Metro North **GP Alignment Program**

MATERNITY WORKSHOP

Saturday 22nd October 2022

Physiotherapy Services

Catherine Willis

Team Leader Physiotherapist

Babies Obstetrics Pelvic Physiotherapy Services RBWH

This is a joint initiative between Metro North Hospital and Health Service and Brisbane North PHN

phn BRISBANE NORTH

An Australian Government Initiative

Queensland Government

Overview of services

Antenatal

- Antenatal Education Classes
- Musculoskeletal conditions of pregnancy
- Hydrotherapy in pregnancy
- Pelvic floor dysfunction
- TENS for labour
- Varicose vein management

Antenatal education classes

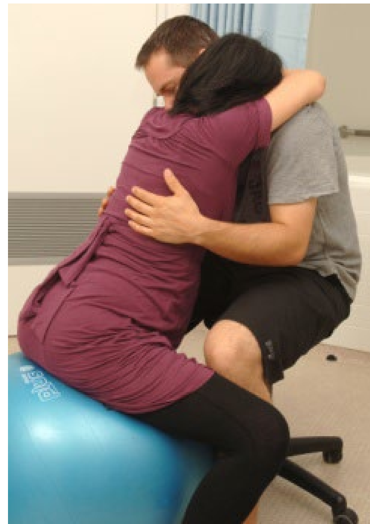
- Physiotherapists and Midwives run a coordinated program of classes – booked through MOPD
- Physios teach two of these classes:
  - Active Pregnancy
  - Active Birth
- YPP (Young Parents Program)

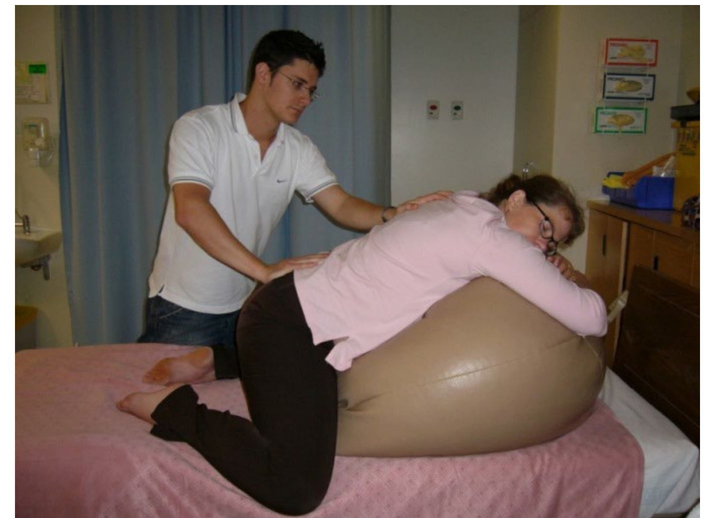
Active Pregnancy class

- Pelvic floor exercises and their benefits
- Back care during pregnancy
- Comfortable sleeping positions
- Perineal massage
- Moving well and exercise – RANZCOG statement 2022
- Precautions e.g., supine sleeping

Active Birth class

- Labour-focused
- Aims to improve confidence in skills to manage labour and childbirth
- Practice of active pain relief strategies
- Postnatal recovery





Images source: Women's and Newborn Services RBWH

Pregnancy Conditions

- Pelvic girdle pain, low back pain
- Bladder/bowel issues
- Carpal tunnel syndrome
- DRAM
- Varicose veins
- *GP referral accepted for women booked into RBWH*

Image source: …

Image source: …

Inpatient Services

- Post natal ward assessment/intervention
- Setting goals for exercise
- Baby handling/tummy time
- Respiratory/mobility issues PRN
- Referral to classes or other outpatient services as required

Postnatal Classes

- Postnatal pelvic floor class (telehealth)
  - OASIS (3rd and 4th degree perineal tear)
  - History of pelvic floor dysfunction
  - Forceps delivery
- Postnatal class (F2F)
  - DRAM check
  - Return to exercise guidelines
  - Back pain
  - Self-referral

Image source: Women's and Newborn Services RBWH

Pelvic Floor Recovery

- ACSQHC Third and Fourth Degree Perineal Tears Clinical Care Standard, 2021
- High-level evidence to support access for birthing people in Australia to suitably-trained physiotherapists

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

https://www.safetyandquality.gov.au/publications-and-resources/resource-library/third-and-fourth-degree-perineal-tears-clinical-care-standard

Neonatal Services

- Outpatient appointments
  - 0 – 12 months
  - Musculoskeletal – talipes, torticollis, plagiocephaly, Erb's palsy
  - Neurological / Developmental review
- Baby massage classes – self refer
- Playgroup for preterm babies
  - (0 – 12 months corrected age)
- Infant Follow up clinic
  - review babies post discharge from maternity ward and neonatal unit

Image source: …

Image source:

Metro North **GP Alignment Program**

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Postnatal case studies

This is a joint initiative between Metro North Hospital and Health Service and Brisbane North PHN

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Red group – postnatal care

- Jessica - G1P2 had an elective Caesarean section at 38 weeks
- She is now 10 days post partum and presents for a routine postnatal check, along with babies Jack and Joe
- She has three 15 minute appointments booked for herself and her babies
- What do you complete for their check ups?

Post partum care – Day 5 -10

Review

- birth & complications
- vaginal blood loss
- feeding & breasts
- immunisations (MMR, Pertussis)
- contraception
- psychological wellbeing
- ongoing follow up (GP, Child Health)

Check

- bowel & bladder function

Post partum care – Day 5 -10

Examine

- BP/abdomen/perineum/Caesarean section wound/breasts/nipples
- baby as per personal health record

Offer

- contraception

https://pathways.nice.org.uk/pathways/postnatal-care

Contraception

Options at 5 – 10 days post partum include:

- Abstinence
- Condoms
- Lactational amenorrhoea method
- Progesterone only pill
- Depo-Provera/Implanon NXT
- Not Combined oral contraceptive pill
- Not IUD unless inserted straight after birth

Neonatal examination by day 7

If baby is discharged from hospital within 72 hours of birth this examination should be conducted by a GP.

Date ____/____/____ Age ________ Weight ____________ NNST* (see page 13) ☐ Done now ☐ Done previously

Head Circ__________ Feeding ____________________ Signature ______________________________

Hearing screen (see 17) ☐ Further assessment indicated ☐ No further assessment indicated ☐ Screen not done

Family history (including deafness) ____

Mother's medication/supplements ____

Baby's medication/supplements ____

Feeding concerns ____

Birth marks ____

Examination

✔ = normal, ✘ = abnormal (explain in comments), O = not examined.

☐ jaundice ☐ spine ☐ respiratory

☐ fontanelle/sutures ☐ genitalia ☐ cardiac (auscultation)

☐ eyes & red reflexes ☐ anus ☐ cardiac (femoral pulses)

☐ face/palate/ears ☐ meconium within 24 hours ☐ hips

☐ limbs ☐ abdomen and umbilicus ☐ neurological/reflexes

Comments ____

Recommendations, follow ups, medication ____

Health promotion issues discussed with parents or care giver

☐ Feeding ☐ Safe infant sleeping information ☐ Injury prevention ☐ Hearing and ear health

☐ Role of GP ☐ Vaccinations funded/non-funded ☐ Roles of child health nurse/community midwife/health worker

Doctor's signature ____________________________ Name ____________________________

* NNST = Neonatal Screening Test

Health assessment
Approx 0–4 weeks

Child's age ___________

To be completed by doctor or child health nurse.

Health Assessment	Within Normal Limits Yes	Within Normal Limits No	Review	Refer	Comments
Weight _______ gm					
Length _______ cm					
Head circumference _______ cm					
Head symmetry					
Mouth/palate/frenulum					
Vision/eye examination (refer to P.12)					
Hearing screen completed*	R ☐ L ☐	R ☐ L ☐			
Cardiovascular					
Femoral pulses					
Hips					
Genitalia					
Development					
Other _______________					

* When an at risk family presents it is critical that all tests occur during this appointment

Comments ____

____

Name ______________________________ ☐ Medical Practitioner ☐ Registered Nurse

Signature ______________________________ Date ___/___/___

Remember your baby's vaccinations can be given from 6 weeks.

