

CASE STUDIES: Complex Cases







CASE STUDY JESSICA – COMPLEX CASE STUDY





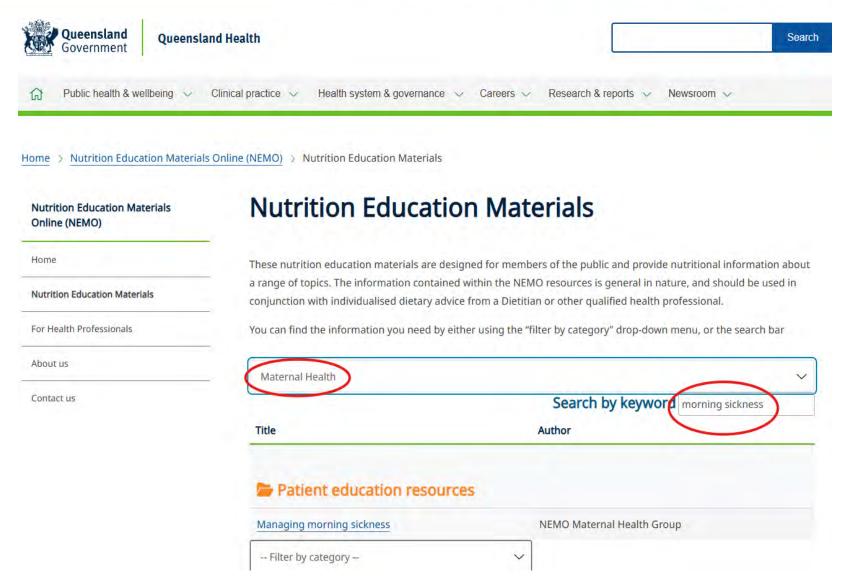
CASE STUDY: JESSICA COMPLEX

- <u>Jessica</u> is now 9 weeks pregnant with twins. She looks pale and ill at ease as she walks into the consulting room
- Her partner, Luke is with her, looking agitated. "She's been spewing her guts up doc; you've got to help! The chemist gave her some vitamins, which haven't helped at all"
- Her BP is 90/60 sitting, 80/55 standing, her PR is 104 and she reports that she isn't passing much urine. You notice a suspicious bruise as you take her blood pressure
- Outline your approach

- Nausea most common GI symptom of pregnancy, occurring in 80 -85% of pregnancies
- Associated with vomiting in approx. 52%
- ~ 90% report cessation of symptoms by 16 20 weeks

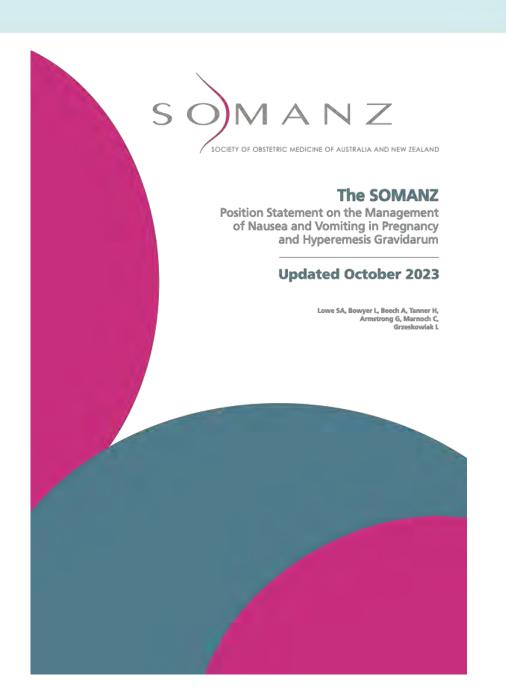
- Only 11 18% of women report having nausea & vomiting confined to the mornings
- Hyperemesis gravidarum is <u>not</u> common, affecting 0.3 1.5% women
- Discontinuing iron supplements/iron containing multivitamins may improve symptoms
- Continue iodine and folate if possible

Metro North **GP Alignment Program**



Nutrition Education Materials Online (NEMO) | Queensland Health

Managing Morning Sickness factsheet



- Nausea, vomiting and/or dry retching caused by pregnancy, with symptoms commencing in the first trimester without an alternate diagnosis.
- Severity may be quantitated using the PUQE-24 Scoring System
- 1. Mild: PUQE-24 = 4-6
- 2. Moderate: PUQE-24 = 7-12
- **3. Severe: PUQE-24 ≥ 13**
- Inability to eat and drink, significant weight loss and/or significant limitation of activity, irrespective of the PUQE-24 score, should also be considered as a measure of severity

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, ha	eve you vomited or thro	wn up?		
l did not throw up (1)	1 to 2 (2)	3 to 4 (3)	5 to 6 (4)	7 or more times (5)
I. In the last 24 hours, he	ow many times have you	u had retching or dry h	eaves without throwin	g up7
None	1 to 2 (2)	3 to 4 (3)	5 to 6	7 or more times (5)

Table 2: Motherisk PUQE-24 scoring system

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

- Anti-emetics
 - ginger 250mg TDS QID
 - vitamin B6 (Pyridoxine) 10 25mg TDS QID
 - · doxylamine, metoclopramide, prochlorperazine
 - ondansetron (second-line)
- Acid suppression
 - famotidine, nizatadine, omeprazole
- Manage/prevent constipation
 - docusate sodium

