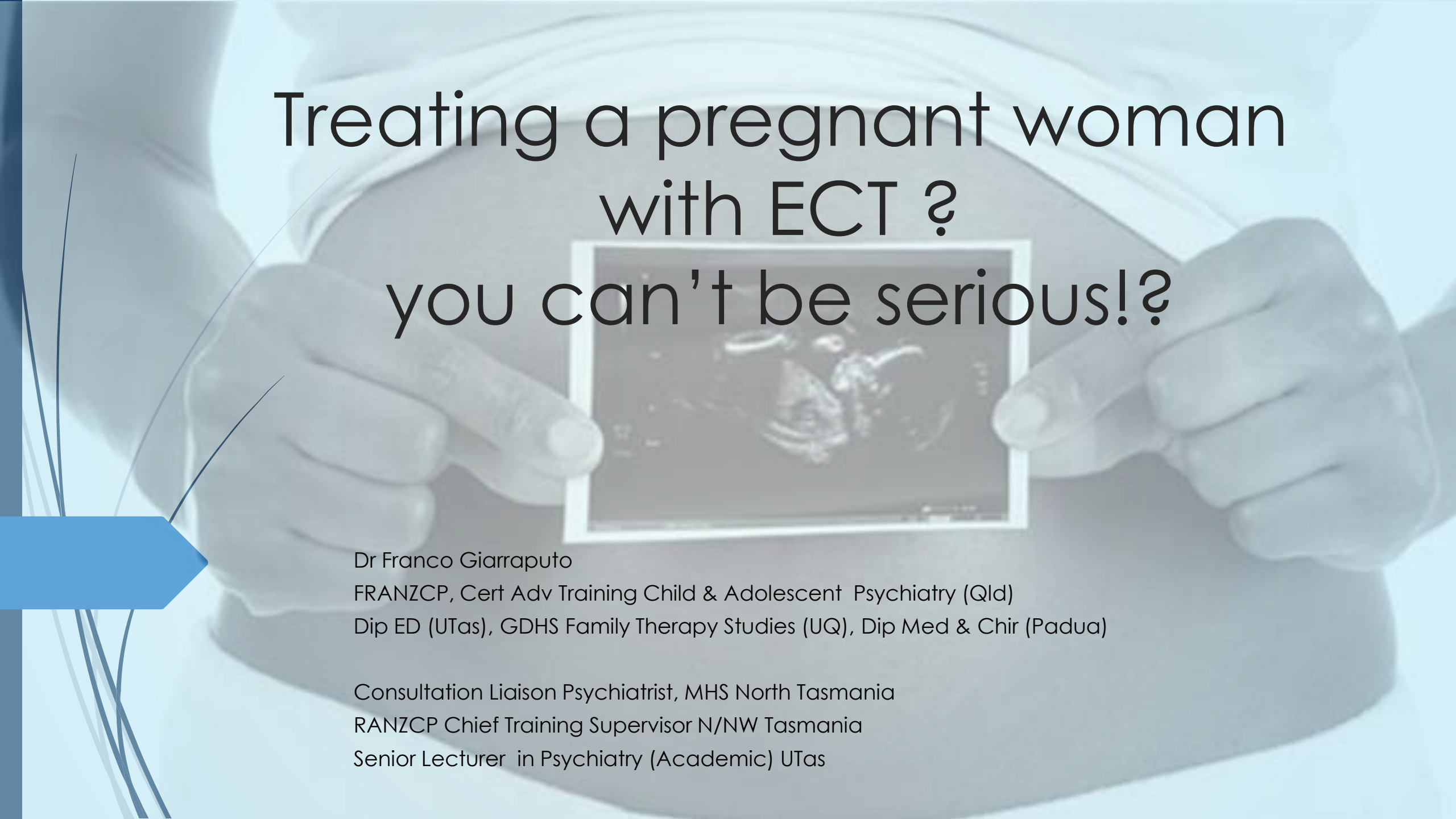
Treating a pregnant woman with ECT ? you can't be serious!?



