General Practice Liaison Officer (GPLO) Program

Metro North Hospital and Health Service *Putting people first*

Healthcare Excellence and Innovation

It Always Happens When No One's Around – Mental Health and AOD Crisis Management

25th March, 2021 – Webinar
GPLO Update

Dr Matthew Cadman - GPLO Metro North HHS and Brisbane North PHN

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Acknowledgment of Country

In the spirit of reconciliation, I would like to acknowledge the Traditional Custodians of country throughout where we are meeting today, and their connections to land, sea and community.

I pay my respect to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Program

6.30pm – 6.40pm	**Welcome and GP Liaison Update and Review of Mental Health Act - Dr Matthew Cadman**
6.40pm – 7.00pm	Dr Simone Garrett-Walcott – Acute Care Team – Crisis management considerations
7.00pm – 7.30pm	Rachael McIntosh and Dr Victoria Gladwell – CHQ CYMHS – Child and Youth Suicide Risk Assessment Framework
7.30pm – 8.00pm	Elizabeth Bennett – Perinatal Mental Health – Risk assessment and medication considerations in perinatal mental health
8.00pm- 8.30pm **8.30pm-8.45pm**	Dr Jeremy Hayllar – ADS – Alcohol and benzodiazepine withdrawal consideration Questions for the Panel (joined by Dr Gaynor Andresen from MNMH-RedCab)

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Welcome

All interaction needs to be through Slido (**do not use chat box**)

- https://www.sli.do/ using event code #bngpweb2
- Submit questions before or during the presentations for the Q&A session at the end. Type your question in the box at the top.
- Any questions that we are unable to answer or if we run out of time will be answered and sent out to all registrants in the next few days.

- Ensure that you stay on line for the 2 hours of the event.
    - Evidence of registrant participation is provided to the college for CPD allocation
- **Please** fill in the evaluation form and email or fax back
    - The feedback helps us to improve these events
    - They are uploaded to the college for recognition of the quality of the event.

GPLO Update (mngplo@health.qld.gov.au)

HealthPathways - New

- Addictions
  - Alcohol Intervention and Withdrawal
  - Codeine: Chronic use and Deprescribing
- Anxiety in Adults
- Antipsychotic Medications
- Bipolar Affective Disorder
- Depression in Adults
- Depression in Older Adults
- Eating Disorders in Adults
- Eating Disorders in Children and Youth
- Eating Disorders Treatment Plan
- Infant Mental Health
- Involuntary Assessment
- Perinatal Emotional Health and Wellbeing
  - Pre-pregnancy Emotional Health and Wellbeing
  - Emotional Health and Wellbeing in Pregnancy
  - Postpartum Emotional Health and Wellbeing
- Psychosis – Established
- Psychosis - First Episode
- Medications for Perinatal Mental Illness
- Suicide Risk in Adults
- Suicide Risk in Young People

https://brisbanenorth.communityhealthpathways.org

COVID-19 Assessment and Management

Last updated: 17 March 2021

Clinical editor's note

As of 16th March, all local government areas (LGAs) in Queensland are back in the low risk category for PPE recommendations for primary care settings.

For PPE recommendations based on risk category, see Queensland Health – PPE in Community health services (Table 1).

This pathway guides primary care management of COVID-19 in the State of Queensland. See also COVID-19 Information.

Background

About COVID-19 assessment and management

HealthPathways

Brisbane North

COVID-19 Vaccination Information

Last updated: see each section below

10 March 2021

Background

About COVID-19 vaccination

Australian national guidance

Last updated: 22 March 2021

Education

- Australian Government Department of Health – COVID-19 Vaccine Training Program [Training for all immunisation providers of the COVID-19 vaccines]
- Australasian Society of Clinical Immunology and Allergy (ASCIA) – ASCIA Anaphylaxis E-training for Health Professionals 2021
- NPS MedicineWise – Sharing Knowledge About Immunisation

Health professional resources

- Vaccine information
- Consent information
- Roll-out and practice preparation information
- Online reporting and forms
- Aged care information
- Disability care information
- Aboriginal and Torres Strait Islander peoples
- Other specific populations information

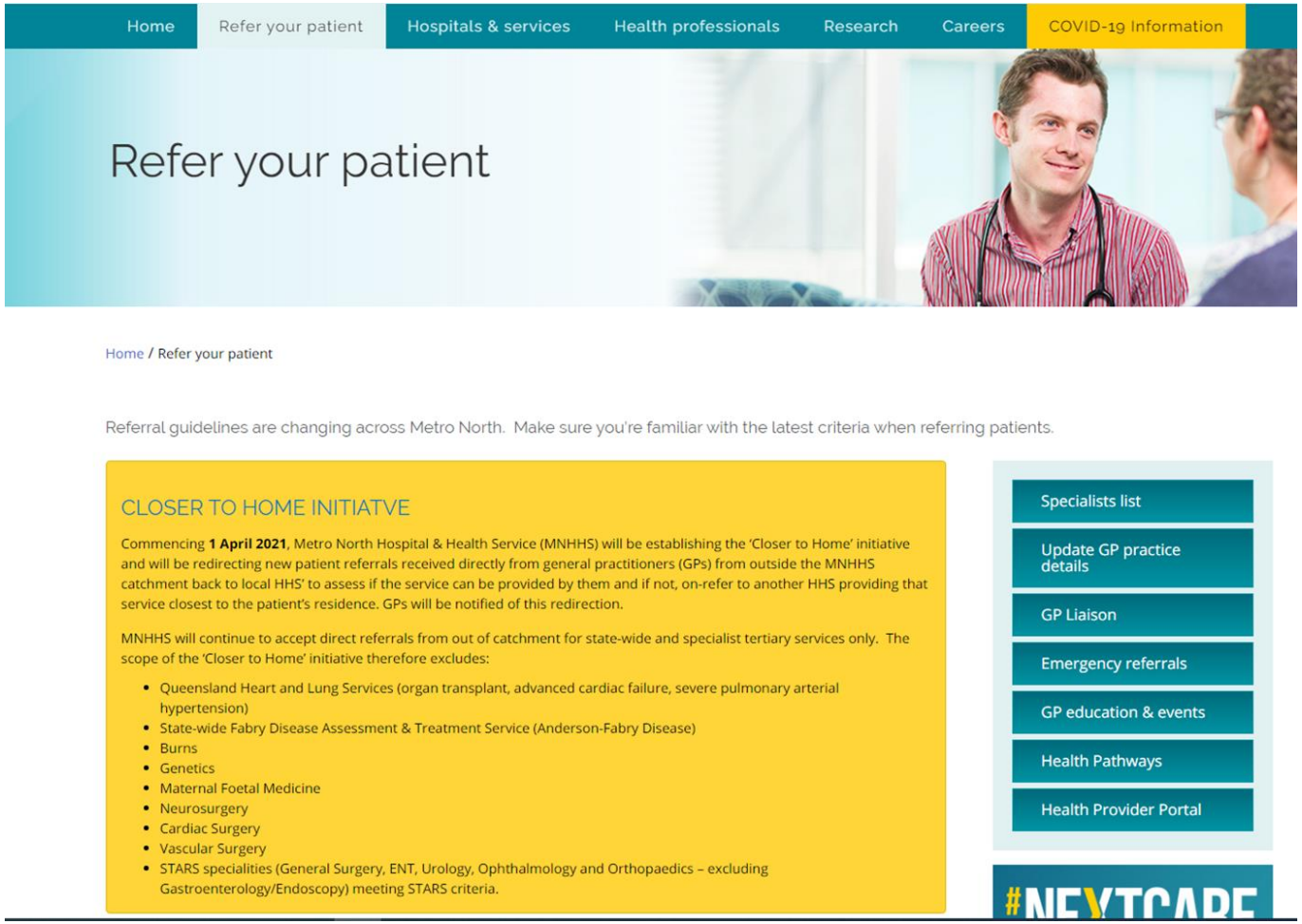
For patients aged 5 to 18 years

Specialist mental health services for children and young people aged 5 to 18 years, with severe and/or complex mental health problems.

1. Check criteria.
2. Contact the service.
3. Inform the patient of location, hours, and cost.
4. For enquiries,
   - North West Community Health Centre
     - Phone: **(07) 3335-8888**
     - Fax: **(07) 3335-8741**
     - Email: CHQ-CYMHS-NorthWest@health.qld.gov.au
   - Nundah Community Health Centre
     - Phone: **(07) 3146-2693**
     - Fax: **(07) 3146-2420**
     - Email: CHQ-CYMHS-Nundah@health.qld.gov.au
   - Pine Rivers Child and Youth Mental Health Service
     - Phone: **(07) 3817-6333**
     - Fax: **(07) 3817-6377**
5. Advise the patient or carer of 24-hour crisis telephone line **(07) 3068-2555.**

For patients aged 0 to 4 years

Refer you patient



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Oral Health services

Referral hotline:

1300 300 850

Fax: (07) 5433 8577

Oral health services are delivered at our dedicated oral health facilities, hospitals, community outreach clinics and schools.

Mental Health services

Adult referral hotline:

1300 MHCALL (1300 64 2255)

Mental health services in Metro North

Child and Youth Mental Health Services (CYMHS) for persons under the age of 18.

Sexual Health and HIV services

A referral is not required for most services.

View Sexual health and HIV service for more information.

Alcohol and Drug Information service

Referral hotline:

1800 177 833

Fax: (07) 3837 5914

View Alcohol and Drug service for more information

Residential Aged Care District Assessment and Referral Service

1300 0 RADAR (1300 0 72327)

RADAR is a Nurse Navigator led service facilitating access to hospital based and outreach services for acutely unwell and deteriorating people living in Residential Aged Care

Brisbane North HealthPathways

Clinicians in the North Brisbane region can now access these pathways online. They provide the user with point of-care guidance for the assessment and management of medical conditions.

GP Smart Referrals

- Condition specific templates

  (Altered bowel habit, palpitations)

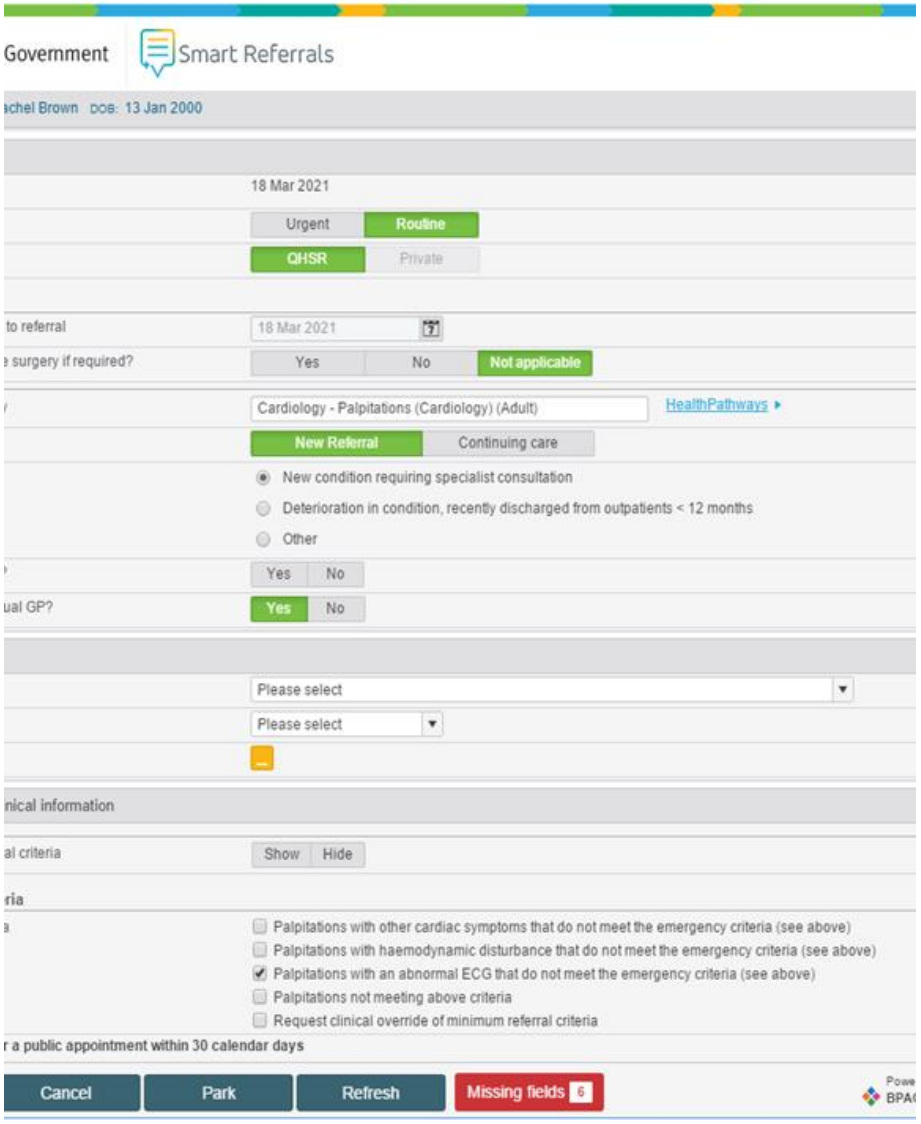
- Attach scanned documents

  (PDF, Images)

- Advice on expected wait times

- Track and follow-up referrals

- Caters for Mater Hospital



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Virtual Emergency Department

Metro North Virtual ED offers alternative pathways that can help avoid your patient waiting in an Emergency Department.

Metro North Hospital and Health Service has developed a Virtual Emergency Department service to provide primary healthcare providers with access to specialist emergency medicine advice, by telephone or video conferencing with one of our senior FACEM's.

It is a safe, fast and efficient way for you to consult with an emergency physician and use real-time technology to align treatment and ongoing services for your patient.

METRO NORTH VIRTUAL ED

1300 847 833

8:00am to 5:00pm, Mon to Fri

(GP's ONLY)

How to access the service

If you are a patient, **you cannot refer yourself** to this service. Please visit your GP or call 13HEALTH (13 43 25 84).

1. Call 1300 VIRTED (1300 847 833) between 8.00am and 5.00pm weekdays. You will be connected directly to a senior emergency nurse who will rapidly Triage your call.
2. Please have the following information ready **(this will take less than 1 minute)**
   - Clinician's name and phone number
   - An email or other link if you require video consultation
   - The patient's name, date of birth, hospital number (if available) and brief description of the problem
3. You will then be connected directly to an Emergency Specialist.

The Emergency Specialist can assist in many ways:

1. Advice to assist you to continue your patient management within the community
2. Advise on the interpretation of pathology, radiology, ECGs and other investigations
3. Engagement with hospital managed community services such as RADAR and HITH (Hospital in the Home) to support your patient with daily skilled nurse visits
4. Connection to a hospital sub specialist for timely advice
5. The arrangement of an urgent outpatient review in a specialty "hot clinic" all within 48 hours
6. Direct admission to hospital for those patients who do not require urgent ED care
7. Liaison with an Emergency Department specialist when rapid admission and care is required

See the Virtual ED fact sheet for GPs (PDF) for more information.

Consult with an emergency clinician

If you are a patient, *you cannot refer yourself* to this service. Please visit your GP or call 13HEALTH (13 43 25 84).

Hotline: 1300 847 833

Open: 0800 to 1730, Monday to Friday

Email: MNHHSvirtualedadmin@health.qld.gov.au

Health pathways

Access to Health Pathways is free for clinicians in Metro North Brisbane.

For login details email: healthpathways@brisbanenorthphn.org.au

Login to Brisbane North Health Pathways: brisbanenorth.healthpathways community.org

Resources

Virtual ED fact sheet for GPs (PDF)

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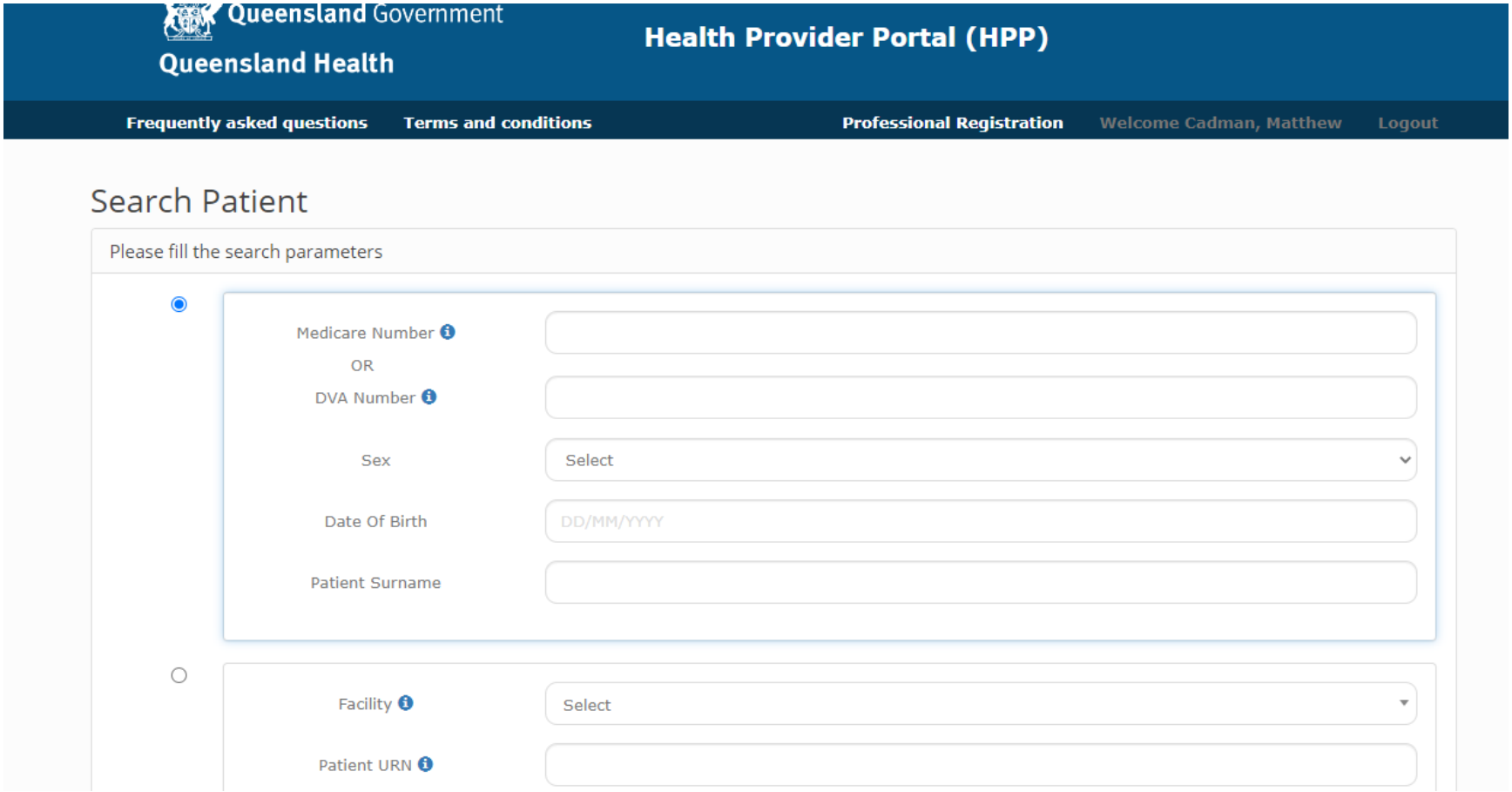
Health Provider Portal



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- GP Virtual Practice Visits
  - Enables multiple GPs at a site to have a virtual meeting about specific issues with GPLO/PCLO with relevant hospital representative if indicated

- "GP Snippets"
  - GPs can call into Team or Zoom meetings hosted by GPLO with guest speakers (such as Virtual ED, Health Pathways, HPP, GP Smart Referrals team)

- GP Mental Health Community Of Practice
  - Meeting one Thursday lunchtime per month Via Teams
  - Also available 1 evening per month Via Teams

The **My Mental Health Service Navigation team** can provide information about mental health, suicide prevention and alcohol and other drug treatment services in our region.

The team also support health professionals, consumers and carers making a referral to PHN commissioned services.

Phone: **1800 752 235**
Email: navigation@brisbanenorthphn.org.au

Phone and email monitored 8.30 am - 4.30 pm Monday - Friday, excluding public holidays

MY MENTAL HEALTH

www.mymentalhealth.org.au

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- Contact Us

  Email – mngplo@health.qld.gov.au

  Don’t forget to fill in your event feedback/evaluation sheet and email back.

  This helps us to deliver better education events for you

- **Future events**

  - Ophthalmology 25th May
  - Gynaecology 5th June
  - Rheumatology – To Be Confirmed

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In Medicare News

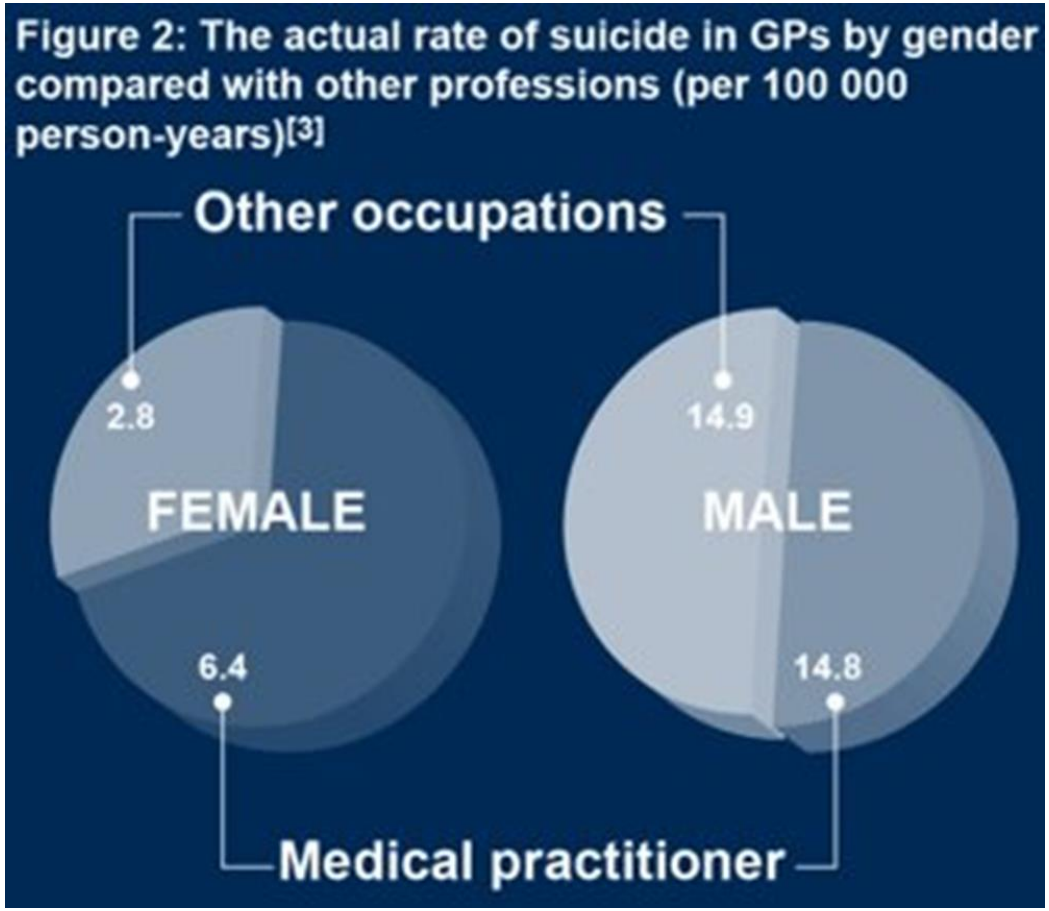
- RACF now have specific item numbers for Mental Health Care Plan and Physical Health initiatives

http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/factsheet-mental-health-aged-care

http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/factsheet-rack-ah

I would like to acknowledge the lived experience of the staff that work with at risk consumers, those who have had a patient die by suicide and the experiences of consumers and families we care for. I would also like to acknowledge those here today and in out greater health community with a lived experience of suicide and those who have been touched by the effects of suicide personally. I encourage you all to take time to look after yourself and colleagues.

