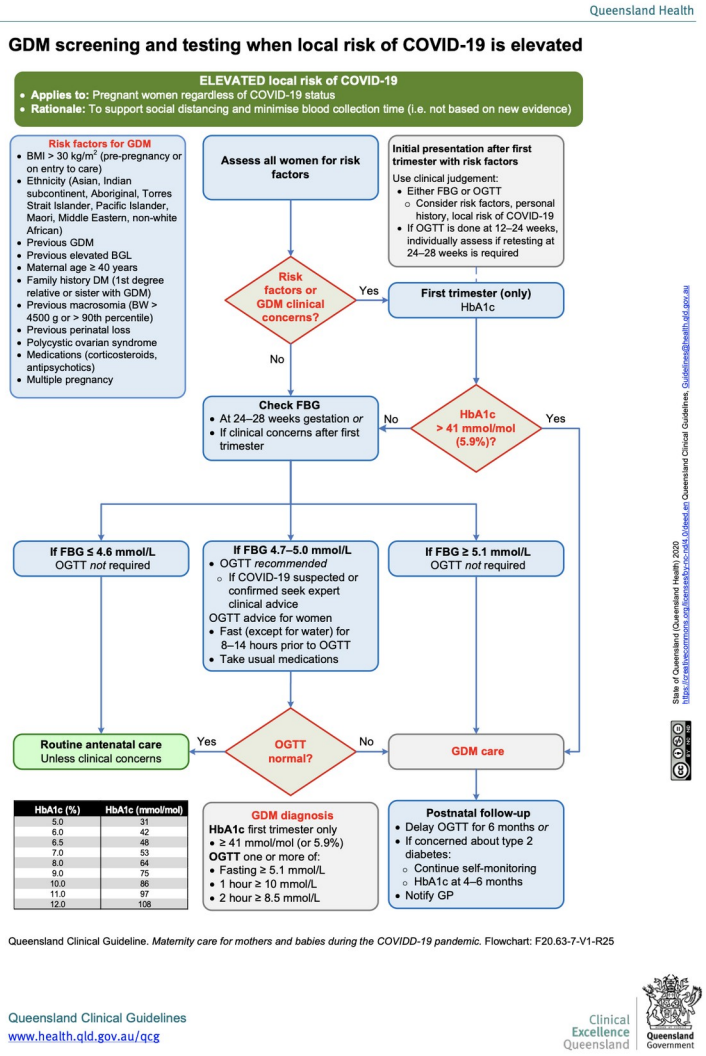
## Testing for Diabetes in Pregnancy during Covid-19

Low numbers: usual pathway

Moderate to high numbers: modified pathway

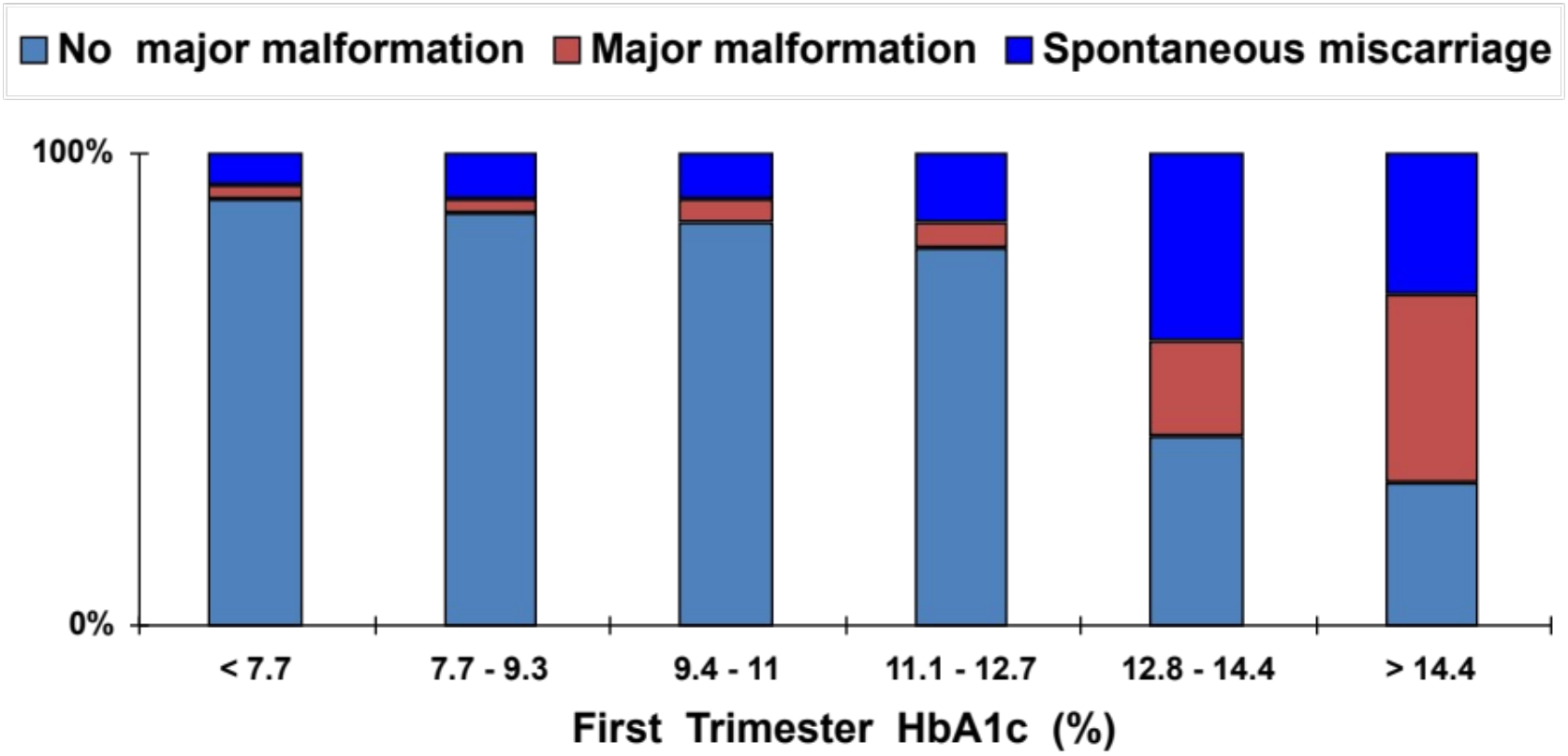
Fasting BSL at 26-28 weeks

- BSL ≤ 4.6 no GTT, normal
- BSL ≥ 5.1 GDM, no GTT
- BSL 4.7-5.0, GTT recommended (glucometer option prn)



# Why test?
## Pre-gestational Diabetes

Fetal / Neonatal Considerations Greene MF et al Teratology 1989: 39; 224-231
Major Malformations / Spontaneous miscarriage



# Potential Adverse Pregnancy Outcomes

- Congenital Malformations
- Miscarriage
- Macrosomia (birth weight > 4500g)
- Shoulder dystocia
- Preterm birth
- Respiratory distress
- Hypoglycaemia of neonate
- Polycythemia
- Hyperbilirubinemia
- Cardiomyopathy

# GDM care in evolution

MMH in partnership with CSIRO are trialing a smartphone app to healthcare portal for remote management of GDM

This means we can see ALL the self monitored BGLs ALL the time!

Women can remain in their chosen model of care with remote monitoring

- From GDM diagnosis (and notification to ANC by usual processes) all public women will receive a GDM education video, a blood glucose meter, 2 fetal scans and access to the app
- All women will have two F2F appointments with the diabetes educators and dietitians for individualized management
- All women requiring insulin will receive F2F education, but titration will be done via the app
- New self monitored BGL targets < or equal to 5 fasting, and < or equal to 7.4 at one hour from the first bite of food

# Concerns about GDM
(or anything obs med related)

GDM:

- Email: diabetesmmh@mater.org.au
- Phone: 07 3163 1988

Other issues:

- Daytime senior obs med registrar available 0800 – 1630: via switch
- Afterhours full consultant cover available
- If you have concerns/questions about the app/GDM care in the community, please call

# Diabetes test positive?

- Notify MMH ASAP
  - GPLM phone or email, please do NOT send a fax – it can get lost in the system
- Women will be seen at MMH, but care can still be shared
- Enter a reminder in your system for a follow up GTT at 6/52 postpartum
- Remember, these women are at a higher risk long term for developing diabetes and CVD, so follow up is important

# Healthy gut diet

**Can we prevent GDM by changing the gut microbiome in high-risk women?**

**Who is eligible?**

- Pregnant women with a history of GDM (but no current diagnosis)
- Enrolled prior to 18 weeks gestation
- Birthing at a Queensland Hospital

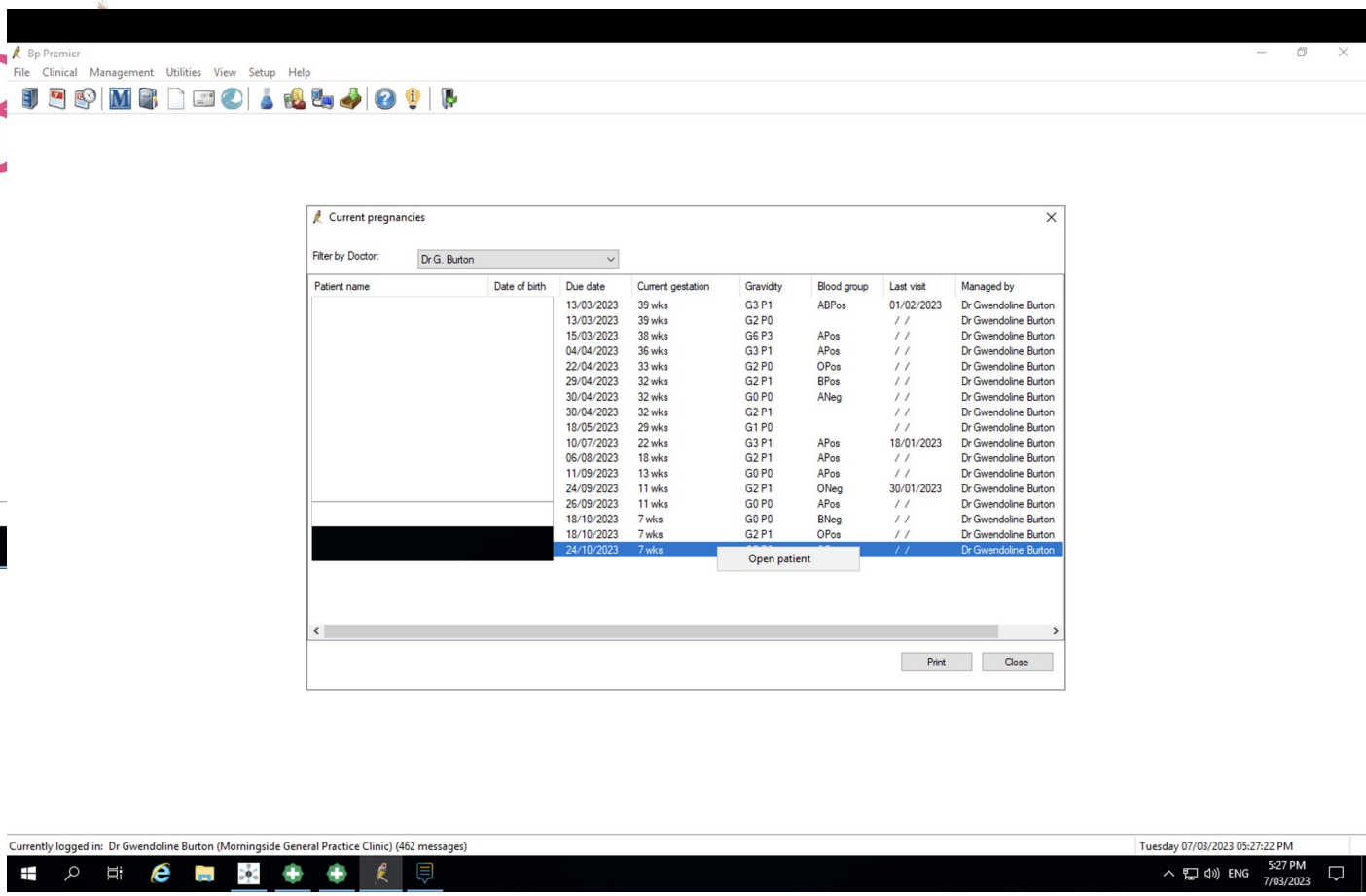
**Why should you care?**

GDM is the most common disorder a woman can experience during pregnancy. More than 1 in 7 pregnant women will be diagnosed with GDM. There are short and long term risks of GDM to mother and child. About 50% of women with GDM will go on to develop type 2 diabetes within 10 years! Preventing or improving the management of GDM can have intergenerational impacts.

Women can register their interest via www.redcap.link/HGD This will trigger a phone call from the research team where they will learn all about the study and decide if it's something they'd like to participate in.

The Healthy Gut Diet
for preventing gestational diabetes
Study


Using the pregnancy list, you can see who is less than 18 weeks gestation and open their file to see if they have a history of GDM
This is a measuring performance/clinical audit activity – log it!