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Introduction and questions to consider during our discussion

- The various aspects is RC's story inter-dispersed with information from the literature
- What are the challenges of caring for a pregnant woman suffering from a severe mental illness?
- What are our treatment options
- Is ECT a realistic option? And how is it done?
- What are the issues we need to consider when administering ECT?
- And what about the baby?
- What may happen in the postnatal period?
- How is the mother (and father) –baby/child relationship impacted?
- Can such a mum (and child) overcome "predisposing" social/family difficulties and trauma , and thrive in spite of these?

The person

Presentation-1

19/08/2020 :

- RC was a 33yo (at time of this last admission) , identifying as Tasmanian Indigenous/First Nations, on DSP, and in a second longer-term commitment relationship with R, her support and carer, who was also a MHSN patient
- **Home visit by ACMHS:**
  - partner reported deterioration of RC over week prior to admission: " up and down";
  - claiming she had been "injected with a mystery virus" at the time of her last depot,
  - believed was coughing blood (denied by R)
  - worried would infect her partner.
  - colourful scarves over hair and face
  - agitated and pacing
  - Irritable
  - pressured , garrulous speech
  - "multiple bizarre persecutory delusions" eg conspiratorial beliefs and the associated belief that she needed "to sacrifice her own freedom to save others' lives."

Presentation-2

- **ED:**
  - Wearing underpants on her head in the belief that she was saving the world with this gesture
  - Belief that was not happy with her government , wanted to do what they wanted and was upset that she couldn't speak her mind.
  - Regular/frequent cannabis use – no other illicits
  - Alternating laughter with quiet periods and suspected to be responding to internal stimuli and getting upset;
  - Good hygiene and grooming
- **Involuntary admission to Northside facilitated:** due to florid relapse of schizoaffective disorder , characterised by irritable mania symptoms and behaviours and psychosis

Context/Precipitants: it happened during Covid

- Non-adherence with prescribed medication
- Ongoing heavy use of cannabis – "hydro" more that 15-20 cones day
- Irregular attendance at follow-up appointments
- Refusal of contraception because wanted to become pregnant
- Start of a new relationship (14 weeks prior) with a fellow patient (R) of ACMHS with similar diagnostic profile
- Becoming pregnant soon after they met

Past psychiatric history/admissions -1

- **01-02/2008->** Index episode 23 yo -> Drug-induced psychosis (cannabis) / FEP
- **07/2008->** Relapse due self-cessation of meds -> RHH-> 6/52
- **2008->** OD-when aged 21 " I didn't want to kill myself." Subsequently made hanging attempt in the context of ETOH use. At times hitting her head when felt suicidal
- **04/2010->** Depressive episode with associated suicide attempt in context of relationship difficulties [with suicide note] by hanging herself aborted- -> AD citalopram(self ceased)? -> ?manic episode
- **Subsequent admissions** associated also with hydroponic cannabis use-> continued use of non-hydroponic after recovery and associated perpetuating psychosocial stressors .
  - **11/2010-> Dx:** Acute stress reaction/possible emerging psychotic depression