Metro North **GP Alignment Program**

Maternity Workshop

Sex: M F I

					7		
Queensland	(Affix URN:	patient identific	ation label here	e)		Queensland Government	(Affix patient identification label here)
Government						Government	URN:
Royal Brisbane and Women's Hospital Emergency & Trauma Centre (ETC)	Family Name:			Royal Brisbane and Women's Hospital	Family Name:		
	Given Names:					Emergency & Trauma Centre	Given Names:
VOMITING IN EARLY PREGNANCY	Address:					VOMITING IN EARLY PREGNANCY	Address:
(VEP) CLINICAL PATHWAY	Date of Birth:		ex: M	_FI		(VEP) CLINICAL PATHWAY	Date of Birth: Sex: M F
INCLUSION CRITERIA		CLUSION				Ongoing management	in short stay unit (ssu)
	☐ Per Vaginal (I☐ Lower abdom			firmed		Review investigations & treat identified issues – eg:	, , ,
Hyperemesis this pregnancy	location of pr		1001 000 001	iiiiiiiou		Regular medications on arrival (as appropriate in cli	
Respiratory Rate Blood pressure % Weight						, .	clopramide 10 mg PO/IV TDS
	ancy weight – current v					, ,	•
RED FLAGS – If present for Consultant review	& consider ear					☐ Ondansetron 4–8 mg PO/IV TDS ☐ Thial	· ·
☐ HR <50 or >120 ☐ Ataxia ☐ Systolic BP <80 or >130 ☐ Headache		_	d consciousne disturbance	ess		☐ Doxylamine 12.5 mg PO Nocte (night and ea If tolerated and severe symptoms, consider inc	
HISTORY & EXAMINATION: Documentation of						Additional medications to consider:	
☐ Gestation ☐ USS findings this pregnancy	☐ Previous pre	•				Pantoprazole 40 mg daily prn if symptomatic of reflu	y (enigaetric burning, burning etc.)
☐ Medical conditions	☐ Complete PL		, ,	•		Doxylamine 25 mg PO Nocte and 12.5 mg midday f	, , ,
Pregnancy Unique Quantifica	ation of Emesis	(PUQE) in	dex				
Total score is sum of replies to each of the three questions. P	UQE 24 score: Mild	≤ 6; Moderate	e = 7-12; Sever	e= 13-15		Coloxyl 120 mg - 2 tabs PO Nocte PRN for constipa	
Motherisk PUQE – 24 scoring system:		T =	T	T		IV Fluids - Titrate to encourage oral intake. , Norma	Saline or Hartmann's 125 ml/hr or as clinically
n the last 24 hours, how long have you felt Not at a nauseated or sick to your stomach?	all 1 hour or less (2)	2-3 hours (3)	4-6 hours (4)	More than 6 hours (5)		appropriate	
n the last 24 hours have you vomited or thrown 7 or mo	ore 5-6 times	3-4 times	1-2 times	I did not		☐ Weight & strict fluid balance	
time (5		(3)	(2)	throw up (1)		☐ Patient to complete - MR 61079 Scoring Template	for Edinburgh Postnatal Depression Scale (EPDS)
in the last 24 hours how many times have you had retching or dry heaves without bringing anything	1-2 times	3-4 times	5-6 times	7 or more		Score of 13 and above please refer to Perinatal MH Se	rvice: Perinatal-Mental-Health@health.qld.gov.au
up?	(2)	(3)	(4)	times (5)		Indications	for discharge
How many hours have you slept out of 24 hours?	Why?				_	Adequate oral intake	
On a scale of 0 to 10, how would you rate your wellbein	g?(0 worst	possible ≤ 10 the	e best you felt befo	ore pregnancy)		☐ All abnormalities addressed and corrected (electroly	te derangement, dehydration)
Can you tell me what causes you to feel that way?						` '	,
Initial manager ☐ Urine – Dipstick and ketones; M/C/S - if indicated	nent in the ETC	,				Planned follow-up with GP or obstetrician within 72h	irs
Bloods – FBC, CHEM20, BHCG if no previous level	I (TFTs if represen	ntation & not	completed th	nis		☐ Discharge pack with Script, Early Pregnancy Vom	iting Handout and medication advice
pregnancy) consider antenatal screen fo	r complex social p	oatient if not	done.			Discharge script: Ensure the discharge m	edications reflects admission medications.
IVC – 1L Normal Saline STAT then 1L Normal Saline	e 250 ml/hr or as	clinically app	ropriate			☐ Metoclopramide 10 mg PO TDS PRN; Qty 30	
Stat medications (as appropriate in clinical context	and with allergies)				☐ Ondansetron 4 mg tablet (not wafer) 1-2 PO TDS F	PRN; Qty 30
Pyridoxine 25 mg PO						☐ Pantoprazole 40 mg PO daily prn Qty 30	
Antiemetic – one or both of Metoclopramide 10 n Thiamine 300 mg IV/PO	ng IV/PO; Ondan	setron 4 – 8	mg IV/PO			Coloxyl 120 mg 2 tabs PO, Nocte, PRN; Qty 100	
☐ Refer to SSU – If no oral intake or symptom resoluti	on after 1 hour of	treatment				Pyridoxine 25 mg PO TDS; Qty 100	
Consider USS Pelvis & Transvaginal – If there is a							
Indications for referral to obstetric medicine (one or more of)				☐ Doxylamine 25 mg ½ to 1 PO Nocte +/- 12.5 mg Midday PRN; Qty 20			
Severe electrolyte disturbance		10.10 01 11101				Must be accompanied by EPV Handout with medical	ation titration advice
Excess weight loss (5% or more)						Short Stay Clinician to complete	
Not tolerating oral medication or adequate intake wit			& medication			Name:	Designation:
		•				Signatura	
Significant Comorbidity – insulin Dependent Diabete	s, Laury Disorder	1, DIVII > 10			_	Signature:	Date://

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Differential diagnosis of NVP in Pregnancy

[more common causes in bold]

Gastrointestinal

Infectious gastroenteritis

Gastro-oesophageal reflux disease-Helicobacter Pylori

Infectious hepatitis

Pancreatitis

Biliary tract disease

Peptic ulcer disease

Bowel obstruction

Gastroparesis

Appendicitis

Peritonitis

Genitourinary

Urinary tract infection including pyelonephritis

Ovarian Torsion

Nephrolithiasis

Metabolic/Toxic

Drugs-including pregnancy vitamins

Use and/or withdrawal of cannabinoids or other illicit drugs

Diabetic ketoacidosis

Addison's disease

Thyrotoxicosis

Non-infectious hepatitis

Hypercalcemia

Eating Disorders

Central-nervous system disease

Migraine

Infection

Tumours

Raised intracranial pressure

Vestibular system pathology: labyrinthitis, Meniere's

Hyperemesis gravidarum (Windsor definition)