# Screening and diagnosis gestational diabetes mellitus[1] (Revised February 2019)

## Risk factors for GDM

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

## GDM diagnosis

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

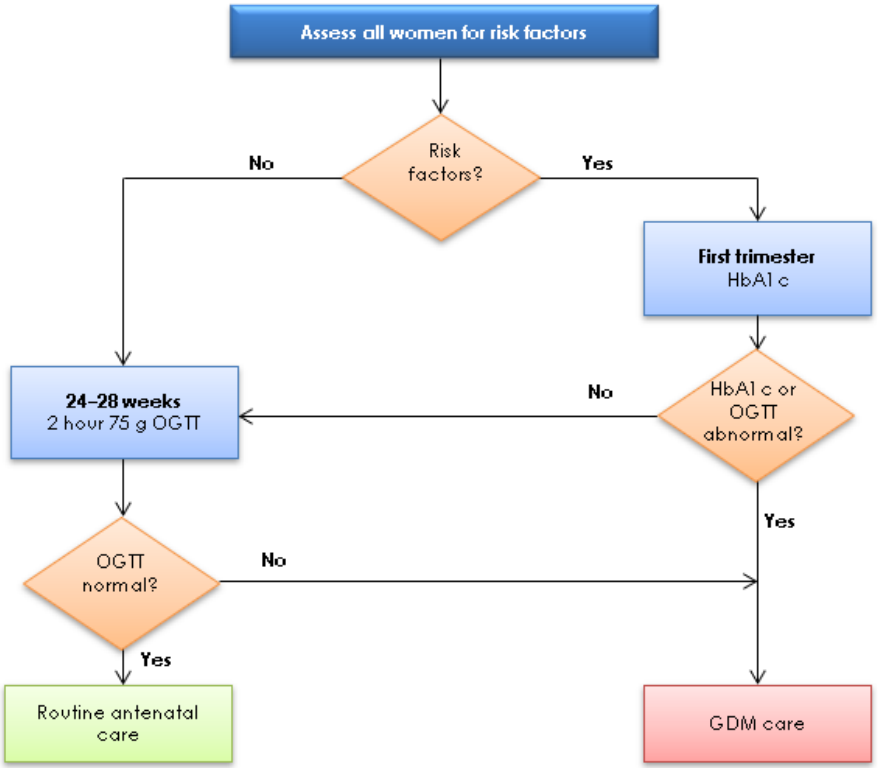
**HbA1c**

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

**OGTT** (after 12 weeks)
One or more of:

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

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




# MMH Clinical Guidelines GDM Flowchart

(page 49 MMH MSC Guideline)

# Why is thyroid disease important in pregnancy?

## Hyperthyroidism

Fetal / neonatal hyperthyroidism

Increased perinatal mortality

Pulmonary Hypertension (uncontrolled)

Preeclampsia

Miscarriage

Premature labour

Placental abruption

Infection

## Hypothyroidism

Infertility

Risk miscarriage

Reduced IQ children

Increased risk of hypertensive disorders of pregnancy

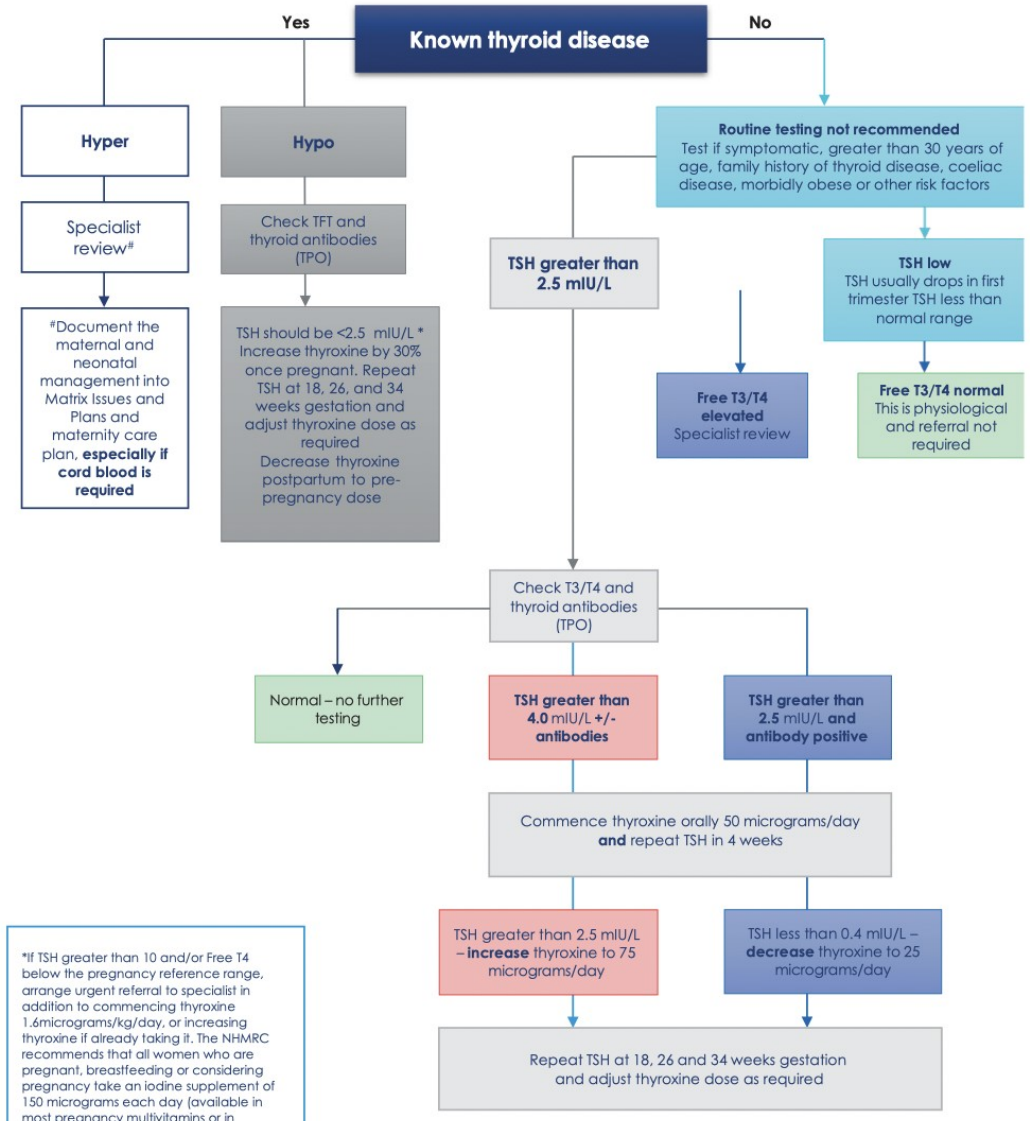
Placental abruption

Preterm delivery

Perinatal morbidity and mortality

PPH

# Thyroid management in pregnancy March 2022




*If TSH greater than 10 and/or Free T4 below the pregnancy reference range, arrange urgent referral to specialist in addition to commencing thyroxine 1.6micrograms/kg/day, or increasing thyroxine if already taking it. The NHMRC recommends that all women who are pregnant, breastfeeding or considering pregnancy take an iodine supplement of 150 micrograms each day (available in most pregnancy multivitamins or in combination with folate)

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




Page 33 of the Mater Guideline

Let's revisit

# Hypothyroidism

- Overt hypothyroidism – increase thyroxine dose by 30% at conception. TSH >10? Commence thyroxine & refer urgently
- Measure TSH at first visit; 6/52 later; then end 2nd and 3rd trimester if normal
- **Reduce** back to preconception dose postpartum
- Aiming for TSH < 2.5-1st trimester, < 3 - 2nd-trimester, < 3.5 -3rd trimester
- 24 % of Australian women are positive for thyroid antibodies
- Studies regarding treatment of euthyroid anti-TPO antibody women with thyroxine are inconclusive with respect to reduction in miscarriage and adverse pregnancy outcomes – so don't routinely test!

# A real-life example....

G2P1

Fit in telephone consultation to organise bloods prior to F2F visit

Age > 30

TSH included

Saturday remoting in from home, TSH 27, T4 normal

Open record, note she is already on levothyroxine for hypothyroidism

WWYD?

# Managing Thyroid issues- tips

- *Don't* routinely test for TFT in pregnancy in low-risk women!
- Ensure those on thyroxine are taking it first thing in the morning on an empty stomach and NOT with pregnancy vitamin or iron
- Most common cause suppressed TSH in first trimester is hCG mediated hyperthyroidism ~ 10% women
- Occasionally Free T4 and Free T3 mildly elevated
- Is differentiated from Grave's disease by the presence of TSH receptor antibody and increased colour flow Doppler sonography on US
- Don't treat – will resolve in 2nd trimester RANZCOG guideline

# Subclinical hypothyroidism and hypothyroidism in preg

| Recommendation 1 | Grade |
|---|---|
| Women who are pregnant, planning a pregnancy or breast feeding should take an iodine supplement of 150 micrograms (µg) each day. | Consensus-based recommendation[1] |
| **Recommendation 2** | **Grade** |
| Targeted testing for overt hypothyroidism is recommended in pregnancy.<br>Women with a personal history of thyroid disease, Type 1 diabetes or symptoms of thyroid disease should be tested with TSH and FT4 | Consensus-based recommendation |
| **Recommendation 3** | **Grade** |
| Overt hypothyroidism should be treated in pregnancy.<br>Overt hypothyroidism is defined as a TSH above the reference range with a decreased $T_4$, OR TSH >10 mIU/L, irrespective of the level of FT4. | Consensus-based recommendation |
| **Recommendation 4** | **Grade** |
| Screening for subclinical hypothyroidism or TPO antibodies, and subsequent treatment with thyroxine is not recommended prior to pregnancy or in pregnancy | Evidence based recommendation<br><br>Grade A |
| **Recommendation 5** | **Grade** |
| Treatment of TPO antibodies in euthyroid women does not reduce miscarriage, and so is not recommended. | Evidence based recommendation<br><br>Grade A |

# Hyperthyroidism

- Graves most common cause throughout pregnancy
- Rx with propylthiouracil 1st trimester; carbimazole 2nd and 3rd trimester
- ~ 60 % women able to have medications weaned by end 2nd trimester – need to watch for postpartum flare
- Check TFTs every 4-6 weeks
- TSH receptor antibody titre predicts risk fetal / neonatal thyrotoxicosis
- Our Obstetric Physicians will sort this out!

Let's revisit

# Obesity in pregnancy

## BMI is important for triage

## For women with a BMI > 30

- **Routine** scheduled bloods are recommended *plus* E/LFT, HbA1c (or early OGTT if k>12), and urine protein/creatinine ratio.
- Advise women to take **5 mg of Folate** daily preconception and in the first trimester as they have a higher risk of impaired glucose tolerance.
- **Advise the hospital** so they can organise appropriate internal referrals, eg: anaesthetist; consider her suitability for a modified model of care.
- **BMI 40 +** seen at k13-14 Obstetric care or modified GP shared care. Not suitable for MGP or outreach. Need bariatric furniture
- U/A with **each visit** and BP with extra large cuff
- If the first trimester diabetes testing is negative, an **OGTT** is to be performed at 26-28 weeks

# Obesity in pregnancy

- It is recommended that all women are weighed each visit
- Advise women of their target weight gain (see page 6 PHR) or use the MMH weight tracker or online weight gain tracker

## 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 page b2).
Refer to Queensland Clinical Guideline: *Obesity in 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 | 0.45 | 12.5 to 18 |
| 18.5 to 24.9 | 0.45 | 11.5 to 16 |
| 25.0 to 29.9 | 0.28 | 7 to 11.5 |
| ≥30.0 | 0.22 | 5 to 9 |

# Obesity guidelines

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

**Queensland Clinical Guidelines**

*Translating evidence into best clinical practice*

Maternity and Neonatal **Clinical Guideline**

## Obesity in pregnancy

# Mater's changing maternity population

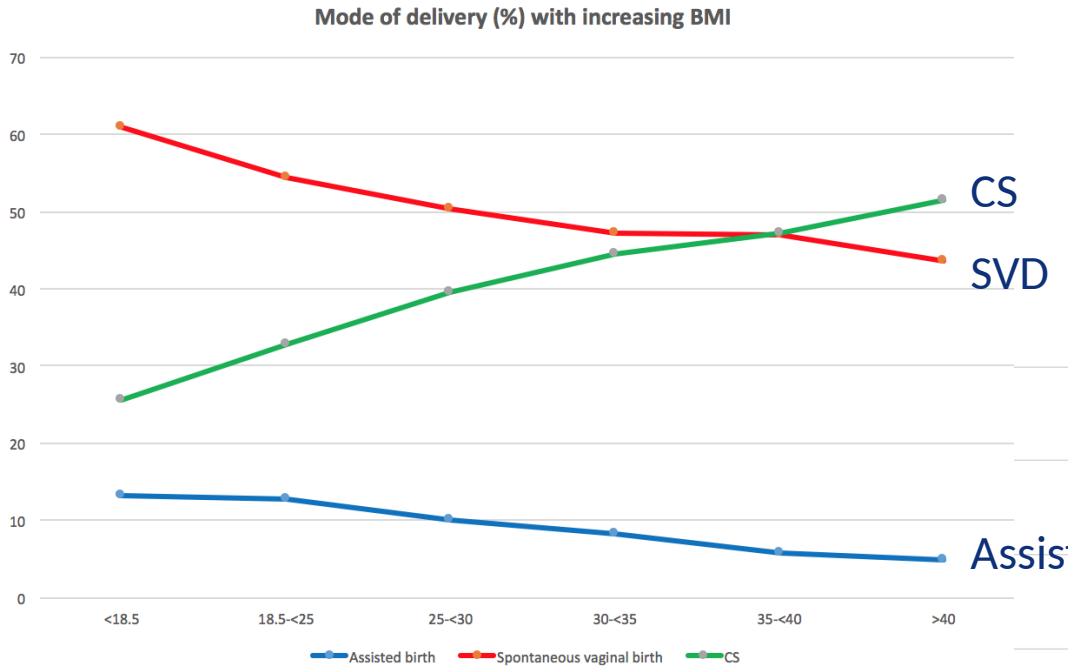
**BMI ≥ 35 is considered high risk**

| | Overweight | Obese 1 | Obese 2 | Obese 3 |
|---|---|---|---|---|
| BMI | 25-29.9 | 30-34.9 | 35-39.9 | ≥ 40 |
| 2000 | 16.5% | 6% | 2% | 1.1% |
| 2012 | 19.7% | 7.6% | 3.1% | 1.9% |

Percentage overweight or obese in
2000 was 25%
2012 was 32.3%
**accounted for 2/3 of bookings in 2019**

The frequency of adverse outcome increases with increasing BMI. The following charts are based on analysis of 75,432 women birthing at Mater Mothers Hospital Brisbane 1998-2009

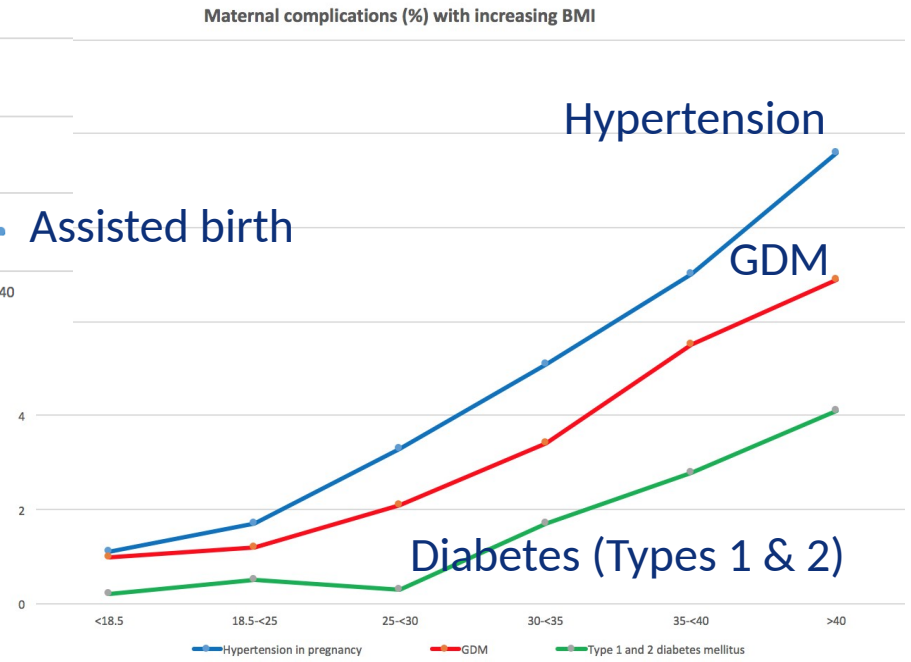
McIntyre HD, Gibbons KS, Flenady VJ, Callaway LK. Overweight and obesity in Australian mothers: epidemic or endemic? Med J Aust. 2012; 196(3):184-8.