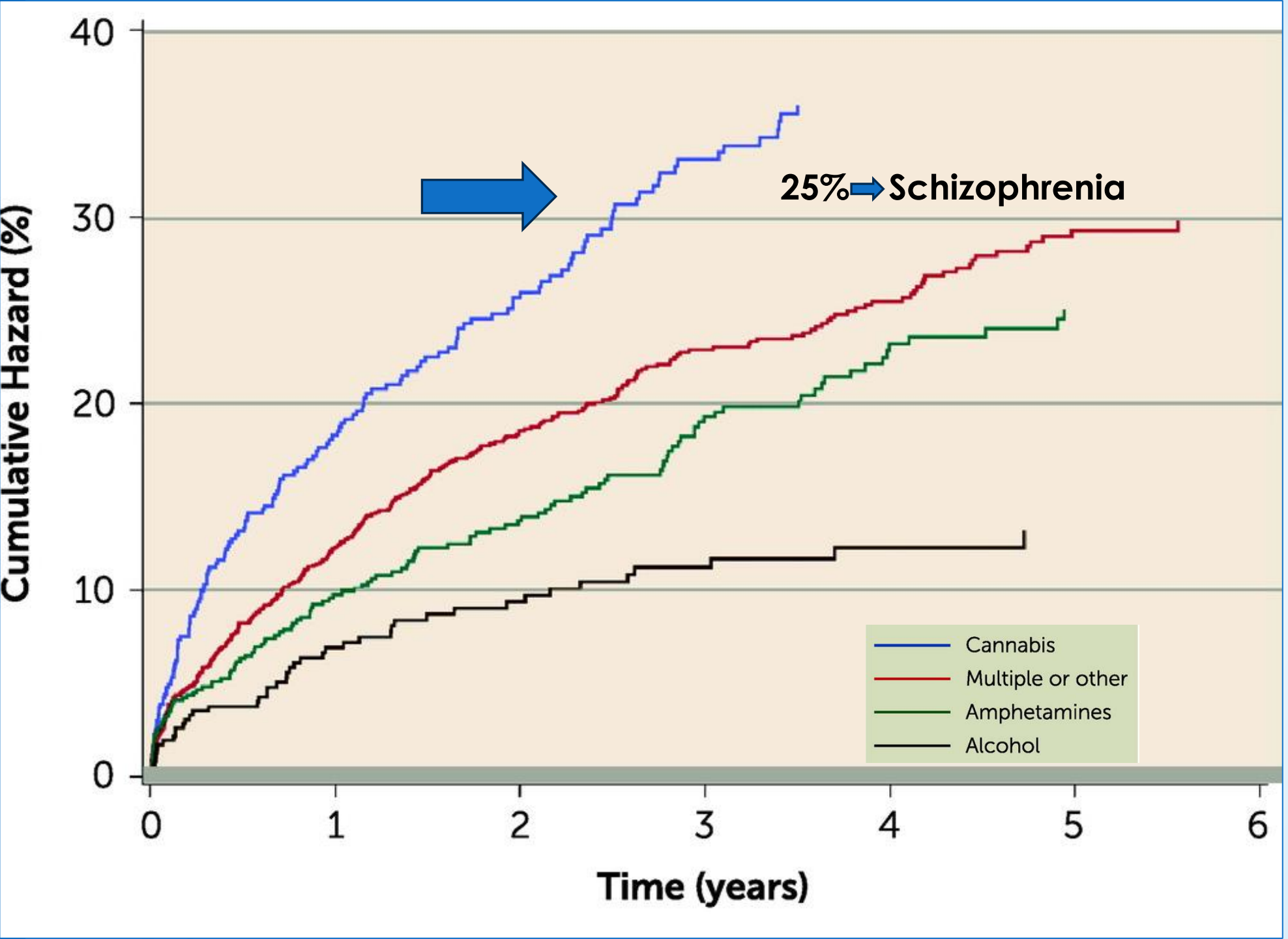
What is the relationship between substance use and mental illness (schizophrenia and bipolar disorder)?