- Symptoms starting in early pregnancy <16 weeks gestation
- Severe nausea and/or vomiting (PUQE-24 ≥ 13)
- Inability to eat and/or drink normally
- Strongly limiting daily activities
- · Signs of dehydration deemed contributory but not mandatory

Hyperemesis gravidarum

• Examination:

- PR, BP, temperature, weight, any signs of dehydration
- o abdomen
- o other e.g. CNS
- Psychosocial screening

Investigations:

 FBC, ELFTs, Mg, TSH, HbA1c, lipase, urine M/C/S, USS to assess for multiple gestation and gestational trophoblastic disease

Admission

- IV fluid and electrolyte replacement +/- enteral/parenteral nutrition
- IV/SC anti-emetics
- o consider corticosteroids
- o monitor weight and fluid balance

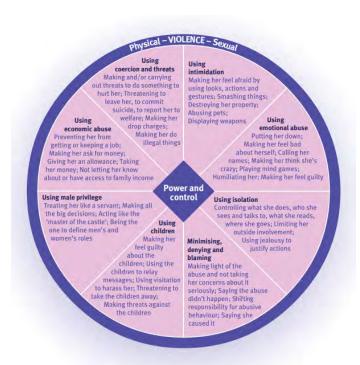
Domestic & family violence is not just physical

- Coercive control pattern of behaviours which aims to instil fear and control a person
- Social abuse isolating a person by controlling who they see, who they speak to, sabotaging relationships
- Emotional abuse insults, put-downs, ridiculing, name calling, humiliation
- Psychological abuse behaviour aimed at undermining person's sense of self
- Tech abuse using technology to bully, harass, intimidate; controlling who you can or cannot be friends with on social media; sending insulting messages online or over the phone
- Sexual abuse forced or unwanted sexual activity
- Reproductive abuse making decisions about another person's body or coercing a person into making certain reproductive decisions



Domestic & family violence is not just physical

- Systemic abuse using systems such as the courts to continue to control, manipulate and abuse
- Financial abuse restricting access to money, accumulating debt in another person's name, preventing a person from seeking or maintaining employment
- Spiritual or Cultural abuse not allowing you to practise your religion or cultural practices; attempting to justify violence or abuse with religious or spiritual practices
- Stalking includes monitoring, watching, following; outside home or workplace
- Physical abuse including property damage use of violence or threat of violence
- Pet abuse abuse or threat of abuse of pets



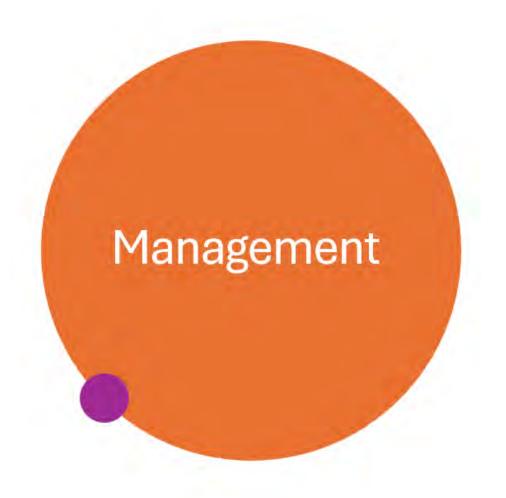
Coercive Control – changes to the law

- From 26 May 2025 will become a Criminal Offence in Queensland
- illegal for an adult to use abusive behaviours towards their current, or former, intimate partner, family member, or informal (unpaid) carer with the intention to control or coerce them
- patterns of physical and/or nonphysical abuse used to hurt, humiliate, isolate, frighten, or threaten a victimsurvivor
- a maximum penalty of 14 years imprisonment due to the serious nature of the offence and the harm coercive control can cause victim-survivors









- Organise a follow up appointment without partner if possible
- Indicate concerns on Maternity booking in referral (including safe methods for contact)

Mandatory reporting responsibilities

If a doctor or registered nurse forms:

- a reportable suspicion a child has suffered, is suffering, or is at unacceptable risk of suffering, significant harm caused by physical or sexual abuse and may not have a parent able and willing to protect the child from the harm. s13E Child Protection Act 1999
- a reasonable suspicion a child may be in need of protection; or an unborn child may be in need of protection after he or she is born. s13A Child Protection Act 1999

Child Safety Services' Regional Intake Brisbane 1300 682 254 (business hours) Child Safety After Hours Service Centre Queensland 1800 177 135

Department of Social Work Services, Allied Health RBWH

Domestic & Family Violence Service List - GP's



DV Connect (Womensline)

PH: 1800 811 811 Web: https://www.dvconnect.org/womensline/

1800RESPECT is a national service providing confidential information, counselling and support to people impacted by sexual assault, domestic or family violence and abuse. (24 hours a day, 7 days a week)

1800 RESPECT

PH: 1800 737 732 Web; https://www.1800respect.org.au/

DVConnect Womensline is a statewide telephone service offering free professional and non-judgemental telephone support to women who are experiencing domestic or family violence. They can help women to obtain safe refuge accommodation, confidential counselling and referral to other services. (24 hours a day, 7 days a week)

Sexual Assault Helpline

PH: 1800 010 120 Web: https://www.dvconnect.org/sexual-assault-helpline/

The Sexual Assault Helpline provides telephone support and counselling to anyone who has been sexually assaulted or abused, and for anyone who is concerned or suspects someone they care about might have been assaulted or abused. (7.30am to 11.30pm, 7 days a week)

DV Connect (Mensline)

PH: 1800 600 636 Web: https://www.dvconnect.org/mensline/

DVConnect Mensline is a statewide telephone service offering free confidential counselling, referral and support to men affected by domestic and family violence. (9am to 12 midnight, 7 days a week)

Mens Line Australia

PH: 1300 789 978 Web: https://mensline.org.au/

Mens Line Australia is a free telephone and online counselling service offering support for Australian men.