CS

SVD

Assisted birth




Hypertension

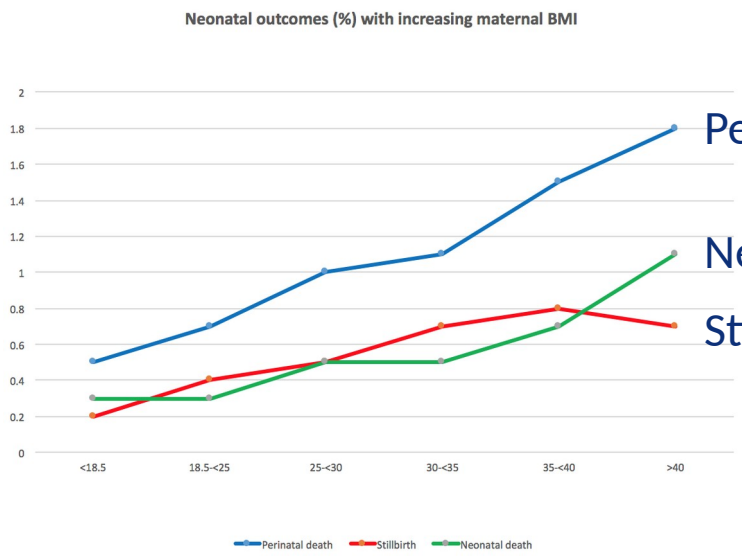
GDM

Diabetes (Types 1 & 2)

# Maternal Obesity Risks

Higher risk of

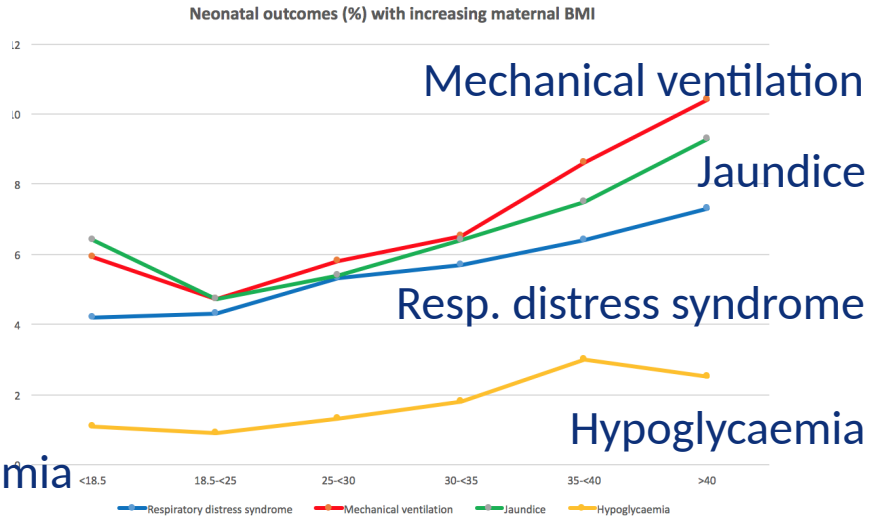
- GDM, Type 1 & 2 diabetes
- Hypertensive related disorders
- Thromboembolism
- Obstructive sleep apnoea
- Conditions which lead to induction of labour
- Complications in labour – decreased vaginal, increased caesarean births
- Anaesthetic complications
- Post operative complications
- Postnatal complications i.e. lactation difficulties, thromboembolism




Perinatal death

Neonatal death

Stillbirth

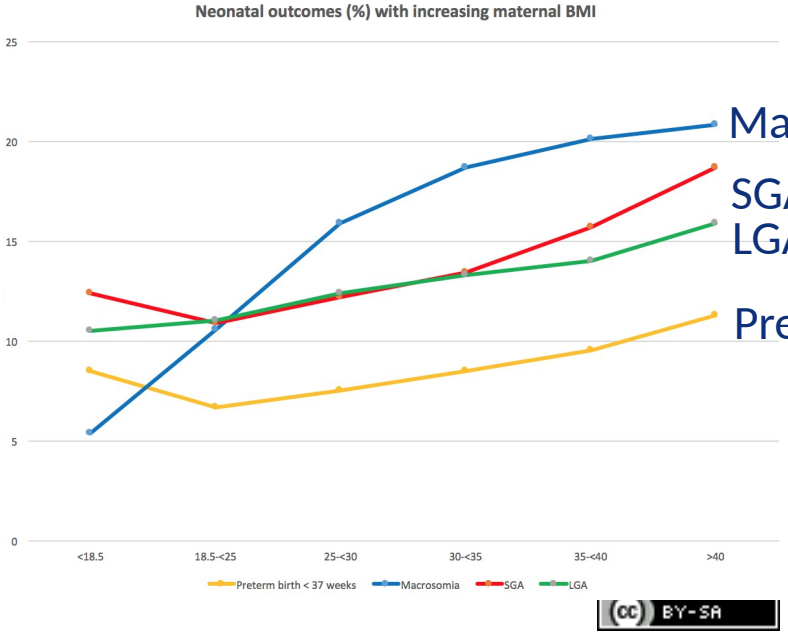



Mechanical ventilation

Jaundice

Resp. distress syndrome

Hypoglycaemia




Macrosomia

SGA

LGA

Preterm < 37 weeks

# Obesity Risks for baby

Higher risk of

- Perinatal death
- Neonatal death
- Stillbirth
- Macrosomia
- Small for gestational age (easy to miss)
- Large for gestational age
- Prematurity (< 37 weeks)
- Mechanical ventilation
- Jaundice
- Respiratory distress syndrome
- Hypoglycaemia

# Talk to women about the risks

## Antenatally

- Limitations on ultrasound screening for fetal anomaly and growth
- Reduced accuracy of NIPT
- “Fetal anomaly screening is incomplete due to maternal body habitus”
- Increased risk of diabetes, hypertension

## Intrapartum

- Difficulty with monitoring fetal wellbeing in labour
- Increased likelihood operative birth
- Increased risk of anaesthetic difficulties

## Postpartum

- Increased risk of thromboembolism
- Problems with establishing effective lactation

Treat as an opportunity for long term behaviour modification and offer dietitian referral

# First visit with GP should include

**General Practitioner can initiate the following:**

- HbA1c in first trimester ? Type 2 DM
- High dose folic acid 5 mg daily
- Screen for cardiovascular disease
- Early dating scan is important to confirm EDC as post dates pregnancy is more common
- Anomaly scan screening for congenital anomaly

**Consider the following if obese with additional risk factors for:**

- Hypertension - Low dose aspirin 150 mg/day,
- DVT - Antenatal thromboprophylaxis

# QCG Obesity

Refer early, including for dietitian support, women who have had bariatric surgery

**Flowchart: Obesity and pregnancy (including post bariatric surgery)**

## Principles of care

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

### BMI classification (kg/m²)

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

*Variations for Asian background

### GWG

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

### Total GWG

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

## Pre and inter-conception

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

## Antenatal

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

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

**Refer as required**
- Psychosocial wellbeing
- Mental health

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

| Elements \| BMI (kg/m²) | 25–29.9 | 30–34.9 | 35–39.9 | > 40 | BS |
|---|---|---|---|---|---|
| Higher dose folic acid | | ✓ | ✓ | ✓ | ✓ |
| Multidisciplinary | ✓ | ✓ | ✓ | ✓ | ✓ |
| Additional bloods | | ✓ | ✓ | ✓ | ✓ |
| Early GDM screen | | ✓ | ✓ | ✓ | ✓caution:OGTT |
| Additional USS | | | ✓ | ✓ | ✓ |
| **Referrals** | | | | | |
| Dietitian | ✓ | ✓ | ✓ | ✓ | ✓ |
| Obstetrician | | | Consult | ✓ | ✓ |
| Anaesthetic | | | | ✓ | ✓ |
| Obstetric medicine | | | | | ✓ |

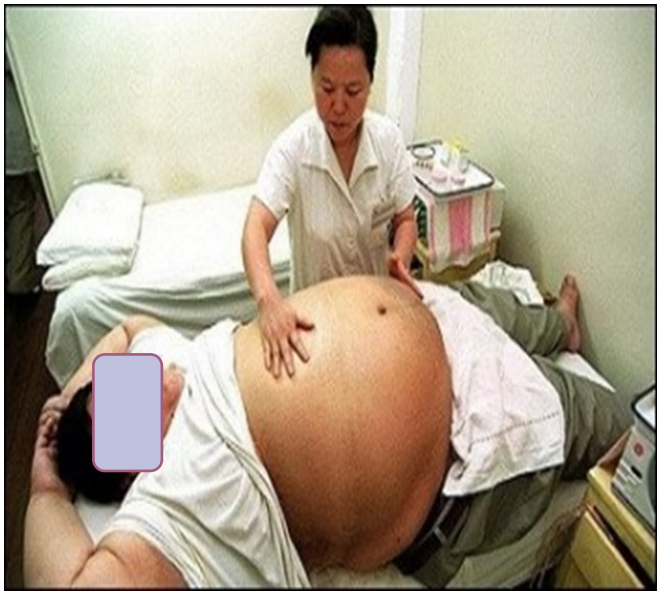
## Labour and birth

- If BMI > 40 kg/m²
  - Early assessment of IV access
  - Recommend CFM
- If prophylactic antibiotics, consider higher

## Postpartum

- Surveillance for airway compromise
- Early mobilisation
- Assess risk of VTE and consider

# SFH? Lie, presentation?



**Practical Issues**

- BP measurement
- Bed weight capacity
- Theatre trolley movement & patient shifting
- Ultrasonography – less reliable and risk of wrist/upper limb injuries for sonographers
- Listening to fetal heart/CTG
- Venous access

# What will the Obstetrician be doing?

Shared antenatal visits with GP if otherwise low risk

**Recommend**

- GTT repeat at 28 weeks if early screening negative
- Anaesthetic referral BMI >40
- Serial scans if required (BMI > 40) to monitor fetal growth
  - Risk unrecognised IUGR
- Facilitate discussion about timing and mode of birth
  - VBAC/IOL/anaesthetic risks in labour

# Nutrition and Dietetics advice

## Nutrition and Dietetics

Healthy eating when you are pregnant is important—a nourishing diet (plus a supplement that contains folic acid and iodine) is essential for good health for you and your growing baby.

Early in pregnancy, the quality of your diet can influence how your baby's organs develop. Later in pregnancy, your diet influences baby's growth and brain development.


The information in these webpages will hopefully inspire and motivate you to eat well during your pregnancy, but sometimes balancing things like weight gain, food preferences, and nutritional needs can be a juggle. Mater Mothers' Hospitals has dietitians available to talk to if you would like more information or help with your diet during this time.

# Antenatal screening for fetal chromosome & genetic conditions


Dr Scott Petersen

Maternal Fetal Medicine
Mater Mothers Hospital
Ph. 3163 1899

# US/S costs—clinics compared
# Not an exhaustive list, not Mater endorsed!

Costs correct as of October 31, 2023, for singleton pregnancies with a valid referral.

Not all services are available at all locations, especially the Nuchal Translucency Scan (NTS).

| Practice | Under 12 weeks (Item 55700, $55 rebate) | NTS (Item 55707 $64.15 rebate) | Morphology (Item 55706 $91.65 rebate) Including cervical length – TV-USS if required |
|---|---|---|---|
| **Citi Scan** | $138.10 HCC BB<br>**GAP: $83.10** | $216.95<br>**GAP: $152.80** | $238.45<br>**GAP: $146.80** |
| **Exact Radiology** | BB viability, dating scans <17/40 | $235<br>**GAP: $170.85**<br>Not available at all centres | $235 morphology<br>**GAP: $143.35**<br>$140 3rd TM scans<br>**GAP: $48.35**<br>(if had Morph scan with Exact, $235 if not) |
| **I-MED Radiology** | $155 HCC BB<br>**GAP $100** | $225 HCC BB<br>**GAP: $160.85** Not available at all centres | $255 HCC BB<br>**GAP: $163.35** for morphology & all 3rd TM scans<br>Not available at all centres |
| **Qld Xray** | $215 HCC BB<br>**GAP: $160** | $260<br>**GAP: $195.85** | $287 - morphology **GAP: $195.35**<br>$251.65 3rd TM scans **GAP: $160** |
| **Qscan** | $135 *BB Meadowbrook<br>**GAP:$80** | $284.15<br>**GAP: $219.85**<br>*BB Meadowbrook | $311.65* for morphology<br>**GAP: $220**<br>$311.65* 3rd TM scans<br>**GAP: $220** |
| **Lumus Imaging Formerly QDI** | $175 **GAP: $120** | $234<br>**GAP: $169.85** | $211<br>**GAP: $119.35** 3rd TM scans |

# NIPT Vs NTS: order both, or FTCS if $ a barrier

Non-Invasive Prenatal Test (NIPT); Nuchal Translucency Scan (NTS); First Trimester Combined Screen (FTCS) = bloods + Ultrasound scan from 11 weeks to 13 + 6 weeks

| NIPT | FTCS |
|---|---|
| Best screening test for T21 | Good screening test T21 |
| Widely available/easy to order | Need access to appropriately trained sonographers |
| Very low false negative rate, positive predictive value (PPV) varies by age | Higher false positive rate than NIPT, PPV varies by age |
| Mostly avoids invasive test (CVS, Amnio) | Mostly avoids invasive test (CVS, Amnio) |
| No fetal anatomy | Identifies twins, miscarriage, major structural anomalies |

Cost: $425 Vs $495
with Genome-wide NIPT*

*Pricing confirmed March 14, 2023

SULLIVAN NICOLAIDES PATHOLOGY

**INSTRUCTIONS FOR THE PATIENT**
To finalise the booking and payment for your NIPT, please visit **sonicgenetics.com.au/bookandpay**
**All enquiries, please contact 1800 010 447**
(Monday–Friday, 8 am–6 pm AEST).

mater

# Non-invasive prenatal test (NIPT) | Request form

## FOR THE DOCTOR

This test should be requested by the doctor responsible for medical management of a patient's non-invasive prenatal testing.