Cannabis ⟷ Psychosis/Bipolar disorder

THC : CBD

1. Uncovers –in predisposed individuals
2. Exacerbates / triggers relapse- in existing illness
3. Causes-etiological

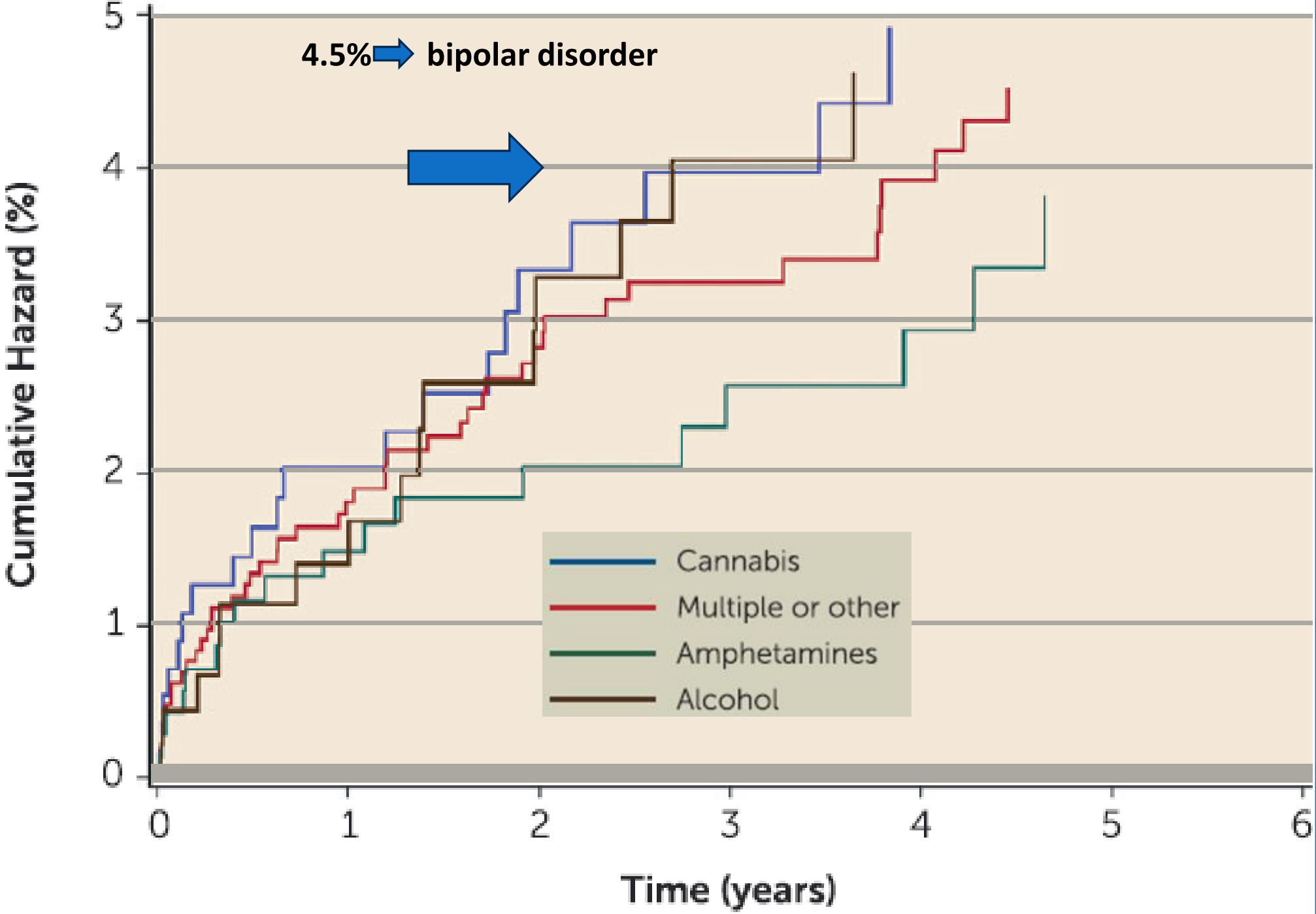
Cumulative transition to SSD



Substance-induced psychosis, particularly cannabis-induced psychosis, is a major risk factor for schizophrenia, and younger age among men and repeated emergency admissions are associatedwith higher risk.