Why should I learn more about the management of emotional pain in patients?



3. . [Milner AJ, Maheen H, Bismark MM, Spittal MJ. Suicide by health professionals: a retrospective mortality study in Australia, 2001–2012. Med J Aust. 2016; 205: 260–5. MM/YYYY]

Warning signs of deterioration in doctors' health, with potential for development of burnout and/or mental illness, include:

- Poor interpersonal behaviour, disruption or irritability
- Risk-taking with boundaries, reputation, career, billing, notation, clinical scope of practice and guidelines – in particular, risk-taking can be a symptom of depression
- Odd, secretive or unusual behaviours
- Absenteeism or working excessively long hours
- Unsafe use of alcohol or drugs
- Cynicism and a focus on income
- Compassion fatigue (feelings of depersonalisation, emotional numbness, reduction in ability to feel empathy or compassion for patients)

Tempo Article – Addressing Doctors Health In General Practice

Mental Health Act 2016 replaces Mental Health 2000

Justice Examination Order

-> Examination Authority

Emergency Examination Order

-> Emergency Examination Authority

Request and Recommendation for Assessment

-> Recommendation for Assessment

Examination Authority

Examination Authority granted by Mental Health Review Tribunal

Can be requested by an Authorised Mental Health Service or Concerned Individual

Concerned Individual has to have sought clinical advice prior to application

Used as a last resort when voluntary assessment is not possible or successful and there are serious concerns

Allows a Queensland Police Officer and Doctor/Authorised Mental Health Worker to attend a person's premises, enter and detain a person for examination

Emergency Examination Authority

- Covered by the Public Health Act 2005

Queensland Police Service and
Queensland Ambulance Service

Immediate risk of serious harm due to major disturbance of mental capacity

Recommendation for Assessment

- No longer requiring 2 person request and recommendation
- Completed by a doctor or authorised mental health worker
- Requires 2 components
  - Treatment Criteria **MAY** apply AND
  - **APPEARS** to be no less restrictive option

- Treatment Criteria
  - Person has a mental illness
  - Person lacks capacity to consent for treatment
  - No treatment may result in imminent serious harm to the person or others, or the person suffering serious physical or mental deterioration

A Few Words On Capacity

Person is capable of understanding

- They have an illness or symptoms
- Understand the nature and purpose of treatment
- Understand the benefits and risks of treatment and alternative
- Consequences of not receiving treatment
- Capable to make and communicate a decision about the treatment
- Allows for supported decision making (ability to understand with assistance of another person)
- Presumption of capacity and therefore practitioners need to make a proactive decision that the person doesn't have capacity

And another few on Less Restrictive Way

Parental consent

- If a parent provides consent for a minor then criteria not met

Under an advanced health directive

With consent of attorney or guardian

ACUTE MANAGEMENT OF THE SUICIDAL PATIENT

Metro North Hospital and Health Service *Putting people first*

Dr Simone Garrett-Walcott, Psychiatrist, Redcliffe-Caboolture Acute Care Team

With acknowledgement of the work of the Metro North Redcliffe-Caboolture Zero Suicide Team

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- Jesse attends his 4pm appointment on the Thursday before Easter.
- He is a 45 year old, married man living with his partner and their 2 children
- He sits down, is obviously distressed and says that he has been thinking of killing himself.
- WHAT SHOULD YOU DO???

FIRST

- Take a deep breath to steady the rising anxiety

SECOND

- Find out more…

Determine the trigger

- Suicidality is the result of the interactions between a variety of factors for example:
- Stressors: social, cultural, family, socioeconomic factors, life events
- Mental health disorders
- Substance use

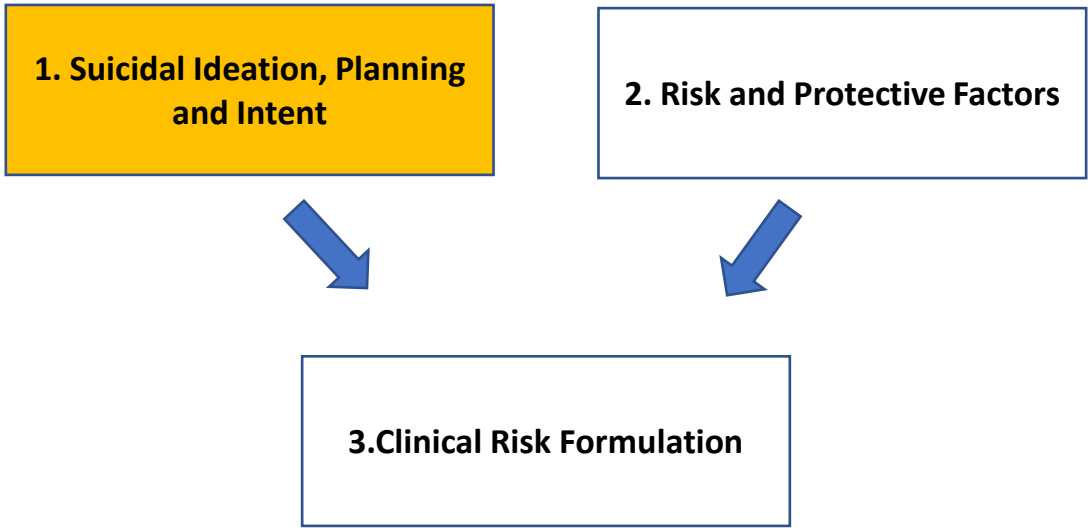
- Jesse said that today his wife left the marital home with the children ending the relationship
- He said prior to that his life was ‘perfect’, however, he lost his dream job 3 weeks ago, throwing the family into financial crisis. He then went into a ‘deep downward spiral’, drinking alcohol daily. Then there had been arguments with his wife.

Complete a risk assessment

- People die by suicide when they have both the desire to die and the means or ability to do so

- A risk assessment is required to determine the desire and the means

Risk Assessment



Suicidal Ideation, Planning and Intent

- Suicidal thoughts/ideation:
  - Does not mean suicidal intent
  - Clarify the duration and intensity: there can be a broad spectrum of suicidal ideations from fleeting thoughts, to a strong desire to die

- Jesse denied previous suicidal thoughts before today. He said that the suicidal thoughts started today after his family left and that they were intense as he felt he could not live without his family.

Suicidal Ideation, Planning and Intent

- Suicidal plan:
  - Is concerning, however does not mean suicidal intent
  - Determine details of plan, access to the means, lethality: this can range from ambiguous/vague, to well thought out/rehearsed)

- He planned to hang himself on an exposed beam on his deck. He has rope from a previous home project. He planned to drink alcohol to give him the courage to do it.

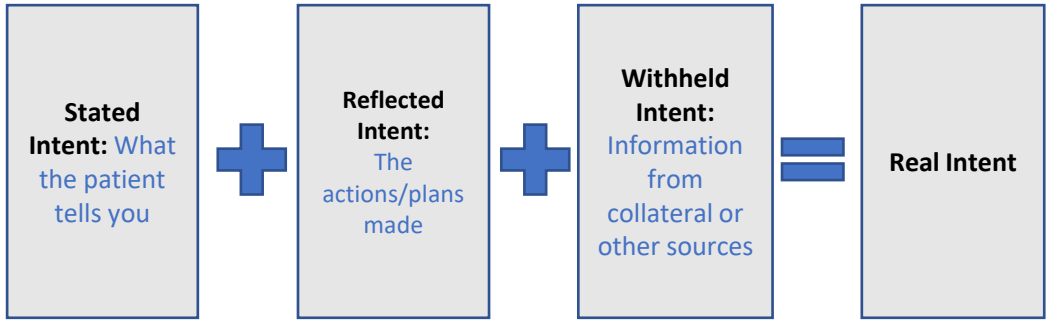
Suicidal Ideation, Planning and Intent

- Suicidal intent:
  - Explore the imminence of plans and intensity of intent: this can range from no intent to end their life at the moment, to intent to leave your office to follow through with the plan

- Jesse said that he does not want to die, that is why he came to see you today for help.

Suicidal Ideation, Planning and Intent

Real suicidal intent can be conceptualised using the following equation:

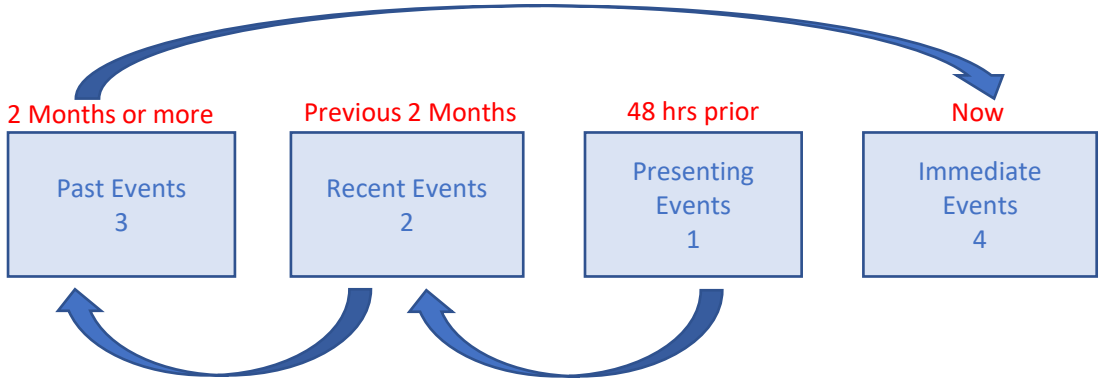


Equation of Suicidal Intent

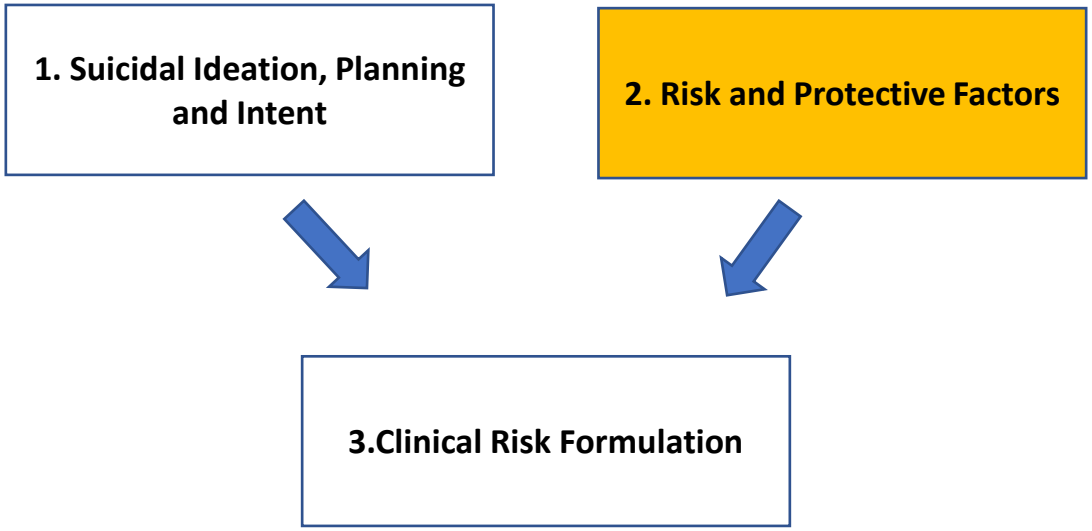
Suicidal Ideation, Planning and Intent

A helpful approach to structure your interviewing strategy to clarify intent:

The Chronological Assessment of Suicide Events (CASE) Approach (Psychiatric Interviewing: The art of understanding by Dr Shawn Shea)



Risk Assessment



Risk and protective factors

- Suicide risk factors:
  - Overall increase the likelihood of suicide
  - No single risk factor is significantly associated with an increase in suicide

Risk and protective factors

- Suicide risk factors:

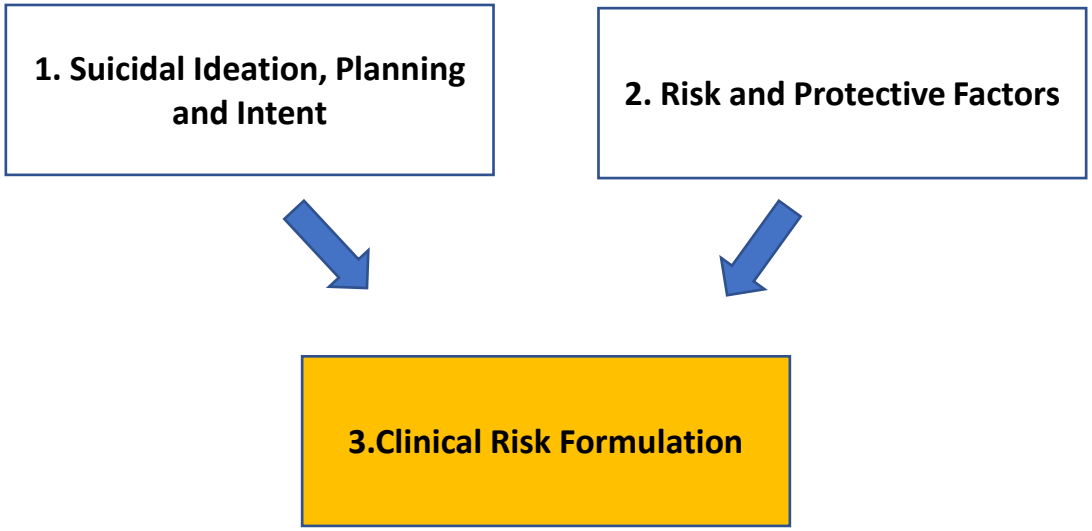
Static factors (non-modifiable)	Dynamic factors (modifiable)
• Demographic factors: *male, 25-44 years old, over 70 years, divorced, rural, LGBTQI+, minority groups* • Previous suicide attempt or self harm • History of substance use • History of mental illness • Exposure to suicide • Stressful life events: *physical illness, imprisonment* • People from culturally and linguistically diverse backgrounds	• Anxiety or psychomotor agitation • Lack of social support (social withdrawal) • Loss of hope and helplessness • Stressful life events: *homelessness, financial difficulties, loss of employment* • Currently abusing substances

Risk and protective factors

- Suicide protective factors:
  - Any factor that contributes to mitigating suicidality

- He previously thought of suicide three years ago after he lost his job. At that time his wife had supported him through it. He disclosed long-standing problems with his alcohol use which tended to increase in the context of distress.

Risk Assessment



Clinical Risk Formulation

- The information gathered is collated to make a clinical decision about the risk of the patient or a Risk formulation.
- Pisani proposed one approach to risk formulation (this will be addressed in a later session)
  - Reformulating Suicide Risk Formulation: From Prediction to Prevention by Anthony Pisani, Daniel Murrie, and Morton Silverman (2015)

THIRD

- Offer hope, reassurance and an intervention

- *Nearly **95%** of people who are suicidal do not want to die but want the psychological pain (psychache) to end. (Edwin Scneidman)*

Safety

- It is important that the least distressing and restrictive environment to safely manage a patient is considered
- Considering the risk formulation:
  - Can the patient be managed in a GP practice setting?
  - Does the patient need to be sent to the Emergency Department immediately for an urgent mental health referral?
  - Is a referral to the Acute Care Team required?

- On discussion, he said that three years ago when he had been suicidal he had gone to the GP then too. As soon as he had said he was suicidal the GP had become uncomfortable and had sent him and his wife, (who was with him), to the Emergency Department. They had sat for 5 hours, then they were seen by a mental health clinician. She has spoken to them and sent him home in the care of his wife who has supported him through it.
- The clinician had suggested that he attend his GP for follow up, but he had not attended as he had felt that the GP had not listened to him in the first place and didn't think he wanted to go back to him.
- He only came to see you today because he trusted you and felt you could help him instead of sending him to the Emergency Department. He was willing to work with you to keep himself safe.

Engagement/therapeutic rapport:

- Normalise suicidality: be concerned but not alarmed
- Giving the patient time to discuss their issues and providing a safe environment is at times helpful and could reduce suicidality
- The therapeutic relationship should be used to assist in managing the suicidality. Often times the GP knows the background of the patient and will be able to assist with problem solving

Assessment:

- Collateral from family or friends is important to provide information that will help with risk determination and formulation of a management plan
- Relatives/friends can help in keeping the patient safe and supporting them
- If including family or friends they should be provided with information on what the concerns are and how they can support the patient, including how they can seek help after hours

- Jesse was asked to nominate someone he trusts to support him if he were to go home. He identified his best friend John who was contacted and came to the Practice to be involved in the discharge planning. John was aware of the difficulties that he had been experiencing, and Jesse updated him on the recent events. John agreed to support Jesse.

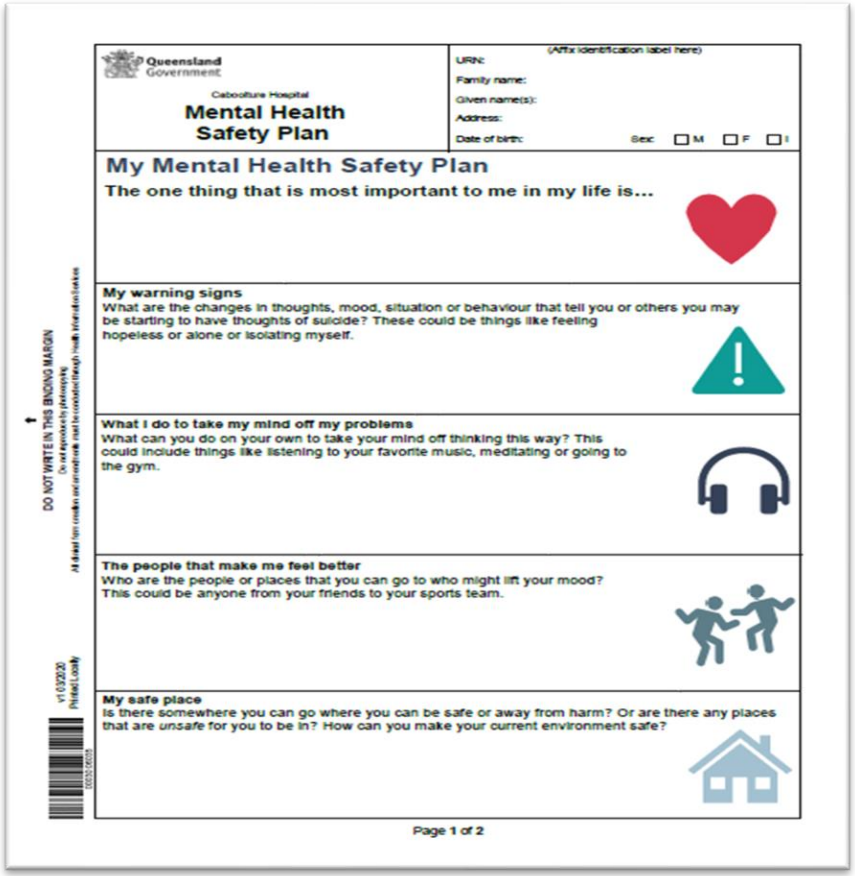
Management:

- Formulate an individualised discharge plan with all the issues relevant to the patient
- Ensure treatment is coordinated and consistent
- Involve patient and family or relatives with counselling on access to lethal means:
  - Educate the patient and their nominated family or friends about the hazards of having access to harmful items and encourage limiting availability to them. (relatives to remove, pills, rope; poisons, QPS to remove firearms)
- John and Jesse agreed that the rope would be removed

- Determine if there is a requirement for medications (treat any underlying mental illness): consider daily/weekly medication dispensing if giving a script.
- Jesse was given a script of Diazepam 5mg (5 tablets), prn to take in the context of agitation and if feeling overwhelmed.

- Discuss alcohol/drug intake and this should be addressed
- Jesse was advised to reduce his alcohol use and to abstain if he could (realistic recommendations were discussed)

A safety plan is also important in this process



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Caboolture Hospital

Mental Health Safety Plan

(Affix identification label here)

URN:
Family name:
Given name(s):
Address:
Date of birth: Sex: ☐ M ☐ F ☐ I

My Mental Health Safety Plan

The one thing that is most important to me in my life is...

My warning signs
What are the changes in thoughts, mood, situation or behaviour that tell you or others you may be starting to have thoughts of suicide? These could be things like feeling hopeless or alone or isolating myself.

What I do to take my mind off my problems
What can you do on your own to take your mind off thinking this way? This could include things like listening to your favorite music, meditating or going to the gym.

The people that make me feel better
Who are the people or places that you can go to who might lift your mood? This could be anyone from your friends to your sports team.

My safe place
Is there somewhere you can go where you can be safe or away from harm? Or are there any places that are *unsafe* for you to be in? How can you make your current environment safe?

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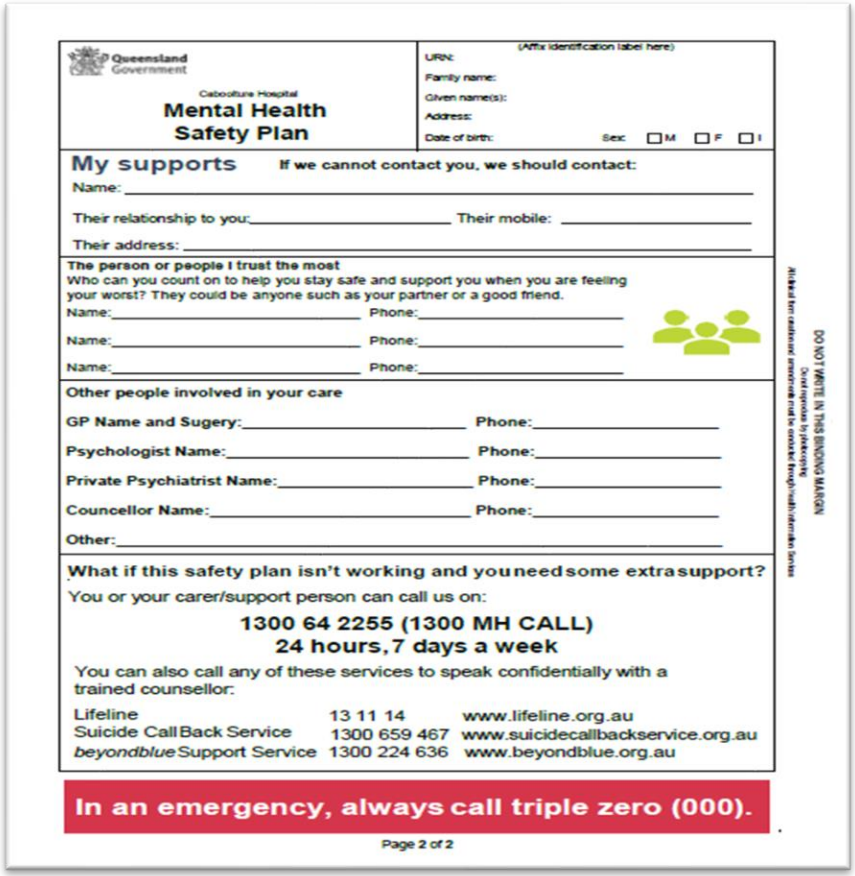

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Caboolture Hospital

Mental Health Safety Plan

(Affix identification label here)

URN:
Family name:
Given name(s):
Address:
Date of birth: Sex: ☐ M ☐ F ☐ I

My supports

If we cannot contact you, we should contact:

Name: _____

Their relationship to you: _____ Their mobile: _____

Their address: _____

The person or people I trust the most
Who can you count on to help you stay safe and support you when you are feeling your worst? They could be anyone such as your partner or a good friend.

Name: _____ Phone: _____
Name: _____ Phone: _____
Name: _____ Phone: _____

Other people involved in your care

GP Name and Sugery: _____ **Phone:** _____
Psychologist Name: _____ **Phone:** _____
Private Psychiatrist Name: _____ **Phone:** _____
Councellor Name: _____ **Phone:** _____
Other: _____

What if this safety plan isn't working and you need some extra support?