Child Health Service

Child and Youth Community Health Service

Child Health Service - Multidisciplinary team

- Child Health Nurses
- Early Intervention Clinicians (EIC) - Social Workers and Psychologists (Parenting Support)
- Aboriginal and Torres Strait Islander Advanced Health Workers
- Support Staff

Child Health Service

- Children - birth to 8 years and their Parents/Carers
- Free
- Do not need to be Medicare Eligible
- Free interpreter service available

Child Health Service

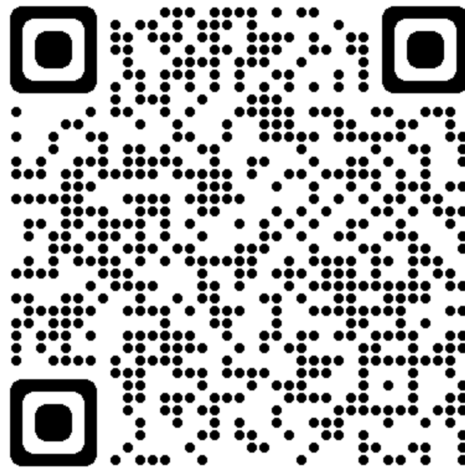
- Drop-in clinics – brief consultation, no appointment, 0 – 5 years
- Clinic & home visiting by appointment
- Telehealth
- Key age checks – PEDS, ASQ
- Sustained home visiting for more vulnerable families
- Day stay infant feeding and parent support program 0 – 6 months

- Parenting groups
    - New parent groups
    - Postnatal wellbeing group
    - Circle of Security
    - Positive Parenting Program

Child Health Service

- Parents can self refer
  - 1300 366 039
  - https://www.childrens.health.qld.gov.au/service-child-health/
- GPs can refer
  - https://www.childrens.health.qld.gov.au/wp-content/uploads/PDF/forms/chs-referral.pdf
  - https://www.childrens.health.qld.gov.au/wp-content/uploads/referral-templates/chq-spec-ref-form.pdf
- Contact your local Clinical Nurse Consultant to discuss options for families
  - Caboolture/North Lakes: 0411 654 136
  - Nundah/Keperra: 0411 896 331

Child Health Service



https://www.childrens.health.qld.gov.au/service-child-health/

Queensland Health

Clinical Excellence Queensland

Queensland Clinical Guidelines

Translating evidence into best clinical practice

Clinical Guideline

Safer infant sleep

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

Blue group – postnatal care

- Kylie - G1P1 had a vaginal birth and a third degree perineal tear
- Now 6 weeks post partum, she presents for her routine visit
- Baby Jasmine has the following appointment for 6 week check and immunisations
- What do you complete for their check ups?

Post partum care – Week 6

- Review
  - birth & complications
  - vaginal blood loss
  - feeding & breasts
  - immunisations
  - contraception
  - medical issues (e.g., OGTT if GDM)
  - psychological wellbeing of mother & partner (EPDS)
  - ongoing follow up (GP, Child Health)
  - need for referrals

EPDS

- Screen for Depression – EPDS
  - 6 – 12 weeks post partum and again in the first postnatal year
  - arrange further assessment if EPDS score 13 or more
  - arrange immediate further assessment if positive score Q10

Post partum care – Week 6

- Check
  - bladder & bowel function
- Examine
  - BP/abdomen/perineum/Caesarean section wound/breasts/nipples
  - baby as per personal health record
- Offer
  - Cervical Screening Test if due
  - contraception

https://pathways.nice.org.uk/pathways/postnatal-care

Perineal care

OASIS (Obstetric Anal Sphincter Injuries)

- Dedicated perineal clinic
- Obstetrician
- Physiotherapist
- Continence Nurse

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

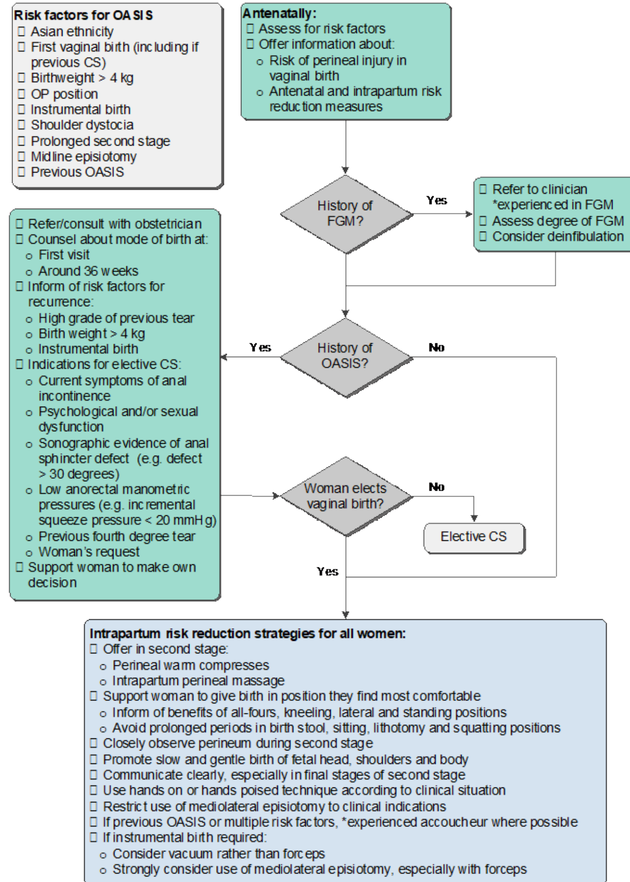
Perineal care

- If incontinence or pain, consider referral to gynaecologist, uro-gynaecologist or colorectal surgeon
- Consider:
  - endoanal ultrasound
  - anorectal manometry
  - secondary sphincter repair
  - referral to physiotherapist for assessment and individualised PFMT

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

Perineal care - resources

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



Flow Chart: Antenatal and intrapartum perineal care

Risk factors for OASIS
- Asian ethnicity
- First vaginal birth (including if previous CS)
- Birthweight > 4 kg
- OP position
- Instrumental birth
- Shoulder dystocia
- Prolonged second stage
- Midline episiotomy
- Previous OASIS

Antenatally:
- Assess for risk factors
- Offer information about:
  - Risk of perineal injury in vaginal birth
  - Antenatal and intrapartum risk reduction measures

History of FGM?
- Yes: Refer to clinician *experienced in FGM; Assess degree of FGM; Consider deinfibulation

History of OASIS?
- Yes:
  - Refer/consult with obstetrician
  - Counsel about mode of birth at:
    - First visit
    - Around 36 weeks
  - Inform of risk factors for recurrence:
    - High grade of previous tear
    - Birth weight > 4 kg
    - Instrumental birth
  - Indications for elective CS:
    - Current symptoms of anal incontinence
    - Psychological and/or sexual dysfunction
    - Sonographic evidence of anal sphincter defect (e.g. defect > 30 degrees)
    - Low anorectal manometric pressures (e.g. incremental squeeze pressure < 20 mmHg)
    - Previous fourth degree tear
    - Woman's request
  - Support woman to make own decision
- No

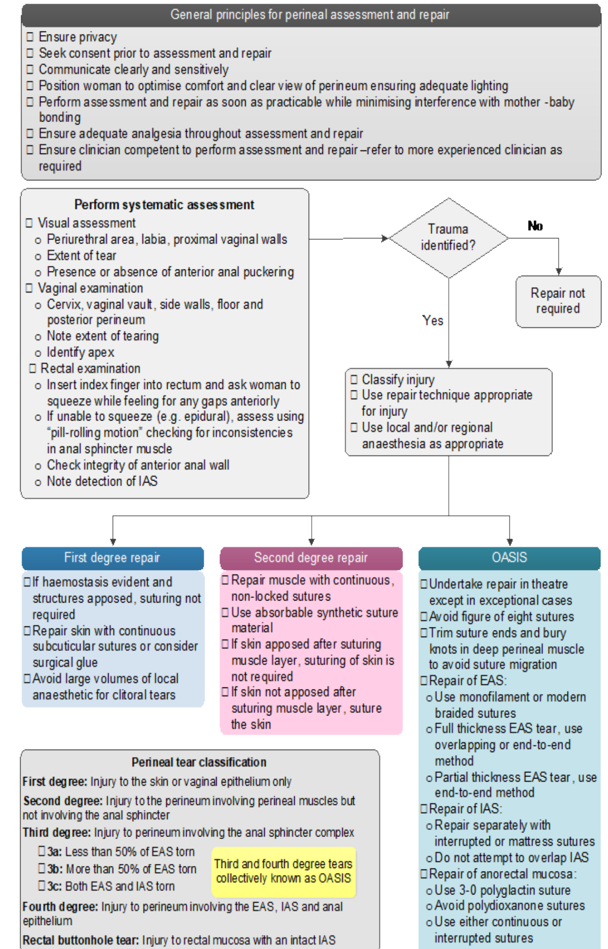
Woman elects vaginal birth?
- No: Elective CS
- Yes

Intrapartum risk reduction strategies for all women:
- Offer in second stage:
  - Perineal warm compresses
  - Intrapartum perineal massage
- Support woman to give birth in position they find most comfortable
  - Inform of benefits of all-fours, kneeling, lateral and standing positions
  - Avoid prolonged periods in birth stool, sitting, lithotomy and squatting positions
- Closely observe perineum during second stage
- Promote slow and gentle birth of fetal head, shoulders and body
- Communicate clearly, especially in final stages of second stage
- Use hands on or hands poised technique according to clinical situation
- Restrict use of mediolateral episiotomy to clinical indications
- If previous OASIS or multiple risk factors, *experienced accoucheur where possible
- If instrumental birth required:
  - Consider vacuum rather than forceps
  - Strongly consider use of mediolateral episiotomy, especially with forceps

*Experienced clinician: The clinician best able to provide the required clinical care in the context of the clinical circumstances and local and HHS resources and structure. May include clinicians in external facilities.