### Patient details

First name _____
Surname _____
Date of birth ___/___/___ Sex _____ **Female - Pregnant**
Address _____
_____
_____
Phone (mobile) _____

### Test(s) requested

**NIPT for: Trisomy 21, 18, 13** ☑ Yes

**OPTIONS (no charge)**
Fetal sex* ☐ Yes
Sex chromosome aneuploidy^ (singleton only) ☐ Yes

*Based on the presence or absence of the Y chromosome. For XY pregnancies this could indicate either two females (if absent) or at least one male.
^If sex chromosome aneuploidy is detected, the fetal sex will be revealed.

**OPTIONAL SPECIALISED TESTING (additional charge)**
Genome-wide NIPT# ☐ Yes

# Includes screening of autosomal aneuploidies, including gains and losses >7Mb. This option must be requested by the requesting doctor prior to sample collection. This option includes screening for sex chromosome aneuploidy in singleton pregnancies. See overleaf for information before ordering.

Is this a ☐ **RE-COLLECTION?** Previous Lab ID _____

| Staff ID/Location | ☐ 1 x NIPT tube | Date re-collected / / | Time re-collected : | Re-collect PAY CAT |
|---|---|---|---|---|
| | | | | SGUN |

### Clinical information **REQUIRED**

**This section must be completed for testing to proceed.**

**Please note:** The requested clinical information is essential for test accuracy. If any of the clinical information you provide below needs updating, please notify the laboratory immediately.

**NUMBER OF FETUSES**
(assumed singleton, unless otherwise indicated)
☐ Twin pregnancy

**GESTATIONAL INFORMATION**
☐ LMP ___/___/___ (date) or ☐ EDC ___/___/___ (date)

**The presence of any of the following invalidates the NIPT result; an alternative test should be considered.**
- Taken at less than 10 weeks' gestation
- There are three or more fetuses
- There is known presence of a demised fetus
- There is known presence of maternal aneuploidy, maternal transplant or maternal malignancy

**NIPT is not a test of fetal viability.**

### Requesting doctor

Name _____
Address _____
_____
_____
Phone _____ Provider No. _____

I confirm that this patient has been counselled about the purpose, scope and limitations of the test and has given consent.

**DOCTOR SIGNATURE**
X _____ Date

### Copy reports to

Name _____
Address _____
_____
_____

## FOR THE PATIENT – Patient and Financial Consent

I consent to the non-invasive prenatal test (NIPT) being performed and confirm that I have been advised about the purpose, scope and limitations of the test. I understand that I can request further information or genetic counselling before or after the test. I understand that NIPT is primarily a screen for an extra copy of chromosomes 21, 18 and 13, and can potentially examine other chromosomes as requested by my doctor on this form.

I understand that the result of this test should be interpreted by my doctor in conjunction with other clinical information and tests, and that it should not be the sole basis for making a decision about my pregnancy. I understand that a second blood collection may be required, that a small percentage of tests do not yield a result due to biological factors, and that I can seek a refund if there is no result for chromosomes 21, 18 and 13. A refund is not available if there is no result for sex chromosome abnormalities/fetal sex/other chromosomes.

☐ I do not agree to the laboratory contacting my treating doctors to obtain information and results regarding this pregnancy for quality assurance purposes.

**PATIENT SIGNATURE**
X _____ Date

**Full payment is required prior to sample collection.** Medicare benefits do not apply.
Following payment, you will receive an email and SMS confirmation of your booking.
Please make sure to bring this request form and booking confirmation with you on the day.
To locate a collection centre for your NIPT, please visit sonicgenetics.com.au/locations

## FOR THE COLLECTOR

I certify that I established the identity of the patient named on this request, collected and immediately labelled the accompanying specimen(s) with the patient's name, DOB and date/time of collection.

| Collector initials | ☐ 1 x NIPT tube | Patient initials |
|---|---|---|
| Location code | Date collected / / | PAY CAT |
| Collection type | Time collected : | SGU |

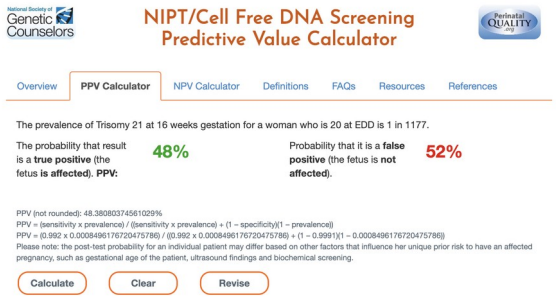
Sullivan Nicolaides Pty Ltd ABN 38 078 202 196,
a subsidiary of Sonic Healthcare Limited ABN 24 004 196 909 APA 906
24 Hurworth Street, Bowen Hills QLD 4006 | **P** (07) 3377 8666 | **E** patientservices@snp.com.au
snp.com.au

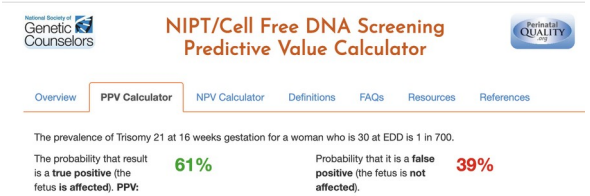
Sonic Genetics

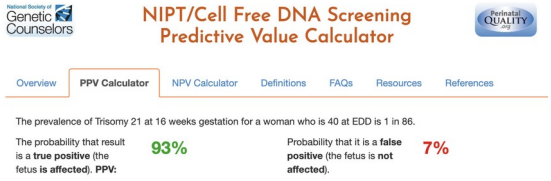
Item 38820 Meridio 426831
ISSUE MAR 2022

# NIPT

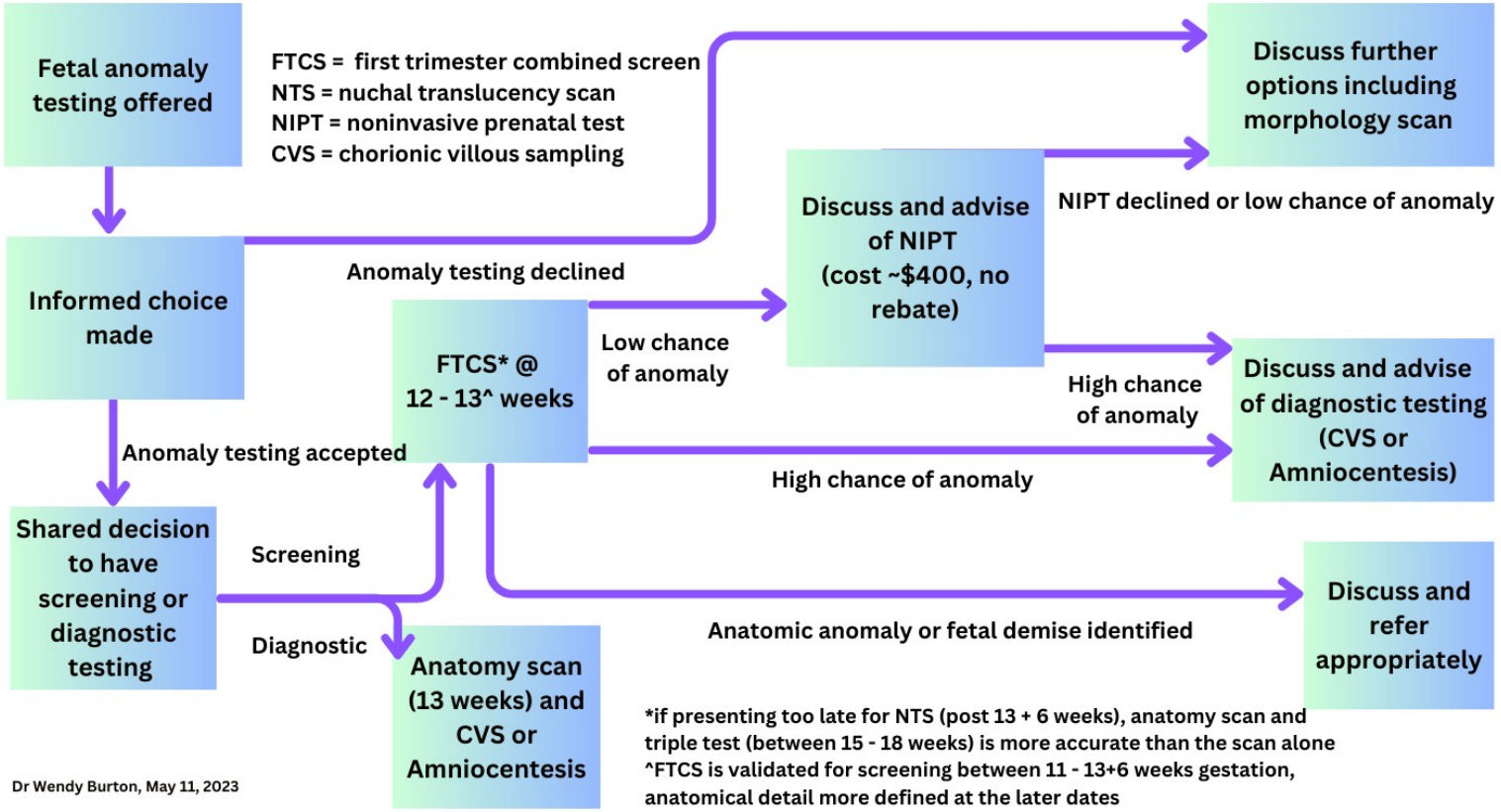
- NIPT is VERY good at excluding a trisomy. If negative, the negative predictive value is >99% at any age
- NIPT's accuracy when it comes to a positive result however depends upon the age of the mother. The younger she is, the lower the pre-test probability and the more likely the positive result is a false positive
- CVS or Amnio is ALWAYS recommended after a high chance NIPT result
- Online calculator https://www.perinatalquality.org/vendors/nsgc/nipt/



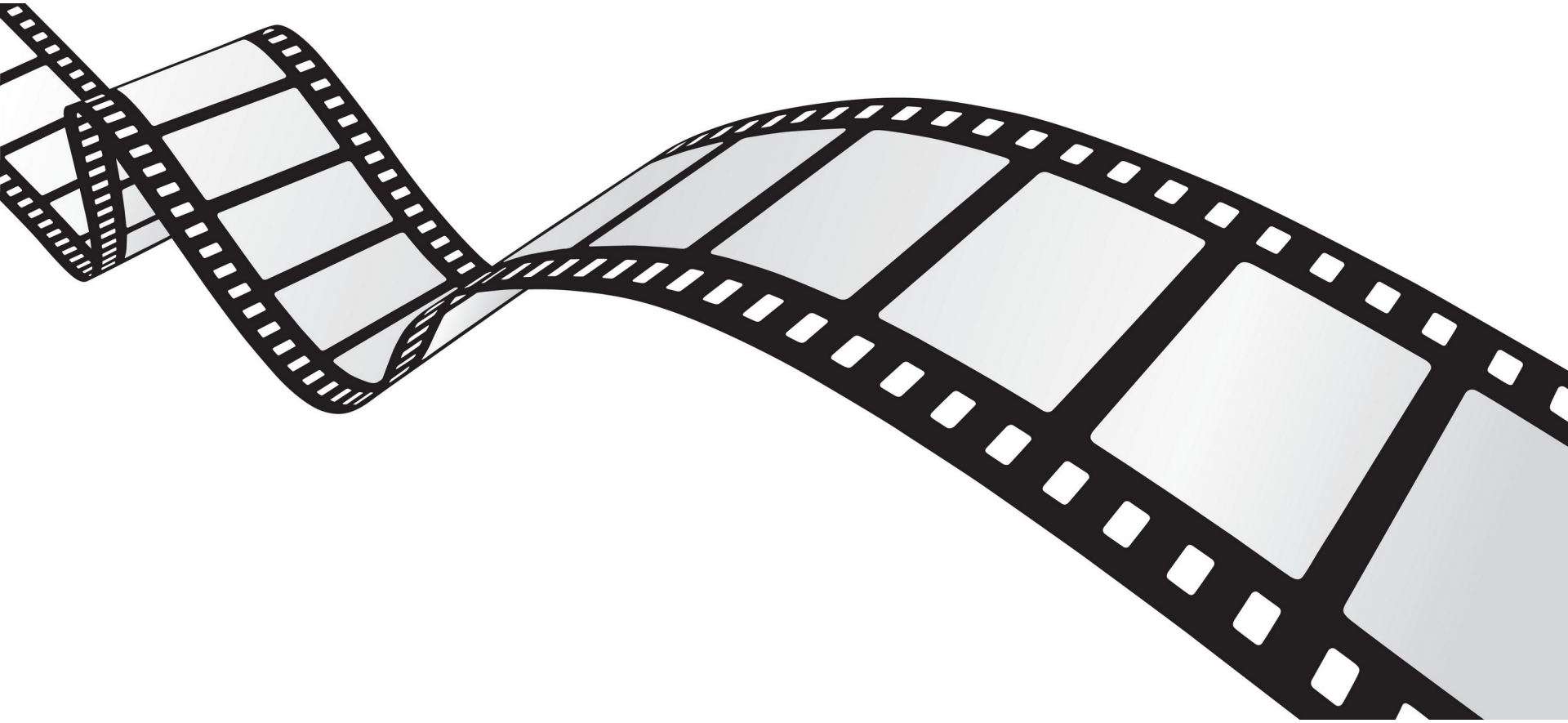



# Suggested referral pathways 2023, fetal anatomy/anomaly screening and testing



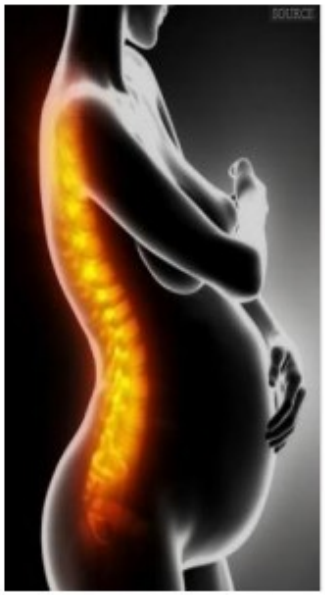
# Break - we resume at 10:30



# *SESSION 2:*

| Time | Session | Who |
|---|---|---|
| 10:30 | **Physiotherapy** | Megan Newell<br>Physiotherapist |
| 10;45 | **Pharmacology** & pregnancy | Dr Treasure McGuire(video)<br>Pharmacist |
| 11:00 | **Mental health** – general principals | Den Davies-Cotter<br>CNC Perinatal Mental Health<br>Dr Wendy Burton |
| 11:15 | **Case work**<br>All<br>Dr Wendy Burton Facilitator | Anne Williamson (GPLM)<br>Kirsty Lehmann Young Women's Clinic<br>Laura Shoo Young Women's MGP<br>Dr Georgia Heathcote Obstetrician |
| 12:50 | **Conclusion** | Dr Wendy Burton |

# Physiotherapy in the child-bearing year



**"Before & After"**

***A physiotherapy guide to staying comfortable and healthy before and after childbirth***

http://brochures.mater.org.au/brochures/mater-mothers-hospital/before-and-after-a-physiotherapy-guide-to-pregna

**Download the booklet to help women learn more about:**

- the physical changes in their body
- positions of comfort to use in pregnancy and labour
- strengthening exercises to maintain and regain muscle strength and improve posture
- general guidelines for exercise before and after pregnancy
- how to prevent back pain by taking care of your back in daily life
- relaxation as a skill for life
- baby handling skills to assist your baby's development

# Physiotherapy in child-bearing

Megan Newell
Physiotherapist

# How can we help?

Mater Mother's Physiotherapists provide care for all women birthing at Mater, including those cared for through GP Shared care.