First Nations

13 YARN

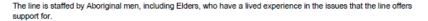
PH 13 92 76 Web: https://www.13varn.org.au/

13YARN is a 24-hour national crisis support line that offers a confidential one-on-one yarning opportunity with a Lifeline-trained Aboriginal & Torres Strait Islander Crisis Supporter for Aboriginal and Torres Strait Islander peoples.

Brother to Brother

PH: 1800 435 700 Web: https://dardimunwurro.com.au/brother-to-brother-crisis-line/

The Brother to Brother crisis line provides phone support for Aboriginal men who need someone to talk to about relationship issues, family violence, parenting, drug and alcohol issues or who are struggling to cope for other reasons.



LGBTQIA+

Rainbow Sexual, Domestic and Family Violence Helpline

PH: 1800 497 212 Web: https://fullstop.org.au/get-help/our-services/rainbowviolenceandabusesupport

The Rainbow Sexual, Domestic and Family Violence Helpline is for: Anyone in Australia who is from LGBTQ+ communities who has recently or in the past experienced sexual, domestic or family violence

Q Life

PH: 1800 184 527 Web: https://www.glife.org.au/

QLife is a free peer support and referral service for LGBTIQ+ people via telephone and webchat. They can be contacted between 3pm and 12am, 7 days a week.

Living with an intellectual or learning disability

WWILD

PH: (07) 3262 9877 Web: https://wwild.org.au/

WWILD supports people with intellectual or learning disabilities who are victims or survivors of sexual violence or have been victims of crime.

Speaking a language other than English

Immigrant Women's Support Service (IWSS)

PH: (07) 3846 3490 Web: https://iwss.org.au/

Immigrants Women's Support Service is a specialist service response for immigrant and refugee women from non-English speaking background and their children who have experienced domestic and/or sexual violence.

Legal Advice

Women's Legal Service

PH: 1800 957 957 Web: https://wlsq.org.au/

The Women's Legal Service Queensland (WLSQ) provides legal assistance and other key support services to women in the areas of domestic and family violence, family law, child protection and sexual assault – counselling notes protect matters. Available Monday to Friday, 9.00am and 4.30pm.

Legal Aid Queensland

PH: 1300 65 11 88 Web: https://www.legalaid.qld.gov.au/Find-leqal-information/Relationships-and-children/Domestic-and-family-violence

Legal Aid Queensland provides legal help to financially disadvantaged Queenslanders. Available Monday to Friday, 8.30am to 4.30pm (except on public holidays).



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Financial Assistance

Victim Assist Queensland (VAQ)

PH: 1300 546 587 Web: https://www.gld.gov.au/law/crime-and-police/victim-assist-queensland

Access to support services and financial assistance to help victim/survivors of violence crime (including DFV) to recover

Centrelink Crisis Payment for extreme circumstances DFV

Web: https://www.servicesaustralia.gov.au/crisis-payment-for-extreme-circumstances-family-and-domestic-violence

Specialist DFV Services

Brisbane Domestic Violence Service (BDVS)

PH: (07) 3217 2544 Web:https://www.micahprojects.orq.au/support-services/domestic-family-violence-services

Inala, South Brisbane, Zillmere in Brisbane City area DFV counselling, Victim support, Support for children, Men's behaviour change, DFV court support, Support for Aboriginal and Torres Strait Islander peoples, Support for culturally diverse people, Support for young people. Provides DFV information, advocacy and psycho-education to adult victims, children and young people, court-based services for Richlands and Holland Park court houses, and intervention programs for offenders using violence in their relationships.

Centre Against Domestic Abuse (CADA) Inc.

PH: Caboolture (07) 5498 9533, Redcliffe (07) 3283 6930, Sandgate (07) 3205 5457

Web: https://cada.org.au/

DFV counselling, Victim support, Support for children, DFV court support, Support for Aboriginal and Torres Strait Islander peoples, Support for culturally diverse people, Support for young people. Provides information and domestic violence counselling for women, children and young people who have experienced domestic and family violence, case management and court-based services

Men Choosing Change (Uniting Care Qld)

PH: (07) 5428 4200 Web: https://www.unitingcareqld.com.au/services-and-support/family-support/men-choosing-change

Moreton Bay in Moreton Bay Regional area DFV counselling, Men's behaviour change, Support for Aboriginal and Torres Strait Islander peoples, Support for culturally diverse people, Support for young people. Provides intervention programs for men who use violence in their personal relationships, and information to male respondents in domestic and family violence court proceedings at the Caboolture, Redolffe and Pine Rivers Magistrates Courts.

Other Services

SANDBAG

PH: (07) 3869 3244 Web: https://www.sandbag.org.au/domestic-family-support/

Bracken Ridge, Sandgate in Brisbane City area DFV counselling, Victim support, Support for children, Support for Aboriginal and Torres Strait Islander peoples, Support for culturally diverse people, Support for young people. Provides domestic violence counselling to adult victims and children and young people.

Northside Connect Inc

PH: (07) 3260 6820 Web: https://northsideconnect.org.au/support/

Bald Hills - Everton Park, Chermside, Nundah, Sandgate, The Gap-Enoggera, Brisbane City in Brisbane City area. Provides a trauma-informed specialist domestic and family violence support service model through a range of activities and programs.

Strong Women Talking – Marigurim Mubi Yangu Aboriginal and Torres Strait Islanders Corporation

PH: (07) 3292 3500 Web: https://strongwomentalking.org.au/services/

Brisbane City (and Ipswich area). Provides the delivery of the Healing Journey Program service to First Nations women who are 18 years and over who have experienced or are at risk of experiencing domestic and family violence or sexual violence.

Brisbane Youth Service (BYS) Inc.