Queensland Clinical Guidelines: F18.30-1-V3-R23

CS: caesarean section, **FGM:** female genital mutilation, **HHS:** Hospital and Health Service, **kg:** kilogram, **mmHg:** millimetre of mercury, **OASIS:** obstetric anal sphincter injuries, **OP:** occipito-posterior position, **>:** greater than, **<:** less than



Flow Chart: Perineal assessment and repair

General principles for perineal assessment and repair
- Ensure privacy
- Seek consent prior to assessment and repair
- Communicate clearly and sensitively
- Position woman to optimise comfort and clear view of perineum ensuring adequate lighting
- Perform assessment and repair as soon as practicable while minimising interference with mother-baby bonding
- Ensure adequate analgesia throughout assessment and repair
- Ensure clinician competent to perform assessment and repair – refer to more experienced clinician as required

Perform systematic assessment
- Visual assessment
  - Periurethral area, labia, proximal vaginal walls
  - Extent of tear
  - Presence or absence of anterior anal puckering
- Vaginal examination
  - Cervix, vaginal vault, side walls, floor and posterior perineum
  - Note extent of tearing
  - Identify apex
- Rectal examination
  - Insert index finger into rectum and ask woman to squeeze while feeling for any gaps anteriorly
  - If unable to squeeze (e.g. epidural), assess using "pill-rolling motion" checking for inconsistencies in anal sphincter muscle
  - Check integrity of anterior anal wall
  - Note detection of IAS

Trauma identified?
- No: Repair not required
- Yes:
  - Classify injury
  - Use repair technique appropriate for injury
  - Use local and/or regional anaesthesia as appropriate

First degree repair
- If haemostasis evident and structures apposed, suturing not required
- Repair skin with continuous subcuticular sutures or consider surgical glue
- Avoid large volumes of local anaesthetic for clitoral tears

Second degree repair
- Repair muscle with continuous, non-locked sutures
- Use absorbable synthetic suture material
- If skin apposed after suturing muscle layer, suturing of skin is not required
- If skin not apposed after suturing muscle layer, suture the skin

OASIS
- Undertake repair in theatre except in exceptional cases
- Avoid figure of eight sutures
- Trim suture ends and bury knots in deep perineal muscle to avoid suture migration
- Repair of EAS:
  - Use monofilament or modern braided sutures
  - Full thickness EAS tear, use overlapping or end-to-end method
  - Partial thickness EAS tear, use end-to-end method
- Repair of IAS:
  - Repair separately with interrupted or mattress sutures
  - Do not attempt to overlap IAS
- Repair of anorectal mucosa:
  - Use 3-0 polyglactin suture
  - Avoid polydioxanone sutures
  - Use either continuous or interrupted sutures

Perineal tear classification

First degree: Injury to the skin or vaginal epithelium only

Second degree: Injury to the perineum involving perineal muscles but not involving the anal sphincter

Third degree: Injury to perineum involving the anal sphincter complex
- **3a:** Less than 50% of EAS torn
- **3b:** More than 50% of EAS torn
- **3c:** Both EAS and IAS torn

Third and fourth degree tears collectively known as OASIS

Fourth degree: Injury to perineum involving the EAS, IAS and anal epithelium

Rectal buttonhole tear: Injury to rectal mucosa with an intact IAS

Queensland Clinical Guidelines: F18.30-2-V3-R23

EAS: external anal sphincter; **IAS:** internal anal sphincter; **OASIS:** obstetric anal sphincter injuries

Perineal care - resources

Queensland Clinical Guideline: Perineal care

8.4 Follow up after perineal injury

Table 32. Post perineal repair follow up

Aspect	Considerations
If OASIS:	• Refer to an obstetrician for postpartum review 6 to 12 weeks postpartum[8] • Refer to a physiotherapist for ongoing follow up and PFMT[8,17] • Refer to a continence nurse (where available) prior to discharge • Where facilities and resources are available, establishing a dedicated perineal clinic to follow up women with OASIS may be beneficial[8,122] ○ There may be a place for 3a tears to be followed up in the community[123] • Establish local protocols for follow up of women with OASIS to avoid a 'patchwork of services'[29]
Self-care advice until six weeks post birth	• GP and/or midwife review around six weeks postpartum for assessment of wound healing ○ If woman observes signs of wound infection or breakdown, advise earlier medical review • Recommend continence clinic review or follow up, where available • Discuss resumption of sexual activity ○ Women with perineal suturing are at increased risk of dyspareunia[124,125] ○ Wound healing and emotional readiness are some of the many factors that influence the decision to resume sexual activity ▪ Median time of return to intercourse is around 5 to 8 weeks postpartum[124] ○ Ways to minimise discomfort (e.g. experimenting with sexual positions, use of lubrication) • Advise to see GP/midwife if: ○ Experiencing dyspareunia ○ Constipation or symptoms of urinary or faecal incontinence
After six weeks postpartum	• If incontinence or pain at follow up, consider referral to specialist gynaecologist or colorectal surgeon[8] • Care considerations may include[8]: ○ Endoanal USS ○ Anorectal manometry ○ Consideration of secondary sphincter repair ○ Referral to a physiotherapist for assessment and individualised PFMT to help manage pelvic floor dysfunction[17]

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

Continence advisory service

Referral reasons may include:		
Lower urinary tract symptoms: Frequency, urgency, urge incontinence, stress incontinence, voiding difficulties, poor stream, feeling of incomplete emptying	**Bowel symptoms:** Constipation, diarrhoea, faecal soiling, flatus incontinence	Issues with 3rd and 4th degree tears
Pre work up for referral acceptance: • Bladder symptoms – MSU M/C/S • Bowel symptoms – Stool M/C/S if indicated		

Enquiries and referrals:
Phone: 07 3646 2325
Fax: 07 3646 1769 – attention **Continence Advisory Service WNS**
Email: RBWH-Continence-Advisor-WNBS@health.qld.gov.au

Green group – postnatal care

- Amanda had a healthy pregnancy and uncomplicated vaginal birth
- She presents at 5 weeks requesting a checkup, looking pale and tired
- She reports that she is still bleeding very heavily, with pain, blood clots and regular flooding
- Amanda also complains of pain in her left thigh
- What do you check?

Postpartum haemorrhage (PPH)

- Secondary PPH = excessive bleeding that occurs between 24 hours post birth and 6 weeks
- Primary PPH = excessive bleeding in first 24 hours post birth

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

Queensland Health
Clinical Excellence Queensland

Queensland Clinical Guidelines
Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Primary postpartum haemorrhage

Secondary PPH

- Common causes:
  - endometritis +/- retained products of conception (RPOC)
- Rare causes:
  - bleeding diathesis
  - pseudo aneurysm / AV malformations of uterine artery
  - choriocarcinoma

Secondary PPH

- Investigations:
  - FBE/iron studies/coagulation screen
  - Infection screen
  - Pelvic USS and Doppler flow
  - BHCG levels
- Treatment:
  - Antibiotics +/- uterotonics
  - If excessive / continued – investigate for RPOC (irrespective of USS findings)
  - Check histology