This care is provided:

- Antenatally
- During hospital stay post birth
- Postnatally

mater mothers

# Do you feel prepared to push during labour?

"Prepare to Push" is a Mater Mother's Physiotherapy initiative designed to help women intending vaginal birth, prepare their pelvic floor for birth.

Evidence suggests that 1 in 3 women who 'push' actually activate their pelvic floor muscles instead of relaxing them. This can lead to obstructed labour, prolonged second stage, and greater reports of birthing trauma.

Scan the QR code below to register your interest!


matermothers.org.au

# Physiotherapy services

## Support for women as they ‘prepare to push’:

**Who is the most at risk?**

- A history of painful intercourse or pelvic pain (incl endometriosis)
- History of chronic constipation
- Women <160cm in height and south-east Asian background
  Women with large gestational size relative to their height

## What is offered?

Predictive pelvic floor muscle screening and assessment for all antenatal women from 20 – 24 weeks.

- Up to three individualised physiotherapy sessions to ‘prepare’ the pelvic floor including home exercise program
- Perineal measurements and risk screening in each session
- Communication with care providers if indicated

- **How to refer?**
- Women birthing at the Mater Mothers can self-refer via the patient information QR code
- You can send an email with patient’s URN to physio.mmh@mater.org.au

# Physiotherapy services

## ANTENATAL

### Obstetric and Pelvic Floor appointments:

**Public Outpatient Physiotherapy** for all women booked to birth at Mater Mothers (public)

- **self-referral** (Phone: 3163 6000 select option 2 and 2)
- **GP**s referral (Fax: 3163 1671)

Please contact us if you have any concerns about your patients timely, responsive, Physiotherapy care – we really appreciate your feedback and suggestions.

**Private Physiotherapy** is also available through Mater Health and Wellness Clinic (Phone 3163 6000 select option 1 and 2)

# Physiotherapy services

# ANTENATAL

**Pelvic and back pain**: (pelvic girdle dysfunction, pubic symphysis dysfunction, coccyx pain, lumbar or thoracic spine)

Online resources for patients:
https://matermothers.org.au/journey/pregnancy/moving-and-resting-well-in-pregnancy

**Upper limb postural pain and wrist conditions** (i.e. Carpal tunnel Syndrome). **Seek advice early**.

See online resources for self management advice:
http://brochures.mater.org.au/brochures/mater-mothers-hospital/pregnancy-carpal-tunnel-syndrome

# Physiotherapy services

# ANTENATAL

**Pelvic Floor dysfunction** (incontinence, obstructed defaecation or pelvic pain)

Encourage patients to do pelvic floor exercises and seek Physiotherapy assessment if concerned. Avoid constipation.

Online resources for patient:

Pelvic floor exercises https://youtu.be/OArrUPQqCHM

**Exercise in pregnancy**

Benefits include better weight control, improved mood and fitness, decreases risk of PIH and pre-eclampsia

Online patient resources:

Being active in pregnancy (https://youtu.be/8A3Eex8l4lg)

Easy exercises to do at home (https://youtu.be/xwFFGfZwizA)

## Physiotherapy services

# ANTENATAL

### Groups:

## Pregnancy Birth and Beyond

This session is offered via a video link (from home) or in person and is a part of the antenatal education program.

It includes:

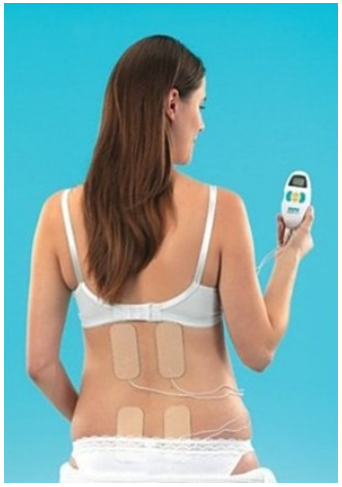
- Body awareness, movement and stretches
- Activating and using your core and preventing strain
- Being active in pregnancy and after birth
- Tool box to reduce pain and tension now, in labour and after birth

Online resources:
https://matermothers.org.au/journey/childbirth/movement-during-labour

Book through Parent Education Phone: 3163 8847

## Physiotherapy services

# ANTENATAL



## Groups:

## TENS in Labour (from K37)

This session is for women birthing at the Mater wishing to use TENS as a pain relief option in labour and includes hire of a TENS unit

Self referral Phone: 3163 6000 (select option 2 and 2)

*Please book **EARLY** to attend at K37*

More information:

- http://brochures.mater.org.au/brochures/mater-health-and-wellness/tens-in-labour
- How much does it cost?

  A total of $150 ($100 deposit, $30 hire fee & $20 for gel pads) is payable at the class

# Physiotherapy services

## ACUTE POSTNATAL – HOSPITAL

**Physiotherapy review** (typically day 2 post birth) provides information and advice to patients assisting:

- Early recovery
  - Acute management of their CS/perineal area (swelling management, wound support)
  - Education on bowel and bladder
  - Discussion around back care and exercises provided
  - Care of abdominal area including how to get in and out of bed
  - Acute pelvic floor exercise
- And recovery post acutely (2-6 weeks)
  - Progressions of pelvic floor exercises
  - Return to exercise guidelines
  - Indications and options for follow up physiotherapy

## Physiotherapy services

# POSTNATAL


### Groups:

## Postnatal Review

This session is recommended for **all postnatal women** 4-6 weeks post birth and can be **booked by women directly**. Phone: 3163 6000 (option 2 and 2)

This group session covers:

- Expected physical recovery post birth
- Abdominal wall recovery and exercise progression
- Pelvic floor recovery including pelvic floor exercise, bladder and bowel function
- Returning to activity and/or exercise after birth
- Caring for yourself while caring for your baby
- Where to find more information and individual support from Physiotherapy

## Physiotherapy services

# POSTNATAL

### Groups:

## Mother - baby wellness group

This session is for women 6 weeks to 6 months post birth who are seeking support for their emotional wellbeing.

- The series runs for several weeks with a focus on exercise, play and wellbeing for mums and bubs.
- BOOKINGS VIA HCP REFERRAL ONLY
- Please Fax referral to 3163 1671

# Physiotherapy services

# POSTNATAL

## Obstetric and Pelvic Floor appointments:

- **Public Outpatient Physiotherapy** for all women who have birthed at Mater Mothers (public)
    - **self-referral** (Phone: 3163 6000 select option 2 and 2)
    - **GP**s referral (Fax: 3163 1671)
- Please contact us if you have any concerns about your patients timely, responsive, Physiotherapy care – we really appreciate your feedback and suggestions.
- **Private Physiotherapy** is also available through Mater Health and Wellness Clinic (Phone 3163 6000 select option 1 and 2)

# Physiotherapy services

# POSTNATAL

- **Pelvic floor** (Incontinence, prolapse, obstructed defaecation or pelvic pain)
- **Musculoskeletal concerns** (pelvic, back, wrist, hand)
- For more information on thumb and wrist pain:
- http://brochures.mater.org.au/brochures/mater-mothers-hospital/thumb-and-wrist-pain
- **Third or fourth degree tears**
- Physio assessment by phone at 10 days and face to face at 6 weeks. For more information on acute perineal management:
- http://brochures.mater.org.au/brochures/mater-mothers-hospital/recovering-from-third-and-fourth-degree-perineal-t

# Pharmacology and pregnancy

## Dr Treasure McGuire, Pharmacologist

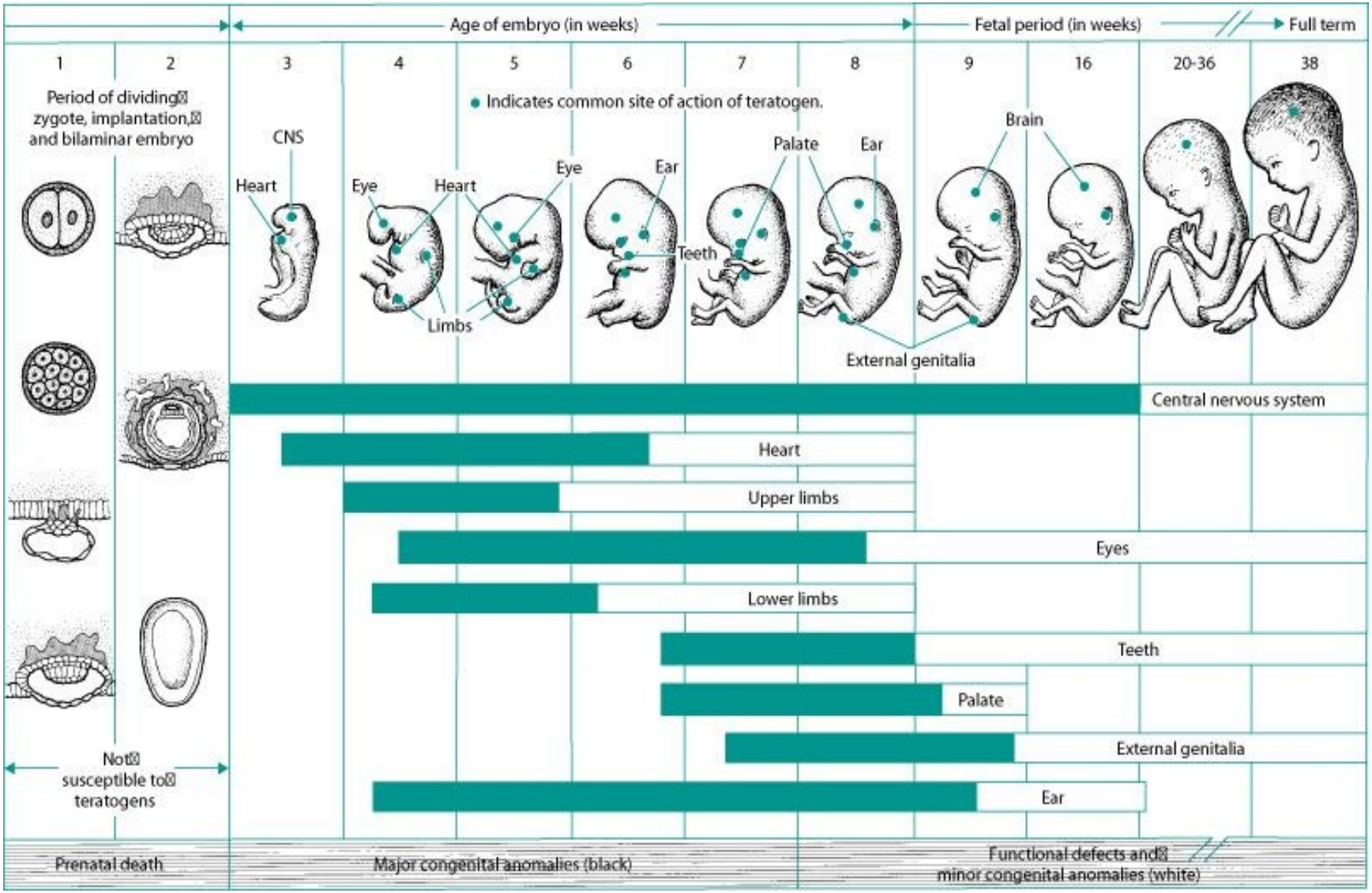
### General principles

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

| *Wk* | *Period* | |
|---|---|---|
| **0-2*** | Conception | Nutrients / drugs are transferred into luminal secretions of fallopian tube & uterine cavity through which ovum then blastocyst must pass.<br>Drugs can kill but cannot cause congenital malformations |
| **2** | Implantation | Vascular connection between mother & fetus are established |
| **2-8** | Embryo-genesis | As now a direct connection between the maternal & fetal circulation, this is the period of organ formation<br>e.g. Heart - days 18 - 40<br>Brain - days 18 - 60<br>Eyes - days 25 - 40<br>Limbs - days 25 - $38^{6}$<br>Genitalia - days 40 - 60 |
| **8-<22** | Organ function | As organs are now formed, the focus is on organ and tissue growth & function |
| **>22** | Fetogenesis | Fetus takes on progressively more responsibility for nutrient/drug intake and elimination, but does so less efficiently than the mother → drug accumulation (with chronic use) .. Period of 'fetal toxicity'<br>Histogenesis of CNS continues postnatally -> behavioural development |

*Organogenesis calendar (from conception) differs from an obstetric calendar (counts from LMP*

# Drug impact on organogenesis




*Tuchmann-Duplessis H. Drug effects on the fetus. New York: ADIS Press; 1977.*

# Families in Mind

## Den Davies-Cotter

CNC Perinatal Mental Health

# Catherine’s House

Comprehensive, integrated perinatal mental health service

- 10 in-patient beds for public (8) and private (2) patients
- Parent Support Centre for parents and babies up to six months after birth
- home-visiting service to help improve infant-parent relationships
- individual and group therapy treatments and day programs

Families will receive care from a multidisciplinary team of psychiatrists, lactation consultations, allied health practitioners, paediatricians, nurses, and other professionals.