PH: (07) 3620 2400 Web: https://brisyouth.org/

Brisbane City in Brisbane City area. The BYS Safe Relationships Program includes a behaviour change program for young men using violence which is an evidence-based psychoeducational intervention delivered one-on-one with young men (and young women) who use violence.

RSPCA Pets in Crisis Program

Web: https://www.rspcagld.org.au/what-we-do/save-animals/pet-in-crisis-program

Pets in Crisis provides a safe house for the pets of individuals at serious risk of domestic violence. For those who need to seek refuge but who are unable to find care for their pets can contact the DVConnect 24 hour crisis line on 1800 811 811 for women and 1800 630 636 for men. DVConnect will work directly with RSPCA Qld to find temporary care for their pets at either an RSPCA Animal Care Centre across the State or with trained RSPCA foster carers.

Brisbane North Health Pathway – localised Domestic and Family Violence Support Services health pathway

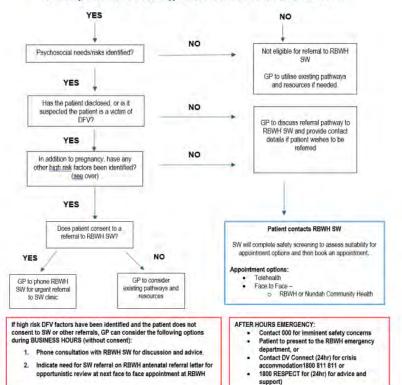
Web: https://brisbanenorthphn.org.au/practice-support/the-healthpathways-program

Username: Brisbane Password: North

RBWH Social Work Services

Royal Brisbane & Women's Hospital (RBWH) Social Work Referral Flowchart – GP

Is the patient receiving antenatal care at the RBWH?



RBWH Department of Social Work Services Women's & Newborns Team

Reception: (07)) 3646 8268 | Fax: (07) 3646 5256

Email: SWS Mat-Neo@health.gld.gov.au

Business Hours: 8:00am - 4.30pm Monday to Friday





Metro North GP Alignment Program

Maternity Workshop

Identification of high risk factors

Has the person using violence ever:

- threatened to kill or seriously harm the victim-survivor? (can include threats to incinerate or commit arson).
- tried to choke or strangle the victim-survivor? (includes attempts to smother or drown) (If yes, note whether consciousness was lost, difficulty in breathing, etc.)
- threatened to or used a weapon against the victim-survivor? (<u>noting</u> a weapon could be anything used to harm)
- · used violence against the victim- survivor during pregnancy?
- · harmed or threatened to harm a pet or animal?
- forced the victim-survivor to participate in sexual acts when they did not consent? (including the presence of intimidation, threats, force, being asleep and/ or persistent and relentless demands for sex.)
- used coercive control? (<u>including</u> using isolation or deprivation tactics; degraded, harassed or threatened; monitored or <u>surveilled</u>; manipulated the victim survivor; used the children against the victim survivor.

Where there are children has the person using violence ever:

- tried or threatened to harm the children? (<u>including</u> physical, emotional and other harms)
- · attempted to take the children when visiting under parenting arrangements?

Domestic and family violence common risk and safety framework - End domestic and family violence reform program - Publications | Queensland Government



CASE STUDY NICOLE – COMPLEX CASE STUDY





CASE STUDY: NICOLE COMPLEX

- <u>Nicole</u> G2P1, K28, GDM, is stressed running late for appointment (caught in traffic), discovers you are running late anyway; she must leave ASAP to get back to work in time for important meeting
- She's had a "stinker" of a headache all week and is not surprised that her BP is elevated at 162/97. She is certain it will settle once she calms down
- Despite her protests, you take her BP again after 5 minutes and the best you can get is 153/92.
- Outline your approach

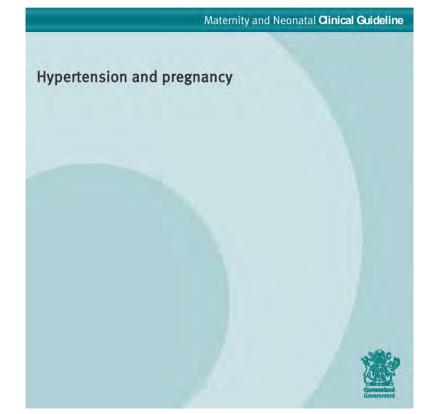
Hypertension and pregnancy

Oueensland Health

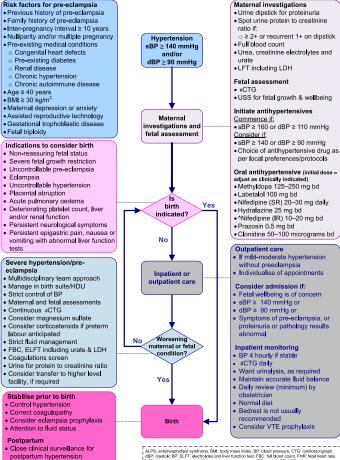
Clinical Excellence Queensland

Oueensland Clinical Guidelines

Translating evidence into best clinical practice



Queensland Clinical Guideline: Hypertension and pregnancy Flow Chart: Management of hypertension in pregnancy Risk factors for pre-eclampsia



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ALPS: antiphospholipid syndrome, BM: body mass index, BP: blood pressure, CTG: cardiotocograph, dBP: dissidot BP: ELFT-detrohytes and liver function test, FBC: full blood court, FRR: feld heart rate, MDU: high dependence unit, LDH: Lacita devlytogeases, suBP: systolo BP; USS: distasous desyndrome, VEC versions thromboerdistins: y created trans. A less thins; 2 presset than or equal to, Si less than or equal to. Silver formulations available with SAS authority, finiterper CTO with caution with an gestational age less than 28 weeks