VTE

Queensland Health

Clinical Excellence Queensland

Queensland Clinical Guidelines

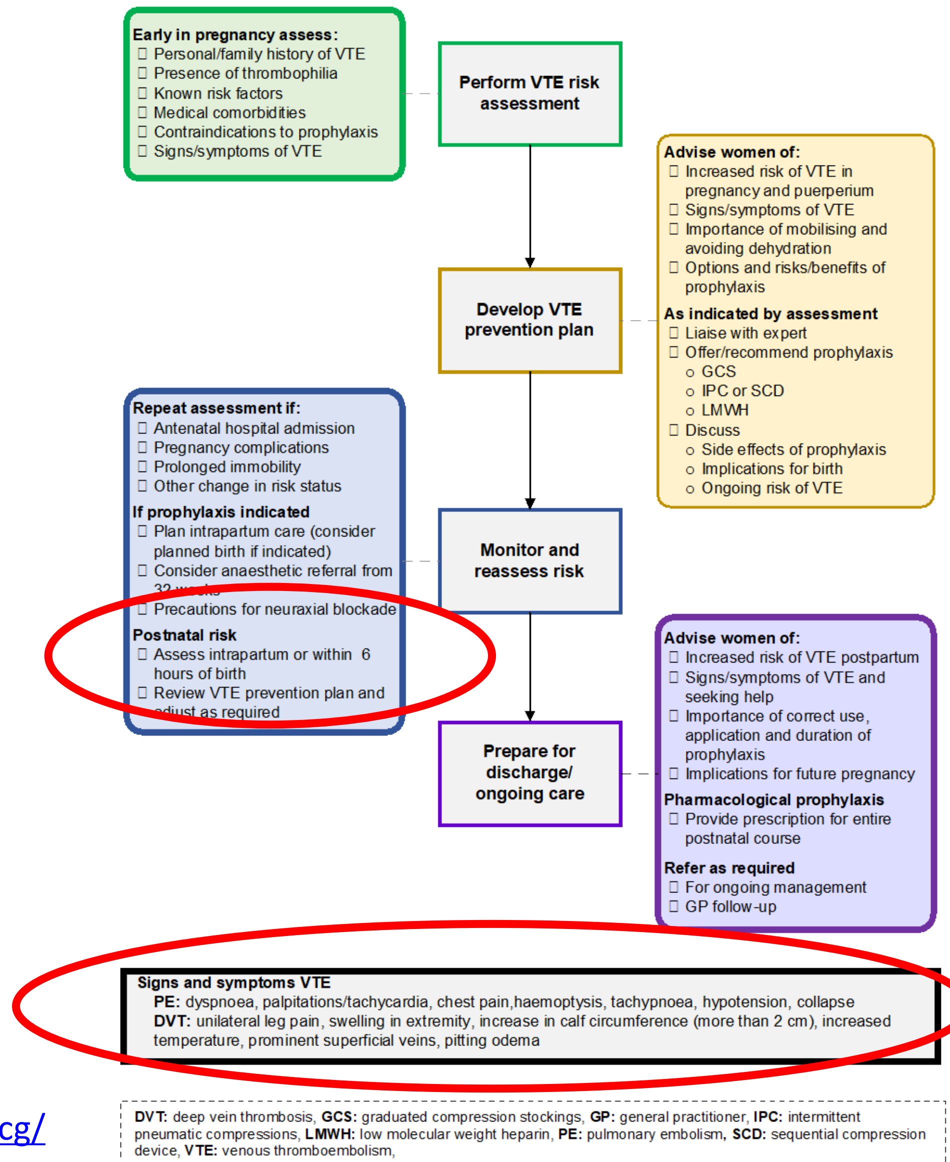
Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Venous thromboembolism (VTE) prophylaxis in pregnancy and the puerperium

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

VTE postnatal assessment



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

Flowchart: Antenatal and postnatal thromboprophylaxis according to risk

High risk

1

ANY ONE OF
- ☐ Pre-pregnancy therapeutic anticoagulation (any reason)
- ☐ Any previous VTE plus high risk thrombophilia*#
- ☐ Recurrent unprovoked VTE (2 or more)
- ☐ VTE in current pregnancy (seek expert advice)

Therapeutic anticoagulation
- Continue/commence antenatal
- Continue 6 weeks postpartum

High prophylactic dose may be appropriate

2

ANY ONE OF
- ☐ Any single previous VTE not provoked by surgery
- ☐ Recurrent provoked VTE (2 or more)
- ☐ Active autoimmune or inflammatory disorder
- ☐ Medical co-morbidity: (e.g. cancer, nephrotic syndrome, heart failure, sickle cell, type I diabetes with nephropathy)

LMWH standard prophylaxis
- From first trimester
- Continue 6 weeks postpartum

3

IF THROMBOPHILIA
- ☐ High or low risk thrombophilia* (no personal history VTE)

Refer to Flowchart: *VTE prophylaxis if thrombophilia*

4

ANY ONE OF
- ☐ Antenatal hospital admission
- ☐ Ovarian hyperstimulation syndrome (first trimester only)
- ☐ Any surgery in pregnancy or postpartum
- ☐ Severe hyperemesis or dehydration requiring IV fluid

LMWH Standard prophylaxis
- While in hospital or until resolves

All risk

5

SELECT ALL THAT APPLY at every assessment (antenatal or postnatal)

	Risk Score
☐ Family history (1st degree relative) of unprovoked or estrogen provoked VTE	1
☐ Single VTE provoked by surgery	3
☐ Age > 35 years	[illegible]
☐ Parity [illegible]	1
☐ Smoking (any amount)	1
☐ Gross varicose veins	1
☐ Current BMI [illegible] kg/m²	1
☐ Current BMI [illegible] kg/m²	2
☐ IVF/ART	1
☐ Multiple pregnancy	1
☐ Pre-eclampsia in current pregnancy	1
☐ Immobility	1
☐ Current systemic infection	1
☐ Pre-existing diabetes	1
☐ Caesarean section in labour	3
☐ Elective caesarean section	[illegible]
☐ Prolonged labour > 24 hours	[illegible]
☐ Operative vaginal birth	1
☐ Preterm birth (< 37+0 weeks)	1
☐ PPH > 1 L or transfusion	1
☐ Stillbirth in current pregnancy	1
☐ Caesarean hysterectomy	[illegible]
Sum all risk scores	

Antenatal risk score

Score	Action
ALL	Mobilise, avoid dehydration
3	LMWH standard prophylaxis – From 28 weeks
[illegible]	LMWH standard prophylaxis – From time of assessment

Postnatal risk score = antenatal + postnatal score

Score	Action
ALL	Mobilise early, avoid dehydration
2	LMWH standard prophylaxis – Until discharge
[illegible]	LMWH standard prophylaxis – 7 days (or longer if ongoing risk)

All caesarean sections
- Recommend IPC or SCD until next day

GCS/TED stockings
- Consider for postnatal women until fully mobile
- Recommend if receiving LMWH

Enoxaparin: standard prophylaxis (subcut)
- [illegible] kg 40 mg daily
- [illegible] kg 60 mg daily
- [illegible] kg 80 mg daily
- > 171 kg 0.5 mg/kg

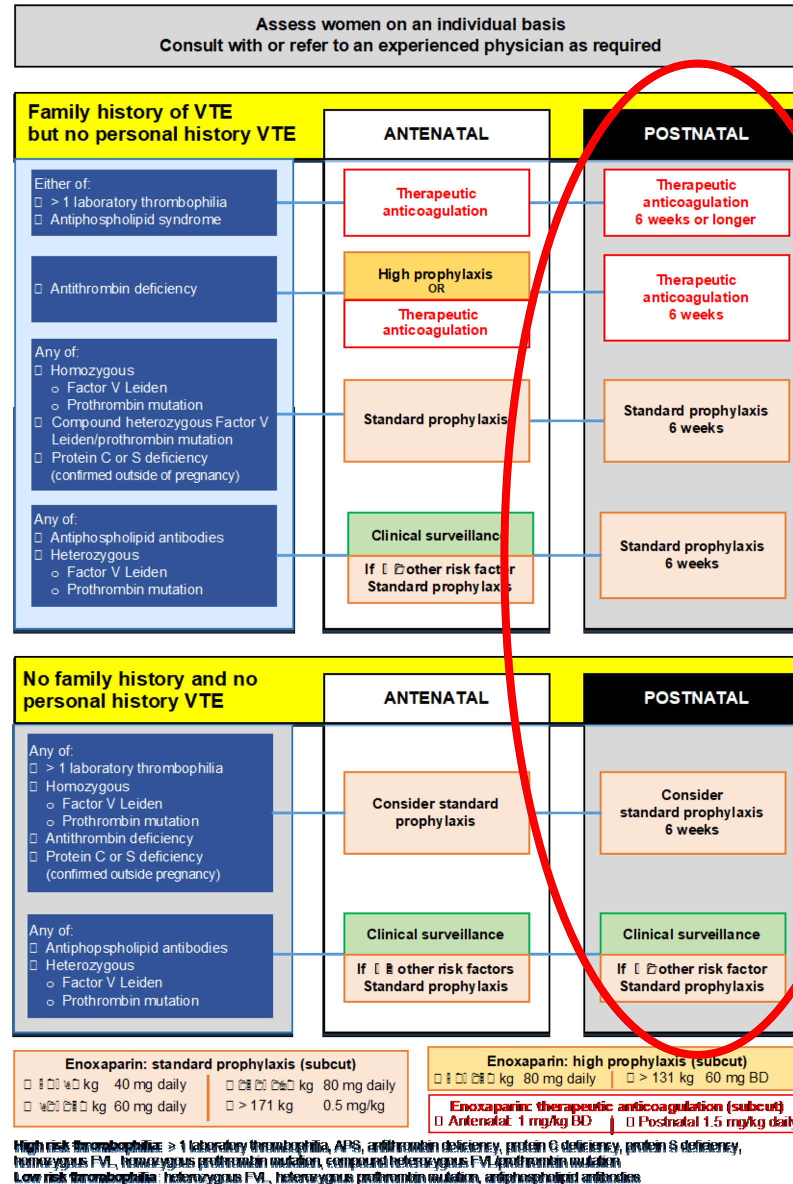
*High risk thrombophilia: > 1 laboratory thrombophilia, APS, antithrombin deficiency, protein C deficiency, protein S deficiency, homozygous FVL, homozygous prothrombin mutation, compound heterozygous FVL/prothrombin mutation
Low risk thrombophilia: heterozygous FVL, heterozygous prothrombin mutation, antiphospholipid antibodies