# Mental Health – general principals

1. Identify women at high risk and provide personalised, appropriate advice, treatment or referrals
    - Past personal history
    - Family history
    - Psychosocial factors & precursors

2. Screen all women every pregnancy –
    - as a minimum, use a standard screening tool at 28 weeks and again at 6 weeks post partum e.g. EPDS, K10, DASS21, ANRQ

*What do you do with what you find?*

# iCOPE

- Screening tool to be rolled out to all women having public maternity care across Qld from Nov 2022
- Women will have access to a consumer report they can share/show their clinicians
  - This includes hyperlinks to information, resources and referral suggestions
- If they have given consent, a clinician report will be viewable in My Health Record

# Management of mental illness in the perinatal period

Consider all options including :

- lifestyle
- appropriate supports
- resources

**Options include:**

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

Search for eligible psychologists at www.psychology.org.au

# Maternal Mental Health

# Management of mental illness in the perinatal period

- Mental health assessment – plan/manage/refer as appropriate
  - medication
  - psychologist
  - psychiatrist

- GP psychiatry support line 1800 16 17 18
- BSPHN has funding for mental health support of at-risk groups, including perinatal presentations 1800 59 52 12
- Mater - public outpatient service for women with complex mental health issues, Catherine's House will be operational in 2023
- Belmont Private Hospital

# Management of mental illness in the perinatal period

If public specialist assessment is required:

**Metro South Acute Care Services**
(1300 MH CALL = 1300 64 22 55)

- Offer initial triage and assessment for severe or complex presentations.
- Provide expert advice on management and medications.

# Services provided by Families in Mind (FiM) include:

FiM has capacity to offer a maximum of 6 appointments to each patient. The support offered includes:

- An initial mental health assessment
- Providing information/psychoeducation regarding mental health concerns e.g. postnatal depression, anxiety, attachment and bonding issues, sleep hygiene, adjustment issues, coping with stressful situations, parenting advice, healthy lifestyles, new family dynamics
- Advice on treatment options
- Referrals for specialist support e.g. community psychologists, parent aide, parenting programs, mother-baby in-patient programs
- Co-ordinated care with midwifery/obstetrics/GP and other community stakeholders
- Counselling and brief interventions
- Telephone advice for patients, GPs, and other health care workers

# Families in Mind

**FiM OUTPATIENT CLINIC** FiM also offers a limited number (6) of outpatient sessions for perinatal mothers living within the Mater Hospital catchment area who need 1:1 mental health assessment and treatment.

**REFERRAL : Phone 3163 7990 Mater in Mind email**
**materinmindintake@mater.org.au**

**or 3163 2299 Catherine's House, Parenting Support Centre**
**email ch_mbf@mater.org.au ( Monday – Friday 0830 -1700)**

**Please include** :

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

# FAMILIES IN MIND
## REFERRAL FORM

**MATER PERINATAL MENTAL HEALTH SERVICE**

AFFIX PATIENT ID LABEL HERE (if available)

**Please email completed form to:** materinmindintake@mater.org.au or fax to (07) 3163 1636
**Telephone enquiries:** 3163 7990

### PATIENT DETAILS

| | |
|---|---|
| **Patient Name:** | **DOB:** |
| **Patient consents to referral:** ☐ Yes ☐ No | **Medicare Number:** |
| **Home Address:** | |
| **Email Address:** | **Mobile Number:** |
| **Country of Birth:** | **Interpreter requirements:** |
| **Indigenous status:** ☐ Aboriginal ☐ Torres Strait Islander ☐ Both Aboriginal and TSI ☐ Neither Aboriginal nor TSI ☐ Not stated or unknown | |
| **If Antenatal- EDC:** | **If Postnatal- number of weeks:** |
| **Baby's Details (if applicable):**<br>**Name:**<br>**Date of Birth:**<br>**Gender:** | **Alternative Support Person Details:**<br>**Name:**<br>**Relationship:**<br>**Contact Number:** |

### REFERRAL DETAILS

**Reason for Referral/Presenting Issue:**

**Relevant clinical background (eg mental health history, current treatment including medication etc):**

**Other relevant information:**

### REFERRING CLINICIAN DETAILS

| | |
|---|---|
| **Name:** | **Role/Delegation:** |
| **Organisation/Clinic:** | **Best Phone Number:** |
| **Email:** | **Referring Clinician's Signature:** |

# Take home message

- Perinatal mental illness is a significant cause of morbidity and mortality, affecting maternal and neonatal outcomes, the health of families and of the community.
- EPDS completed at her booking in appointment.  As per the PHR (Pregnancy Health Record) please administer EPDS (or K10 or DASS21 or ANRQ) again by 34 weeks, at 6 weeks post partum and prn
- Identification and appropriate treatment is essential to promote optimal outcomes
- **Suicide** is the leading cause of maternal death in Qld

# Every woman, every time....

# Are you ok?

COPE:

# How do you ask women about DV?

"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?"**

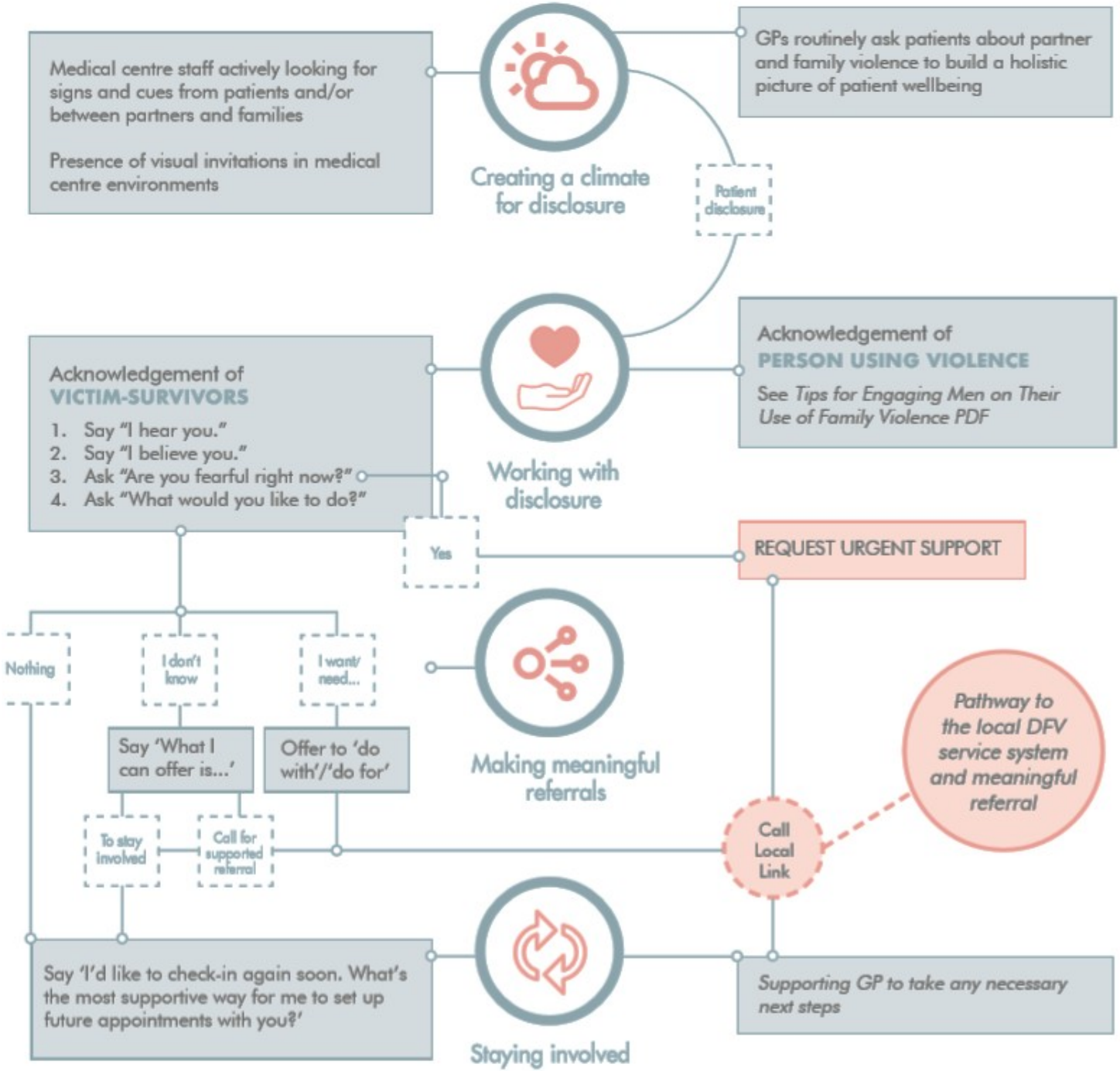
# Domestic and Family Violence (DFV) Local Link

- Brisbane South PHN initiative to help primary health care become part of an integrated system response to domestic & family violence
- The DFV Local Link offers a one-point of referral for patients affected by DFV & can provide advice & support for general practices
- Patients can be referred to the DFV Local Link if they are affected by DFV and are a patient of a general practice in Brisbane, Logan, Redlands or Beaudesert. More information and contact details for your DFV Local Link are found at https://bsphn.org.au/support/for-your-patients-clients/domestic-and-family-violence/
- The DFV Local Link support referred patients by conducting risk assessments, providing advice on next steps, and connecting them with supports and services. The Brisbane DFV Local Link also provides case work support to patients.

Landline: 3013 6035
Hannah's Mobile: 0488-180-590
Summer's Mobile: 0419-757-257

Contact your Brisbane DFV Local Link:
bdvslocallink@micahprojects.org.au

Recognise
Respond
Refer

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# DFV Loca l Link

# Management

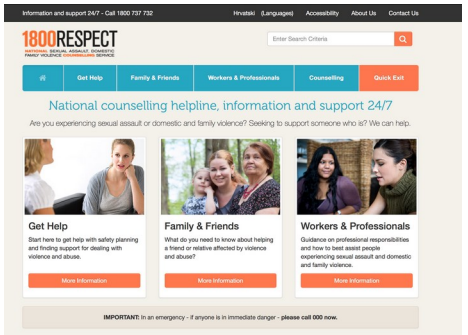
Organise a 2nd appointment without partner if possible

Resources

- Domestic Violence Hotline 1800 811 811
- 1800Respect 1800 737 732

Facilitate early referral to hospital

- Flag concerns/suspicions
- Enable social worker support


MMH telehealth appointments

MW unable to ask DV questions due to no assurance of privacy. GP's to ask early please notify concerns

# Please use available resources and tools

| | |
|---|---|
| Notify | Notify the Social Workers |
| Alert | Alert MMH to the risks so that they can triage most effectively |
| Communicate | Communicate with other care providers |
| Screen | On page 3 (QHealth a10) of the Pregnancy Health Record (PHR) is the Tobacco Screening Tool. Use it. |
| Screen | On page 4 (QHealth a11) of the PHR are the Alcohol and Drug Screening Tools. Use them. |

# *Reducing stillbirth*

## *#Quit4Baby is one of the 5 key interventions*

To register for the Safer Baby Bundle free eLearning, please visit

https://learn.stillbirthcre.org.au

For more information on how to register for the eLearning module, please visit

https://vimeo.com/352404965

# Meet the MMH midwives

Anne Williamson, GPLM

Kirsty Lehmann, Midwife

Laura Shoo, Midwife

# Case work :

Jodie is a 24yo primip who has come to you to confirm her pregnancy and to find out what she needs to do next.

**Identify for Jodie, your individualised PLAN for:**

- Assessment
- Screening/investigations
- Ongoing management
- Referrals & resources

Have you ever had a sexually transmitted infection?

Did you have vaccinations as a child? Have you had any as an adult e.g. for travel, whooping cough?

Have you had chicken pox? If not, have you been vaccinated for it? (Available 2000 & funded since 2005)

Are you at risk of Vitamin D deficiency? e.g. if you don't get much sunlight onto your skin.

Are you in a healthy weight range?

Do you have regular dental checks? When was your last one? Any problems with your teeth?

Do you feel safe at home and at work?

Do you live & work in a healthy environment? Does your partner live & work in a healthy environment?

What sort of work do you do? What sort of work does your partner do?

So we can understand the risk of inherited conditions better, would you please identify your ethnic background? The ethnic background of baby's father?

Did your mother and/or your sisters have any problems in pregnancy?

Are there any medical conditions that run in your family? Any that run in the family of baby's father?

Have there been a repeated number of pregnancy complications or babies born with specific medical conditions in your family? Conditions such as recurrent miscarriages, stillbirth or early death, intellectual disability, thalassaemia, cystic fibrosis, fragile X or spinal muscular atrophy may be important.

Is there a family history of mental illness? e.g. anxiety, depression, nervous breakdown or bipolar disorder?

Do you plan to travel? If yes, where, when and for how long?

Have you thought about how you will feed your baby?

Have you thought about where you want to have your baby? Do you have private insurance?



**Newly pregnant? Important elements of your history**

*Please complete to the best of your knowledge. Most questions aim to identify factors which increase risk to you or baby— feel free to ask if you don't understand a question or the reason for asking it.*

How do you feel about being pregnant?

When was your last period? Was it a normal period?

Have you done a pregnancy test? If so, when was the first time it was positive?

How long have you been trying to fall pregnant for?

Are your periods usually regular or irregular?

Have you been having any fertility treatment to help you become pregnant?

Have you ever been pregnant before? If so, how many times and what were the outcomes each time? Were there any complications during the pregnancy, during the birth or afterwards for you or for baby?

Do you have any medical conditions that might affect your pregnancy? e.g diabetes, thyroid disease, high blood pressure, epilepsy, low platelet count, asthma, heart, lung or kidney problems and mental health.

Do you take any medications? This includes prescription medication such as asthma puffers as well as over the counter, herbal or alternative medications & supplements e.g. folic acid & pregnancy vitamins.

Have you had any surgical operations? If yes, what did you have, when & were there any complications?

Do you ever smoke? If yes, what do you smoke, how much and how often? Do others smoke near you?

Do you drink alcohol? If yes, what do you drink, how much and how often?

Do you use drugs? If yes, what do you take, how do you take it, how much and how often?

Do you follow any particular diet such as vegan, vegetarian or dairy-free?

What types of exercise do you like? Do you exercise regularly? If yes, what types of exercise do you do?

Have you ever had a Pap Smear or Cervical Screening Test? If yes, when was it and what was the result?