Flowchart: F21.13-2-V9-R26

Arrange follow up

 Consider VTE prophylaxis Consider timing of discharge

· Maternal screening as indicated

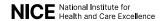
Queensland Clinical Guidelines

Refer to online version, destroy printed copies after use

Hypertension in pregnancy



Hypertension in pregnancy





Hypertension in pregnancy: diagnosis and management

NICE guideline Published: 25 June 2019 Last updated: 17 April 2023

www.nice.org.uk/guidance/ng133

Hypertension

- Most common medical problem in pregnancy
- A leading cause of perinatal and maternal morbidity & mortality
- sBP ≥ 140 &/or dBP ≥ 90 = mild moderate
- sBP ≥ 160 &/or dBP ≥ 110 = severe
- sBP ≥ 170 = medical emergency

Classification of hypertension in pregnancy

- Chronic hypertension occurring in pregnancy
- White coat hypertension
- Masked hypertension
- Transient gestational hypertension
- Gestational hypertension
- Pre-eclampsia
- Pre-eclampsia superimposed on chronic hypertension

Oral antihypertensives

Table 16. Oral antihypertensive drug therapy

Drug	Initial dose	Maintenance Dose	Maximum daily dose
Methyldopa ⁵⁷	125–250 mg BD	250–500 mg 2–4 times daily	Maximum/day 2 g
Labetalol ⁵⁸	100 mg BD	200–400 mg 2–4 times daily	Maximum daily dose: 2.4 g
Hydralazine ^{59,60}	25 mg BD	25–100 mg BD	Maximum daily dose: 200 mg
Nifedipine (SR) ^{61,62}	20–30 mg daily	60–120 mg daily	Maximum daily dose: 120 mg
*Nifedipine (IR) ^{61,63}	10–20 mg BD	20–40 mg BD	Maximum daily dose: 80 mg
Prazosin ⁶⁴	0.5 mg BD	1 mg TDS	Maximum daily dose: 20 mg
Clonidine ^{65,66}	50–100 microgram BD	150–300 microgram BD	Maximum daily dose: 600 microgram

^{*}Special Access Scheme (SAS) authority required. Note: Nifedipine formulations available with SAS authority

Pre-eclampsia

- Multisystem disorder
- Hypertension & involvement of 1 or more other organ systems and/or fetus
- Resolves within 3 mo. Postpartum
- Hypertension may not be the first manifestation
- Proteinuria common but not mandatory to make the clinical diagnosis

Risk factors for pre-eclampsia

Table 7. Clinical risk factors for pre-eclampsia

Risk factor	Relative risk [95% CI]
Previous history of pre-eclampsia ²⁰	8.40 [7.10 to 9.90]
*Adolescent pregnancy (10–19 years) ²¹	6.70 [5.80 to 7.60]
Systemic lupus erythematosus ²²	5.50 [4.50 to 6.80]
Chronic hypertension ²⁰	5.10 [4.00 to 6.50]
Assisted reproductive technology (donor oocytes) ²⁰	4.34 [3.10 to 6.06]
Pre-existing diabetes ²⁰	3.70 [3.10 to 4.30]
Family history of pre-eclampsia ²³	2.90 [1.70 to 4.93]
Twin pregnancy (increased risk with multiples) ²⁴	2.93 [2.04 to 4.21]
Body mass index (BMI) before pregnancy (> 30 kg/m ²) ²⁰	2.80 [2.60 to 3.60]
Antiphospholipid syndrome ²⁰	2.80 [1.80 to 4.30]
Nulliparity ²⁰	2.10 [1.90 to 2.40]
Pre-existing kidney disease ²⁰	1.80 [1.50 to 2.10]
Assisted reproductive technology (donor sperm) ²⁰	1.63 [1.36 to 1.95]
Maternal congenital heart defects ²⁵	1.50 [1.30 to 1.70]
Maternal anxiety or depression ²⁶	1.27 [1.07 to 1.50]
Inter-pregnancy interval greater than 10 years ²⁰	1.10 [1.02 to 1.19]
Gestational trophoblastic disease ²⁷	Unavailable
Fetal triploidy ²⁸	Unavailable
Fetal aneuploidy ²	Unavailable

Limited data (primarily from low resourced countries) may suggest higher incidence in adolescent pregnancies'

First trimester screening for pre-eclampsia

- Maternal risk factors
- Mean arterial pressure
- Sonographic markers
 - outerine artery pulsatility index (UTPI) measured between 11+0 13+6 weeks
- Biochemical markers
 - oplacental growth factor (PIGF)
 - opregnancy associated plasma protein-A (PAPP-A)

Pre-eclampsia risk reduction

- Aspirin 100 150 mg at night commence before 16+0 weeks
- 1200 2500 mg calcium if intake < 600mg/day

Symptoms of pre-eclampsia

- Severe headache
- Visual disturbance
- Severe upper abdominal pain (epigastric or RUQ)
- Nausea and vomiting
- Sudden or progressive peripheral oedema

Diagnosis of pre-eclampsia

3.3 Diagnosis of pre-eclampsia

A diagnosis of pre-eclampsia requires both⁶:

- Hypertension arising after 20+0 weeks gestation, confirmed on 2 or more occasions AND
- **One or more** of the organ/system features related to the mother and/or fetus identified in Table 5. Diagnosis of pre-eclampsia.

Note

- · Hypertension may not be the first manifestation
- Pre-existing hypertension is a strong risk factor for the development of pre-eclampsia⁶ and requires close clinical surveillance
- Proteinuria is common but is not mandatory to make the clinical diagnosis^{6,8}