APS: antiphospholipid syndrome, **ART:** artificial reproductive technology, **BMI:** body mass index, **FVL:** factor V Leiden, **GCS:** graduated compression stockings, **IPC:** intermittent pneumatic compressions, **IVF:** in-vitro fertilisation, **LMWH:** low molecular weight heparin, **PE:** pulmonary embolism, **PPH:** Primary postpartum haemorrhage, **SCD:** sequential compression device, **SLE:** systemic lupus erythematosus, **TEDS:** thromboembolic deterrent stockings **VTE:** venous thromboembolism, [illegible]: greater than or equal to, **>:** greater than

Flowchart: F20.9-2-V2-R25

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

Flowchart: Thromboprophylaxis if thrombophilia



Flowchart: F20.9-3-V1-R25

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

Therapeutic anticoagulation

5.4.3 Therapeutic anticoagulation

If weight greater than 100 kg, liaise with an experienced physician regarding dose. If the woman has antithrombin deficiency, consider increased dose and monitoring of anti-Xa levels.

Table 21. Therapeutic anticoagulation

Medicine	Dosage
Dalteparin	100 units/kg twice per day[61]
Enoxaparin	Antenatal: o 1 mg/kg subcutaneous twice per day[61] Postnatal: o 1.5 mg/kg subcutaneous daily[61]
Heparin sodium (UFH)	Loading Dose[61]: o 80 units/kg IV stat Infusion[61]: o 18 units/kg/hour IV infusion Monitor APTT[61] as per Queensland Health form: Heparin intravenous infusion order and administration–adult[15]
Warfarin	Variable oral dose o Aim for INR 2–3 unless specified otherwise Refer to Queensland Health's guidelines for anticoagulation using warfarin[62,63]

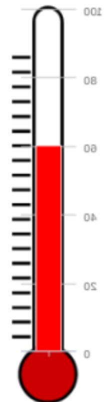
https://www.health.qld.gov.au/qcg/

Orange group - post partum

- Nicole - G1 P1 BMI 40, VTE risk, GDM, hypertension
- She had a caesarean birth, and has a healthy baby girl weighing 4200g
- She presents at 5 days post partum, looking flushed and moving slowly. She is accompanied by her husband and her mother is caring for the baby at home
- Your preliminary observations reveal a temperature of 39.2, BP 105/68 and PR of 112
- What is your approach?

Post Partum Pyrexia

- Definition:
  - Oral temperature of 38.0° C or more on any two of the first 10 days postpartum, exclusive of the first 24 hours
- Common Causes:
  - UTI / endometritis / mastitis / breast abscess / pneumonia / pharyngitis/gastroenteritis
  - Surgical site infection / septic thrombophlebitis
  - Drug reaction
  - Clostridium difficile diarrhoea
  - Infections related to regional anaesthesia



https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_64a.pdf

Post Partum Pyrexia - Management

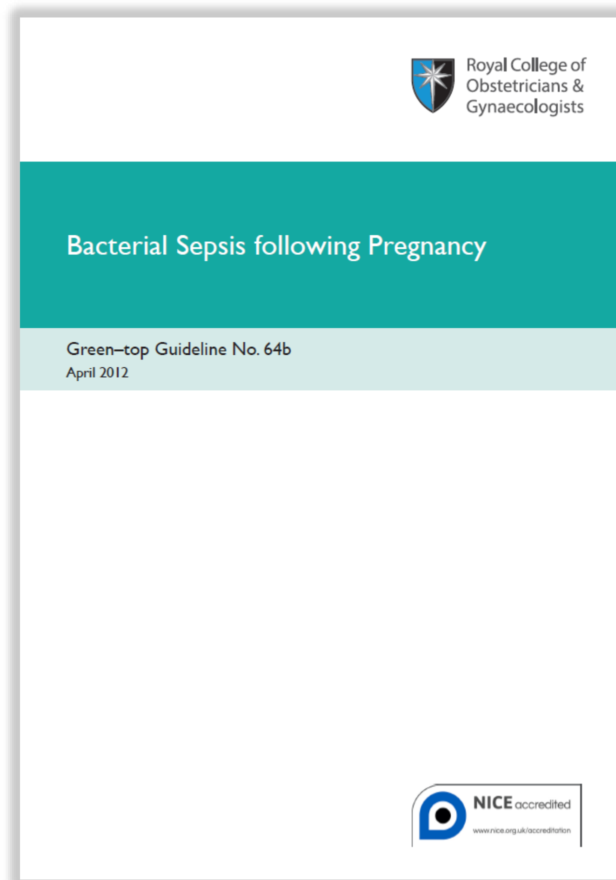
Refer urgently if any 'Red flags':

- appears seriously ill, anxious, distressed
- temperature >38° C
- sustained tachycardia (>90 bpm)
- breathlessness (RR>20 breaths/minute)
- abdominal or chest pain
- diarrhoea and/or vomiting
- uterine or renal angle pain

https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_64a.pdf

Post Partum Pyrexia - Management

- History, examination and investigations to identify cause and direct optimal therapy
- Amoxycillin with Clavulanic Acid, Metronidazole, Clindamycin, Carbapenems, Piperacillin-Tazobactam, Gentamicin



https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_64a.pdf

SOMANZ (Society of Obstetric Medicine Australia and New Zealand) guideline aims to provide evidence based guidance for the investigation and care of women with sepsis in pregnancy or the postpartum period. The guideline is evidence based and incorporates recent changes in the definition of sepsis.

SOMANZ Guidelines for the Investigation and Management of Sepsis in Pregnancy

Society of Obstetric Medicine Australia and New Zealand

https://www.somanz.org/content/uploads/2020/07/2017SepsisGuidelines.pdf

GDM follow up

- OGTT at 6 – 12 weeks postpartum
- Annual OGTT or HbA1c if contemplating another pregnancy
- Optimise postpartum and interpregnancy weight
- Early glucose testing in future pregnancies
- If no further pregnancies planned, screen for diabetes every 3 years for life
- Lifelong screening for cardiovascular disease

Queensland Clinical Guidelines https://www.health.qld.gov.au/qcg/

Pink group - post partum

- Kate – G3P3 had an uncomplicated pregnancy, a straightforward birth and post partum course
- She is 5 days post partum and presents for her routine visit, along with baby Trinity
- As you commence your routine post partum check, you enquire about feeding and Kate reports *"Trinity is unsettled and not breastfeeding well, so this morning I gave her some formula"*.
- How do you manage Kate's check up?

Infant feeding

- NHMRC
  - exclusive breastfeeding until around 6 months
  - around 6 months solids can be introduced while continuing to breast feed
  - continue breastfeeding until 12 months and beyond
- WHO
  - exclusive breastfeeding for the first 6 months
  - from 6 months, children should begin eating safe and adequate complementary foods while continuing to breastfeed for up to 2 years and beyond

Infant feeding

- Start to introduce solid foods around 6 months, **(not before 4 months).** Continue to breastfeed while introducing solids.
- Introduce a wide variety of foods from each food group by 12 months
- Include **common allergy causing foods by 12 months** in an age appropriate form e.g., smooth peanut butter, well cooked egg

https://www.allergy.org.au/patients/allergy-prevention/ascia-how-to-introduce-solid-foods-to-babies

Why is breastfeeding important?