You or your carer/support person can call us on:

1300 64 2255 (1300 MH CALL)
24 hours, 7 days a week

You can also call any of these services to speak confidentially with a trained counsellor:

Lifeline	13 11 14	www.lifeline.org.au
Suicide Call Back Service	1300 659 467	www.suicidecallbackservice.org.au
beyondblue Support Service	1300 224 636	www.beyondblue.org.au

In an emergency, always call triple zero (000).

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Discharge planning:

- Follow up should include:
  - An agreed appointment scheduled with you
  - Maintaining contact with the patient and their family and friends as needed, the intensity and duration of the support should be decided as required by the presentation

- John agreed to remain with Jesse for the next three days, however he had to return home for work after that. It was agreed that John and Jesse would attend your clinic in three days so that you could reassess to determine Jesse's risk of suicide and make further planning as to the level of support Jesse required. They were both reminded of the contingency plan of contacting the mental health services or the Emergency services if the situation deteriorated or if there were concerns that Jesse was unsafe even with John there

Discharge planning:

- For some patients the level of suicide risk can change quickly due to internal and external factors, this should be discussed and strategies to reduce the risk should be explicitly discussed and agreed

- If foreseeable changes are identified then plan to mitigate against the increased risk eg if Jesse's wife were to come to the home to collect her clothes then John should organise for Jesse to be out of the house, or to be close by to provide support when she leaves

- The contingency plan of contacting the Mental Health Services on 1300 64 22 55/ contacting the Emergency Services/ presenting to the Emergency Department should be clearly understood by patient and family or friends

Follow up:

- Subsequent follow up should be determined by the presentation of the patient and the collateral provided
- On follow up 3 days later Jesse and John felt that while he was better, although not yet back to his baseline. It was confirmed that the rope had been removed from the house. Jesse said that he felt safe to remain at home alone and it was agreed that John could return home. A follow up appointment with Jesse was booked with you. There was a plan for weekly reviews until he was back at baseline.

- If Jesse does not attend his follow up appointment in a weeks time then:
  - Phone call him, if no answer then,
  - Phone call to John to determine if he has had recent contact, if no answer then,
  - Contact either the Emergency services informing them of his recent history and request a welfare check, letting them know that you have grave concerns about Jesse's safety

What would the Acute Care Provide

- If this patient were to be sent to the Emergency Department:
  - He would be assessed in the Emergency Department
  - Based on his risk formulation a Safety Plan would be completed and he would be discharged in the company of John
  - He would be encouraged to attend his GP. The Acute Care Team would follow up until he made his GP appointment, if no deterioration in his mental state
  - If there were concerns about his mental state, or a deterioration, then he would be offered a further in person review at an outpatient mental health clinic

Thank you!

From Prediction to Prevention

Understanding and communication youth suicide risk using the Prevention Orientated Risk Formulation

GenZs

Dr Victoria Gladwell
Consultant Psychiatrist
Child and Youth Mental Health Service
Children's Health Queensland

Rachael McIntosh
Suicide Prevention Coordinator
Child and Youth Mental Health Service
Children's Health Queensland

Queensland Government

CHQ would like to acknowledge the First Nations people as the traditional custodians of this country and pay our respects to their cultures and elders past, present and emerging.

CHQ would like to acknowledge those here today and in our Health Care community with a lived experience of suicide and those who have been touched by the effects of suicide, professionally and personally.

GenZs

K & Mum
Background

- K is 16yr 6mo old, current school non attender, with excess absenteeism since since grade 8, who lives with both bio parents, an older sister age 19, with significant drug abuse and younger brother, age 10.
- Previous hx of DoCs notification with K- as she lived out of home for 2weeks with female peer/best friend grade 9.
- Self placed with best friend Feb-June 2020.
- Parents had a trial separation 4 years ago 2017.
- NSSI*and suicidal ideation since 2018.
- On again off again older BF who uses drugs.

** **Nonsuicidal self-injury (NSSI)** – "Directly and intentionally inflicting damage to ones own body tissues without intention of suicide and for purposes not socially sanctioned".*

Known Mental Health Hx

- MH hx and involvement with GP.
- GP referred K to community CYMHS for longstanding school refusal.
- Social anxiety, depression and DSH/NSSI with chronic suicidal ideation diagnosed + treated x 18mo.
- Community Clinic refers to Day Program (DP) Oct 2020.
- DP disclosed daily ETOH 4 litre bag/day x 3 months + MJ when she had access.
- OD with 20x Neurofen whilst intoxicated on ETOH + dehydrated leading to 5 day hospitalisation for medical stabilisation of acute renal necrosis.

Current Appt - Thursday 4pm

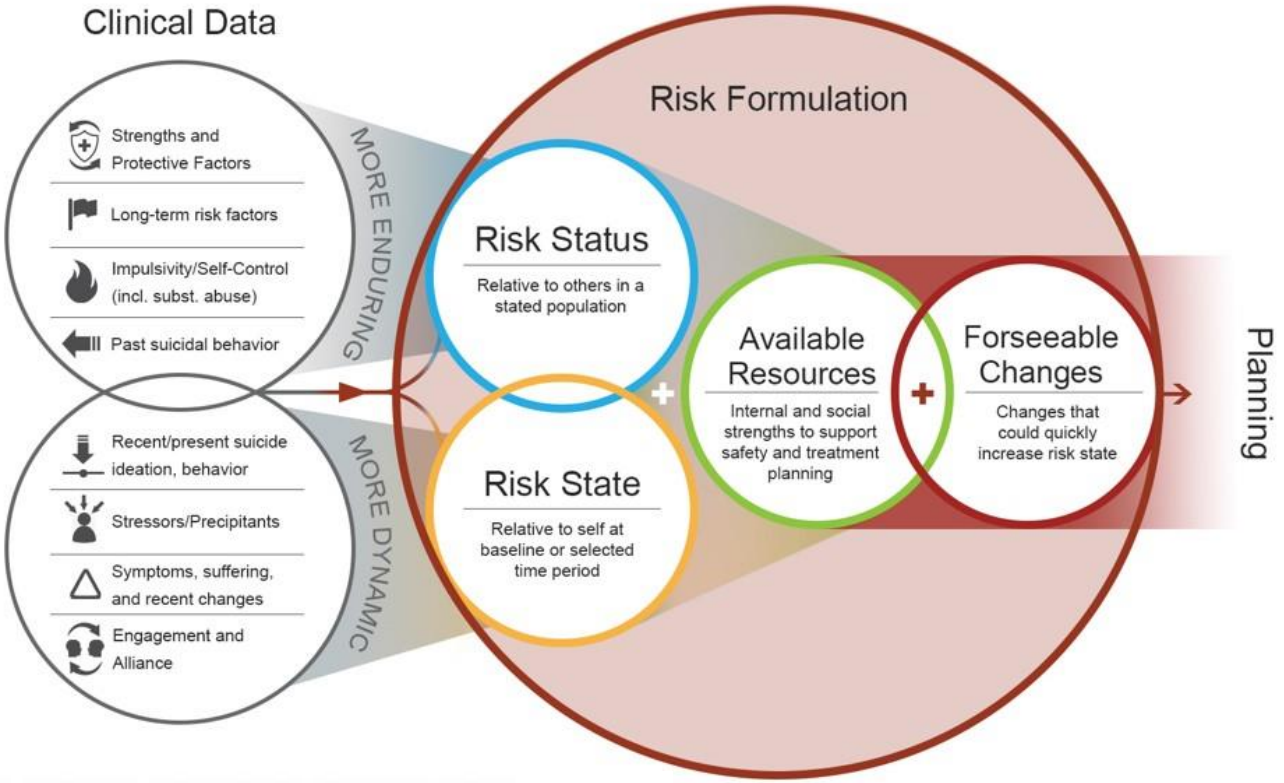
- K attends your GP office for physical check and follow up as advised by renal specialist.
- You have known her + family for years and were the original referring GP.
- K starts to talk about her suicidal ideation (chronic passive) + also reveals active suicidal thoughts about imagining her own funeral but denies intent or making plans.

Pause Point

What is happening for you

- Frightened of having someone so young and vulnerable in your office, with such complex problems that are hard to comprehend.
- Feeling overwhelmed as there is too much at stake- life and death so you think that you cannot help –as you are not "the right person" or "do not have the specialist knowledge".
- Cannot think because you have a 16 year old at home, who has become sullen and withdrawn and you are starting to worry.
- THINK **PORF!**

Prevention Ordinated Risk Formulation



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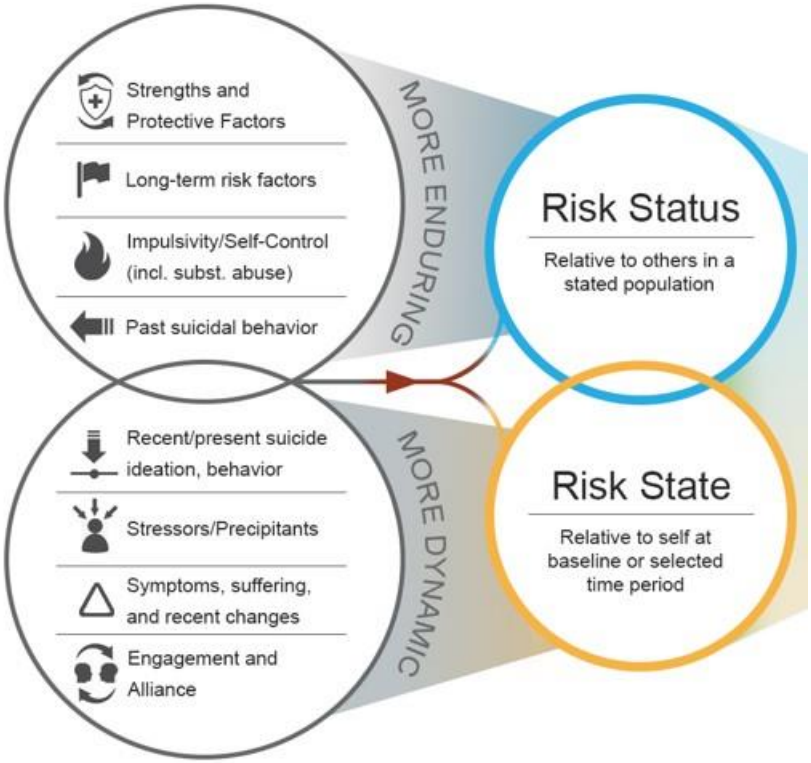
For further information: Pisani, A. R., Murrie, D. C., & Silverman, M. M. (2016). Reformulating suicide risk formulation: From prediction to prevention. Academic Psychiatry, 40(4), 623-629. doi:10.1007/s40596-015-0434-6

Engage and Assess



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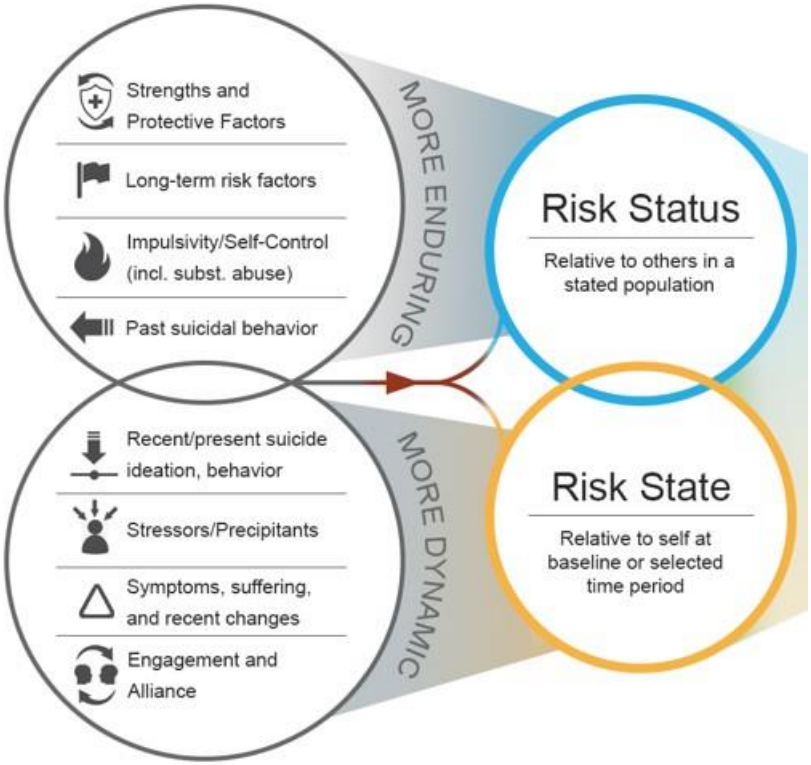

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Risk status - relative to others in a given setting, current or being considered by the assessor, including the key "more enduring" and "more dynamic" factors which have contributed to the risk status.

e.g. (Young person)'s suicide risk is_____ (higher than, similar to, lower) _____(cohort), ***because*** *_____.*

Risk state - relative to self at baseline or given selected time period/s), including the key "more enduring" and "more dynamic" factors which have contributed to the risk state.

e.g. (Young person)'s risk of suicide is _____(higher than, similar to, lower than)_____ (timeframe/ event point), ***because*** *_____.*

Assess and Respond

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Available Resources: Immediately accessible to the consumer and treatment team to support crisis and treatment planning.

They are distinguished from protective factors, which decrease risk across populations or refer to broad strengths. Protective factors are important to note but are not always immediately available to aid in a crisis.

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Foreseeable changes: Events or stressors, which, if they occurred, could reasonably be expected to increase or decrease risk.

Identifying these potential changes as a core element in risk formulation

(a) explicitly acknowledges the fluid and inherently unpredictable nature of suicide risk

(b) directly suggests situations around which specific contingency plans can be developed in collaboration with consumers and their families

Thus, the goal of anticipating changes that could increase **risk is prevention, not prediction**.

Planning = Safety Planning

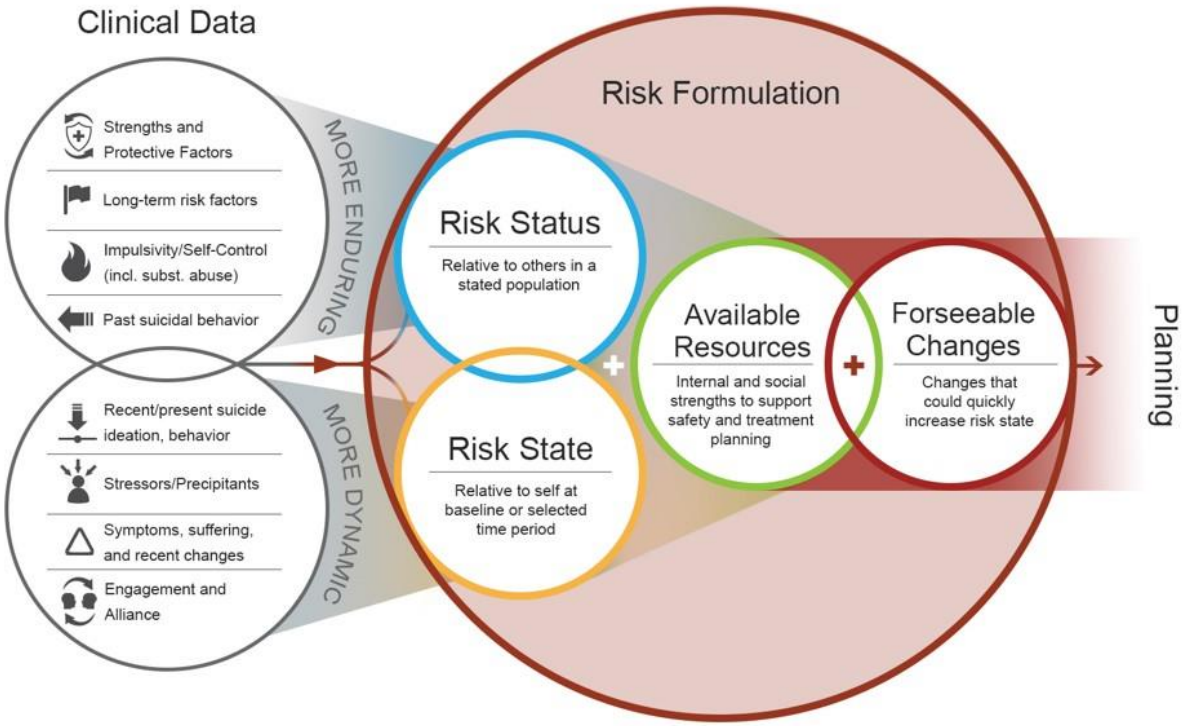
Young Person

- Warning signs
- Internal coping strategies
- Social situations and places that can help to distract
- People that can be asked for help – HOW
- Professionals/crisis services that can be contacted for help
- How to make the environment safe

Parent/Carer

- Lethal means restriction
- Red flag from the parent's perspective
- What the parent can do to support
- HOW they will check in and WHAT they will do
- Level of supervision needed
- What to do if concerned
- Parent/carer self care

Putting it all together for K



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A shared language to understand and communicate suicide risk in HHS

GenZs
GenerationZEROsuicide

Thank you

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07 3146 2122
rachael.mcintosh@health.qld.gov.au
CHQ-CYMHS-ZeroSuicide@health.qld.gov.au
07 3310 9444
Generation Zero Suicide (GenZs) Initiative

PERINATAL WELLBEING LIZ BENNETT TEAM LEADER

Perinatal care in the antenatal period

Case presentation

- Amanda presents for what is expected to a be routine ante-natal shared care appointment
- G2P1
- K 32 weeks – uncomplicated pregnancy
- States “I can’t do this anymore, I don’t want to go back to feeling the way I did last time” – she is crying and distressed

- A speedy review of her notes highlights
  - Post natal depression after first child – needed sertraline 150mg and psychology – suicidal ideation but no self harm
  - Notes indicate sertraline stopped prior to conception due to concerns of the effect to babies

Goals

- What are the risk factors for adverse perinatal mental health?
- What are the current recommendations around psychotropic medications in the perinatal period?
- What are the management options available?
- What are the important phone numbers to know to get help?
- What resources are available for care planning?

Perinatal Mental Illness

- Perinatal mental illness is a significant cause of morbidity and mortality, affecting maternal and neonatal outcomes, health of families and the community
- Early identification & appropriate intervention essential
- Suicide is a leading cause of maternal death in the developed world

In Qld in 2016 and 2017, suicide was the leading cause of death of women during pregnancy and within a year of the end of pregnancy

Source: Queensland Maternal and Perinatal Quality Council Report 2019

Suicide

- Suicide is the leading cause of death in the first-year post-partum *(Maternal Mental Health Alliance, 2019).* Prolonged antenatal and postnatal depression leaves women and their families at greater risk of PTSD, suicide, anxiety, relationship difficulties and is associated with cognitive delays for babies born to subsequent pregnancies. (Maternal Health Study, 2014; Royal Australian College of Obstetricians and Gynaecologists, 2019). Extensive research has been undertaken on what elements throughout the antenatal and postnatal periods contribute to risk factors or mental health concerns for mothers, and the resulting impacts across the domains of health, mental health, and the developmental, behavioural and educational outcomes of subsequent children/ infants . A particular notable feature of perinatal depression and anxiety is that, if not treated, the impacts are lasting and have significant social and economic burden *(Beyond Blue, Valuing perinatal health; The consequences of not treating perinatal depression and anxiety, 2012*).

Perinatal Mental Illness

- 1 in 10 women experience depression in pregnancy
- 1 in 7 experience depression in the year following birth
- 1 in 5 women experience anxiety in pregnancy and in the year following birth
- Common for women to experience depression and anxiety concurrently
- 10% of partners experience anxiety and depression in the perinatal period

Perinatal Mental Illness

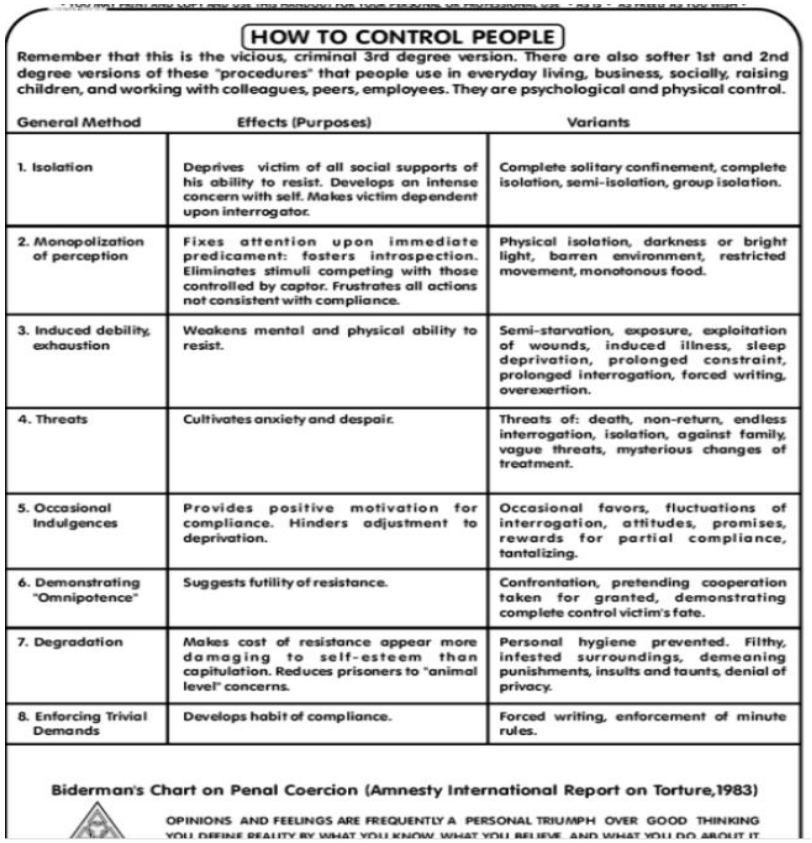
- Prevalence of schizophrenia & bipolar disorder: 1 in 100 in general population
- Prevalence of post-partum psychosis: 1 in 1000 pregnancies
- Increased risk of new onset psychosis post partum
- Risk of relapse of pre-existing mood disorders increases across the perinatal period

Perinatal Mental Illness

Risk factors

- PHx/FHx mental illness/perinatal mental illness
- Psychosocial risk factors
- ATSI, migrants, refugees, LGBTIQ
- Isolation, lack of support
- Life stressors/trauma e.g. domestic and family violence, marital conflict, child safety, emotional/physical/sexual abuse, loss, change, disability, ACE
- Advanced maternal age, IVF, body image & obesity, hyperemesis gravidarum, birth trauma, IUFD
- ACE
- COVID lockdown and increase in DV esp coercive DV and increased drug use

Biderman's chart of coercion



HOW TO CONTROL PEOPLE

Remember that this is the vicious, criminal 3rd degree version. There are also softer 1st and 2nd degree versions of these "procedures" that people use in everyday living, business, socially, raising children, and working with colleagues, peers, employees. They are psychological and physical control.

General Method	Effects (Purposes)	Variants
1. Isolation	Deprives victim of all social supports of his ability to resist. Develops an intense concern with self. Makes victim dependent upon interrogator.	Complete solitary confinement, complete isolation, semi-isolation, group isolation.
2. Monopolization of perception	Fixes attention upon immediate predicament: fosters introspection. Eliminates stimuli competing with those controlled by captor. Frustrates all actions not consistent with compliance.	Physical isolation, darkness or bright light, barren environment, restricted movement, monotonous food.
3. Induced debility, exhaustion	Weakens mental and physical ability to resist.	Semi-starvation, exposure, exploitation of wounds, induced illness, sleep deprivation, prolonged constraint, prolonged interrogation, forced writing, overexertion.
4. Threats	Cultivates anxiety and despair.	Threats of: death, non-return, endless interrogation, isolation, against family, vague threats, mysterious changes of treatment.
5. Occasional Indulgences	Provides positive motivation for compliance. Hinders adjustment to deprivation.	Occasional favors, fluctuations of interrogation, attitudes, promises, rewards for partial compliance, tantalizing.
6. Demonstrating "Omnipotence"	Suggests futility of resistance.	Confrontation, pretending cooperation taken for granted, demonstrating complete control victim's fate.
7. Degradation	Makes cost of resistance appear more damaging to self-esteem than capitulation. Reduces prisoners to "animal level" concerns.	Personal hygiene prevented. Filthy, infested surroundings, demeaning punishments, insults and taunts, denial of privacy.
8. Enforcing Trivial Demands	Develops habit of compliance.	Forced writing, enforcement of minute rules.