Table 5. Diagnosis of pre-eclampsia

Aspect	Consideration		
Renal	 Random urine protein to creatinine ratio greater than or equal to 30 mg/mmol¹⁴ from an uncontaminated specimen (proteinuria) Serum or plasma creatinine greater than or equal to 90 micromol/L¹⁴ or Oliguria (less than 80 mL/4hours or 500 mL/24 hours) 		
Haematological	 Thrombocytopenia¹⁴ (platelets under 150 x 10⁹/L) Haemolysis⁸ (schistocytes or red cell fragments on blood film, raised bilirubin, raised lactate dehydrogenase (LDH), decreased haptoglobin) Disseminated intravascular coagulation (DIC)⁸ 		
Liver	New onset of raised transaminases ¹⁴ (over 40 IU/L) with or without epigastric or right upper quadrant pain ^{8,15}		
Neurological	Headache ⁸ Persistent visual disturbances (photopsia, scotomata, cortical blindness, retinal vasospasm) Hyperreflexia with sustained clonus Convulsions (eclampsia) Stroke		
Pulmonary	Pulmonary oedema ¹⁴		
Uteroplacental	 Fetal growth restriction (FGR)⁸ Suspected fetal compromise¹⁴ Abnormal umbilical artery Doppler wave form analysis Stillbirth 		



CASE STUDY KYLIE – COMPLEX CASE STUDY





CASE STUDY: KYLIE COMPLEX

- <u>Kylie</u> age 32, presents anxiously for advice. Her 11-year-old step-daughter, who stayed with her last weekend, has just been diagnosed with Chicken Pox. Kylie is 17 weeks pregnant.
- Outline your approach
- What are current Australian recommendations for preconception, antenatal and postnatal vaccinations, not just Varicella?



AUSTRALASIAN SOCIETY FOR INFECTIOUS DISEASES 2022

Management of Perinatal Infections

THIRD EDITION



Varicella – exposure in pregnancy

- 'Exposure'
 - o sharing home
 - o face to face > 5 minutes
 - o same room > 1 hour
- Check serology if uncertain past history of chicken pox or VZV immunisation
- If negative IgG, and
 - Exposure < 96hrs earlier, give ZIG (order through Red Cross 07 3838 9010)
 - Exposure > 96hrs but < 10 days, give ZIG
 - Exposure > 10 days no ZIG; give aciclovir if risk factors for maternal complications (> 20/40, lung disease, immunocompromised, smoker)

Varicella in pregnancy

At risk times for baby:

- 12-28 weeks 1.4% risk of Fetal Varicella Syndrome (scarring of skin, low birth weight, prematurity, problems affecting limbs, brain and eyes)
- 7 days before birth to 2 days after delivery
- >2 28 days after delivery in infants < 28 week gestation or < 1000g

At risk times for mother:

- risk of maternal complications throughout pregnancy
- give aciclovir if seen within 24 hours of onset of rash
- Risk higher if > 20 weeks gestation

Varicella in pregnancy

Refer all women with Varicella in pregnancy

• Liaise by phone with the GP Liaison Midwife to reduce risk to other pregnant women (isolation will be required)

Vaccination before, during, after...

Preconception

- MMR, Varicella, Influenza, COVID-19
- Pneumococcus (for at risk women including smokers)

During pregnancy

- Influenza, COVID-19
- dTpa at 20 32 weeks in each pregnancy
- RSV vaccine between 28-36 weeks in each pregnancy
- Other inactivated vaccines if benefits of protection from vaccination outweigh the risks; avoid fever
- Only absolute C/I = smallpox, although all live attenuated vaccines are C/I because of hypothetical risk of harm

Post partum

- MMR as required
- dTpa, Influenza, COVID-19 if not vaccinated during pregnancy

Cytomegalovirus (CMV)

- May be transmitted to baby and can have serious consequences
- Limited evidence to support screening for CMV during pregnancy
- Advise hygiene measures that reduce risk of infection including avoiding contact with children's saliva or urine and hand washing after such exposure

Cytomegalovirus (CMV)

 Offer screening to pregnant women who have frequent contact with large numbers of very young children (e.g., childcare workers) – CMV specific IgG

 Offer testing to pregnant women if they have symptoms suggestive of cytomegalovirus that are not attributable to another specific infection, and/or when imaging findings suggest fetal CMV infection - CMV specific IgG, IgM, and IgG avidity

Zika Virus

- Management of pregnant women
 - inquire about travel history
 - if history of travel to a Zika virus affected country during/immediately prior to pregnancy → evaluate

 Remind travellers to all areas where mosquito borne diseases are present to use mosquito bite prevention measures

Zika Virus - Preventing sexual transmission

- Men who have travelled to Zika virus affected areas whose partner is pregnant:
 - avoid unprotected sex for duration of pregnancy
- Men who have travelled to a high or moderate risk country whose partner is not pregnant:
 - avoid pregnancy and unprotected sex for at least six months

COVID-19

ABOUT US ABOUT LIVING EVIDENCE LIVING GUIDELINES RESEARCH AND INITIATIVES RESOURCES





Caring for people with COVID-19

Supporting Australia's healthcare professionals with continually updated, evidence-based clinical guidelines

Funding has now been discontinued for the National Clinical Evidence Taskforce and the COVID-19 guidelines as of 30 June 2023.

These guidelines are no longer continually updated but will remain online until the guidance becomes inaccurate and/or no longer reflects the evidence or recommended practice.

For three years, the COVID-19 guideline delivered trusted, up-to-date clinical guidelines and flowcharts for everyone throughout the COVID-19 pandemic.

The Taskforce provided a successful model of rapid evidence surveillance, while implementing a world-first, cross-disciplinary collaboration, including healthcare workers, evidence experts, consumers and 35 peak health bodies across Australia.

Communiques »





COVID-19 - Australian Living Evidence Collaboration



CASE STUDY
KATE – COMPLEX CASE STUDY





CASE STUDY: KATE COMPLEX

- Kate presents at 35 weeks for an unscheduled appointment
- Her pregnancy has been progressing smoothly, but she is clearly anxious. Her baby, who usually "kicks like a world cup soccer player", has been noticeably quiet since yesterday afternoon. She asks "Is something wrong with my baby?"
- What do you say to her?
- What do you do if you can hear the fetal heart?
- What do you do if you cannot hear the fetal heart?