	Health outcome associated with breastfeeding	No. Studies	Pooled Effect	95% CI	Interpretation: odds (OR) / risk (RR) of outcome is:
For baby	Performance in intelligence tests[14]	17	3.44 points	2.30–4.58	increased
	Overweight/obesity in later life[15]	113	OR: 0.74	0.70–0.78	reduced
	Type 2 diabetes[15]	11	OR: 0.65	0.49–0.86	reduced
	Malocculsion[16]				
	Ever versus never breastfed	18	OR: 0.34	0.24–0.48	reduced
	Exclusive versus ever breastfed	9	OR: 0.54	0.38–0.77	
	Dental caries[17]				
	If breastfed beyond 12 months	5	OR: 1.99	1.36–2.96	increased
	If breastfed up to 12 months	7	OR: 0.50	0.25–0.99	reduced
	Acute otitis media (until 2 years)[18]				
	If exclusive breastfeeding for first 6 months	5	OR: 0.57	0.44–0.75	reduced
	More versus less breastfeeding	12	OR: 0.65	0.59–0.72	
	Childhood leukaemia[19]				
	Any breastfeeding for 6 months of longer	18	OR: 0.81	0.73–0.89	reduced
	Ever versus never breastfed	15	OR: 0.89	0.84–0.94	
	SIDS[20]				
	Exclusive breastfeeding	8	OR: 0.27	0.24–0.31	reduced
	Any breastfeeding	18	OR: 0.40	0.35–0.44	
	Severe respiratory infections[8]	16	RR: 0.68	0.60–0.77	reduced
	Mortality due to infectious diseases[8]	9	OR: 0.48	0.38–0.60	reduced
	Protection against diarrhoea morbidity/hospital admission[8]	15	RR: 0.69	0.58–0.82	reduced
Maternal	Breast cancer[21]	98	OR: 0.78	0.74–0.82	reduced
	Ovarian cancer[21]	41	OR: 0.70	0.64–0.77	reduced
	Type 2 diabetes[22]	6	RR: 0.68	0.57–0.82	reduced
	BMI in postmenopausal women[23]	1	0.22 kg/m^2	0.21–0.22	reduced

Queensland Clinical Guidelines https://www.health.qld.gov.au/qcg

Breastfeeding cautions

Aspect	Consideration
Breastfeeding not recommended	Specialised formula required for: o Galactosaemia o Maple syrup urine disease o Phenylketonuria (PKU) (some breastfeeding may be possible with careful monitoring)[4] Human immunodeficiency virus (HIV) positive[4]
Temporary avoidance or supplementation required[1,2]	Examples include (but are not limited to): o Severe maternal illness (e.g. sepsis) o If hepatitis C positive and nipples are bleeding o Concerns with the health and wellbeing of the baby[1] If herpes simplex virus type 1 (HSV-1) on the breast, avoid breastfeeding until all active lesions have resolved Refer to Section 4: Supplemental feeding
Maternal medication and substance use	Individualise care: o Refer to a breast milk pharmacopeia for recommendations about specific medications (e.g. LactMed[24]) o Refer to Queensland Clinical Guidelines: *Perinatal substance use: neonatal*[25] and *Perinatal substance use: maternal*[26]
Recommendation	Whenever an interruption to breastfeeding is being considered, weigh the benefits of breastfeeding against the risks and discuss with the mother and family[4] When a mother decides to continue breastfeeding in situations where a degree of risk is identified, refer for specialist advice and management Where temporary avoidance of breastfeeding is indicated, support the mother to express breast milk to maintain lactation

Queensland Clinical Guidelines https://www.health.qld.gov.au/qcg

Medications in breastfeeding

- Antenatal Pharmacists
  - RBWH
    - P: 3647 0810 Monday - Friday
    - F: 3646 3544
    - E: pharmacy-maternityoutpatients-RBWH@health.qld.gov.au
  - Redcliffe Hospital
    - P: 3883 7160 Monday - Friday
    - F: 3883 7908
    - E: redh-pharmacy@health.qld.gov.au

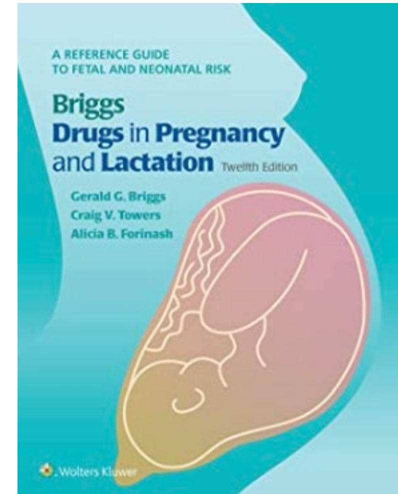
Medication for Perinatal Mental Illness

- Queensland Medicines Advice & Information Service (QMAIS) for Health Professionals

  P: 07 3646 7599 or 07 3646 7098

  E: QMAIS@health.qld.gov.au
- LactMed - U.S. National Library of Medicine https://www.ncbi.nlm.nih.gov/books/NBK501922/
- Drugs in Pregnancy and Lactation Gerald Briggs et al
- Medications and Mothers' Milk Online

  https://www.halesmeds.com



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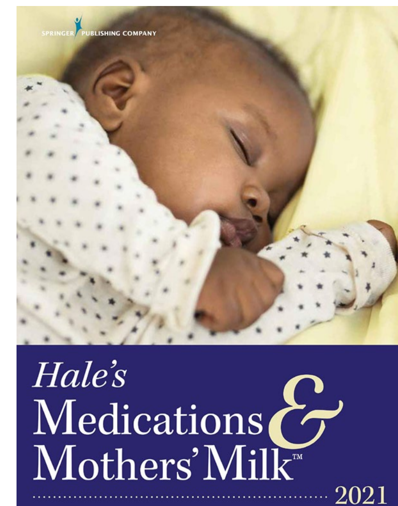


Source: Google images

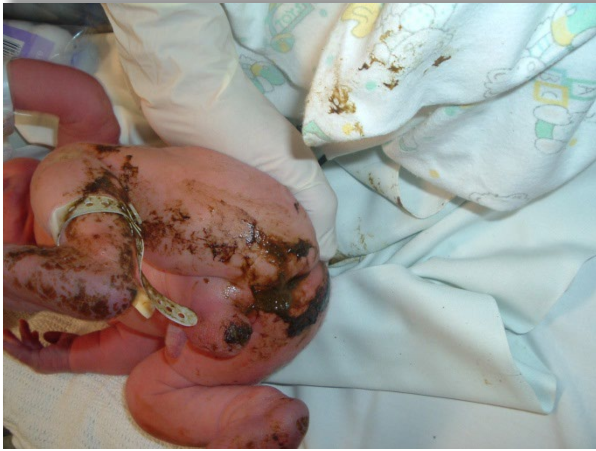
During pregnancy

- Share breastfeeding information at every antenatal visit
  - many women decide how they will feed their baby before or early in pregnancy
  - more likely to initiate and continue to breastfeed if their doctor encourages them to
- Identify risk factors for challenges/concerns e.g., diabetes, thyroid disease, previous breast surgery
- Breast and nipples examination not routinely recommended
- Refer if required

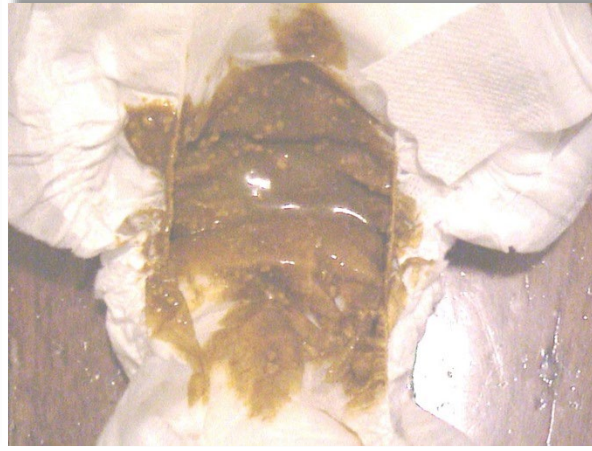
Postnatal check day 5 to 7

- Ask targeted questions to ascertain if feeding is progressing normally
- Weigh baby
- Review baby input/output
- Health promotion
  - safe sleeping
  - role of community midwife/child health nurse
  - local hospital/community lactation support