Biderman's Chart on Penal Coercion (Amnesty International Report on Torture, 1983)

OPINIONS AND FEELINGS ARE FREQUENTLY A PERSONAL TRIUMPH OVER GOOD THINKING

Perinatal Mental Illness

Consequences - Mother

- Smoking, alcohol, unhealthy eating
- Increased pregnancy symptoms e.g. nausea & vomiting
- Gestational diabetes
- Gestational hypertension
- Pre-eclampsia
- Intrauterine Fetal Growth Restriction
- Antepartum haemorrhage
- Preterm labour
- LUSCS
- Postnatal depression & mood disorders
- Maternal death

Perinatal Mental Illness

Consequences – Baby

- Preterm birth
- Low birth weight
- Fetal distress
- Decreased APGARs
- Increased NICU admission
- Decreased breast feeding
- Failure to thrive
- Adverse neurodevelopmental outcomes
- Perinatal death

Perinatal Mental Illness

- Screen for Depression – EPDS
  - as early as practical in pregnancy
  - repeat at least once later in pregnancy
  - 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 (this is the question that reflects harm to self or others)
- **10.** The thought of harming myself has occurred to me
- Yes, quite often
- Sometimes
- Hardly ever
- Never

Perinatal Mental Illness

- Screen for Anxiety
- Preferred is the EPDS COPE recommendation
  - use anxiety items from other screening tools e.g. EPDS, DASS, K10, ANRQ
- Assess Psychosocial Risk factors
  - SAFE Start Tool
  - ANRQ with domestic and family violence items
- Consider language and cultural appropriateness of tools in ATSI, migrant and refugee women

Management of Perinatal Mental Illness

- Mild to Moderate Perinatal Depression and Anxiety
  - Cognitive behavioural therapy (CBT), interpersonal psychotherapy (IPT) and psychodynamic therapy
  - Psychotherapy involving the infant may improve mother - baby interaction

Medication for Perinatal Mental Illness

- Moderate to Severe Depression
  - **SSRIs** preferred
  - **TCAs** can be considered especially if previously effective
- Moderate to Severe Anxiety
  - **SSRIs** preferred
  - **TCAs** can be considered especially if previously effective
  - Short-term use **benzodiazepines** while awaiting onset of action of SSRI or TCA
  - Avoid long acting benzodiazepines, particularly around time of birth
- **SSRIs**, **TCAs**, **short acting benzodiazepines** OK in breast feeding
- Consideration of low dose anti psychotics

Medication for Perinatal Mental Illness

- Bipolar disorder
  - Use caution with anticonvulsants as mood stabilisers in pregnancy and breast feeding
  - **Sodium valproate** associated with major & cardiac malformations and adverse cognitive outcomes
  - **Do not prescribe sodium valproate** (wean over 2-4 weeks with Folic acid 5mg/day)
  - **Carbamazepine** & **lamotrogine** may be associated with major malformations
  - Avoid **lamotrogine** in breast feeding

Medication for Perinatal Mental Illness

- Bipolar disorder
  - **Lithium** may be associated with increased risk of malformations
  - Closely monitor blood levels
  - Reduce dose just prior to onset of labour & recommence after birth at pre-pregnancy dose
  - Avoid **lithium** in breast feeding

Medication for Perinatal Mental Illness

- Bipolar disorder
  - Use caution with any antipsychotic in pregnancy. We commonly use Seroquel or Olanzepine in low doses Monitor for excessive weight gain and GDM
  - Do not initiate **clozapine** in pregnant women and use with caution in breast feeding (monitor infant's WCC weekly for first 6 mo.)

Medication for Perinatal Mental Illness

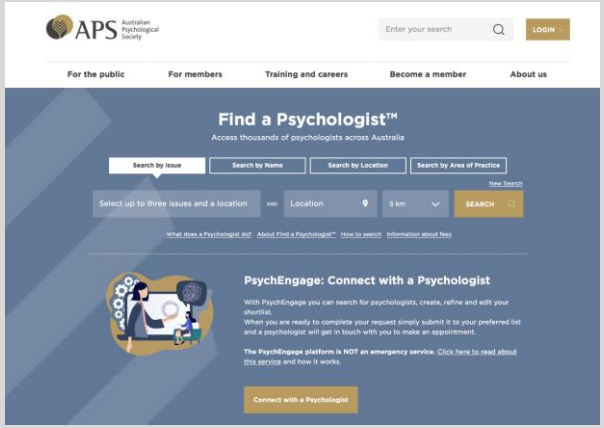
- Choose medication with lowest risk profile for woman, fetus and baby
- Consider previous response to medication
- Use lowest effective dose
- Use a single drug if possible
- Dosages may need to be adjusted due to changes in pharmacodynamics in pregnancy

Medication for Perinatal Mental Illness

- Detailed morphology USS at 18-20 weeks if exposure to psychoactive medications in first trimester
- Pharmacological review early post partum in women who cease psychoactive medications during pregnancy
- Observe infants exposed to psychoactive medications for first 3 days post partum

Management of Perinatal Mental Illness

- Non directive pregnancy support counselling (Item 81000)
  - No Mental Health Treatment Plan required
  - 3 Medicare funded visits.
  - Search for eligible psychologists at www.psychology.org.au
- Mental health treatment plan (Better Access/ATAPs)



Perinatal Pharmacy referrals

- Preferred option is via email
- Pharmacy-MaternityOutpatient-RBWH **Pharmacy-MaternityOutpatient-RBWH@health.qld.gov.au**

- Phone 3646 7300

Management for Amanda

- Risk assessment
  - What should we look for particularly that places her at higher risk
    - ? Past history consider mental health, D and A use , prolonged hyperemysis , consideration of tokophobia
    - ? Social Isolation? Domestic violence
    - Previous history of suicidal ideation and intent
    - Protective factors
    - ? New partner ? LGBTIQ
    - ? Planned Pregnancy explore bonding and attachment to child and unborn child
    - Health screen ? Iron stores, B12 Vit D

Management for Amanda

- Immediate management and for the weekend
  - Restart sertraline ? Given 5mg diazepam for severe distress and potential initiation effects
  - Contact a support person
  - Ensure MH call number is given to both parties
  - Arrange in person review within 24 hours?
  - Emergency contact details – who and what
- Management when business returns to normal
  - Who do we refer to then ???

Mental Health Care in the Perinatal Period

Australian Clinical Practice Guideline

October 2017

COPE

Centre of Perinatal Excellence

cope.org.au

Useful resources

- Centre of Perinatal Excellence
  cope.org.au
- beyond blue
  https://www.beyondblue.org.au/health-professionals
- Massachusetts General Hospital Center for Women's Mental Health
  https://womensmentalhealth.org/?doing_wp_cron=1482262772.0649859905242919921875
- Black Dog Institute
  blackdoginstitute.org.au
- Panda Perinatal Anxiety & Depression Australia
  panda.org.au
- Queensland Centre for Perinatal and Infant Mental Health Library Service
  http://qcpimh.libguides.com/Library/home
- Lavender Mother and Baby Unit Gold Cost University Hospital
  https://www.goldcoast.health.qld.gov.au/our-services/lavender-mother-and-baby-unit
- Victorian Government – Better Health Channel
  https://www.betterhealth.vic.gov.au/health/healthyliving/postnatal-depression-pnd

Useful resources

- Just speak up https://healthyfamilies.beyondblue.org.au/pregnancy-and-new-parents/just-speak-up
- MoodGYM Training Program

  https://moodgym.com.au
- White Cloud Foundation

  http://whitecloudfoundation.org
- AMEND http://betterrelationships.org.au/services/counselling/amend/
- Smiling Mind App

  https://www.smilingmind.com.au/smiling-mind-app/
- Encircle Young Parents Program

  http://encircle.org.au/young-parents-program/
- Assistance to Survivors of Torture & Trauma

  http://qpastt.org.au
- CALD Mental Health Care & Support https://metrosouth.health.qld.gov.au/qtmhc

Useful resources

- PCL *Women talk, we listen…*
  http://www.pcl.org.au/
- Women's Health Queensland Wide
  https://www.womenshealth.org.au
- Lifeline 13 11 44
  https://www.lifeline.org.au
- Parentline Queensland
  https://parentline.com.au/
- Peach Tree
  http://peachtree.org.au/
- Mum Space
  https://www.mumspace.com.au
- SMS for Dads
  www.sms4dads.com.au

Metro North Hospital and Health Service *Putting people first*

Two patients with substance use disorder presenting to your surgery

Jeremy Hayllar

Clinical Director, MNMH ADS

Queensland Government

Penny a 51 year old lawyer

- Presents on Thursday pm before the Easter Long Weekend
- Drinking 3 bottles of wine/day (working from home during the pandemic) over last 12 months
- Begins when she starts work around 08.00
- Decided to use a 4 day break as a great opportunity to stop – thinks her drinking is affecting her work and her memory
- Dr Google says '*just needs some diazepam to get her through*'
- Began binge drinking in late teens, daily drinking, after work over last 30 years (1-2 bottles wine)

Penny a 51 year old lawyer

- Low mood, lacking motivation hope for future
- No thoughts of self harm
- Recent messy divorce
- Ongoing custody battle over 12 year old daughter
- Father was a big drinker
- Previous ‘cold turkey’ efforts to stop drinking lasted only a few days, typically because of poor sleep and growing cravings
- No history of seizures, lives alone, custody of daughter half time
- No other substances, non-smoker, nil prescribed
- Last alcohol: the night before – 3 bottles wine

Penny a 51 year old lawyer:

- OE BAL 0.14%, plethoric, fine tremor, pulse 92, BP 145 / 90, bruising +
- Abdomen soft, smooth tender 5cm liver edge below costal margin
- Romberg – abnormal, no nystagmus
- Request: U&E, LFT, Mg, FBC, platelets, clotting
- ?in-patient (declined) > out-patient – Biala provides daily review
- Risk of withdrawal seizures in the first 24 - 48 hours
- Caution use of diazepam with a raised BAL

Penny: Withdrawal Regime

- Rx diazepam: divided doses, staged supply (clinic or pharmacy)
- Day 1 and 2: 40 mg
- Day 3 and 4: 25 mg
- Day 5: 10 mg ie total 28 tablets
- Thiamine 100 mg tds
- Magnesium (Magmin) 500 mg tds
- May need antacid / antiemetic / antihypertensives

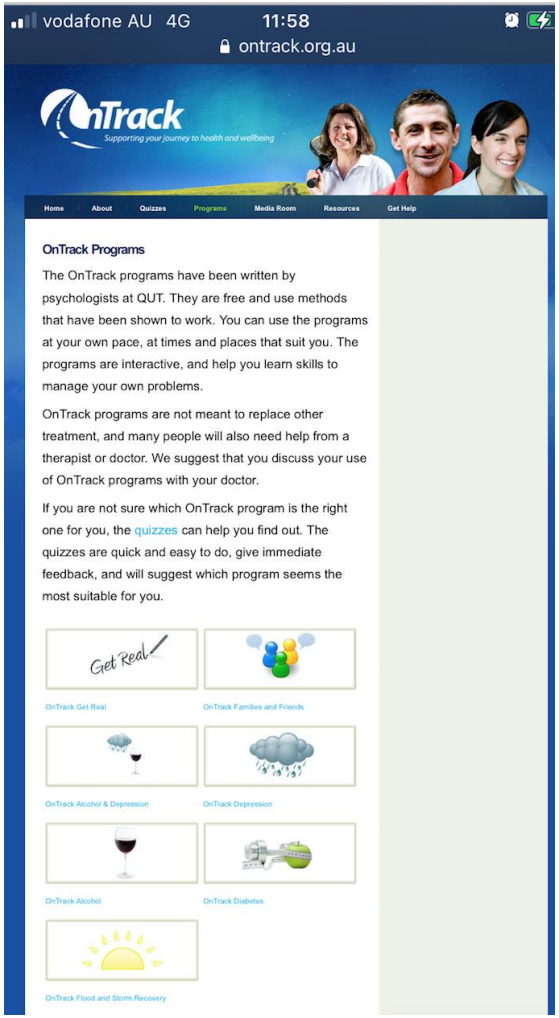
- ADCAS – 1800 290 928 if specialist support needed

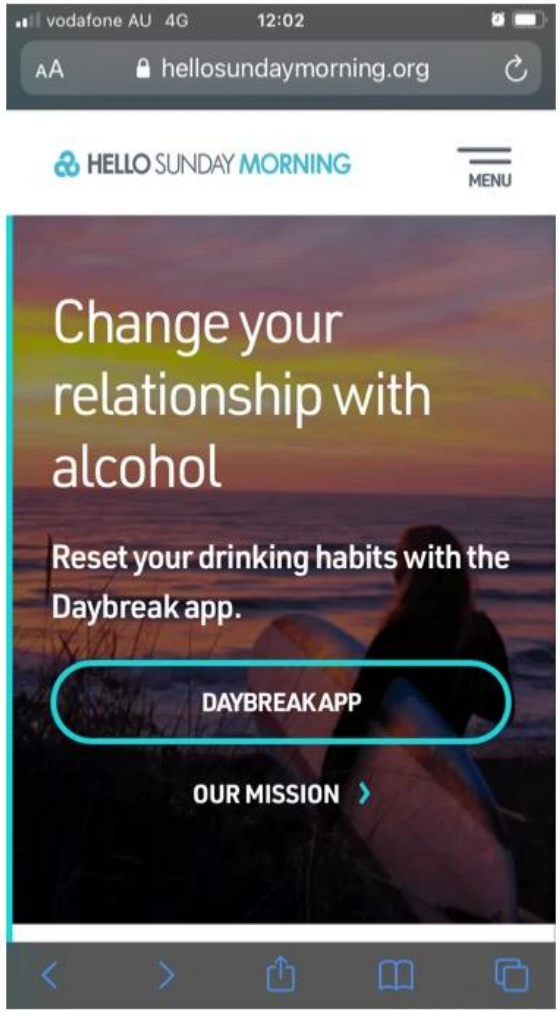
Penny a 51 year old lawyer: Where next?

- Anti-craving medications – 2 first line agents indicated as part of a *comprehensive treatment program with goal of maintaining abstinence*
- naltrexone 50 mg tablets (assuming LFT ~OK)
  - PBS authority 30 tabs and 1 repeat
- acamprosate 333 mg capsules (assuming renal function OK)
  - PBS streamline (5366) 180 caps and 1 repeat

  disulfiram off PBS, topiramate off label, baclofen off label.

- Talking therapy ie psychology: CBT / ACT / Mindfulness
- Groups: AA or SMART recovery
- Range of on-line resources: On-track (QUT) HSM
- More broadly: purpose / meaning – exercise, avoiding boredom, goal setting
- ?antidepressant Rx





- Caution re range of private rehab facilities boasting equine therapy and more!
- $$$ implies quality programs
- May not deliver

Paul a 17 year old male with IDDM

- The next patient, parents in the waiting room!
- Using up to 20 mg alprazolam per day over the past week, with escalating doses over the past few months (street supplies)
- Spent last night in watchhouse – criminal damage charges
- 18 months ago while an inpatient with diabetic keto-acidosis received temazepam for sleep – near daily use BZD since
- History of generalized anxiety since primary school
- Limited adherence to diet and insulin regime
- Parents ‘at their wits end’

Paul a 17 year old male with IDDM

- Significant BZD tolerance (20 mg alprazolam=~100 – 200 mg diazepam)
- Risk of seizures with abrupt discontinuation – also resurgence of anxiety
- Alprazolam T ½ ~9-20 hours – with rapid *on* and *off* effects
- **Plan:** support gradual BZD withdrawal using diazepam, with active metabolites > T ½ (30-200 hours per eTG)
- In view of IDDM and high doses involved, ?commence withdrawal in hospital
- Paul declined – start at 40 mg diazepam daily supply and regular review
- CIWA B may help monitor progress / medication requirement
- Some street supplies contain other BZD (ie etizolam highly potent)
- Growing use of internet / dark web > Australia Post to purchase substances

Paul a 17 year old male with IDDM

- CIWA B around 50/80, slowly dropped over next few weeks
- Stabilised on 50 mg diazepam daily, staged supply
- Agreed to drop 5 mg per day, each week
- When he reached 25 mg per day, reductions of 2.5 mg / day weekly
- Discussed anti-depressant Rx – mirtazapine can be helpful
- Overall 4-6-9 month process, some flexibility, working with patient
- Psychology input around anxiety / stress management – though cognition / memory compromised at high dose BZD
- Youth focused service to provide ongoing support

Learning outcomes

- Contrast alcohol and benzodiazepine withdrawal management
- Risk of withdrawal seizures: alcohol 1st 24-48 hrs, BZD up to 1 month
- Withdrawal is merely *crossing the threshold* to begin a 'recovery journey'
- Benzodiazepines 'alcohol in a pill' – avoid use with alcohol or beyond 7 days
- Thiamine for those with alcohol use disorder: 100 mg tds 1/12, parenterally 300 – 500 mg tds in cases of poor nutrition or risk of WKS
- 'Trauma informed' approach – aim to help Paul manage his anxiety
- Range of self-help groups – SMART recovery may be preferrable
- benzo.org.uk may be helpful for more background – user forums etc
- *'THE RESOURCE SITE FOR INVOLUNTARY BENZODIAZEPINE TRANQUILLISER ADDICTION, WITHDRAWAL & RECOVERY'*

Resources

my safety plan

1 My warning signs

Things that let me know I might be heading towards a crisis

I feel this way because...

3 Things I can do or places I can go to take my mind off it

5 Moving forward

What I can do to move forward (this can be big steps or small steps)

Things I look forward to...

2 Making my environment safer

4 People and services I can lean on for support

This plan belongs to: .....

This plan was first made on (date): ...../...../.....

This plan will be updated on (date): ...../...../.....

Helpful tip: take a photo of this plan on your phone so you have it with you.

Confidential helplines and webchats/websites

Kids Helpline 1800 55 1800 (24hrs/7days)

eheadspace 1800 650 890 (9am-1am/7days)

Lifeline 13 11 14 (24hrs/7days)

Your team and crisis supports:

Support Person:.....

Phone: .....

MHCall **1300 64 22 55** (QLD - 24hrs/7days)

IN AN EMERGENCY CALL 000
OR GO TO YOUR CLOSEST HOSPITAL

Queensland Government

my safety plan

Example

1 My warning signs

Things that let me know I might be heading towards a crisis

- feeling empty
- can't sleep
- yelling at everyone
- Feeling like life is too hard

I feel this way because...

- I can't see a future
- I feel unlovable
- I can't go back to school after what happened

3 Things I can do or places I can go to take my mind off it

- listen to music
- take a hot shower
- draw
- watch youtube
- watch a TV show
- my friends house
- uncles house
- Just being outside

5 Moving forward

What I can do to move forward (this can be big steps or small steps)

- Try to follow this plan if I am thinking of hurting myself
- Try to talk about my feelings and not bottle them up
- Mum will talk with school about what's going on

Things I look forward to...

- Getting my licence
- My friends

2 Making my environment safer

- Give my meds to someone else.
- Ask mum to hold on to my phone if Facebook is upsetting me

4 People and services I can lean on for support

- Sam (friend)
- Mum
- Uncle Tim
- Rachael (sister)
- CYMHS person
- eheadspace online chat
- 000 if things are really bad

This plan belongs to: Jaime Walker

This plan was first made on (date): 06/08/2019

This plan will be updated on (date): 13/08/2019

Helpful tip: take a photo of this plan on your phone so you have it with you.

Confidential helplines and webchats/websites

Kids Helpline 1800 55 1800 (24hrs/7days)
eheadspace 1800 650 890 (9am-1am/7days)
Lifeline 13 11 14 (24hrs/7days)

Your team and crisis supports:

Support Person : Emma O'Donnell
Phone: .....
MHCall 1300 64 22 55 (QLD - 24hrs/7days)

IN AN EMERGENCY CALL 000
OR GO TO YOUR CLOSEST HOSPITAL

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Child and Youth Mental Health Service

Safety Planning Templates

New co-designed safety planning templates for young people and parents/carers in suicidal crisis.

A Safety Plan is meant to be owned by the young person or parents/carers as a tool that is personalised to meet their needs in a suicidal crisis and should travel with them across care providers and services.

Safety Planning is an evidence based (Stanley & Brown, 2009) brief intervention which aids in mitigating suicide risk. Safety Plans come in many different formats from written, app based, or picture based to name a few. A Safety Plan should be a dynamic document that is completed collaboratively with the young person and their carers, updated regularly and where consent is provided, shared across care providers.

In completing a Safety Plan the clinician/doctor collaboratively supports a young person and or parent/carer to identify and document:

- warning signs
- internal coping strategies
- social situations and people that can help to distract
- people that can be asked for help
- professionals/crisis services that can be contacted for help, and
- how to make the environment safe.

The NEW safety plan templates listed below have been co-designed with CYMHS staff and young people and parents/carers with lived experience of suicide as part of CHQ HHS's Generation Zero Suicide (GenZs) Initiative to support this intervention.

Youth Friendly Safety Plan Template

A safety plan in a youth friendly format to be completed collaboratively with the young people who presents with any risk of suicide. Safety planning is not limited to this template and any format can be used to facilitate engagement and understanding with the young person.

A safety plan **must** be completed in a format that the young person can reference outside of the appointment/assessment (e.g. paper, taking a photo, app*) and a copy should be uploaded onto the young person's medical record for future reference.

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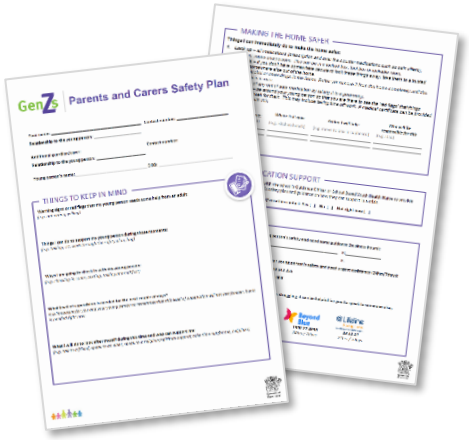
Parent/carer Safety Plan Template



A Safety Plan specifically designed to provide containment and guidance to parents/carers supporting a young person in a suicidal crisis.

The safety plan is to be completed collaboratively with the parent/carer who's young person presents with any risk of suicide.

A parent/carer safety plan **must** be completed in a format that the parent/carer can reference outside of the appointment (e.g. paper, taking a photo) and a copy should be uploaded onto their young person's medical record for future reference.

GenZs
GenerationZEROsuicide

The Generation Zero Suicide (GenZs) Initiative utilises co-design to ground the implementation of the "Zero Suicide in Healthcare Approach" within a child and youth mental health public healthcare setting. This means young people and parent/carers with a lived experience of suicide were involved from the outset, working alongside health care leadership and frontline clinicians to ensure the outputs of the initiative met the real needs of young people and their families.

Contact us

Suicide Prevention Coordinator | CHQ CYMHS
Level 10, 199 Grey Street, South Brisbane QLD 4101
t 07 3310 9444
e CHQ-CYMHS-ZeroSuicide@health.qld.gov.au
w www.childrens.health.qld.gov.au

Parents and Carers Safety Plan

Your name: _____ **Contact number:** _____

Relationship to the young person: _____

Additional guardian/carer: _____ **Contact number:** _____

Relationship to the young person: _____

Young person's name:_____ **DOB:** _____

THINGS TO KEEP IN MIND

Warning signs or red flags that my young person needs some help from an adult:
(e.g. not eating, yelling)

Things I can do to support my young person during those moments:
(e.g. talking, TV, work through the safety plan, hug)

Ways I am going to check in with my young person:
(e.g. checking-in codes, texting, talking at breakfast)

What level of supervision is needed for the next couple of days?
It is important for you and your young person to remember that this level of supervision will not last forever, but it is needed right now.