Rognli EB et al. Transition From Substance-Induced Psychosis to Schizophrenia Spectrum Disorder or Bipolar Disorder *Am J Psychiatry* ***2023***; *180:437–444*

Transition to bipolar disorder



Transition rates substantially lower than those found for schizophrenia. Although the incidence of bipolar disorder in men and women in the general population is approximately the same we found a higher risk of transition from substance induced psychosis to bipolar disorder among women. Interestingly, a higher transition rate from substance-induced psychosis to bipolar disorder among women was also foundin a previous study

Rognli EB et al. Transition From Substance-Induced Psychosis to Schizophrenia Spectrum Disorder or Bipolar Disorder *Am J Psychiatry* ***2023***; *180:437–444*

Relationship history -1

- Multiple indiscriminate sexual relationships
- Allegedly verbally abusive 3 yr relationship with alcoholic male ended in 2021-> polysubstance use -> suicidal attempt.
- Inconsistent contraceptive use
- 2011/23yo : pregnant, ,lived on King Island in de-facto relationship-> increase in substance use
- Due to attend High Risk Pregnancy clinic at LGH-> DNA -> relapse of psychosis –admission -> Dx " chronic schizophrenia with features of paranoia and disorganisation."

➡ **Period of inter-episodic stability: ? what kept her well**

A poignant confession at 23

Private psychologist - 11/52 pregnant (1st) : text messages received from RC and disclosed to her GP "out of duty of care for this young, pleasant and resilient girl" –concerned about her safety.

1. "I'm scared . I don't know if I can do this here. What the hell have I done ? I don't know if I can give this baby what it needs '"
2. "God has never left me but I tried to leave him." "I'm not adopting and I'm not aborting, but I don't know where I'm going."
3. "I've pretty much been running since I was 15 and I can't , nor will I run anymore."

Past psychiatric history-2

- **7/2012 ->** found at Gorge with 9/12 baby in rain ; disorganised and psychotic-> Dx Schizoaffective disorder (with irritable mania) and substance use disorder (cannabis principally)
- **2013 / 25yo -**Paliperidone depot 75mg monthly-> increased lactation--> lithium , asenapine and quetiapine; **-> Dx BP I** ! (by locum psychiatrist)

➡ **Period (5yrs)of inter-episodic stability** : **? what kept her well**

- **5/2018 (31)->** RHH for 6/52-> bizarre/paranoid delusions about aliens wanting to abduct her daughter; "extremely aggressive and uncooperative -> ECT –RUL UB x 12 -> "dramatic improvement" -> lithium and depot haloperidol -> MHSN Community follow-up; supported by father and financially by mother-> CPS involvement

Past psychiatric history-3

- **08/2018**-> heavy cannabis use and ETOH; CPS denial of custody -> verbally aggressive to wards staff -> threatening suicide, > police called -> voluntary admission to NS –brief admission -> DC to father's care and ACMHS follow-up -> Rx : lithium and asenapine -> anger Mx counselling with Catholic Care ; dealing with frustration due to loss of driving license ;
- Set goal towards reunification with daughter -> engaging more in artwork for exhibition ->ADS
- **04/2019**-> manic relapse -> NS-> ECT x 7 (BF 0.5s) -> good effect -> paliperidone depot , quetiapine and lithium continued

  Schizoaffective dis Dx reinstated (see below) -> DSP application " needs the stability and reduced stress of being on the DSP." -> granted

How was she managed **before** the 2nd pregnancy?

Past psychiatric history-4

- **02/2020**-> **ACMHS RV by me** : Schizoaffective dis Dx confirmed; Meds = aripiprazole depot 400mg, Lithium 450mg nocte , quetiapine 100mg nocte , diazepam 5mg PRN -> requesting cessation of lithium due to hair loss;-> not on contraception as wanting another baby -> ongoing cannabis use (15-20 cones /day) –breakthrough psychosis noted and " love keeps me alive."