Decreased fetal movements

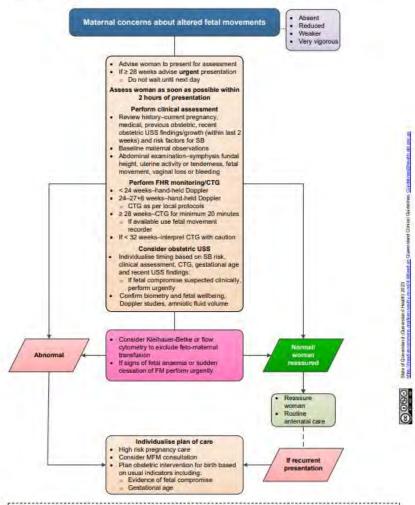
- Perceived changed or decreased fetal movements
 - sensitive non-specific indicator of fetal compromise
 - associated with impaired placental function
- Adverse pregnancy outcomes reported after altered fetal movements
 - threatened preterm labour; preterm birth
 - fetal growth restriction (FGR); small for gestational age (SGA)
 - stillbirth and neonatal death; congenital abnormalities, neonatal stroke
 - feto-maternal haemorrhage

Maternal concern about altered fetal movements

- Advise woman to present for assessment
- If ≥ 28 weeks advise urgent presentation
 - do not wait until next day
- Assess woman as soon as possible within 2 hours of presentation
 - perform FHR monitoring/CTG
 - < 24 weeks hand-held Doppler</p>
 - 24-27+6 weeks hand-held Doppler/CTG as per local protocols
 - ≥ 28 weeks CTG
 - consider obstetric USS

Queensland Health

Altered fetal movements



CTG: cardiolocograph, FHR: (etal heart rate, FM: lefal movements; MFM: maternal fetal medicine; SB: stillbirth; USS: ultrasound scar; 2: greater than or equal to; <: less than

Queensland Clinical Guideline. Fetal Movements. Flowchart: F23.46-1-V3-R28

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



Queensland Clinical Guidelines | Queensland Health







CLINICAL PRACTICE GUIDELINE

FOR THE CARE OF WOMEN WITH DECREASED FETAL MOVEMENTS WITH A SINGLETON PREGNANCY FROM 28 WEEKS' GESTATION

Version: 2.4 March 2023

ENDORSING ORGANISATIONS





Even if you hear a heartbeat, this does not mean your baby is well.

If you notice a change in movements or you are concerned about your baby's wellbeing, contact or present to your **closest** health service right away.



Home fetal dopplers

- may provide false reassurance about baby's well-being
- caution expectant parents about the potential risks of using home fetal dopplers
- advise expectant parents to present immediately to a maternity facility if they are concerned about their baby's well-being

Home fetal dopplers

- 4 September 2024 TGA removed all home fetal dopplers from the Australian Register of Therapeutic Goods (ARTG)
- home fetal dopplers will no longer be available for purchase
- however, there may be resale of second-hand devices
- TGA also considers Baby Movement Apps to be medical devices and must be included in the ARTG

Safer Baby Bundle – reducing preventable stillbirth

- Smoking cessation
- Fetal growth restriction (FGR)
- Decreased fetal movement (DFM)
- Side sleeping
- Timing of birth



eLearning





WORKING TOGETHER TO REDUCE STILLBIRTH

Safer Baby Bundle eLearning course *NEW* (updated August 2024)

The Safer Baby Bundle module provides evidence based information for maternity health care providers on the 5 elements of the bundle: Smoking Cessation, Fetal Growth Restriction (FGR), Decreased Fetal Movements (DFM), Side Sleeping and Timing of Birth. This eLearning course has been updated in August 2024 to align with most recent evidence and updated resources.

START COURSE



IMPROVE eLearning course

This course consists of six modules and is designs to support maternity healthcare professionals in responding to women who have experience stillbirth, and gain crucial learnings. Each module takes approximately 20 minutes to complete and provide essential training for obstetricians, neonatologists, midwives, nurses, general practitioners and antennal staff.

START COURSE

Pre-term birth prevention

- Routine transabdominal (TA) cervical length measurement at 20 week morphology scan
 - o< 35mm (TA) or cannot be clearly seen TA, transvaginal (TV) assessment recommended
 - < 25mm TV commence vaginal progesterone pessaries 200mg nocte and refer to obstetrics/MFM
- Encourage smoking cessation

Date	Gestation (weeks)	Estimated date of birth by dating scan:
1 1		Screening tests (11–13 weeks + 6 days) • ☐ Chance of:
1 1		Reproductive carrier screening – preconception/early pregnancy: Yes No Outcome: Low chance result. High chance result.
1 1		Morphology scan Cervical length (if known): mm (TA/TV)TA <35mmTV <25mm Vaginal progesterone discussed/prescribed:Yes (document intervention on page a11)No Placenta:AntenorPostenorFundalLow lyingClear of the OS Fetal morphology:No abnormalities detected
r i		Additional scans (plot scan results on graphs)

Pre-term birth prevention

Authority item:	Progesterone 200mg Pessaries 1 Before bed.				
Quantity:	42	Repeats: 3			
PBS listed Indications for Authority:	Indication Prevention of pre	term birth			
Indication detail:	Clinical criteria: * Patient must have a singleton pregnancy, AND * Patient must have at least one of: (i) short cervix (mid-trimester sonographic cervix no greater than 25 mm), (ii) a hi spontaneous preterm birth, AND * The treatment must be administered no earlier than at 16 weeks gestation.				
PBS Notes:	No increase in the maximum quantity or number of units may be authorised. No increase in the maximum number of repeats may be authorised.				
Indication for this authority:	Prevention of preterm birth				
Approval No:	11835	Previous authority Send to patient Lookup	lx		

Stillbirth and preterm birth prevention GP education (resources from past event)

Queensland Healt

Clinical Excellence Queensland

















RBWH Obstetric Review Centre (ORC)

- Common presentations include:
 - Labour/preterm labour
 - Uncertainty about term or preterm prelabour rupture of membranes
 - Decreased or no fetal movements
 - Review of hypertensive women referred by their GP, obstetrician or midwife
 - Bleeding after 14 weeks
 - Headaches
 - o Feeling unwell