What I will do to look after myself during this time and who can support me:
(e.g. talk to a friend, speak to an elder, speak to a religious/spiritual support, take time out for me, helplines)

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MAKING THE HOME SAFER

Things I can immediately do to make the home safer:

1. ***Lock up –*** *all medications (prescription and over the counter medications such as pain killers), weapons, ropes and poisons. This can be in a locked box, tool box or lockable room.*
2. ***Relocate –*** *if you don't have somewhere secure to lock these things away, take them to a trusted adult or somewhere else out of the home.*
3. ***Limit –*** *alcohol or other drugs in the home. Better yet remove it from the home completely until the suicidal crisis is over.*
4. ***Dispose –*** *of any out of date medication by taking it to a pharmacy.*
5. ***Supervise –*** *be around your young person so that you are there to see the 'red flags' that things aren't going well for them. This may include taking time off work. A medical certificate can be provided to help you with this.*

Item to lockup/remove:	***Where is it now***	***Action I will take***	***Who will be responsible for this***
(e.g. large knives)	(e.g. kitchen bench)	(e.g. move to box in cupboard)	(e.g. Dad)

SCHOOL/VOCATION/MENTAL HEALTH SUPPORT

The treating team can speak with the school's Guidance Officer, School Based Youth Health Nurse and/or other mental health supports to provide them with your young person's safety plan and guidance on how they can support in a crisis.

I give consent for school/vocation contact: **Yes [ ] No [ ] Not right now [ ]**

I give consent for mental health support contact: **Yes [ ] No [ ] Not right now [ ]**

WHO TO CALL

If you are concerned for your young person's safety and need some guidance (business hours):

Clinician/Doctor: _____ P:_____

Other Service: _____ P:_____

If you have immediate concerns for your young person's safety and need urgent assistance (24hrs/7days):

1300 MH CALL *(Queensland)*: **1300 642 255**

Ambulance or Police – Triple Zero: **000**

As a parent/carer of a young person who is struggling it can be helpful for you to speak to someone also, helplines are a good place to start.

parentline
1300 30 1300
8am – 10pm, 7days

Beyond Blue
1300 22 4636
24hrs / 7days

Lifeline Saving Lives
Crisis Support. Suicide Prevention.
13 11 14
24hrs / 7days

Queensland Government

CIWA-Ar

Clinical Institute Withdrawal Assessment of Alcohol Scale - Revised

Date:

Name:

NAUSEA AND VOMITING

Ask "Do you feel sick to your stomach? Have you vomited?" Observation.

0 No nausea and no vomiting
1 Mild nausea with no vomiting
2
3
4 Intermittent nausea with dry heaves
5
6
7 Constant nausea, frequent dry heaves and vomiting

TREMOR

Arms extended and fingers spread apart. Observation.

0 No tremor
1 Not visible, but can be felt fingertip to fingertip
2
3
4 Moderate, with patient's arms extended
5
6
7 Severe, even with arms not extended

PAROXYSMAL SWEATS

Observation.

0 No sweat visible
1 Barely perceptible sweating, palms moist
2
3
4 Beads of sweat obvious on forehead
5
6
7 Drenching sweats

ANXIETY

Ask "Do you feel nervous?" Observation.

0 No anxiety, at ease
1 Mild anxious
2
3
4 Moderately anxious, or guarded, so anxiety is inferred
5
6
7 Equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

AGITATION

Observation.

0 Normal activity
1 Somewhat more than normal activity
2
3
4 Moderately fidgety and restless
5
6
7 Paces back and forth during most of the interview, or constantly thrashes about

TACTILE DISTURBANCES

Ask "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?" Observation.

0 None
1 Very mild itching, pins and needles, burning or numbness
2 Mild itching, pins and needles, burning or numbness
3 Moderate itching, pins and needles, burning or numbness
4 Moderately severe hallucinations
5 Severe hallucinations
6 Extremely severe hallucinations
7 Continuous hallucinations

AUDITORY DISTURBANCES

Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.

0 Not present
1 Very mild harshness or ability to frighten
2 Mild harshness or ability to frighten
3 Moderate harshness or ability to frighten
4 Moderately severe hallucinations
5 Severe hallucinations
6 Extremely severe hallucinations
7 Continuous hallucinations

VISUAL DISTURBANCES

Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.

0 Not present
1 Very mild sensitivity
2 Mild sensitivity
3 Moderate sensitivity
4 Moderately severe hallucinations
5 Severe hallucinations
6 Extremely severe hallucinations
7 Continuous hallucinations

HEADACHE, FULLNESS IN HEAD

Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

0 Not present
1 Very mild
2 Mild
3 Moderate
4 Moderately severe
5 Severe
6 Very severe
7 Extremely severe

ORIENTATION AND CLOUDING OF SENSORIUM

Ask "What day is this? Where are you? Who am I?"

0 Oriented and can do serial additions
1 Cannot do serial additions or is uncertain about date
2 Disoriented for date by no more than 2 calendar days
3 Disoriented for date by more than 2 calendar days
4 Disoriented for place/or person

Withdrawal scales were developed to assist the monitoring and management of withdrawal symptoms. It is important to note that withdrawal scales are not diagnostic tools.

Interpretation of scores. The maximum score is 67. Patients scoring less than 10 do not usually need additional medication for withdrawal.

Total CIWA-Ar Score:

Source: Sulivan JT, Sykora K, Schneiderman J, Naranjo CA, Sellers EM. Assessment of alcohol withdrawal: The Revised Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA-Ar). British Journal of Addiction to Alcohol and Other Drugs. 1989;84(11):1353-7. doi: 10.1111/j.1360-0443.1989.tb00737.x

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Centre for alcohol and other drug training and workforce development

Tracey Mackle

From: Tracey Mackle
Sent: Monday, 27 May 2019 9:36 AM
To: amy.stretton@gmail.com
Subject: Fact Sheet
Attachments: sertraline.pdf

Hi Amy

Lovely to talk to you today

10 Nellie Street
Nundah 4012

Thursday 1pm – 30th May
Perinatal Mental Health Team
Appt is with Adele

Kind Regards
Tracey

CIWA-B

Clinical Institute Withdrawal Assessment Scale - Benzodiazepines

Name:

Objective physiological assessment

For each of the following items, please circle the number which best describes the severity of each symptom or sign.

1	Observe behaviour for restlessness and agitation	0 None, normal activity	1	2 Restless	3	4 Paces back and forth, unable to sit still
2	Ask patient to extend arms with fingers apart, observe tremor	0 No tremor	1 Not visible, can be felt in fingers	2 Visible but mild	3 Moderate, with arms extended	4 Severe, with arms not extended
3	Observe for sweating, feel palms	0 No sweating visible	1 Barely perceptible sweating, palms moist	2 Palms and forehead moist, reports armpit sweating	3 Beads of sweat on forehead	4 Severe drenching sweats

Patient self-report

For each of the following items, please circle the number which best describes how you feel.

4	Do you feel irritable?	0 Not at all	1	2	3	4 Very much so
5	Do you feel fatigued (tired)?	0 Not at all	1	2	3	4 Unable to function due to fatigue
6	Do you feel tense?	0 Not at all	1	2	3	4 Very much so
7	Do you have difficulties concentrating?	0 No difficulty	1	2	3	4 Unable to concentrate
8	Do you have any loss of appetite?	0 No loss	1	2	3	4 No appetite, unable to eat
9	Have you any numbness or burning in your face, hands or feet?	0 No numbness	1	2	3	4 Intense burning or numbness
10	Do you feel your heart racing (palpitations)?	0 No disturbance	1	2	3	4 Constant racing
11	Does your head feel full or achy?	0 Not at all	1	2	3	4 Severe headache
12	Do you feel muscle aches or stiffness?	0 Not at all	1	2	3	4 Severe stiffness or pain
13	Do you feel anxious, nervous or jittery?	0 Not at all	1	2	3	4 Very much so
14	Do you feel upset?	0 Not at all	1	2	3	4 Very much so
15	How restful was your sleep last night?	0 Very restful	1	2	3	4 Not at all
16	Do you feel weak?	0 Not at all	1	2	3	4 Very much so
17	Do you think you had enough sleep last night?	0 Yes, very much so	1	2	3	4 Not at all
18	Do you have any visual disturbances? (sensitivity to light, blurred vision)	0 Not at all	1	2	3	4 Very sensitivity to light, blurred vision
19	Are you fearful?	0 Not at all	1	2	3	4 Very much so
20	Have you been worrying about possible misfortunes lately?	0 Not at all	1	2	3	4 Very much so

21	How many hours of sleep do you think you had last night?	
22	How many minutes do you think it took you to fall asleep last night?	

Total CIWA-B Score:	

Interpretation of scores: Sum of items 1-20

1–20 = mild withdrawal
21–40 = moderate withdrawal
41–60 = severe withdrawal
61–80 = very severe withdrawal

Source: Busto UE, Sykora K, Sellers EM. A clinical scale to assess benzodiazepine withdrawal. Journal of Clinical Psychopharmacology. 1989;9(6):412-6. doi: 10.1097/00004714-198912000-00005

insight
Centre for alcohol and other drug training and workforce development

Withdrawal scales were developed to assist the monitoring and management of withdrawal

Citalopram - Pregnancy and Breastfeeding

This fact sheet is for women who take citalopram and are concerned about its effects on pregnancy and breastfeeding. It does not include information about all the side effects and should be read in addition to information provided with the product. It is very important that you speak to a doctor before you decide to change or stop taking citalopram. For further advice regarding exposure to citalopram, your doctor may contact the Perinatal Psychotropic Medicines Information Service (PPMIS) telephone line on (03) 8345 3190 on your behalf.

What is citalopram?

Citalopram belongs to a class of medicines called selective serotonin reuptake inhibitors (SSRI). It is used to treat major depression and anxiety disorders (e.g. obsessive-compulsive disorder, panic disorder, generalised anxiety disorder, post-traumatic stress disorder and social phobia).

Should I stop taking citalopram before becoming pregnant?

There are high rates of relapse in people who stop taking citalopram. Studies have suggested that untreated depression during pregnancy is associated with pregnancy complications and adverse pregnancy outcomes [1]. The decision to stop, start or to continue taking citalopram, or to change how you take citalopram, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment choices in your individual situation. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking citalopram during pregnancy cause birth defects?

A birth defect is an abnormality that develops in the baby during pregnancy. All women carry a 3 to 5 percent risk of having a baby with a birth defect (that is, 3 to 5 births in 100). Of all the antidepressants that are used during pregnancy, citalopram is one of the most studied. While some studies have linked citalopram to some form of birth defects, most studies have shown that there is no association between citalopram and birth defects.[2-4] However, because the findings are inconsistent, it is important that you and your doctor discuss your individual situation either before you become pregnant or during your pregnancy. Stopping citalopram can also put your pregnancy at risk.

Are there any other concerns if I continue taking citalopram during late pregnancy?

Inconclusive information suggests babies may be at a slightly increased risk of developing pulmonary hypertension - a potentially serious lung problem, when mothers take citalopram during late pregnancy. Pulmonary hypertension is a very rare condition, affecting 1 to 2 babies out of 1000 births. Majority of women (99%) taking SSRIs give birth to healthy babies.[5,6] Tell your obstetrician if you are taking citalopram, as you and your baby will need to be monitored during late pregnancy.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to predict if your baby will have withdrawal symptoms from citalopram after the birth. Withdrawal symptoms reported include problems with breathing, irritability, tremor difficulty feeding and problems with sleep. The symptoms will usually be mild and your baby is likely to recover without treatment. However, some babies may need to stay in a special care nursery for a few days until the symptoms resolve.[7]

Will taking citalopram have any long term effects on my baby's behaviour and development?

There have been limited studies about the long term effects on baby behaviour and development following exposure to citalopram during pregnancy. Based on the available information, children exposed to citalopram during pregnancy do not have any significant differences in their behavioural and development compared to children not exposed to the medicine.[8-10]

Can I breastfeed my baby if I continue taking citalopram?

There are several published reports on citalopram and breastfeeding. Very small amounts of citalopram are found in breast milk but no serious or harmful effects have been found in breastfed babies.[11] Watch your baby for any potential effects such as drowsiness, irritability, poor feeding and restlessness. Discuss with your doctor or other healthcare providers the risks and benefits associated with taking citalopram while breastfeeding your baby.

If you have questions about the information on this fact sheet or other medicine exposures during pregnancy, call the Royal Women's Hospital Medicine Information Service on **03-8345 3190.**

DIAZEPAM

This fact sheet is for women who take diazepam and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking diazepam.

What is diazepam?

Diazepam belongs to a group of medicines called benzodiazepines. These medicines are used to treat anxiety, sleeplessness, seizures, muscle spasms and alcohol withdrawal.

Should I stop taking diazepam before becoming pregnant?

The decision to stop, start or to continue taking diazepam, or to change how you take diazepam, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Do not stop taking diazepam suddenly because you may experience withdrawal symptoms. The effect of withdrawal symptoms on pregnancy is unknown. For this reason, if you and your doctor decide to stop diazepam before you become pregnant, it is likely that your doctor will reduce your dose slowly until you stop the medicine, or until you have been reached the lowest dose that helps to control your symptoms.

Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking diazepam during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect).

Some older studies have suggested there is an increased chance of having a baby with a cleft lip and palate if diazepam is taken in the first trimester,[1,2] but more recent studies have not supported this information.[3,4] It is important you and your doctor talk about your situation before you become pregnant or as soon as you find out you are pregnant.

Are there any other concerns if I continue taking diazepam throughout the pregnancy? Will my baby have withdrawal symptoms after the birth?

Diazepam use during pregnancy seems to be linked with a slight increased chance of babies being born early and having a low birth weight.[5] When diazepam is used close to the time of delivery, there may be an increased chance of withdrawal symptoms in your baby. Withdrawal symptoms may include difficulty breathing, muscle weakness, irritability, crying, sleep disturbances,

tremors, jitteriness, vomiting and diarrhoea. These symptoms are usually mild and do not last very long, but may require some supportive treatment.[6,7] High doses of diazepam should be avoided near the time of delivery.

It is important you speak to your doctor about reducing the dose of diazepam during pregnancy if possible. It is also important you tell your obstetrician, midwife and pharmacist that you are taking diazepam, so they can monitor your baby for signs of withdrawal.

Will taking diazepam have any long-term effects on my baby's behaviour and development?

There is not a lot of information about the long-term effects of diazepam on behaviour and development in children whose mothers were taking diazepam during pregnancy. It is not known if the medicine will cause any long-term effects.

Can I breastfeed my baby if I continue taking diazepam?

Very small amounts of diazepam are known to cross into the breast milk.[8] Large doses and regular use of diazepam can lead to a build-up of the medicine in the breast milk. The decision to breastfeed your baby while taking diazepam needs to be considered on an individual case basis. It is important to talk to your doctor or other health care providers about the risks and benefits of taking diazepam while breastfeeding your baby.

If you choose to breastfeed while taking diazepam, observe your baby closely for side effects, which may include drowsiness, weight loss, poor feeding and restlessness.

Where to get more information

If this fact sheet does not answer your questions about diazepam or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

Medicines Information Service

Pharmacy Department
Level 1, The Royal Women's Hospital
Cnr Grattan St & Flemington Rd
Parkville VIC 3052

Hours: 9am to 4pm Monday to Friday
T: (03) 8345 3190
F: (03) 8345 3195
E: drug.information@thewomens.org.au

DOSULEPIN (DOTHIEPIN)

This fact sheet is for women who take dosulepin and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking dosulepin.

What is dosulepin?

Dosulepin is a medicine used for the treatment of depression.

Should I stop taking dosulepin before becoming pregnant?

The decision to stop, start or to continue taking dosulepin before becoming pregnant must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Ongoing consultation with your health care providers is very important once you become pregnant.

Can taking dosulepin during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect).
Dosulepin has not been linked to an increased chance of having a baby with birth defects.[1,2] If you need to use dosulepin during pregnancy, use the lowest possible dose to control your symptoms.

Are there any other concerns if I take dosulepin during late pregnancy?

A small number of babies may develop withdrawal symptoms after birth. Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from dosulepin after they are born. Withdrawal symptoms can include problems with breathing, sleeping, feeding, irritability and tremors. The symptoms are usually mild and your baby is likely to recover without treatment.[1,3]
Some babies may need to stay in a special care nursery for a few days until the symptoms go away. Tell your obstetrician and midwife if you are taking dosulepin so they can monitor you and your baby after birth.

Will taking dosulepin have any long-term effects on my baby's behaviour and development?

Information about the long term behaviour and development in children of women who used dosulepin during pregnancy is very limited. Most studies have shown that the brain development in children of women who used an antidepressant during pregnancy were no different from children of women who did not use any medicines.[4-6]

the women's
the royal women's hospital
victoria australia

Can I breastfeed my baby if I take dosulepin?

Very small amounts of dosulepin have been found in breast milk, but no serious side effects have been found in breastfed babies.[7,8] It is important to talk to your health care providers about your options. Dosulepin is considered safe to use during breastfeeding.

If you choose to breastfeed while taking dosulepin, watch your baby for possible side effects such as drowsiness, irritability, poor feeding and restlessness.

A small follow-up study has suggested that there is no significant difference in long-term child development in preschool children who had been exposed to dosulepin in breast milk in the first year of life compared to the non-exposed group.[9] Talk with your doctor or other health care providers about the risks and benefits of taking dosulepin while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about dosulepin or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

Medicines Information Service

Pharmacy Department
Level 1, The Royal Women's Hospital
Cnr Grattan St & Flemington Rd
Parkville VIC 3052

Hours: 9am to 4pm Monday to Friday
T: (03) 8345 3190
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E: drug.information@thewomens.org.au

Notes

DULOXETINE

This fact sheet is for women who take duloxetine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking duloxetine.

What is duloxetine?

Duloxetine is a medicine used to treat depression, generalised anxiety disorder and painful diabetic peripheral neuropathy.

Should I stop taking duloxetine before becoming pregnant?

When duloxetine is stopped, your symptoms may come back. The decision to stop, start or to continue taking duloxetine, or to change how you take duloxetine, must be made with your doctor.

You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Factors that may be considered include the type and severity of your condition, whether any other medicine has worked for you in the past or if duloxetine is the only medicine that works for you. The likelihood that your symptoms may return if you stop the medicine or while you change over to another medicine, should also be considered.

Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking duloxetine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). There is not a lot of information about duloxetine use during pregnancy. A few reports have described healthy babies being born to women who took duloxetine during pregnancy.[1-5]

It is important that you and your doctor talk about your situation before you become pregnant or as soon as you find out you are pregnant.[4]

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from duloxetine after they are born.[2, 4, 6]

Withdrawal symptoms can include problems with breathing, irritability, tremor, difficulty feeding and problems with sleep. The symptoms will usually be mild and your baby is likely to recover without treatment.

Let your obstetrician and paediatrician know that you are taking duloxetine so that they can monitor you and your baby closely.

Will taking duloxetine have any long-term effects on my baby's behaviour and development?

There is still no information available about the long-term effects of the medicine on a baby's behaviour and development when the mother takes duloxetine during pregnancy.

Can I breastfeed my baby if I continue taking duloxetine?

Only very small amounts of duloxetine are found in breast milk, but serious side effects have not been found in breastfed babies.[1, 7] Although side effects are rare, watch your baby for signs of excessive drowsiness, irritability, poor feeding and restlessness. Talk with your doctor or other healthcare providers about the risks and benefits of taking duloxetine while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about duloxetine or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

Medicines Information Service

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ESCITALOPRAM

This fact sheet is for women who take escitalopram and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking escitalopram.

What is escitalopram?

Escitalopram belongs to a class of medicines called selective serotonin reuptake inhibitors (SSRI). It is used to treat depression and anxiety disorders (e.g. obsessive-compulsive disorder and social phobia).

Should I stop taking escitalopram before becoming pregnant?

When escitalopram is stopped, your symptoms may come back. Unfortunately, untreated depression during pregnancy can be associated with pregnancy complications.[1] The decision to stop, start or to continue taking escitalopram, or to change how you take escitalopram, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment choices in your individual situation. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking escitalopram during pregnancy cause birth defects?

A birth defect is an abnormality that develops in the baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). So far, there has only been a small amount of research about escitalopram and pregnancy. Most studies have shown that escitalopram is not linked to any increased risk of birth defects.[2-4] It is important that you and your doctor discuss your individual situation before you become pregnant or as soon as you find out you are pregnant.

Are there any other concerns if I continue taking escitalopram during late pregnancy?

There is some information that suggests babies may have a slightly increased chance of developing pulmonary hypertension - a potentially serious lung problem, when mothers take escitalopram during late pregnancy. Pulmonary hypertension is a very rare condition, affecting 1 to 2 babies out of 1000 births. Most women (99%) taking SSRIs give birth to healthy babies who do not develop pulmonary hypertension.[5,6] Tell the obstetrician if you are taking escitalopram, as you and your baby may need to be monitored after delivery.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from escitalopram after they are born.

Withdrawal symptoms can include problems with breathing, sleeping and feeding, irritability and tremors. The symptoms will usually be mild and your baby is likely to recover without treatment.
Some babies may need to stay in a special care nursery for a few days until the symptoms go away.[7]

Will taking escitalopram have any long-term effects on my baby's behaviour and development?

There have been a small number of studies about the long-term effects on baby behaviour and development when escitalopram is taken during pregnancy. From this information, children of women who took escitalopram during pregnancy did not have any significant differences in their behaviour and development compared to children of women who did not use the medicine during pregnancy.[8]

Can I breastfeed my baby if I continue taking escitalopram?

There are several published reports on escitalopram and breastfeeding.[9-11] Only very small amounts of escitalopram are found in breast milk, but serious harmful side effects have not been found in breastfed babies.[10]
Escitalopram is considered safe to use during breastfeeding.
Although side effects are rare, watch your baby for signs of excessive drowsiness, irritability, poor feeding and restlessness.
Talk with your doctor or other health care providers about the risks and benefits with taking escitalopram while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about escitalopram or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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FLUOXETINE

This fact sheet is for women who take fluoxetine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking fluoxetine.

What is fluoxetine?

Fluoxetine belongs to a class of medicines called selective serotonin reuptake inhibitors (SSRI). It is used to treat depression and anxiety disorders (e.g. obsessive-compulsive disorder, panic disorder and post-traumatic stress disorder).

Should I stop taking fluoxetine before becoming pregnant?

When fluoxetine is stopped, your symptoms may come back. Unfortunately, untreated depression during pregnancy can also be associated with pregnancy complications.[1] The decision to stop, start or to continue taking fluoxetine, or to change how you take fluoxetine, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking fluoxetine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). Of all the antidepressants that are used during pregnancy, fluoxetine is one of the most studied. Some studies have linked fluoxetine to birth defects,[2] but most studies have shown that fluoxetine does not cause birth defects.[3-7] As the information about the medicine is inconsistent, it is important that you and your doctor discuss your situation before you become pregnant or as soon as you find out you are pregnant.

Are there any other concerns if I continue taking fluoxetine during late pregnancy?

There is some information that suggests babies may have a slightly increased chance of developing pulmonary hypertension - a potentially serious lung problem, when mothers take fluoxetine during late pregnancy. Pulmonary hypertension is a very rare condition, affecting 1 to 2 babies out of 1000 births. Most women (99%) taking fluoxetine will give birth to healthy babies who do not develop pulmonary hypertension.[8] Tell the obstetrician if you are taking fluoxetine, as you and your baby may need to be monitored after delivery.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from fluoxetine after they are born. Withdrawal symptoms can include problems with breathing, sleeping and feeding, irritability and tremors. The symptoms will usually be mild and your baby is likely to recover without treatment.
Some babies may need to stay in a special care nursery for a few days until the symptoms go away.[9,10]

Will taking fluoxetine have any long-term effects on my baby's behaviour and development?

There are only a small number of studies about the possible long-term effects of fluoxetine on your baby's behaviour and development. From this information, children of women who took fluoxetine during pregnancy did not have any significant differences in their behaviour and development compared to children of women who did not use the medicine during pregnancy.[11,12]

Can I breastfeed my baby if I continue taking fluoxetine?