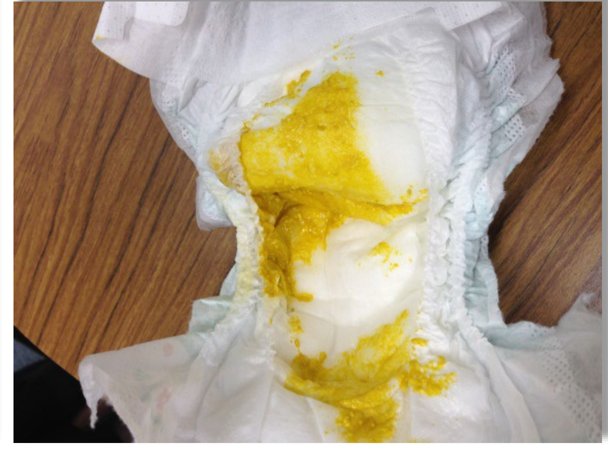
Breastfeeding is going well when…



Meconium
At birth



Transitional Stool
Day 2-4



Within 24 – 48 hours of "milk in" - from Day 5 - 7

- Feeding on cue 8-12 times every 24 hours
- 6-8 wet nappies and 3-4 yellow stools each day
- Mother can hear baby gulping or swallowing milk
- Breastfeeding is comfortable
- Baby is receiving only breast milk

Input/output checklist

Age (hours)	Breast milk intake	Number of breastfeed	Number of wet nappies	Stooling	Stool colour	Stool consistency	Baby weight
0–24	0–5 mL colostrum at first feed 2–10 mL per feed Average of 7 ml per feed 7–123 mL of colostrum in first 24 hours	First 8 hours: 1 or more Second 8 hours: 2 or more Third 8 hours: 2 or more	1 or more	1–2	black	tarry/sticky	Loses 7% average 10% maximum
24–48	5–15 mL per feed Increasing volumes	8–12	2 or more	1–2 1–2	greenish/black then brownish 'transitional'	softening	
48–72	15–30 mL per feed Increasing volumes	8–12	3 or more	3–4	greenish/yellow	soft	
72–96	30–60 mL per feed 395–800 mL per day	8–12	4 or more	4 large or 10 small	yellow/seedy	soft/liquid	
End of first week	395–800 mL per day Increasing volumes 440–1220 mL per day by one month	8–12	6 or more	4 large or 10 small	yellow/seedy	soft/liquid	Weight loss plateaus then starts to regain weight

- Between 4–6 days of age, babies start to regain weight and by two weeks will have returned to birth weight
- Most babies have returned to birth weight by 10 days of age
- Average weekly weight gain of 150 to 200 grams to three months of age
- Babies usually double their birth weight by six months of age, and triple their birth weight by 12 months of age
- Weight gain or loss is only one aspect of wellbeing—assess every mother and baby on an individual basis
- Urates may be present before secretory activation when milk flow increases–urates not expected after 96 hours of age
- Number of bowel motions of breastfed babies tends to decrease between six weeks and three months of age

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6 week check

- Discuss
  - Mother's satisfaction with baby's progress
  - Feeding including patterns and growth
  - Continuing breastfeeding – supply/demand
  - When to introduce solids
  - Stool changes
  - Mother's lifestyle - nutrition, physical activity, alcohol, contraception

Common presentations to GP

- Need for information, affirmation and reassurance
- Baby not attaching to breast
- Nipple pain and trauma
- Concerns about milk supply
- Blocked ducts
- Mastitis

Breastfeeding Concerns at 3 and 7 Days Postpartum and Feeding Status at 2 Months
Erin A. Wagner et al, *PEDIATRICS* Volume 132, Number 4, October 2013

Recommendations for common concerns

- Consider specific recommendations listed below in addition to the universal recommendations and supportive care strategies outlined in the guideline
- Refer to appropriately qualified health professional (e.g. IBCLC, medical officer, child health nurse) if concerns persist and/or interventions require monitoring after discharge from the service

Concern	Signs/Consideration	Recommendations
Sleepy baby not exhibiting feeding cues	• Prolonged periods of not feeding require investigation • Exclude causes such as effects of maternal analgesia during labour and birth, effects of the birth process and illness	• Reassure mother this is usually temporary • Refer to Flow Chart: Sleepy baby • Refer to Queensland Clinical Guideline: *Neonatal jaundice*
Alert baby who is exhibiting feeding cues but unable to attach	• Reason may not be apparent • Can be distressing for both the mother and her baby as ba may back arch, cry when approaching the breast and pusl away • Woman related reasons include: ○ Inverted or flat nipples, areola engorgement/oedema • When nipple is flat or inverted, or areola engorged, it obliterates nipple and makes grasping nipple/areola difficu impossible for baby • Reverse pressure softening (RPS) uses gentle positive pressure to soften areola and surrounding tissue by temporarily moving swelling slightly backward and upward the breast • Baby related reasons include: ○ Birth trauma ○ Ankyloglossia (tongue-tie)	
Delay in secretory activation or poor milk transfer	• Common cause of poor milk transfer is sub-optimal attach • Possible causes of delay in secretory activation include: ○ Postpartum haemorrhage, diabetes, obesity • Possible causes of low milk production at stage of initiatio include, breast surgery, hypoplastic breasts, chronic disea or medical conditions	

Concern	Signs/Consideration	Recommendations
Nipple pain and trauma	• Nipple discomfort in the first few days is common • Commonly cited reason for ceasing breastfeeding • Sub-optimal positioning is the most common cause • Other causes include tongue-tie, flat or retracted nipples, poor skin health (e.g. eczema, bacterial, thrush, herpes), nipple vasospasm • Regardless of treatment used, most women report a reduction in nipple pain to mild levels approximately 7–10 days' after birth • Sore nipples occurring beyond the first weeks of breastfeeding may be caused by: ○ Infections such as staphylococcus aureus and candida ○ Vasospasm	• Reassure if nipples tender but no sign of compression after a feed • Review and optimise positioning and attachment • Soften areola sufficiently to enable baby to grasp adequately • Review nipple care ○ Avoid soaps and synthetic bras ○ Change breast pads frequently ○ Expose breasts to air briefly after breastfeeding ○ Wash daily ○ Allow expressed breast milk to dry on the nipple after breastfeed • Limited evidence exists about the effectiveness of treatment for nipple pain and/or trauma • Refer if pain/trauma persists beyond first week or infection suspected
Breast engorgement	• Physiologic breast fullness when 'milk comes in' is normal • Engorgement:"swelling and distension of the breasts usually during early days of initiation of lactation, caused by vascular dilatation as well as arrival of the early milk" • More frequent breastfeeding (or expressing, if baby is not feeding at the breast) in first 48 hours is associated with less engorgement • Symptoms occur most commonly between days 3–5 • In the presence of oedema reverse pressure softening shown to improve attachment	• Best management is prevention • Reduce engorgement so baby can breastfeed effectively ○ Encourage reverse pressure softening before attempting breastfeeding or hand expressing • Manage discomfort ○ Paracetamol and Ibuprofen are safe options for breastfeeding women in appropriate doses ○ Cold packs may provide comfort • Provide anticipatory guidance regarding possibility of engorgement to women prior to hospital discharge
Blocked duct or mastitis	• Blocked duct presents as a tender lump in otherwise well women • Mastitis may or may not involve bacterial infection • Staphylococcus aureus is most common pathogen in milk of women with mastitis • Clinical presentation: ○ Tender, hot, swollen, wedge-shaped area of breast, temperature of 38.5 °C or greater, chills, flu-like aching, systemic illness • Common during first six weeks • Predisposing factors are those which result in milk stasis (e.g. nipple damage, infrequent feeding and poor attachment) • A continuum exists from blocked duct or engorgement to mastitis to breast abscess	• Improve milk removal ○ Increase feed frequency, optimise positioning and gently massage during feed from the blocked and/or tender area toward the nipple, express after feed if required ○ Apply heat (shower, warm cloth, heat pack) to facilitate milk ejection reflex • Supportive/comfort measures ○ Rest, adequate fluids and nutrition, analgesia and cold packs • Antibiotics indicated if symptoms not improving within 12–24 hours or if acutely ill

Queensland Clinical Guidelines www.health.qld.gov.au/qcg/

Infant feeding support

- Hospital based Community Midwifery Service (CMS)
- Hospital-based Lactation Service

Queensland Government

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Royal Brisbane and Women's Hospital

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Home / Healthcare Services / Maternity Services / Feeding your baby

Feeding your baby

You will be offered feeding support from our experienced midwives and lactation consultants. We offer lactation support services, appropriate care and information to mothers during pregnancy and after birth.

Breastfeeding information

We recognise that whilst breastfeeding is normal and may progress naturally, some mothers may require additional support from a midwife or lactation consultant. When you have consistent support and advice in the early days of breastfeeding it can become easier with time.

Our specialised lactation consultants hold breastfeeding discussions for you and your support network. These are held at 11.00am each weekday morning in the postnatal ward parent lounge. Bookings are not required.