Dr Wendy Burton License Thanks: RACGP GPDU Emerald PB maternity-matters.com.au Dec 19

# 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 tests are recommended: Full Blood Count; Blood Group and antibodies; Rubella immunity, Hepatitis B, Hepatitis C, HIV and syphilis serology and a urine test for kidney disease and infections. If you have a high risk of diabetes, you are advised to have a first trimester glucose tolerance test or HbA1c.
- [ ] Chicken Pox, thyroid, chlamydia, iron stores or vitamin D levels may be recommended, depending upon your history.
- [ ] Supplements of folic acid (0.5 Vs 5 mg) & iodine are recommended, as is Omega 3 if your levels are low (test cost ~$265)
- [ ] 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 to help you to stop drinking alcohol during this pregnancy. Other drugs may also be harmful, so let's talk.
- [ ] It is recommended that you are up to date with COVID vaccinations and that you have a free* influenza vaccine from your GP as soon as they are available. These vaccines can be safely given at any time in your pregnancy.
- [ ] If you are not sure when you fell pregnant, a scan is recommended 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.
- [ ] The noninvasive prenatal test (NIPT, cost ~ $400) gives information about a limited range of chromosomal abnormalities, including Down Syndrome. There are also tests for chromosomal conditions including cystic fibrosis, spinal muscular atrophy and fragile X syndrome (~$400 for these 3 tests). These blood tests are not free.
- [ ] An ultrasound test, the morphology scan, is recommended and usually done at or about 20 weeks of pregnancy to check on the position of the placenta, anatomy, growth & 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 2023



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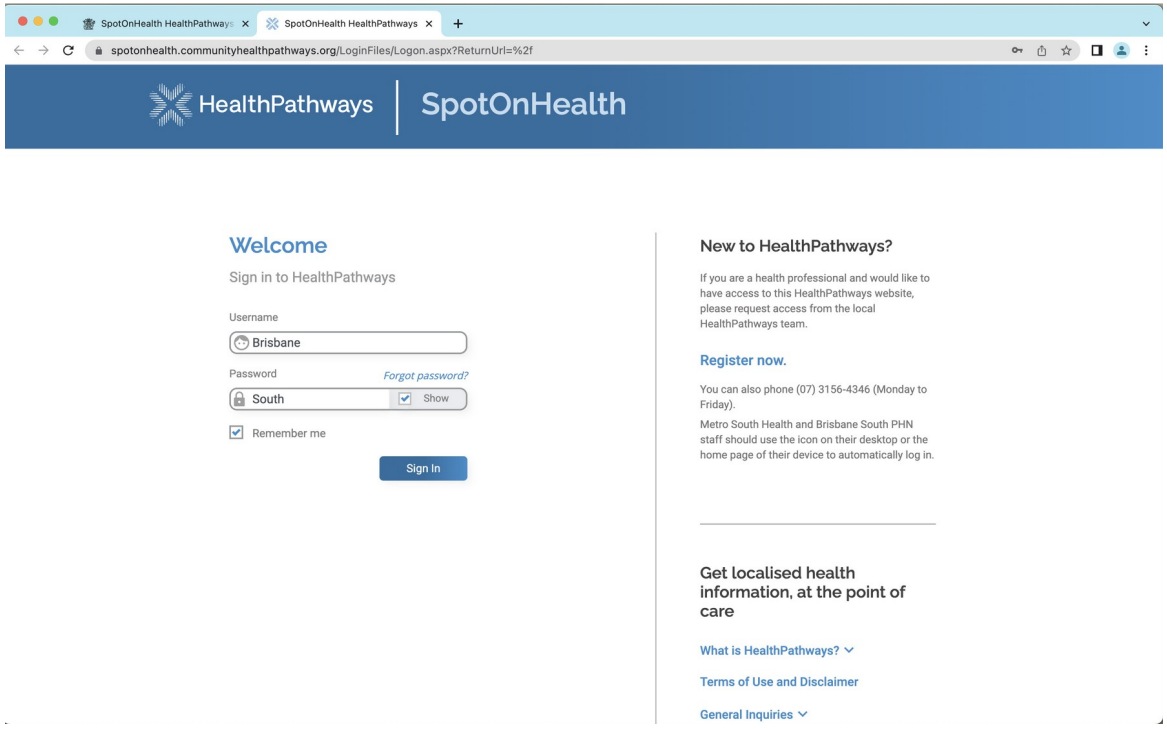
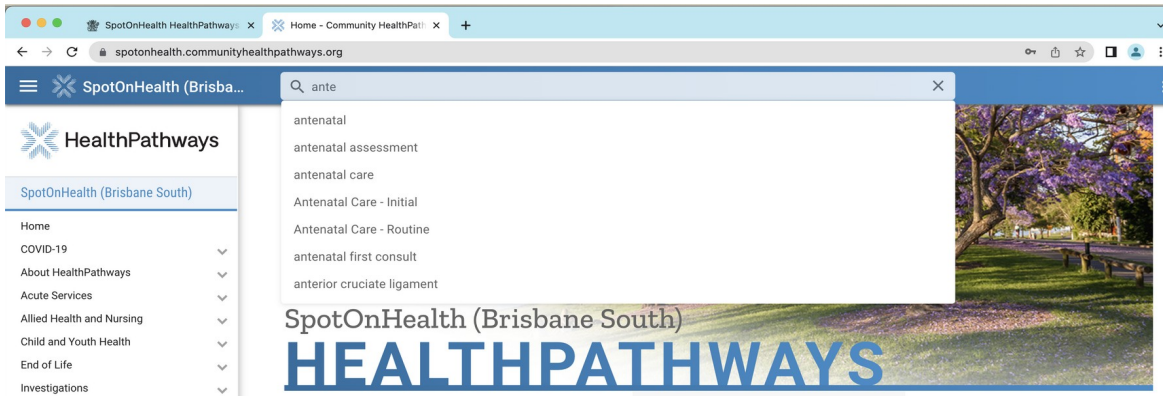
- PRECONCEPTION CHECKLIST
- PRECONCEPTION ACTION LIST
- PREGNANCY HISTORY CHECKLIST
- PREGNANCY CHECKLIST
- RECOMMENDED READING
- RECOMMENDED READING AFTER BABY IS BORN
- SLEEP DURATION IN CHILDREN
- CLINICAL AUDIT SPREADSHEET




# Health Pathways can help!

**Summary of key points**

# Antenatal Appointment Schedule

## 6-12 week visit

- Confirm pregnancy
- Obtain medical and obstetric history
- Measure BP, record height and weight, and calculate BMI
- Discuss antenatal screening and testing options
  - Ultrasound scans
  - Bloods/urine, depending upon risks
  - Organise CST if due
- Discuss models of care
- Discuss anti-D with Rh negative women
- Review with results and refer to MMH with the information above
- Review post anomaly scan and follow up/referrals prn

## Summary of key points

# Antenatal Appointment Schedule

**18-20 week visit**

- Review morphology scan and follow up/referrals prn
- Organise follow up of placental position prn
- Confirm EDC, if not already done

**24 weeks**

- Routine AN assessment ? Additional care required
- Fundal height and health promotion/parent education

**28 weeks**

- As above + FBC, Blood group antibodies, Syphilis, GTT +/- Ferritin +/- antiD
- EPDS, DV, drug and alcohol screening
- Discuss infant feeding, Vit K and Hep B
- Discuss and commence birth plan
- When to go to hospital
- Consider discharge planning

# Summary of key points

**31 weeks**

- As above, review results and follow up prn
- Confirm consent for Vit K, Hep B

**34 weeks**

- AntiD prn
- Repeat USS if low lying placenta on morphology scan
- Routine assessment, reassess schedule
- Order 36 week bloods (FBC +/- Ferritin +/- Syphilis)
- Discuss birth preferences

**38 & 40 weeks**

- Routine assessment
- Confirm understanding of the signs of labour and indications for admission to hospital

# Please enquire or inform women about….

- Breastfeeding intentions and availability of support e.g. ABA, Mater Parent  Support Centre, brochures
- Vit K
- Hep B
- Birthing preferences
- When to go to hospital
- Post natal checks

# Case work discussions:

- Scenario 1: FADUMA

Faduma is a 25yo Somalian lady.

She has a Hb 104, MCV is low.

She presents with hyperemesis at 10wks.

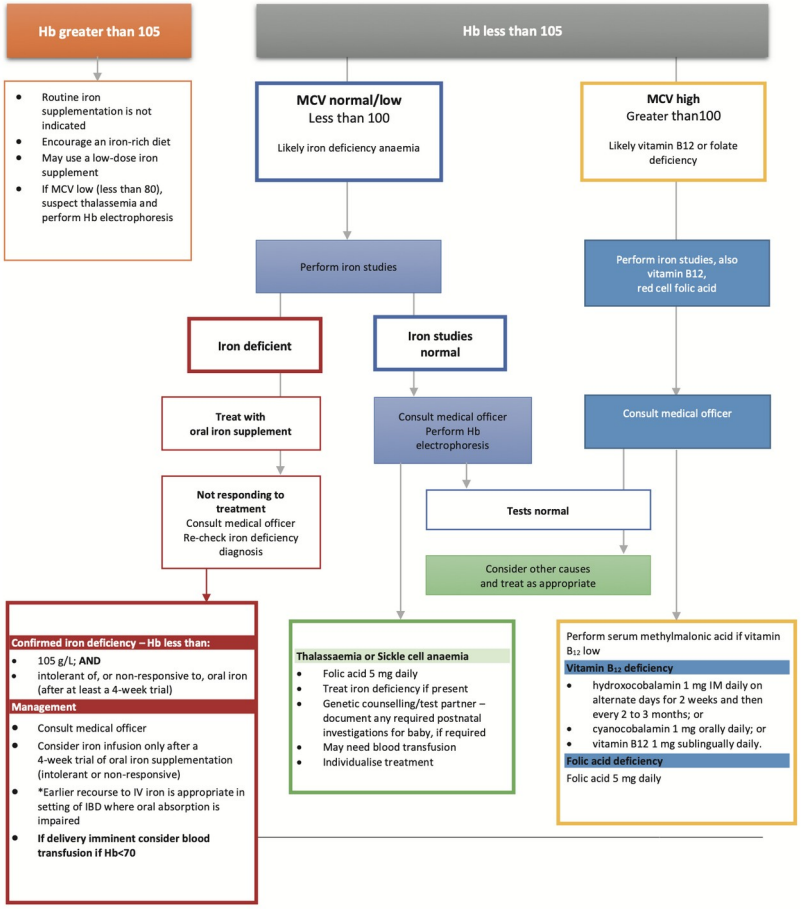
She reports that a child in her daughter's day care has been diagnosed with chicken pox.

Identify the risks for Faduma, your assessment and management/action plan.

Consider what resources you might utilise

# Anaemia

To state the obvious, please identify and treat the cause



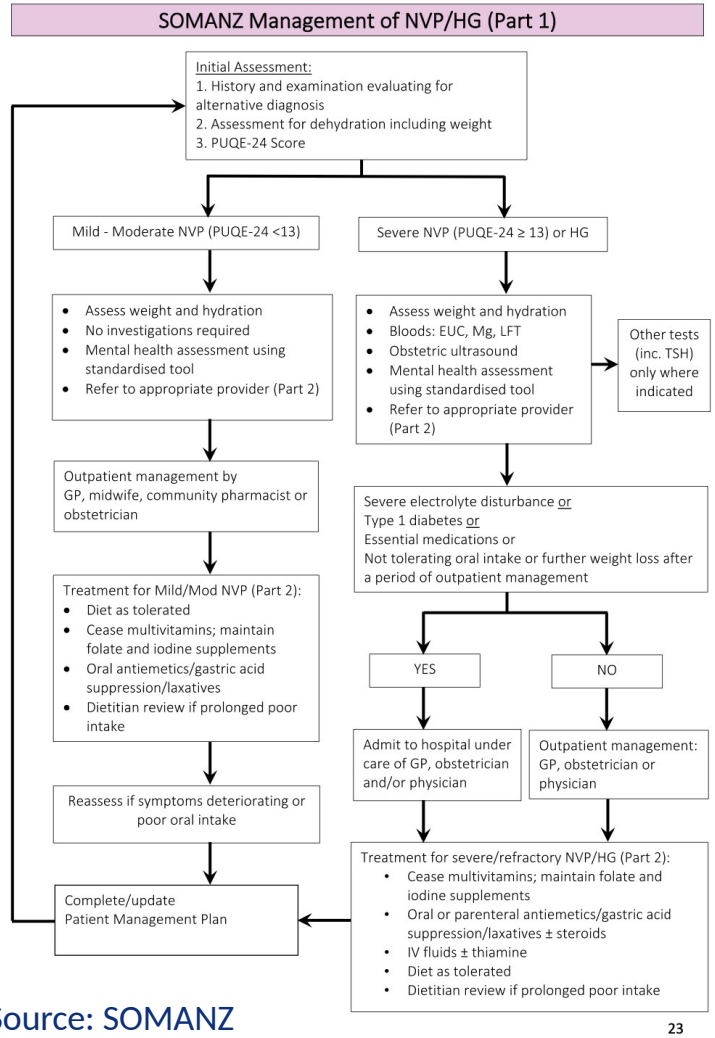

Source: Mater Mothers GP Maternity Shared Care Guideline, page 34

# Nausea and vomiting

Table 2. Motherisk PUQE-24 scoring system (2,3)

Total score: mild ≤6; moderate 7 to 12; severe ≥13.

| | | | | |
|---|---|---|---|---|
| **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) |




Source: SOMANZ

# Quick tips

- The pregnancy assessment centre (PAC) usually won't give IV fluids unless there are ketones in the urine (so manage expectations)
- If you can do a Ferinject, you can do IV fluids – work out your costs, your profit margin and if you have the physical room, staff and time to do this
- There is no point testing for Varicella seroconversion after vaccination as the test is not sensitive enough to confirm protection. Assume protected if history of x 2 doses of vaccine
- Zoster Immunoglobulin is recommended if there has been a significant exposure and not immune

# Case work discussions:

## Scenario 2:

Sharon is 30yo Torres Straight Islander lady who is newly pregnant.