As fluoxetine lasts in the body for a long time, it is not the preferred medicine for breastfeeding mothers. Also, very small amounts of fluoxetine have been found in breast milk and some side effects have been seen in breastfed babies.[13]
If you use fluoxetine and breastfeed your baby, watch your baby for signs of excessive drowsiness, irritability, poor feeding and restlessness.

Talk with your doctor or other healthcare providers about the risks and benefits of taking fluoxetine while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about fluoxetine or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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REVIEW

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Lithium during pregnancy and after delivery: a review

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Abstract

Lithium is an effective treatment in pregnancy and postpartum for the prevention of relapse in bipolar disorder. However, lithium has also been associated with risks during pregnancy for both the mother and the unborn child. Recent large studies have confirmed the association between first trimester lithium exposure and an increased risk of congenital malformations. Importantly, the risk estimates from these studies are lower than previously reported. Tapering of lithium during the first trimester could be considered but should be weighed against the risks of relapse. There seems to be no association between lithium use and pregnancy or delivery related outcomes, but more research is needed to be more conclusive. When lithium is prescribed during pregnancy, lithium blood levels should be monitored more frequently than outside of pregnancy and preferably weekly in the third trimester. We recommend a high-resolution ultrasound with fetal anomaly scanning at 20 weeks. Ideally, delivery should take place in a specialised hospital where psychiatric and obstetric care for the mother is provided and neonatal evaluation and monitoring of the child can take place immediately after birth. When lithium is discontinued during pregnancy, lithium could be restarted immediately after delivery as strategy for relapse prevention postpartum. Given the very high risk of relapse in the postpartum period, a high target therapeutic lithium level is recommended. Most clinical guidelines discourage breastfeeding in women treated with lithium. It is highly important that clinicians inform and advise women about the risks and benefits of remaining on lithium in pregnancy, if possible preconceptionally. In this narrative review we provide an up-to-date overview of the literature on lithium use during pregnancy and after delivery leading to clinical recommendations.

Keywords: Lithium, Pregnancy, Perinatal, Bipolar disorder, Postpartum psychosis, Congenital malformations, Review, Breastfeeding, Delivery, Neurodevelopment

Background

Lithium therapy has a well-established evidence base as a long-term maintenance treatment for bipolar disorder with demonstrated efficacy in reducing both manic and depressive relapse and anti-suicidal properties (Geddes and Miklowitz 2013). Bipolar disorder often has its onset before the age of 25 years (Merikangas et al. 2011), and as such lithium is frequently prescribed to women of childbearing age. However, there is enormous global variance in prescription patterns of lithium and recommendations for its use during the perinatal period (defined as pregnancy and the first year postpartum). In general, data on the prevalence of lithium use during pregnancy are scarce with the exception of population-based studies from Denmark and the UK. In a recent clinical overview, the Danish author Larsen and colleagues recommended lithium as the first-line mood-stabilizing treatment during pregnancy (Larsen et al. 2015). Despite this recommendation, only 16% (53/336) of women with bipolar disorder redeemed at least one lithium prescription during pregnancy and only 6.3% of women used lithium in the third trimester, indicating that the majority of women discontinued lithium during pregnancy (Broeks et al. 2017). Similarly, in the UK discontinuation rates of lithium during pregnancy is high with a study of pregnant women showing that only 17 out of 52 pregnant women

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continued lithium use during pregnancy (McCrea et al. 2015). This pattern of discontinuation of lithium before pregnancy is supported by the NICE guideline where it is recommended to "not offer lithium to women who are planning a pregnancy or pregnant, unless antipsychotic medication has not been effective" (National Collaborating Centre for Mental H 2014). For most other countries information on lithium use during pregnancy is lacking. In a recent meta-analysis on bipolar disorder in the perinatal period, 5700 bipolar pregnancies (n = 37 studies) were included (Wesseloo et al. 2016). Of these, information on medication use was only available for 445 bipolar pregnancies (60 women with various medication including lithium and 385 women without medication). Most of these lithium users came from the Netherlands, which can be explained by the recommendation in the Dutch guidelines to list lithium as a first line treatment option during pregnancy (Trimbos-instituut 2015). In the Australian Clinical Practice Guideline on perinatal mental health, no specific recommendation was made to continue or discontinue lithium during pregnancy, but rather proposes care pathways for both situations (Austin et al. 2017). Altogether, guidelines give inconsistent and highly variable information regarding the safety of lithium use during pregnancy. A comprehensive Canadian review of recommendations for the treatment of bipolar disorder during pregnancy recommended: "Women at risk for new onset or relapse of a mood episode who are not on maintenance treatment should be considered for trial of a mood stabilizer other than valproate, or an atypical antipsychotic drug" (Sharma and Sharma 2016).

To guide clinicians in their decision making we provide a narrative review of the literature on efficacy of lithium use in the perinatal period and the risks for mother and child.

Lithium during pregnancy

Efficacy

To date the literature on the impact of pregnancy on the course of bipolar disorders is inconsistent. Previous studies suggested that women with bipolar disorder may have a lower risk of relapse during pregnancy, when compared to the period before or after (Grof et al. 2000). A recent systematic review concluded that based on the literature to date the question of how pregnancy affects the course of bipolar disorder can't be answered (Salim et al. 2018). Viguera et al. showed that in women who discontinued mood stabilizing treatment including lithium during pregnancy (n = 62), the relapse risk was two times increased compared to women who continued treatment (n = 27) (Viguera et al. 2007). In the postpartum period there is a high risk of a bipolar episode and hospitalization for psychiatric morbidity (Munk-Olsen et al. 2006; Harlow et al. 2007; Di Florio et al. 2013). A perinatal history of affective psychosis or depression is the most important risk factor, as reported in a recent cohort study investigating risk factors for postpartum recurrence in bipolar disorder (Di Florio et al. 2018). Unfortunately, this study did not investigate the effect of medication use during pregnancy on the risk of recurrence. A recent meta-analysis showed significantly higher postpartum relapse rates in women without medication during pregnancy (N = 385; 66%, 95% CI 57–75) as compared to women using prophylactic medication (N = 60, 23%, 95% CI 14–37) (Wesseloo et al. 2016). Of these 60 patients with prophylactic medication during pregnancy, the majority used lithium (Bergink et al. 2012; Austin 1992; Freeman et al. 2002; Bilszta et al. 2010). Hence, lithium prophylaxis during pregnancy in women with bipolar disorder might be important not only to maintain mood stability during pregnancy, but also for postpartum relapse prevention.

Interestingly, a recent population based cohort study reported that lamotrigine during pregnancy was not inferior to lithium in the prevention of severe postpartum episodes (Wesseloo et al. 2017). However, the authors point out the likely influence of confounding by indication since lamotrigine was primarily prescribed to women with a vulnerability for depressive episodes, while lithium was primarily prescribed to women with a history of manic episodes. Therefore, this finding requires replication in studies that can account for diagnosis, variant and severity of illness.

Dosing and monitoring of blood levels during pregnancy and around delivery

Lithium has a narrow therapeutic range of 0.5–1.2 mmol/L and higher levels may lead to toxicity (Oruch et al. 2014). Excretion of lithium is almost exclusively renal, hence blood plasma levels mainly depend on intravascular volume and glomerular filtration rate (GRF) (Oruch et al. 2014; Grandjean and Aubry 2009). As pregnancy progresses total body water, plasma volume and GFR are increased (Pariente et al. 2016) with GFR rising from as early as 6 weeks gestation up to 50% over non-pregnant women by the end of the first trimester (Davison 1984). Clinical studies have shown lithium blood levels to decrease significantly during pregnancy (Wesseloo et al. 2017; Westin et al. 2017). An average decrease of 24% in the first trimester, 36% in second trimester and 21% in third trimester was described. Creatinine blood levels showed a similar longitudinal pattern, showing that indeed changes in lithium blood level reflect changes in renal physiology.

In summary, first and second trimester are characterised by a significant decrease of lithium blood levels

with a risk of subtherapeutic levels. In third trimester and the postpartum, lithium levels gradually return to their preconception level which implicates that in this period clinicians need to be aware of the risk of lithium intoxication. Close monitoring and dose adjustment is needed with conditions such as hyperemesis gravidarum, pre-eclampsia, impaired renal function, concomitant medication or acute blood loss occur, as these conditions increased the risk of toxicity (Handler 2009; Blake et al. 2008). Furthermore, as lithium levels in the fetus equal those in the mother, changes in dosing may impact fetal health and increase the risk of complications (Newport et al. 2005). A multiple day dosing regime has been proposed to minimise fetal risk by minimising peak lithium levels (Horton et al. 2012). However, multiple day dosing has been associated with an increased risk of renal side effects and as a consequence possible non-adherence (Singh et al. 2011). Therefore, twice daily dosing seems to be preferred to more frequent administration.

The above described dynamic changes in GFR and maternal haemodynamics during pregnancy necessitate monthly monitoring of lithium blood levels until 34 weeks and weekly monitoring thereafter until delivery (Wesseloo et al. 2017).

Several authors and guidelines have suggested to decrease or discontinue lithium treatment when in labour in order to minimise lithium side-effects in the neonate (National Collaborating Centre for Mental H 2014; Trimbos-instituut 2015; Newport et al. 2005). However, there is currently no evidence that suggests this strategy decreases the risk of perinatal and infant complications and this strategy has to be weighed against the risk of maternal relapse during a high-risk period. Both Deligiannidis et al. and Wesseloo et al. have recommended careful lithium blood level monitoring instead of discontinuation in all cases (Deligiannidis et al. 2014). Lithium blood levels should be measured before and 24 h after delivery and adequate fluid management is important to prevent dehydration. Lithium blood level, as well as thyroid-stimulating hormone (TSH) and free thyroxine (T4) should be evaluated in umbilical cord blood sample (Trimbos-instituut 2015). Nephrotoxic medication and nonsteroidal anti-inflammatory drugs should be avoided (Deligiannidis et al. 2014). When considering anaesthesia options during delivery, drug interactions with lithium should be taken into account. Lithium potentiates succinylcholine and pancuronium and can be expected to potentiate other depolarising and non-depolarizing muscle relaxants (Blake et al. 2008). Close monitoring of neuromuscular function is therefore required. Regional anaesthesia is considered to be safe (Blake et al. 2008).

Obstetric complications

When investigating the effect of lithium exposure on obstetric complications in cohort studies it is important to consider that bipolar disorder, the indication for which lithium is often prescribed, is associated with obstetric complications independent of medication. In specific, women with bipolar disorder are at increased risk of antepartum hemorrhage, placental abnormalities and caesarean section (Boden et al. 2012; Jablensky et al. 2005). The mechanism underlying this increased risk for women with bipolar disorder is unclear but psychosocial stress accompanied by high cortisol levels, comorbidity and lifestyle factors might play a role (Boden et al. 2012). In a recent shared protocol meta-analysis of 727 lithium exposed pregnancies and 21,397 pregnancies in disease matched controls lithium use during pregnancy was not associated with preeclampsia, diabetes during pregnancy, fetal distress, postpartum hemorrhage or caesarean section (Munk-Olsen et al. 2018). Additionally, in two studies the rates of obstetric complications were not higher in women who continued lithium during pregnancy compared to women who discontinued lithium before or early in pregnancy (Petersen et al. 2016; Frayne et al. 2017). Table 1 presents an overview of the results from observational cohort studies on obstetric complications of lithium use during pregnancy. Results of these studies should be interpreted considering several methodological limitations, i.e. the sample size of two studies was very small and these studies did not correct for confounding variables and timing, duration or dose of the exposure.

Polyhydramnios has not been investigated in observational cohort studies, but has been described in two case reports (Ang et al. 1990; Krause et al. 1990). This warrants further investigation because polyuria is a well-known side effect of lithium and fetal polyuria could lead to polyhydramnios. In summary, while women with bipolar disorder have an increased risk of obstetric complications, there seems no association between lithium use during pregnancy and pregnancy or delivery related outcomes.

Consequences for the developing child

Lithium freely crosses the placental barrier and lithium concentrations equilibrate between maternal and fetal circulation (Newport et al. 2005). Hence maternal lithium therapy results in fetal lithium exposure. We provide a summary of published results from investigations on the short- and long-term consequences of intrauterine exposure to lithium.

Table 1 Obstetric outcome after lithium treatment during pregnancy: findings from clinical cohort studies

Study	Design	Sample size	Findings
Petersen et al. (2016)	Registry-based study	Exposed = 35 Disease matched non-exposed = 84 Controls = 320.853	No difference in the rate of caesarean sections
Frayne et al. (2017)	Cohort study	Exposed = 33	No difference in the rate of obstetric complications between the women that continued (n = 19) or discontinued (n = 14) lithium
Munk-Olsen et al. (2018)	Meta-analysis (six study sites)	Exposed = 727 Disease matched controls = 21,397	No association between lithium exposure in utero and preeclampsia (OR 0.97, 95% CI 0.52–1.80), gestational diabetes (OR 1.20, 95% CI 0.81–1.78), fetal distress (OR 1.00, 95% CI 0.76–1.32), postpartum hemorrhage (OR 1.28, 95% CI 0.64–2.57) and caesarean section (OR 0.94, 95% CI 0.66–1.33)

OR odds ratio, *CI* confidence interval

Congenital malformations

The first trimester of pregnancy is crucial to the normal development of the fetus. Since in this period all major body organs are forming, the fetus is susceptible to damage from teratogens and this has raised some concerns about the possible teratogenicity of lithium use during the first trimester. In this review we summarise the results from clinical cohort studies investigating the risk of congenital malformations after lithium use during pregnancy, an overview of these studies is presented in Table 2.

In multiple investigations, lithium treatment during pregnancy has been associated with cardiovascular malformations, including Ebstein anomaly (Weinstein and Goldfield 1975; Schou et al. 1973; Nora et al. 1974; Patorno et al. 2017). Ebstein anomaly is a congenital malformation characterised by an abnormal development of the tricuspid valve and the right ventricle, with highly variable prognosis. The prevalence in the normal population is estimated to be about 1 per 20,000 live births (Lupo et al. 2011). The association with lithium use during pregnancy was first reported in the 1970s investigation on the Register of Lithium Babies (Weinstein and Goldfield 1975; Schou et al. 1973). Based on the data from the Register of Lithium Babies, Nora et al. estimated a fivefold increase in the risk of congenital heart-disease and about a 400-fold increase in the risk of Ebstein anomaly (Nora et al. 1974). In contrast, case control studies in children born with Ebstein anomaly or other cardiovascular malformations did not find an association with lithium exposure (Zalzstein et al. 1990; Boyle et al. 2016; McKnight et al. 2012; Correa-Villasenor et al. 1994; Sipek 1989; Lisi et al. 2010). For a comprehensive summary of case–control studies we refer to a review and meta-analysis by McKnight et al. (2012). A registry based case control study of 264 Ebstein anomaly cases by Boyle et al. found an association with maternal mental health problems in general but not with lithium use (Boyle et al. 2016).

Two studies on congenital malformations in general have yielded contradicting results, with one study reporting a high rate of congenital malformations after in utero exposure to lithium (Reis and Kallen 2008) and another study reporting no association between lithium exposure and congenital malformations (Jacobson et al. 1992). Additionally, several case reports have been published on congenital diaphragmatic hernia (Hosseini et al. 2010), goiter (Frassetto et al. 2002; Nars and Girard 1977), cardiovascular complications (Park et al. 1980; Long and Willis 1984; Arnon et al. 1981; Wilson et al. 1983), bilateral hip dislocation (Deiana et al. 2014) and neural-tube defect (Jacobson et al. 1992). In general, sample sizes of these clinical investigations are considered too small to study rare congenital malformations.

Recently, three cohort studies with large sample sizes, have provided more evidence on the matter (Munk-Olsen et al. 2018; Patorno et al. 2017; Diav-Citrin et al. 2014). Diav-Citrin et al. compared the rate of congenital abnormalities in lithium exposed pregnancies, disease matched and nonteratogenic-exposed pregnancies (Diav-Citrin et al. 2014). The occurrence of cardiovascular anomalies was higher in the lithium-exposed group although this difference was not significant after excluding the anomalies that resolved spontaneously. Patorno et al. used register data from Medicaid in the U.S. to study 1,325,563 pregnancies of which 663 were exposed to lithium and 1945 exposed to lamotrigine (Patorno et al. 2017). They found a dose dependent association between lithium exposure and cardiac malformations, including Ebstein anomaly. The adjusted risk ratio for cardiac malformations was calculated to be 1.65 compared to controls and 2.25 compared to lamotrigine-exposed. The risk of cardiac malformations was estimated to be in the order of one additional case per 100 live births. The same study

Table 2 Findings from clinical cohort investigations on the association between in utero exposure to lithium and congenital malformations

Study	Design	Sample size	Findings
Schou et al. (1973)	Cohort study	Exposed = 118	Nine children with congenital malformations, of which six with cardiovascular malformations
Nora et al. (1974)	Retrospective cohort study	Teratogenic history obtained in 733 women	Two lithium exposed pregnancies and both children were born with Ebstein anomaly
Weinstein and Goldfield (1975)	Cohort study	Exposed = 143	Cardiovascular abnormalities found in 9.1% of cases of exposure to lithium in 1st trimester
Kallen and Tandberg (1983)	Registry-based study	Exposed = 59 Other drugs = 38 Disease matched non-exposed = 80 Controls = 110	Four children with heart defects after lithium exposure. No cases of Ebstein anomaly
Jacobson et al. (1992)	Prospective cohort study	Exposed = 138 Controls = 148	No difference in the rate of major malformations
Reis and Kallen (2008)	Registry-based study	Exposed = 79	Eight children with congenital malformations, of which four with cardiac malformations
Diav-citrin et al. (2014)	Prospective cohort study	Exposed = 183 Disease matched non-exposed = 72 Controls = 748	Single center comparison: no difference in major malformations, increased risk of cardiovascular malformations (RR 7.23, 95% CI 1.97–26.53), not after excluding cases that spontaneously resolved (RR 5.78, 95% CI 0.82–40.65)
Patorno et al. (2017)	Registry-based study	Exposed = 663 Lamotrigine = 1945 Controls = 1,322,955	Increased risk of cardiac malformations after first trimester lithium exposure compared to controls (RR 1.65, 95% CI 1.02–2.68) and lamotrigine-exposed (RR 2.25, 95% CI 1.17–4.34)
Munk-Olsen et al. (2018)	Meta-analysis (six study sites)	Exposed = 727 Disease matched controls = 21,397	First trimester lithium exposure was statistically significant associated with congenital malformations (OR 1.62, 95% CI 1.12–2.33) but not with cardiac malformations in specific (OR 1.54, 95% CI 0.64–3.70)

RR risk ratio, *OR* odds ratio, *CI* confidence interval

found no association between lithium exposure and non-cardiac malformations. In contrast, in a shared-protocol meta-analysis of six study sites the risk of major malformations (including cardiac malformations) was increased in lithium-exposed pregnancies (OR 1.62, 95% CI 1.12–2.33) compared to non-exposed pregnancies in mothers with a mood disorder, while there was no statistically significant increase in the risk of cardiac malformations (Munk-Olsen et al. 2018).

While this evidence is not conclusive it is recommended that it is discussed with women who seek advice on treatment of bipolar disorder either pre-pregnancy or during pregnancy. One option would be to taper lithium during the first trimester although the risk of relapse needs to weighed if considering this option. In the case of lithium continuation, fetal anomaly ultrasound including detailed fetal cardiac scanning, should be offered at 20 weeks gestational age. This could also be advised at 16 weeks (Galbally et al. 2010). In the case of detection of a cardiac malformation, information, guidance and counselling can be offered as early as possible. Although the pathophysiology of the association between lithium and congenital malformations is unclear, it might be related to lithium's inhibition of the glycogen synthase kinase-3β (GSK3β) (Young 2009). GSK3β expression is of importance for the Wnt signaling pathway, which is of influence on cardiac and vascular development in the embryo (Corada et al. 2010; Jope 2003).

Neonatal outcomes

Two studies found an increased risk of preterm birth in women with lithium use during pregnancy when compared to controls (Diav-Citrin et al. 2014; Troyer et al. 1993). In contrast, three studies including the meta-analysis of six studies reported no difference in the rate of preterm birth between lithium exposed pregnancies and controls (Newport et al. 2005; Munk-Olsen et al. 2018; Jacobson et al. 1992). In addition, most studies do not

find differences in birth weight except for one small study in which lithium-exposed neonates had a higher birth weight (Newport et al. 2005; Munk-Olsen et al. 2018; Jacobson et al. 1992; Diav-Citrin et al. 2014; Troyer et al. 1993).

Lithium exposure is associated with increased risk of neonatal complications. Newport et al. found an association between high infant lithium concentrations and lower 1-min Apgar scores, higher rate of central nervous system and neuromuscular complications and longer duration of hospital stays (Newport et al. 2005). In a cohort of 19 babies exposed to lithium during pregnancy, 8 were admitted to a special care unit post-delivery (Frayne et al. 2017). This high rate of neonatal admissions was confirmed in a large meta-analysis of six study sites (Munk-Olsen et al. 2018). Additionally, there are case reports on neonatal lithium toxicity (Kozma 2005; Flaherty and Krenzelok 1997; Morrell et al. 1983; Woody et al. 1971; Wilbanks et al. 1970; Stothers et al. 1973), nephrogenic diabetes insipidus (Pinelli et al. 2002), and jaundice (Connoley and Menahem 1990). In a review of case reports, Kozma further reports respiratory problems, hypotonia, lethargy, poor drinking ability, thyroid problems, cyanosis, hypoglycemia and polyuria (Kozma 2005). Normal neonatal outcome was reported in the study from Silverman et al. (1971).

Because of potential problems in the neonatal period after in utero exposure to lithium, we recommend that delivery should take place in a specialised hospital with advanced neonatal care available immediately after delivery. In Table 3 we present the results of studies on neonatal outcome.

Long term developmental outcome

It is assumed that the fetal environment influences lifetime disease risk based on Barker's hypothesis of Developmental Origins of Health and Disease (DOHaD) (Barker 1990; Schlotz and Phillips 2009). This hypothesis proposes that exposure during fetal development can result in permanent physiological and metabolic changes, which modify disease risk through life. Prenatal exposure to lithium may therefore have consequences on development and health outcomes well beyond infancy. Indeed, results from preclinical studies in mice, rats and zebrafish show neurodevelopmental deficits (Poels et al. 2018). Clinical data are scarce, four small clinical cohort studies have investigated long term neurodevelopmental outcomes. The results of these studies are presented in Table 4. Schou used data from the Scandinavian Register of Lithium Babies to compare the mothers' subjective retrospective assessment of their children's development in lithium-exposed children (n = 60) and their non-exposed siblings (n = 57) and found no difference (Schou 1976). In a prospective multicenter study, there was no difference in the age of attainment of major developmental milestones in lithium-exposed children compared to non-exposed children (Jacobson et al. 1992). Another study examined 15 lithium-exposed children at the age of 3–15 years old and used standard validated tests to assess growth, neurological, cognitive and behavioural

Table 3 Neonatal outcome after lithium treatment during pregnancy: findings from clinical cohort studies

Study	Design	Sample size	Findings
Jacobson et al. (1992)	Prospective cohort study	Exposed = 138 Controls = 148	No difference in the rate of preterm birth Higher birthweight in lithium exposed neonates
Troyer et al. (1993)	Cohort study	Exposed = 60 Disease matched non-exposed = 290	Cohort of manic-depressive women: risk ratio for prematurity of 2.54 No difference in birthweight
Newport et al. (2005a, b)	Cohort study	Exposed = 24	Lower Apgar scores, longer hospital stays and higher rates of CNS and neuromuscular complications in infants with high lithium levels No statistically significant association with preterm birth or low birth weight
Diav-citrin et al. (2014)	Prospective cohort study	Exposed = 183 Disease matched non-exposed = 72 Controls = 748	2.3 times higher rate of preterm delivery in exposed group (13.7% versus 6.0%) No differences in birth weight
Frayne et al. 2017	Cohort study	Exposed = 19	Eight neonates admitted to a special care unit
Munk-Olsen et al. (2018)	Meta-analysis (six study sites)	Exposed = 727 Disease matched controls = 21,397	No association between lithium exposure in utero and preterm birth (OR 1.24, 95% CI 0.83–1.84), low birth weight (OR 0.98, 95% CI 0.72–1.35) or small for gestational age (OR 0.90, 95% CI 0.67–1.21) A significant higher rate of neonatal admission (OR 1.62, 95% CI 1.12–2.33)

OR odds ratio, *CI* confidence interval

Table 4 Neurodevelopmental consequences of intrauterine exposure to lithium: findings from clinical cohort studies

Study	Design	Sample size	Follow-up	Findings
Schou (1976)	Prospective cohort study	Exposed = 60 Controls = 57	Mean = 7 years	No difference in development based on questionnaire filled out by the mother
Jacobson et al. (1992)	Prospective cohort study	Exposed = 22 Controls = n.r.	1–9 years, mean = 61 weeks	No difference in attainment of milestones
van der Lugt et al. (2012)	Cohort study	Exposed = 15	3–15 years	Normal developmental milestones (n = 15), minor neurological dysfunction (n = 1), low verbal + total IQ, normal performance IQ (n = 1), subclinical anxiety problems (n = 2), subclinical oppositional problems (n = 1)
Forsberg et al. (2017)	Cohort study	Exposed = 20 Disease matched non-exposed = 8 Controls = 11	4–5 years	No differences in total, performance and verbal IQ

IQ intelligence quotient, *n.r.* not reported

outcomes (van der Lugt et al. 2012). Most children scored lower on the performance Block patterns when compared to the general population although this difference was not statistically significant. Growth and behavioural development was within normal range. One child in this study was diagnosed with minor neurological dysfunction without clinical implications. A recent study compared the intelligence quotient (IQ) in children with in utero exposure to lithium (n = 20), non-exposed children of mothers with a mood disorder (n = 8) and controls (n = 11) and reported no difference in total, performance or verbal IQ (Forsberg et al. 2017).