Parent information

- For signs of a hungry baby: Infant feeding cues (term) (PDF)
- For signs of a hungry premature baby: Infant feeding cues (preterm) (PDF)
- When and how to use nipple shields (PDF)
- How to bottle feed (PDF)
- Hand expressing technique (PDF)
- When to use dummies and pacifiers (PDF)
- Mastitis symptoms and treatments (PDF)
- Making more breast milk (PDF)
- Lactation service – information for parents (PDF)
- Feeding the late preterm baby (PDF)

Our Lactation Services are staffed by International Board Certified Lactation Consultants (IBCLCs). The Royal Brisbane and Women's Hospital is a Baby Friendly Health Initiative (BFHI) accredited hospital. This means that breastfeeding is encouraged, supported and promoted. Breastfed babies are not given infant formula, dummies or teats unless medically indicated or it is the parents' informed choice.

Contact us

Lactation Service
Phone: (07) 3646 2250

Resources

Lactation service -information for parents (PDF)

Infant feeding surveys

Pregnant woman

Mother who is breastfeeding

Mother who is NOT breastfeeding

Mother of a baby admitted to the Special Care Nursery

Metro North Hospital and Health Service
Putting people first

RBWH: Women's & Newborn Services; Maternity Outpatients

For more information

Queensland Health booklet "Child Health Information Your guide to the first 12 months"

Queensland Health Breastfeeding website:
http://www.health.qld.gov.au/breastfeeding/

Raising Children Network:
https://raisingchildren.net.au/newborns/breastfeeding-bottle-feeding/about-breastfeeding

The Australian Breastfeeding Association:
www.breastfeeding.asn.au.

Support after hours

The Australian Breastfeeding Association (ABA) offers a 7day breastfeeding helpline Phone 1800 686 268 or visit www.breastfeeding.asn.au.

If you are concerned about your health, or that of your baby please call:

- 13 HEALTH (13 43 25 84)—qualified staff will provide advice and further support
- 000 (triple zero) in emergency

Metro North Hospital and Health Service
Maternity Outpatients Department
Women's and Newborn Services
www.health.qld.gov.au/rbwh

What are Lactation Consultants?

Lactation consultants:

- are health professionals
- hold an International Board-Certified Lactation Consultant (IBCLC) qualification
- work in hospitals and child health services, or in private practice.

Source: Australian Breastfeeding Association Website.

Partnering with Consumers National Standard 2.4.1 Consumers and/or carers provided feedback on this publication. CFN:1562

Lactation Service

Information for Parents

The Royal Brisbane and Women's Hospital (RBWH) actively protects, promotes and supports breastfeeding and is proudly a Baby Friendly (BFHI) accredited facility.

Queensland Government

https://metronorth.health.qld.gov.au/rbwh/healthcare-services/maternity-services/breastfeeding-and-lactation-support

Find a Lactation Consultant >

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The professional organisation for IBCLCs®

Lactation Consultants of Australia and New Zealand (LCANZ) is the professional organisation for International Board Certified Lactation Consultant's (IBCLCs®), health professionals and members of the public who have an interest in lactation and breastfeeding in Australia and New Zealand

LEARN MORE

For Clients | For Lactation Consultants | For Medical Professionals | For Government

http://www.lcanz.org/

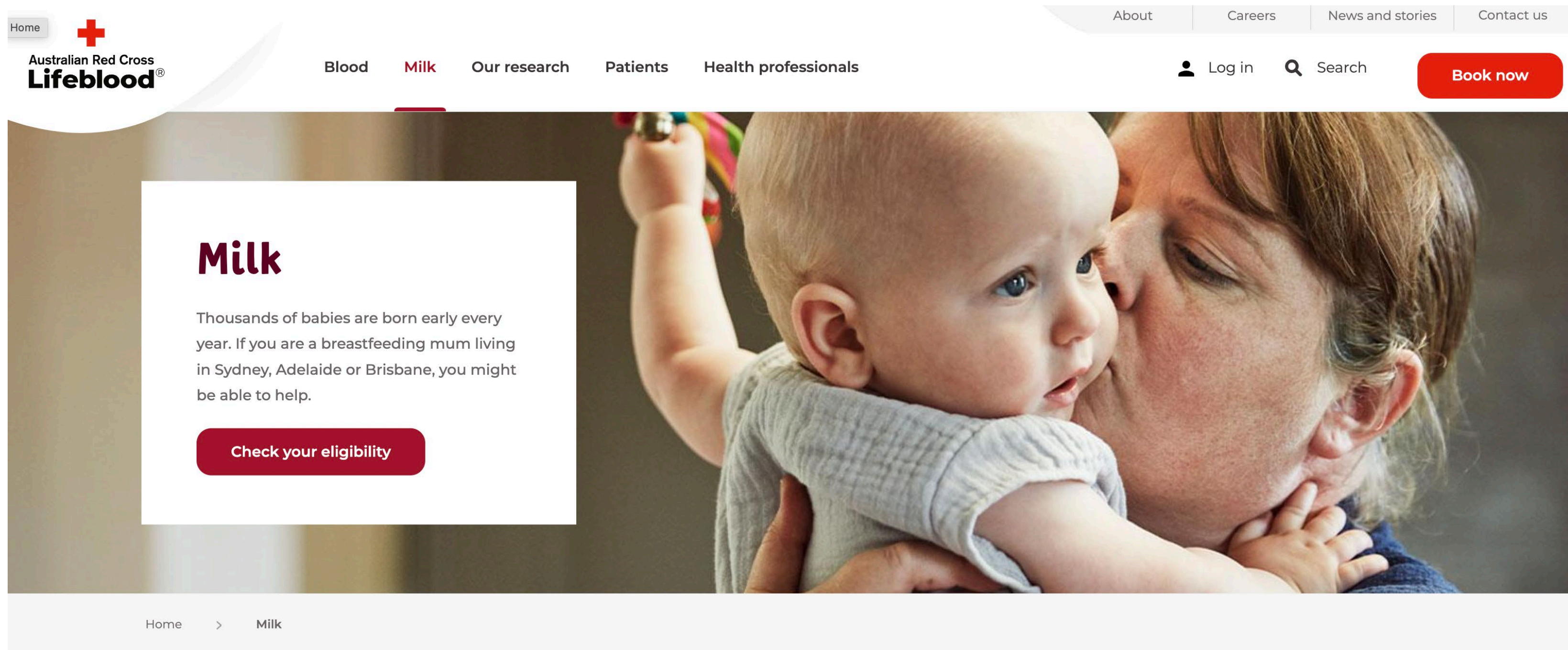
Resources for families

- Pregnancy, Birth and Baby
  http://www.pregnancybirthbaby.org.au/
- Breastfeeding Queensland Health
  https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/clinical-staff/maternity/nutrition/breastfeeding
- Australian Breastfeeding Association
  https://www.breastfeeding.asn.au/
- Raising Children Network
  https://www.raisingchildren.net.au

Additional resources for health professionals

- Queensland Clinical Guideline: *Establishing breastfeeding* http://www.health.qld.gov.au/qcg/
- Academy of Breastfeeding Medicine http://www.bfmed.org/

Donated breast milk for preterm infants



https://www.lifeblood.com.au/milk

Donor milk + probiotics associated with 69% reduced mortality in very preterm babies

Sharpe, J., Way, M., Koorts, P.J. *et al.* The availability of probiotics and donor human milk is associated with improved survival in very preterm infants. *World J Pediatr* 14, 492–497 (2018)

Infant formula feeding

- Respect informed decision not to breastfeed
- Cow's milk-based formula suitable for newborn for first 12 months
- Special formulas under medical supervision
- Changing type of formula because of minor rashes and irritability is usually of no benefit
- Show parents how to safely prepare formula and how to bottle feed (refer to Child Health book)

MATERNITY WORKSHOP

Saturday 22nd October 2022

Conclusion

Contact information

Metro North GP Alignment Program

Email: metronorthgplo@health.qld.gov.au

This presentation will be available online

https://metronorth.health.qld.gov.au/refer-your-patient-page/gp-events/education-resources

Mater Mothers' Hospital Alignment Options

- *Metro North GP Alignment Program - Maternity* is affiliated with *Mater Mothers Hospital GP Maternity Shared Care Alignment.*
- Completion of MN GP Alignment Program – Maternity + MMH Online Bridging Program will meet the Mater Mothers Hospital alignment requirements
- For more information
  - Phone: 3163 1500
  - Email: http://mscadmin@mater.org.au
  - Website: https://www.materonline.org.au/whats-on/gp-maternity-shared-care-alignment

Metro North **GP Alignment Program**

MATERNITY WORKSHOP

Saturday 22nd October 2022

Thank you

phn BRISBANE NORTH
An Australian Government Initiative

Queensland Government