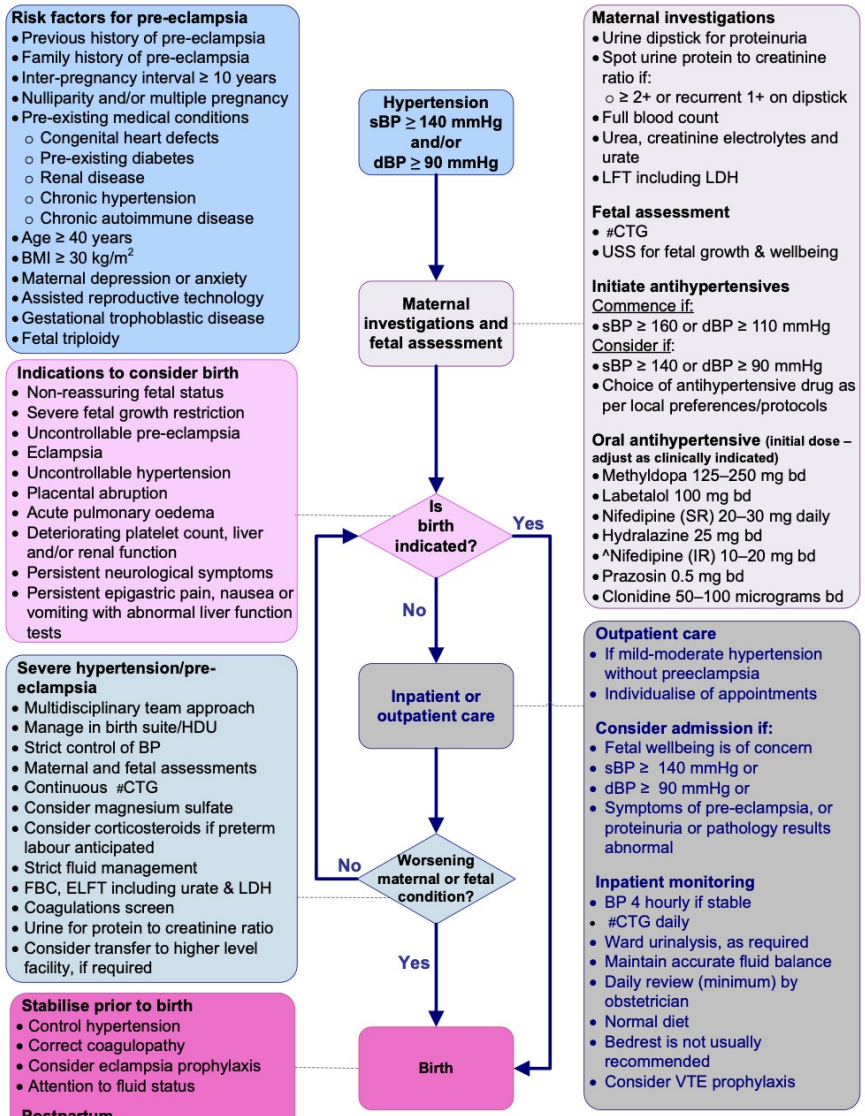
She has a BMI of 33 and a history of a macrosomic baby

She has essential hypertension treated with ACE inhibitors.

Identify the risks for Sharon and your assessment and management/action plan.

Consider what resources you might utilise

## Flow Chart: Management of hypertension in pregnancy




Flowchart: F21.13-2-V9-R26

# Case work discussions:

## Scenario 3: DEVINA

Devina is a 38yo primip, G1P0 who has presented for her routine AN appointment at 28wks.

She is rhesus negative, and her BP is 155/95 mmHg
She has rushed to get to her appointment and tells you she has an urgent meeting which she must attend immediately after her appointment. She mentions that she has had a headache all week.

Identify the risks for Devina and your assessment and management/action plan.

Consider what resources you might utilise

# Women over 35 years of age

Have an earlier obstetric booking appointment

- Age 35-38 Hx at K16 or within 4 weeks if late referral
- Age 38 + Hx at K13-14 or within 2-3 weeks if late referral

Please send the referral in *before* the FTCS/NT result

- Women 38 and over see obstetrician or registrar at K36 to discuss and/or plan induction at K39
- Primiparous age 38+ IOL K39
- Multiparous age 38 + IOL at K40

# Rh negative women

Anti D for:

- miscarriage at any gestation
- threatened miscarriage after 12 weeks (unless worried about compliance)
- antepartum haemorrhage
- abdominal trauma sufficient to cause bleeding
- interventions such as ECV, amniocentesis, CVS
- postpartum if baby Rh positive

# Anti D use

Give within 72 hours

- Dose: 250 IU before, 625 IU after 12 weeks
- Routine Anti D (625 IU) at 28 and 34-36 weeks
- Can be ordered for women and stocks held in general practice
- 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

NATIONAL BLOOD AUTHORITY AUSTRALIA

# Australian Health Provider Data Form

| SECTION A | | | | | |
|---|---|---|---|---|---|
| **AHP Class** | | | **Delivery mode** | | |
| **NBMS AHP code** | New AHP ☐ | Modify details ☐ | Deactivated ☐ | Reactivated ☐ | |
| **HEALTH PROVIDER DETAILS** (If new AHP complete all fields. If existing AHP, document details to be changed only) | | | | | |
| **Full name of AHP:**<br>**Note:** For GPs, pharmacies and other individuals, the name of the business will not be accepted and this must be a primary provider's name) | | | | | |
| **Contact Name:** | | | **Contact position title**: | | |
| **Phone:** | | | **Fax:** | | |
| **Email address:** | | | | | |
| **Street Address** | **Business Name:** | | | | |
| | **Street:** | | | | |
| | **Suburb:** | | | | |
| | **State:** | | **Post code:** | | |
| **Delivery address**<br>(if the same as the Street Address write "As Above") | **Street:** | | | | |
| | **Suburb:** | | | | |
| | **State:** | | **Post code:** | | |
| **Hospital ID:** | | | **Other accreditation ID (if available) e.g. ACHS, EQuiP or ISO:** | | |
| **For pathology laboratories:**<br>*Pathology (NATA ID):*<br>*Type of NATA accreditation:* | | | **For GPs, pharmacies and other individuals you must include (where applicable):**<br>*Medicare provider number:*<br>*AHPRA number:* | | |
| **Section A completed by**: | | | | | |
| **Data entered into NBMS by:** | | | | | |
| **URGENT OR LIFE-THREATENING ISSUE – Please ensure section B is completed in full.**<br>*to be completed only where product has been issued to the generic new customer code X1ZNEW* | | | | | |
| **Reason for urgent or life threatening request:**<br>The products that can be ordered for urgent requests are marked in section C with an * | | | | | |
| **Verbal acknowledgement obtained from the AHP that they have capacity to safely administer the product** ☐ | | | | | |
| **Name of clinician requesting product (for Hospital & Path. Lab requests):** | | | | | |
| **Verbal / email approval given by (MS staff representative only):** | | | | | |
| **NBMS issue note number(s):** | NBMS order note number(s): | | | | |

# Administration of Anti-D

Rh D immunoglobulin should be given by slow, deep IMI

Document in the Pregnancy Health Record

RhD immunoglobulin can be obtained from QML and Mater upon receipt of a signed and completed request form. It will be delivered by their routine courier service.

a) Mater Blood Bank Fax 07 3163 8179

b) QML Blood Bank Fax 07 3371 9029

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

# Case work discussions:

## Scenario 4: KATE

Kate is 34yo lady who presents with an unplanned pregnancy.

She has a history of Depression and is known to DOCS.
She has a history of Lletz x 2 for CIN 3

She decided to cease her SSRI medication when she found out she was pregnant

Identify the risks for Kate and your assessment and management/action plan.

Consider what resources you might utilise

# To congratulate or not?

- 51% of women will have an unplanned pregnancy
- Unplanned  unwanted
- 4001 nondirective pregnancy support counselling (at least 20 min)
- If TOP is chosen – local options?
- mTOP < 9 weeks/63 days
- STOP

# Please watch out for AOTC

We will keep you updated e.g. about changes to the GDM pathway, guideline changes, immunisations, education events. AOTC, including past editions, is available online

## Summary of key points

Routine first trimester Antenatal Screen (ANS)

- FBC, Blood group and antibodies, Rubella, ferritin
- Hep B, Hep C, HIV, syphilis and MSU m/c/s
- CST if due
- Women with BMI > 35 to have first trimester HbA1c or early OGTT if k>12 , E/LFTs urinary protein/creatinine ratio

26-28 week bloods: FBC, OGTT, syphilis and Blood group antibodies (only if Rh –ve) +/- ferritin

36 week bloods: FBC, syphilis +/- ferritin

# Contact details

**Maternity Share Care issues?**

- GP Liaison Midwife (GPLM) Phone: 3163 1861
- E-mail: GPL@mater.org.au
- Mobile: 0466 205 710

**If you are uncertain about the best approach in caring for or referring a woman, or if she requires urgent review**

- on call Obstetric Consultant 3163 1330 (M-F 8.30-4.30)
- Obstetric Registrar 3163 6612 (24hrs)
  3163 6611

# Contact details

**Alignment status, contact details, evaluation training & RACGP enquiries?**

- Phone Mater Education on 3163 1500
- Fax 3163 8344
- Email mscadmin@mater.org.au

# Available now!

## Online options to realign

- Bridging option (or refresher!) for GPs who complete an Alignment event at an allied hospital
- (Redland, Logan, Beaudesert, RBWH, Ipswich, Nambour!)
- VOPP presentations
- Video clips with Dr Treasure McGuire, pharmacologist

# GPs referring to MSHHS?

Dedicated Maternity GP Liaison

**Dr Kim Nolan** –GPLO General Practitioner – Maternity

Ph: 07 2891 5754 (Tues all day and Friday mornings)

**Lisa Miller** – GPLM Midwife

Ph. 0428 677 046

Email: GPLO_Maternity_Share_Care@health.qld.gov.au

Their online Bridging Program can be accessed via the GPLM@ GPLO_Maternity_Share_Care@health.qld.gov.au
Please include a copy of your GPs MMH Alignment Certificate

# GPs referring to MNHHS?

## Contact information for the MNHHS Alignment:

Metro North Maternity GP Alignment Program

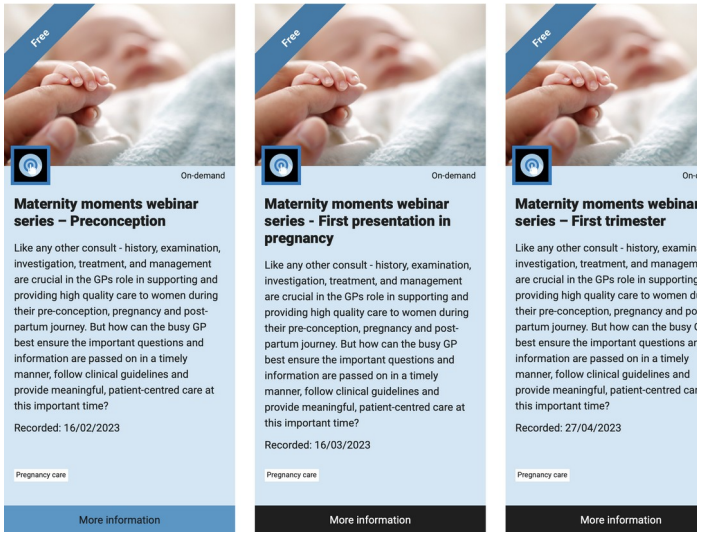
Phone: (07) 3646 6852

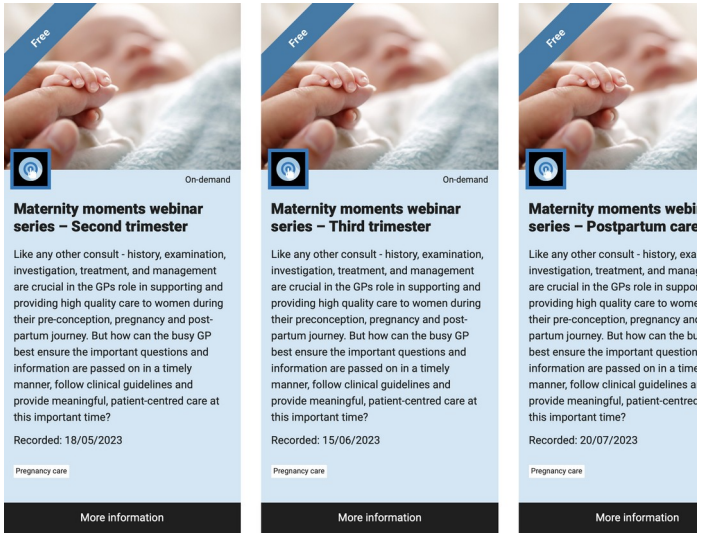
Email: mngpalign@health.qld.gov.au

Online resources are available under Metro North GP Alignment Program on the Education resources page under “gynaecology resources”

# Want to know more?

Series of 6, 30-minute webinars, available on demand, free of charge



# Communicate Communicate Communicate

When you have assembled your exhaustive history and have completed your examination and investigations, promptly send your referral to the MMH so the booking can commence and triage can be effectively and efficiently done.

***Use the template!***

**Copy the MMH on ALL investigations.**

If an adverse event occurs, such as a miscarriage, let the GPLM know.

If an adverse event occurs at MMH and you are NOT notified, please give this feedback to the GPLM.

Communication is a two-way street and gaps can only be closed if they are identified. If MMH contact you about an event, there is contact information – please use it to provide feedback/clarification.

# **Consultation** with women and care givers

We all aim to provide high quality clinical care with ongoing education from us and in seeking advice from others, including:

physiotherapists, dietitians, social workers, pharmacists, lactation consultants, physicians, midwives and obstetricians

**USE THEM!**

**IF IN DOUBT, PHONE A FRIEND!!!**

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**

# Item numbers for MSC

**16500** Rebate $44.15 Antenatal Attendance
**91853** (video) **91858** (telephone) equivalent of 16500
**16591** Rebate $133.45 "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 the 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**

# YOU ARE NOT YET ALIGNED!!

**You need to :**

1. Complete the Questionnaire within 4wks with an 80% pass
2. Complete your paperwork,

   --this may take up to 8 weeks.
3. Please provide your email address
4. Self log your RACGP points

   --we will send a certificate

# To ***mainta in*** your alignme nt

**By the 3-year mark, you must either:**

Do another Alignment:

- at MMH (we have 3 versions, next year 4) or
- MSHHS or MNHHS and complete an online bridging program + quiz

OR

Complete the MMH online realignment and bridging course (90 minutes) and quiz and complete an attestation form that you have:

a) reviewed the current MMH/GPSC guidelines and/or SpotOnHealth Pathways

b) attended a minimum of 6 hours CPD relevant to Women's Health in the past 3 years. Provide supporting documentation if requested

# Conclusion

- Please complete the evaluation and give us feedback let us know what we did well and what we could do better
- Let us know if you would be happy to have your contact information available for pregnant women who don't have a regular GP
- Let us know if you would be happy to have MSHHS hold your contact details
- Give us an email address that we will be able to contact/update you on

# The End!

***GOOD AFTERNOON AND THANK YOU!***