In summary, while preclinical evidence does point to possible developmental effects of perinatal exposure to lithium, this is not found in clinical investigations. Due to methodological weaknesses of the published clinical studies (e.g. small sample sizes, lack of control group and subjective outcome measures) no conclusion can be drawn from these results and more research is needed to provide an estimation of the risk for the developing child.

Lithium use during pregnancy

- Maintenance of lithium during pregnancy is effective in the prevention of relapse during pregnancy and the postpartum period.
- The first and second trimester are characterized by a significant decrease in blood levels for lithium.
- Fetal anomaly ultrasound including detailed fetal cardiac scanning, should be offered at 20 weeks gestational age.
- In the third trimester, weekly monitoring of lithium blood levels is recommended. Preferably, lithium blood levels should be measured before and 24 h after delivery.
- Lithium blood level, TSH and free T4 should be evaluated in umbilical cord blood sample.
- Lithium use during pregnancy has not been associated with obstetric complications. However, the association with preterm birth and birthweight remains uncertain.
- Lithium exposure during the first trimester is associated with congenital malformations in several studies, recent studies estimate the risk lower than previously reported. Tapering of lithium during the first trimester should be considered but weighed against the risks of relapse.
- Lithium exposure is associated with increased risk of neonatal complications. Lithium-exposed neonates should be observed directly post-delivery.
- Little is known about the developmental consequences of intrauterine exposure to lithium.

Lithium use postpartum

Efficacy

Women with a history of bipolar disorder or postpartum psychosis are at extremely high risk of relapse postpartum. Few clinical studies have investigated the efficacy of pharmacotherapy when it is initiated immediately after delivery, as a prophylactic strategy in women who have not been treated during pregnancy. A meta-analysis showed that patients with bipolar disorder using prophylactic pharmacotherapy during the postpartum period had a lower relapse rate (N = 98; 29%, 95% CI 16–47) compared with those who remained medication free (N = 107; 65%, 95% CI 55–73) (Wesseloo et al. 2016). Off these 98 women, 38 started prophylactic treatment during pregnancy while 22 were medication free during pregnancy and initiated prophylaxis immediately

postpartum. For the remaining women information regarding the timing was unavailable or they were on chronic maintenance treatment. Numbers are very small but in all studies on prophylactic treatment with lithium postpartum, women with bipolar disorder had significantly lower rates of postpartum relapse compared to medication free women (Bergink et al. 2012; Austin 1992; Cohen et al. 1995). In contrast, valproate failed to demonstrate significant prophylactic benefits (Wisner et al. 2004) and further investigation of second generation antipsychotics is warranted. In our previous work we have recommended distinct perinatal treatment algorithms for women with bipolar disorder and women with a history of psychosis limited to the postpartum period. In women with bipolar disorder, prophylaxis during pregnancy increases the likelihood of maintaining mood stability during pregnancy and preventing postpartum relapse. In women with a history of psychosis limited to the postpartum period, prophylactic treatment immediately after birth is appropriate (Bergink et al. 2016). In this group of women with a history of postpartum psychosis, the established efficacy of lithium makes it the drug of first choice for postpartum prophylaxis.

Dosing and monitoring of blood level

Lithium prophylaxis has demonstrated efficacy in reducing postpartum episodes. However, the dosing and duration of prophylaxis is unknown. We recommend relapse prevention prophylaxis in women with bipolar disorder with a higher lithium target level (for example 0.8 mmol/L) during the first month postpartum. Given that the relapse risk is high particularly in the first month postpartum, we follow the view that the benefits of higher lithium target blood levels in the first month postpartum outweighs the potential risks. We recommend to start lithium on the first evening after delivery and with a dose to target blood level of 0.8–1.0 mmol/L to optimize relapse prevention. In our previous work, we observed that normalization of renal function can take up to a few weeks after delivery as both mean lithium and creatinine blood levels were higher in the postpartum period than in the preconception period (+ 9% and + 7% respectively) (Wesseloo et al. 2017). Therefore, we recommend twice weekly monitoring of lithium blood levels for the first 2 weeks postpartum. Women with bipolar disorder on maintenance treatment with lithium might want to change to their preconception dose and blood level after 1 month postpartum. For those women who want to taper their lithium dose (i.e. women with isolated postpartum psychosis/mania in history, or women with bipolar disorder without regular maintenance treatment) we advise to commence tapering after 3 months postpartum.

Breastfeeding

Clinical guidelines generally discourage breastfeeding in women treated with lithium due to the possible risk of lithium toxicity in the newborn (National Collaborating Centre for Mental H 2014). Furthermore, the lack of continued sleep during puerperium might also increase the risk of maternal relapse. Lithium is excreted into breast milk and the elimination rate in infants is lower than in adults, which may cause higher exposure levels in infants. However, there is a lack of data from clinical investigations on this topic. In Table 5 we present the results of clinical studies on infant lithium exposure through lactation. Some case studies have estimated serum lithium levels to be about one-half of maternal serum lithium levels (Frew 2015; Schou and Amdisen 1973) while others estimated levels closer to one quarter of the mothers' levels (Bogen et al. 2012; Sykes et al. 1976). The larger study available for lithium and breastfeeding consists of 11 mother infant pairs with a calculated infant lithium dose as 0–30% of the maternal dose per kilogram bodyweight, based on the daily milk intake and lithium levels measured in breast milk (Moretti et al. 2003). Unfortunately, serum lithium levels were only available in two

Table 5 Summary of the results from clinical studies on infant lithium exposure through lactation

Study	Design	Sample size	Findings
Schou et al. (1973)	Case series	8 mother–infant pairs	Infant/maternal serum lithium concentration of 1/2 in first week and 1/3 during the following weeks
Sykes et al. (1976)	Case report	1 mother–infant pair	Breast milk lithium level of 1/4 of maternal serum level, infant had good excretion of lithium into urine
Moretti et al. (2003)	Case series	11 mother–infant pairs	Infant lithium dose of 0–30% of the maternal dose/kg Infant serum level of 17–50% of maternal serum level
Viguera et al. (2007a, b)	Case series	10 mother–infant pairs	Mean infant serum level of 0.16 meq/L (range 0.09–0.25) In four infants: transient elevations of TSH, blood urea nitrogen and creatinine
Bogen et al. (2012)	Case series	3 mothers with 4 infants	Infant lithium levels ranged from 10 to 17% of maternal levels at 1 month postpartum
Frew (2015)	Case report	1 mother–infant pair	Infant/maternal serum lithium concentration ratio of 0.58. No adverse events

mother–infant pairs. In one pair lithium serum levels of the infant achieved 17–20% of the maternal serum level while in the other infant this was calculated to be 50%. No adverse effects were observed in the lithium exposed infants. Viguera et al. measured lithium levels in breast milk, maternal serum and infant serum in ten mother child pairs from eight to 27 weeks postpartum (Viguera et al. 2007). Based on these measurements it was estimated that infant lithium levels in serum were about one quarter of the lithium levels in serum of the mother. This estimation was lower than previous reports (Frew 2015; Schou and Amdisen 1973; Moretti et al. 2003). Lithium exposure through breastmilk was generally well tolerated by the infants in this study although one infant developed elevated levels of TSH which, normalised after the mother discontinued lithium treatment. Three other infants showed transient elevations in blood urea nitrogen and creatinine levels. In summary, there is a lack of sufficient information on infant lithium levels and the consequences of lithium exposure through breast milk. Due to the lack of information and the possible nephrotoxic effects of lithium in infants, in combination with the vulnerability of the developing neonatal kidneys and the risk of dehydration associated with the neonatal period, breastfeeding while on lithium treatment is discouraged in many national guidelines and individual centers worldwide (Galbally et al. 2018).

Lithium use postpartum

- When lithium is discontinued during pregnancy, lithium should be restarted immediately after delivery and is an effective strategy for relapse prevention in the immediate postpartum.
- For women with an isolated episode of postpartum psychosis or mania in history lithium prophylaxis immediately after delivery is effective for relapse prevention, there is no need to use lithium during pregnancy.
- Consider a high target therapeutic lithium level immediately after delivery and during the first month postpartum to optimize relapse prevention (e.g., 0.8–1.0 mmol/L).
- Obtain lithium blood levels twice weekly during the first 2 weeks postpartum.
- Breastfeeding while taking lithium is not recommended.

Summary and discussion

The aim of this review was to provide a broad range of information and clinical guidance regarding lithium use during pregnancy and the postpartum period. Since it was our aim to give a broad overview of the literature from a clinical perspective we opted for a narrative review rather than a systematic review or meta-analysis. The clinical recommendations in this review article are suggestions based on the available scientific information and clinical experience of the authors. Readers should note that recommendations were not formulated within the context of a guideline procedure.

Women of childbearing age requiring mood stabilisation should be given the opportunity to weigh the risks and benefits of lithium treatment during pregnancy and the postpartum period, and to develop an individualised treatment plan together with their healthcare providers in a specialised centre (Bergink and Kushner 2014; Yonkers et al. 2004). Antenatal care should take place in a multidisciplinary setting, with close collaboration between psychiatric and obstetric services. During pregnancy and the postpartum period women with bipolar disorder should be closely monitored. The possible risks for the unborn child, such as the risk of congenital malformations need to be carefully weighed against the risk of maternal relapse. The pros and cons of discontinuation of medication need to be compared with the pros and cons of continuing medication. In this context it is important to note that also relapse of bipolar disorder carries a fetal risk. High maternal stress but also high-risk behaviour, such as alcohol or drug use or lack of compliance to antenatal care are associated with adverse fetal outcomes.

Switching to maintenance therapy with lamotrigine before conception should be considered as the efficacy of lamotrigine in prevention of postpartum relapse is not inferior to lithium (Wesseloo et al. 2017) and there are no risks of congenital malformations associated with its use (Patorno et al. 2017). However, the efficacy of lamotrigine in the prevention of postpartum episodes was established in a group of women with a high vulnerability to depressive episodes and lamotrigine is not effective in the prevention of mania. Moreover, the efficacy of lamotrigine in the prevention of relapse during pregnancy is not yet investigated. Maintenance therapy with second generation antipsychotics is an alternate treatment option (National Collaborating Centre for Mental H 2014). Importantly, the use of second generation antipsychotics during pregnancy is not associated with an increased risk of congenital malformations (Petersen et al. 2016; Huybrechts et al. 2016). However, a recent Medicaid study found an increased risk of gestational diabetes associated with the continuation of quetiapine and olanzapine during pregnancy (Park et al. 2018) and there is uncertainty on the long-term impact on neurodevelopment (Poels et al. 2018). Notably, the efficacy of second generation antipsychotics in relapse prevention during the perinatal

period is not yet properly investigated in women with bipolar disorder. Moreover, antipsychotics are known to be less effective than lithium in maintenance treatment for bipolar disorder outside the perinatal period (Geddes and Miklowitz 2013).

When providing advice to the individual patient, knowledge about past treatment efficacy should also be taken into account. In women with a history of severe bipolar episodes and a good effect on lithium therapy, continuation of lithium might be preferred in order to prevent relapse. When lithium therapy is continued during pregnancy, regular antenatal visits are warranted for checking lithium blood levels, evaluation of fetal growth, and for monitoring signs of preterm labour. Detailed fetal anomaly scanning, including detailed fetal cardiac scanning should be offered at 20 weeks gestational age or maybe earlier in the future. Furthermore, evaluation of maternal thyroid (TSH and free T4) levels and kidney function is recommended (Trimbos-instituut 2015). Delivery should take place in a specialised hospital where psychiatric and obstetric care for the mother is provided and neonatal evaluation and monitoring of the child can take place immediately after birth.

More investigations are required on the development of children exposed to lithium in utero as the studies that have been published so far provide insufficient information to properly advise women.

We recommend against breastfeeding while on lithium treatment given both the paucity and the poor quality of the available clinical reports. However, we are aware of the differences in clinical recommendations between guidelines and authors. For instance, a recent systematic review by Pacchiarotti et al. studied the same literature as reported in this review paper but they concluded that lithium levels in the infant were low and breastfeeding should be permitted through an individualized approach (Pacchiarotti et al. 2016). Clinicians that do recommend breastfeeding should publish their findings with comprehensive data on lithium levels in serum and breast milk, as well as infant outcomes including neurological, renal and thyroid function. In this way more knowledge will be available in order to develop evidence based recommendations.

Authors' contributions
EP, VB and HB performed the literature search and selected relevant articles. EP produced the tables. All authors contributed to writing the manuscript. All authors read and approved the final manuscript.

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LITHIUM

This fact sheet is for women who take lithium and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking lithium.

What is lithium?

Lithium is medicine used for the treatment and prevention of manic or depressive episodes in bipolar affective disorder andschizoaffective disorder. Lithium is known as a "mood stabiliser" as it helps to prevent extreme fluctuations in mood (i.e. "highs and lows").

Should I stop taking lithium before becoming pregnant?

Stopping lithium treatment too quickly during pregnancy can cause your symptoms to come back.[1] The decision to stop, start or to continue taking lithium before becoming pregnant must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Factors to consider include the type and severity of your condition, whether any other medicines have worked for you in the past or the likelihood that your symptoms may return without the medicine or when changing over to another medicine.

Can taking lithium during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect).
There are some studies that suggests that when lithium is used during pregnancy, there may be an increased chance the baby may have a heart defect known as Ebstein's anomaly.[2-4] The risk of developing Ebstein's anomaly in the general population is 1 in 20 000 births (0.005%). If lithium is used during the first trimester, then this risk increases to 1 to 2 in 2000 births (0.05 to 0.1%).[2,4,5] If the decision is made to continue lithium during pregnancy, lithium should be used at the lowest possible dose.

I have been using lithium since the start of my pregnancy. Are there any tests or monitoring that can tell me about my pregnancy?

Yes, it is important that you have regular lithium levels taken because your dose may need to be adjusted during pregnancy. Also, at 16 weeks, your baby should have a scan to look at their heart because the medicine may cause the rare heart defect, Ebstein's anomaly. At 18 to 20 weeks, your baby should also have a test call a '*detailed echocardiography with anatomical survey*.'

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Lithium may also increase the chance of you developing diabetes insipidus and hypothyroidism.[6] Let your doctor and midwife know if you use lithium during pregnancy, so they can monitor you and your baby to prevent or manage these problems.

Are there any other concerns if I continue taking lithium during late pregnancy?

Lithium may cause a condition called "floppy baby syndrome" where the baby can have low muscle tone, lethargy and breathing difficulties[7] when they are born. Lithium levels should be taken once a month throughout pregnancy. When you are 36 weeks pregnant, the levels should be taken more regularly until you give birth. This is to make sure the levels remains in the right range and to make sure you reduce the chances of getting side effects.

Usually, 24 to 48 hours before you give birth, or when labour starts, you should not take any lithium.[8] This is to reduce the chances of lithium toxicity after birth. Once your baby is born, lithium can be restarted at the dose you were on before you were pregnant.[7]

Will taking lithium have any long-term effects on my baby's behaviour and development?

Information about the long-term behaviour and development in children of women who used lithium during pregnancy is very limited.[9] It is not known if lithium will affect your baby's behaviour and development.

Can I breastfeed my baby if I continue taking lithium?

Lithium is known to pass into the breast milk[10,11] and may cause serious side effects in your baby.

These side effects include lethargy, poor feeding and low muscle tone. For this reason, breastfeeding is generally not recommended if you take lithium.[7] It is important to discuss your options with your health care providers.

If you choose to breastfeed while taking lithium, special arrangements with your doctor are needed to closely monitor your baby's lithium levels, kidney function and thyroid function.[10]

The long-term effects of lithium on breastfed infants have not been well studied.

Where to get more information

If this fact sheet does not answer your questions about lithium or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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LORAZEPAM

This fact sheet is for women who take lorazepam and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking lorazepam.

What is lorazepam?

Lorazepam belongs to a group of medicines called benzodiazepines. Lorazepam is used to treat anxiety and sleeping problems.

Should I stop taking lorazepam before becoming pregnant?

The decision to stop, start or to continue taking lorazepam, or to change how you take lorazepam, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Do not stop taking lorazepam suddenly because you may experience withdrawal symptoms such as anxiety, irritability, nightmares, sweating, tremors and seizures. The effect of withdrawal symptoms on pregnancy is unknown. If you and your doctor decide to stop lorazepam before you become pregnant, it is likely that your doctor will reduce your dose slowly until you stop the medicine, or until you have been reached the lowest dose that helps to control your symptoms.

Can taking lorazepam during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect).

Most studies have shown that lorazepam use during pregnancy does not increase your chance of having a baby with birth defects.[1,2] Some older studies have suggested there is an increased chance of having a baby with a cleft lip and palate if benzodiazepines are taken in the first trimester.[3,4] However, recent studies have not supported this information.[1,4-6] It is important you and your doctor talk about your situation before you become pregnant or as soon as you find out you are pregnant.

Are there any other concerns if I continue taking lorazepam throughout the pregnancy?

Lorazepam use during pregnancy may be linked with a slight increased chance of babies being born early and having a low birth weight.[2,7]

Also, when lorazepam is used close to the time of delivery, there may be an increased chance of withdrawal symptoms in your baby. Withdrawal symptoms may include difficulty breathing, muscle weakness, irritability, crying, sleep disturbances, tremors, jitteriness, vomiting and diarrhoea.[8]

These symptoms are usually mild and do not last very long, but may require some supportive treatment.
High doses of lorazepam should be avoided near the time of delivery.
It is important you speak to your doctor about reducing the dose of lorazepam during pregnancy if possible.[8] It is also important you tell your obstetrician, midwife and pharmacist that you are taking lorazepam, so they can monitor your baby for signs of withdrawal.

Will taking lorazepam have any long-term effects on my baby's behaviour and development?

There is not a lot of information about the long-term effects of lorazepam on behaviour and development in children whose mothers were taking lorazepam during pregnancy. It is not known if the medicine will cause any long-term effects.

Can I breastfeed my baby if I take lorazepam?

Very small amounts of lorazepam are known to cross into the breast milk, but are unlikely to cause harm in your baby.[9]
The decision to breastfeed your baby while taking lorazepam needs to be considered on an individual case basis. It is important you talk to your doctor or other health care providers about the risks and benefits of taking lorazepam while breastfeeding your baby.
If you choose to breastfeed while taking lorazepam, watch your baby closely for side effects, which may include drowsiness, weight loss, poor feeding and restlessness.

Where to get more information

If this fact sheet does not answer your questions about lorazepam or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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MIRTAZAPINE

This fact sheet is for women who take mirtazapine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking mirtazapine.

What is mirtazapine?

Mirtazapine is an antidepressant medicine.[1]

Should I stop taking mirtazapine before becoming pregnant?

The decision to stop, start or to continue taking mirtazapine, or to change how you take mirtazapine, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Factors that may be considered include the type and severity of your condition, whether any other medicine has worked for you in the past or if mirtazapine is the only medicine that works for you. The likelihood that your symptoms may return if you stop the medicine or while you change over to another medicine, should also be considered.

Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking mirtazapine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). In a small study of 145 women who used mirtazapine during pregnancy, there was no increased risk of birth defects.[2] However, more studies are needed to make sure these findings can be confirmed.

Will my baby have withdrawal symptoms after the birth?

There are a few published case reports of withdrawal symptoms in babies of mothers who were taking mirtazapine during pregnancy.[3,4] Withdrawal symptoms reported include problems regulating body temperature, irritability and tremor. In most cases, the symptoms were mild and babies recovered without treatment. Let your obstetrician and paediatrician know that you are taking mirtazapine so that they can monitor you and your baby closely.

Will taking mirtazapine have any long-term effects on my baby's behaviour and development?

There is still no information available on the long-term effects of the medicine on a baby's behaviour and development when the mother takes mirtazapine during pregnancy.

Can I breastfeed my baby if I continue taking mirtazapine?

There is limited information available about the safety of mirtazapine in breastfeeding. A small number of case reports have shown that small amounts of mirtazapine are found in the breast milk,[5, 6] but serious side effects have not been seen in breastfed babies. Talk to your doctor and other health care providers about the risks and benefits of taking mirtazapine while breastfeeding your baby.

Although side effects are rare, watch your baby for signs of excessive drowsiness, poor feeding and sleeping pattern changes.

Where to get more information

If this fact sheet does not answer your questions about mirtazapine or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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OLANZAPINE

This fact sheet is for women who take olanzapine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking olanzapine.

What is olanzapine?

Olanzapine is an atypical antipsychotic medicine used for the treatment of schizophrenia. It may also be used with other medicines for bipolar disorder.[1]

Can taking olanzapine make it harder to become pregnant?

Some antipsychotic medicines can increase your levels of a hormone called prolactin. High prolactin levels can make it harder for you to get pregnant.

Olanzapine only increases prolactin levels by a small amount, and does not seem to reduce the chances of a person falling pregnant.[2]

Should I stop taking olanzapine before becoming pregnant?

The decision to stop, start or to continue taking olanzapine, or to change how you take olanzapine, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Factors that may be considered include the type and severity of your condition, whether any other medicine has worked for you in the past or if olanzapine is the only medicine that works for you. The likelihood that your symptoms may return if you stop the medicine or while you change over to another medicine, should also be considered. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking olanzapine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). Studies have not found an increased number of birth defects in babies born to women taking olanzapine during pregnancy.[2-4] The decision to use olanzapine during pregnancy needs to be made on an individual case by case basis after considering the risks and benefits to both you and your baby.

Are there any other concerns if I continue taking olanzapine during late pregnancy?

Olanzapine is known to increase blood glucose levels, affect glucose tolerance and cause weight gain.[5] The medicine may also increase triglyceride and cholesterol levels and the risk of gestational diabetes.[6] You

and your baby will need to be closely monitoring
throughout your pregnancy to prevent or manage any problems.

Will my baby have withdrawal symptoms after the birth?

Babies born to women who have taken olanzapine close to time they give birth have shown some withdrawal symptoms. These symptoms include irritability, restlessness, excessive crying and stiff muscle tone. These symptoms are rare and mild and babies are likely to recover without treatment
However, some babies may need to stay in a special care nursery for a few days until the symptoms go away. Tell your health care providers if you use olanzapine during pregnancy so they can monitor you and your baby after delivery.

Will taking olanzapine have any long term effects on my baby's behaviour and development?

Olanzapine use during pregnancy has not been shown to have an effect on a baby's behaviour or development, but more information is needed to make sure these finding can be confirmed.

Can I breastfeed my baby if I continue taking olanzapine?

Very small amounts of olanzapine are known to cross into the breast milk, but serious side effects in babies have not been reported.[9,10]
The decision to breastfeed your baby while taking olanzapine needs to be considered on an individual case basis. It is important to talk to your doctor or other healthcare providers about the risks and benefits of taking olanzapine while breastfeeding.

If you choose to breastfeed while taking olanzapine, watch you baby closely for side effects, which may include drowsiness, poor feeding and changes in sleeping patterns.

Where to get more information

If this fact sheet does not answer your questions about olanzapine or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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PAROXETINE

This fact sheet is for women who take paroxetine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking paroxetine.

What is paroxetine?

Paroxetine belongs to a group of medicines called selective serotonin reuptake inhibitors (SSRI). It is used to treat depression and anxiety disorders (e.g. obsessive-compulsive disorder, panic disorder, generalised anxiety and post-traumatic stress disorder).

Can taking paroxetine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in the baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). There have been some reports of paroxetine causing heart defects when taken in the first trimester.[1,2] Other studies have found there is no link between paroxetine and birth defects.[3,4] As the information about the medicine is not all the same, it is important that you and your doctor discuss your situation before you become pregnant or as soon as you find out you are pregnant.

Should I stop taking paroxetine before becoming pregnant?

As there are some concerns that paroxetine may cause birth defects, the decision to stop or change to another medicine, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation.

Changing medicines can cause your symptoms to come back.[5] Unfortunately, untreated depression during pregnancy can also be associated with pregnancy complications.[6] Ongoing consultation with your health care providers is very important throughout your pregnancy.

Are there any other concerns if I continue taking paroxetine during late pregnancy?

There is some information that suggests babies may have a slight increased chance of developing pulmonary hypertension - a potentially serious lung problem, when mothers take paroxetine during late pregnancy. Pulmonary hypertension is a very rare condition, affecting 1 to 2 babies out of 1000 births. Most women (99%) taking SSRIs will give birth to healthy babies.[7] Tell your obstetrician if you are taking paroxetine, as you and your baby will need to be monitored after delivery.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from paroxetine after they are born.[8,9]

Withdrawal symptoms can include problems with breathing, sleeping and feeding, irritability and tremors.

The symptoms will usually be mild and your baby is likely to recover without treatment. Some babies may need to stay in a special care nursery for a few days until the symptoms go away.

Will taking paroxetine have any long-term effects on my baby's behaviour and development?

There have been a small number studies about the long-term effects on baby behaviour and development when paroxetine is taken during pregnancy. From this information, children of women who took paroxetine during pregnancy do not have any significant differences in their behavioural and development compared to children of women who did not use the medicine during pregnancy.[10-12]

Can I breastfeed my baby if I continue taking paroxetine?

There are several published reports on paroxetine and breastfeeding. Only very small amounts of paroxetine are found in breast milk, but serious side effects have not been found in breastfed babies.[13-15]

Paroxetine is considered safe to use during breastfeeding.

Although side effects are rare, watch your baby for signs of excessive drowsiness, irritability, poor feeding and restlessness. Talk with your doctor or other health care providers about the risks and benefits of taking paroxetine while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about paroxetine or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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Risperidone (pron. ris-perry-doan)

What is risperidone used for?

Risperidone (also known as Risperdal®, Rispa®, Rixadone®, Resdone® and Ozidal®) is mainly used to help treat the symptoms of psychosis, schizophrenia and mania, and to prevent these symptoms coming back. It is also used to help the symptoms of bipolar mood disorder, dementia, psychosis in depression and disruptive behaviours in autism. It is called an antipsychotic or neuroleptic. It is made as tablets, melt-in-the-mouth tablets (Quicklets®), a syrup and a long-acting injection (see a separate PILL for the injection Risperdal Consta®).

What is the usual dose of risperidone?

The usual dose of risperidone is around 4-6mg once a day. Much lower doses (e.g. 0.5mg-2mg a day) can be enough in older people.

How should I take risperidone?

Swallow the tablets with at least half a glass of water whilst sitting or standing. This is to make sure that they reach the stomach and do not stick in your throat. For the liquid, use a medicine spoon, dropper or oral syringe to carefully measure your dose. For the Quicklets®, just put them on your tongue and they will dissolve quickly.

When should I take risperidone?

Take your risperidone as directed on the medicine label. It can be taken with or without food, but taking it at mealtimes may make it easier for you to remember. If the label says to take it once a day this is usually best at bedtime as it may make you drowsy at first.

What are the alternatives to risperidone?

This will depend on what you are taking it for. There are many other antipsychotics, talking therapies and treatments for schizophrenia, mania and psychosis. See our “Handy charts” to help you compare the medicines, how they work and their side effects.

How long will risperidone take to work?

This will depend on what you are taking it for. You may feel less agitated and calmer soon after the first few doses but the full effects will build-up over a few weeks. Please look at one of the “Handy charts” for more help and advice on how long you might need to take it for before it works.

How long will I need to keep taking risperidone for?

This will depend on what you are taking it for. It may be that taking it for many months or years will help to stop your symptoms coming back. Please look at one of the “Handy charts” for more help and advice.

Is risperidone addictive?

Risperidone is not addictive.

Can I stop taking risperidone suddenly?

It is unwise to stop taking it suddenly, even if you feel better. Your symptoms can return if treatment is stopped too early. This may occur some weeks or even months after risperidone has been stopped. When the time comes, you should withdraw risperidone by a gradual reduction in the dose over several weeks. You should discuss this fully with your doctor, case manager or pharmacist.

What should I do if I forget to take risperidone?

Take the missed dose as soon as you remember unless it is within about 12 hours of your next dose. If you remember after this just take the next dose as normal. Do not try to catch up by taking two doses at once as you may get more side-effects. If you have problems remembering your doses (as many people do) ask your pharmacist, doctor or case manager about this. Webster and other packs can be used to help you remember.

Can I drink alcohol while I am taking risperidone?

Risperidone can increase the effects of alcohol, make you sleepy, reduce your concentration and slow your reactions. This is really important if you need to drive or operate machinery and you must seek advice on this.

Will risperidone affect my other medication?

Risperidone has only a few interactions with other medicines:

- The effects of risperidone can sometimes be increased by fluoxetine, paroxetine or itraconazole
- The effect of risperidone can be decreased by rifampicin or carbamazepine
- If risperidone is taken with benzodiazepines (e.g. diazepam, lorazepam, temazepam), or alcohol, it will cause more sleepiness.
- You should have no problems with "The Contraceptive Pill" and risperidone

Not all of these interactions happen in everyone. Some of these medicines can still be used together but you will need to follow your doctor's instructions carefully. There are many other possible drug interactions.

What sort of side-effects might occur if I am taking risperidone?

The table below will show you some of the main side effects you might get from risperidone.

Side effect	What happens	What to do about it
VERY COMMON *(more than about 1 in 10 people might get these)*		
Postural hypotension	A low blood pressure - this can make you feel dizzy or light-headed.	Try not to stand up too quickly. If you feel dizzy, don't drive.
Headache	When your head is painful and pounding.	Ask your pharmacist if paracetamol is safe to take with any other medicines you may be taking.
Akathisia	Restlessness, feeling more on edge. You may sweat more.	Try and relax by taking deep breaths. Wear loose fitting clothes. Your doctor may need to adjust your dose.
Movement disorders (extra-pyramidal side effects)	Having shaky hands. Your eyes and tongue may move on their own. You may feel very restless, or stiff.	It is not usually dangerous but is a well known side effect. If it is distressing or worries you, tell your doctor. He or she may be able to give you a medicine for it e.g. an anticholinergic.
COMMON *(less than about 1 in 10 people might get these)*		
Raised prolactin (hyper-prolactinaemia)	It can affect breasts (including milk being leaked) and irregular or no periods in women, or cause impotence and chest changes in men.	It can be very distressing. Discuss with your doctor when you next see him or her as it may possibly even affect your bones if prolactin is raised for a long time.
Sleepiness	Feeling sleepy or sluggish. It can last for a few hours after taking a dose.	Don't drive or use machinery. Ask your doctor if you can take your risperidone at a different time.
Weight gain	Eating more and putting on weight.	A diet full of vegetables and fibre may help prevent weight gain.
Constipation	When you can't pass a bowel motion (the opposite of diarrhoea).	Make sure you eat enough fibre, cereal or fruit. Make sure you are drinking enough fluid, keep active and get some exercise e.g. walking. If this does not help, ask your doctor or pharmacist for a mild laxative.
UNCOMMON *(less than about 1 in 100 people might get these)*		
Blurred vision	Things look fuzzy and you can't focus your eyes properly.	Don't drive. See your doctor if you are worried.
Sexual dysfunction	Finding it hard to have an orgasm. No desire for sex.	Discuss with your doctor.
Skin rashes	Blotches seen anywhere on the skin.	Stop taking it and see your doctor now.

Do not be worried by this list of side effects. Some people get no side effects at all and others may get some effects that are not listed in this table. If you think you might have a side effect to your medicine, you should ask your doctor, case manager or pharmacist.

Will I need a blood test if I am taking risperidone?

You might sometimes need to have a blood test, to check on some possible side effects e.g. prolactin levels, blood sugar.

Can I drive, cycle or operate a boat while I am taking risperidone?

You may feel a bit sleepy, dizzy or light-headed at first when taking risperidone. You should be careful as it may slow down your reaction times. Until this wears off, or you know how risperidone affects you, do not drive or operate machinery.

☎ ***Lifeline*** *provides 24hr telephone crisis support on 13 11 14 or visit www.lifeline.org.au for information &.downloads*

The small print: This leaflet is to help you understand about your medicine. You should also read the manufacturer's Consumer Medicine Information (CMI) Leaflet. You may find lots more on the internet but beware as internet-based information is not always accurate. Do not share medicines with anyone else.

QUETIAPINE

This fact sheet is for women who take quetiapine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking quetiapine.

What is quetiapine?

Quetiapine is an atypical antipsychotic that is used for the treatment of schizophrenia or may be used in conjunction with other medicines in bipolar disorder.

Should I stop taking quetiapine before becoming pregnant?

The decision to stop, start or to continue taking quetiapine before becoming pregnant must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Factors to consider include the type and severity of your condition, whether any other medicine has worked for you in the past and the likelihood that your symptoms may return without the medicine or when changing over to another medicine.

Can taking quetiapine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). The decision to use quetiapine during pregnancy needs to be made on an individual basis after considering the risks and benefits to both you and your unborn baby. Very little research has been done on quetiapine use during pregnancy.

A small number women who used quetiapine during pregnancy and had healthy babies, have been reported.[1-4]

If you need to use quetiapine during pregnancy, use the lowest possible dose to control your symptoms.

Are there any other concerns if I continue taking quetiapine during pregnancy?

Quetiapine has been shown to cause an increase in blood glucose levels, affect glucose tolerance and weight gain.[5] Other complications may include an increase in triglyceride and cholesterol levels and the risk of gestational diabetes.[6]

If you use quetiapine during pregnancy, please let your doctor and midwife know so they can monitor you and your baby throughout your pregnancy to prevent or manage these complications.[7]

Will my baby have withdrawal symptoms after the birth?

Babies born to women who have taken quetiapine close to the time they deliver have experienced the following symptoms:

irritability, restlessness, excessive crying and stiff muscle tone. The chances of these adverse effects occurring are low, but if they do happen, they usually go away within a few days.

Make sure your doctors and midwives are aware that you are taking quetiapine during pregnancy, so they can monitor your baby they are born for these effects.

Will taking quetiapine have any long-term effects on my baby's behaviour and development?

Information about the long-term behaviour and development in children of women who used quetiapine during pregnancy is not available. The possible long-term effects in your baby are unknown.

Can I breastfeed my baby if I continue taking quetiapine?

Quetiapine is known to get into breast milk in very small amounts.[8-11] There are no reports of any serious side effects in babies who have been breastfed when the mother is taking quetiapine.[12]

It is important to discuss your options with your health care providers. If you choose to breastfeed while taking quetiapine, watch your baby closely for possible side effects such as drowsiness, lethargy, changes in sleeping patterns and poor feeding.

Where to get more information

If this fact sheet does not answer your questions about quetiapine or you are still unclear about what you should do, then seek further advice.

Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

Medicines Information Service

Pharmacy Department
Level 1, The Royal Women's Hospital
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BLACK DOG INSTITUTE

Safety of antidepressants in pregnancy & breastfeeding

Fact Sheet

What this Fact Sheet covers:

- Risks of untreated depression in pregnancy & postnatally
- Exposure to antidepressants in pregnancy & breastfeeding
- Early pregnancy antidepressant exposure & birth defects
- Late pregnancy exposure and risk of newborn withdrawal
- Breastfeeding and antidepressants
- Where to get more information
- Key points to remember

Introduction

Decisions about the use of antidepressants in pregnancy and breastfeeding need to be made with care. While this handout is designed to help you to make an informed decision about the use of antidepressants at this time, it is not meant to replace a detailed discussion with your doctor. Furthermore, **our knowledge in this area remains limited and new information is constantly coming to light on this topic**. Ideally, discussions with your doctor would take place before planning a pregnancy and, if possible, with your partner present. The risks and benefits need to be weighed up before decisions can be made about stopping or (re)starting an antidepressant in pregnancy and when breastfeeding.

The risks of untreated depression in pregnancy & postnatally

Depression in pregnancy and after childbirth occurs in about 10% of women. When depression is severe it may be associated with suicidal behaviour, poor self-care, inadequate nutrition, excessive use of alcohol and cigarettes and poor antenatal clinic attendance. All of these can put the foetus at risk. Some studies suggest that maternal depression is associated with increased rates of prematurity, low birth weight and irritability in newborns. Finally, women who cease antidepressants early in pregnancy or pre-conception have a five-fold increase of relapse by the time they deliver.

Mothers who are depressed after the birth will find it harder to adjust to parenting, thus potentially impacting on their care of the baby and the mother-baby relationship.

While untreated depression at this time may have significant adverse effects for both mother and baby, there is also considerable concern on the part of women, their partners and doctors about foetal and infant exposure to antidepressants.

Exposure to antidepressants in pregnancy & breastfeeding

A significant amount (probably between 20-100%) of antidepressants crosses into the baby's system in pregnancy. The amount is generally less than 1% to 5%

in breast milk. We do not know how exposure in pregnancy might affect the developing foetal brain, but two small studies suggest no negative impact on cognitive function while a small 2007 study suggests no behavioural impact in pre-school children. **Much work remains to be done in this area.**

Early pregnancy antidepressant exposure & birth defects and miscarriage

1) **Birth defects:** There are now a number of studies examining several thousand infants, suggesting that there is no increased risk of overall birth defects or malformations above the general population risk (which is 2-3%, a third of which are heart defects) with early pregnancy exposure to the serotonin acting SSRI antidepressants (*Prozac, Zoloft, Cipramil & Luvox*) and the older Tricyclic antidepressants. There is now significant evidence from a meta-analysis (2007) of combined data on 2,752 infants exposed to *Aropax*, to suggest that exposure to this particular SSRI may be associated with an increase in heart defects. This is also supported by another large study published in 2007. T he most common heart defects are called Ventricular Septal Defect (colloquially known as a hole in the heart). *Most of these heart defects however are known to resolve spontaneously* as the baby grows.

The risk of birth defects with the SNRI *Efexor* is far less studied, but the small amount of data available would suggest it is not increased above the norm*;* there is as yet no information available on the newer antidepressants *Avanza* or *Edronax* in relation to birth defects,

2) Miscarriage and mild Prematurity : appears to be slightly increased with the use of SSRIs.

Late pregnancy exposure and risk of newborn withdrawal

There have been recent reports of withdrawal syndromes in babies exposed to the SSRI antidepressants (as well as in the older Tricyclic antidepressants such as *Prothiaden*) in the last few weeks of pregnancy. Based on much smaller numbers from a 2007 publication, this also seems to apply to *Efexor*. Withdrawal symptoms are usually mild, mostly begin on day 1 or within 4 days of birth and usually last for 2-3 days. Newborns will initially need to be monitored in hospital for such symptoms. Withdrawal symptoms include mild breathing problems, irritability, difficulty in settling and feeding, and very occasionally the baby may have a seizure. No babies have died from late pregnancy SSRI exposure. More recent reports also suggest an increased, but minimal, chance of more severe breathing problems with SSRI exposure in late pregnancy. These findings are yet to be confirmed in future studies.

As noted above, this is an evolving field of research and new information is continually coming to light such that no definitive statements can be made about the absolute safety of the SSRIs, whether the exposure is early or late in pregnancy. Ultimately the decision is made after discussion between the doctor and the patient and her family, by balancing out the risks of untreated depression versus the impact of these drugs on the foetus.

Fact Sheet

Breastfeeding and antidepressants

While a small number of studies suggest that antidepressants are not harmful to your baby in terms of its developmental milestones and preschool performance, there is still very little known in this area. What we do know is that compared to the use of antidepressants in pregnancy, less than 5% of SSRIs pass into breast-milk. The decision on whether to breastfeed is an individual one but a significant number of women have done so whilst on antidepressants and do not report adverse effects in their babies.

Key points to remember

- It is important to balance the mental health needs of the mother and the safety issues for the infant in the treatment of depression in pregnancy.

Aropax: may be associated with heart defects and an echocardiogram can be done at 18 weeks to exclude such defects if baby has been exposed to this drug. Overall *Aropax*, is probably best avoided in pregnancy.

- *Other SSRIs*: While the data are still not completely clear about the risk of other (non-cardiac) birth defects related to SSRIs, any such reported risk appears to be relatively minor and must be weighed against the benefits of treatment if mother is unwell.

- Please consult with your doctor for more detailed information about medication use in pregnancy and breastfeeding.

Where to get more information

- If you have further queries you can call **Mothersafe**, a NSW state-wide telephone service which allows you to discuss your concerns with staff who have expertise in this area. Ph: 02 9382 6539 or 1800 647 648.

- **The Motherisk website –** www.motherisk.org - is a leading website for drugs in pregnancy & breastfeeding and can be consulted for frequent updates.

- See also our Fact Sheets: '*Treatments for Bipolar Disorder during pregnancy and the postnatal period*' and '*Depression during pregnancy and the postnatal period*'. http://www.blackdoginstitute.org.au/factsheets/index.cfm

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SERTRALINE

This fact sheet is for women who take sertraline and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking sertraline.

What is sertraline?

Sertraline belongs to a group of medicines called selective serotonin reuptake inhibitors (SSRI). It is used to treat depression and anxiety disorders (e.g. obsessive-compulsive disorder, panic disorder and post-traumatic stress disorder).

Should I stop taking sertraline before becoming pregnant?

When sertraline is stopped, your symptoms may come back. Unfortunately, untreated depression during pregnancy can also be associated with pregnancy complications.[1] The decision to stop, start or to continue taking sertraline, or to change how you take sertraline, must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking sertraline during pregnancy cause birth defects?

A birth defect is an abnormality that develops in the baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). Of all the antidepressants that are used during pregnancy, sertraline is one of the most studied. Most studies have shown that there sertraline does not cause birth defects.[2-6] It is important that you and your doctor talk about your situation before you become pregnant or as soon as you find out you are pregnant.

Are there any other concerns if I continue taking sertraline during late pregnancy?

There is some information that suggests babies may have a slight increased chance of developing pulmonary hypertension - a potentially serious lung problem, when mothers take sertraline during late pregnancy. Pulmonary hypertension is a very rare condition, affecting 1 to 2 babies out of 1000 births. Most women (99%) taking sertraline will give birth to healthy babies.[7,8] Tell you obstetrician if you are taking sertraline, as you and your baby will need to be monitored after delivery.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from sertraline after they are born.[9-11] Withdrawal symptoms can include problems with

breathing, sleeping and feeding, irritability and tremors. The symptoms will usually be mild and your baby is likely to recover without treatment.
Some babies may need to stay in a special care nursery for a few days until the symptoms go away.

Will taking sertraline have any long-term effects on my baby's behaviour and development?

There have been a small number studies about the long term effects on baby behaviour and development when sertraline is taken during pregnancy. From this information, children of women who took sertraline during pregnancy do not have any significant differences in their behavioural and development compared to children of women who did not use the medicine during pregnancy.[12,13]

Can I breastfeed my baby if I continue taking sertraline?

There are several published reports on sertraline and breastfeeding. Only very small amounts of sertraline are found in breast milk, but serious side effects have not been found in breastfed babies.[14,15]
Sertaline is considered safe to use during breastfeeding.
Although side effects are rare, watch your baby for signs of excessive drowsiness, irritability, poor feeding and restlessness.
Talk with your doctor or other health care providers about the risks and benefits of taking sertraline while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about sertraline or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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VENLAFAXINE

This fact sheet is for women who take venlafaxine and are concerned about the effects of the medicine during pregnancy and breastfeeding. The fact sheet does not include information about all the side effects and should be read together with the product information provided with the medicine. It is very important that you speak to your doctor before you decide to start, change or stop taking venlafaxine.

What is venlafaxine?

Venlafaxine belongs to a group of medicines called serotonin and noradrenaline reuptake inhibitors (SNRI). It is used to treat major depression and anxiety disorders (e.g. generalised anxiety disorder, panic disorder and social phobia).

Should I stop taking venlafaxine before becoming pregnant?

When venlafaxine is stopped, your symptoms may come back. Unfortunately, untreated depression during pregnancy is also associated with pregnancy complications.[1] The decision to stop, start or to continue taking venlafaxine or change how you take venlafaxine must be made with your doctor. You and your doctor should talk about the possible risks and benefits of treatment in your individual situation. Ongoing consultation with your health care providers is very important throughout your pregnancy.

Can taking venlafaxine during pregnancy cause birth defects?

A birth defect is an abnormality that develops in a baby during pregnancy. All women have a 3 to 4 percent chance of having a baby with a birth defect (that is, 3 to 4 babies out of 100 babies will have a birth defect). So far, there is only a small amount of research about venlafaxine and pregnancy. This research suggests that there is no increased risk of having a baby with a birth defect if you take venlafaxine during pregnancy.[1-4] There is still a need for more information on the use of venlafaxine during pregnancy. It is important that you and your doctor discuss your individual situation before and during your pregnancy.

Are there any other concerns with taking venlafaxine during late pregnancy?

When venlafaxine is used late in pregnancy, there may be an increased risk of lung problems and low blood sugar levels in your baby.[5] Make sure the obstetrician or midwives who care for you know that you are taking venlafaxine, because you and your baby may need to be monitored during pregnancy and after delivery.

Will my baby have withdrawal symptoms after the birth?

Unfortunately, it is impossible to tell if your baby will have withdrawal symptoms from venlafaxine after they are born. Withdrawal symptoms can include problems with breathing, sleeping, feeding, irritability and tremors.[6-8] The symptoms are usually mild

and your baby is likely to recover without treatment.[9]
Some babies may need to stay in a special care nursery for a few days until the symptoms go away.[10,11]

Will taking venlafaxine have any long-term effects on my baby's behaviour and development?

There have only been a small number of studies about the long-term effects on baby behaviour and development when venlafaxine is taken during pregnancy. One study has found that children of women who took venlafaxine during pregnancy did not have any significant differences in their behaviour and development compared to children of women who did not use the medicine during pregnancy,[12] however more information is needed.

Can I breastfeed my baby if I continue taking venlafaxine?

There are not a lot of reports on venlafaxine and breastfeeding.[13-15] A very small amount of venlafaxine is found in breast milk, but serious side effects have not been found in breastfed babies.[15,16] Watch your baby for any potential side effects such as drowsiness, irritability, poor feeding and restlessness.[13]

Talk with your doctor or other healthcare providers about the risk and benefits of taking venlafaxine while breastfeeding your baby.

Where to get more information

If this fact sheet does not answer your questions about venlafaxine or you are still unclear about what you should do, then seek further advice.
Your doctor, local pharmacist and the Royal Women's Hospital Medicines Information Service can assist you in making decisions regarding the safety of medicines during pregnancy and breastfeeding.

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