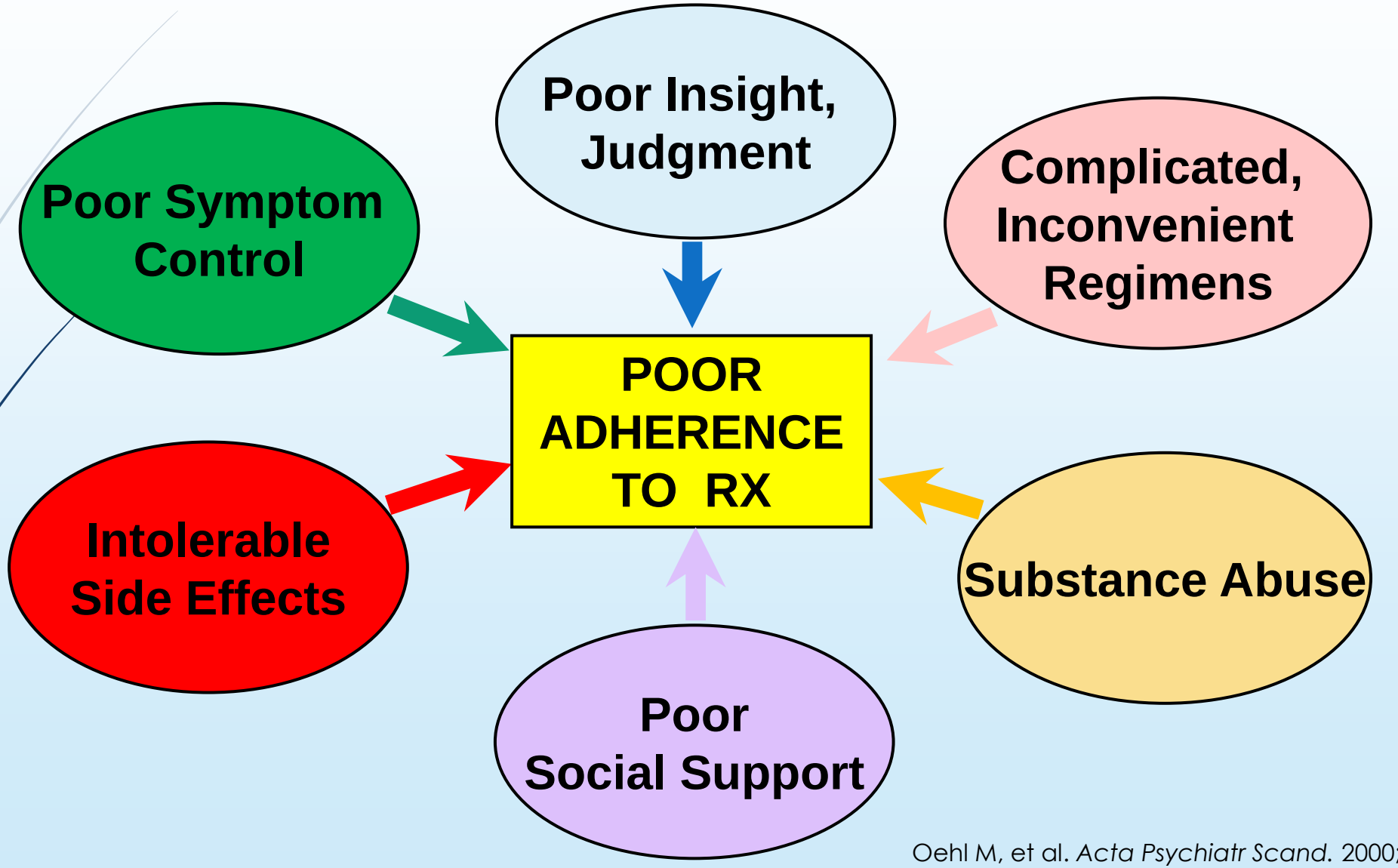
  Advised to : wean lithium, minimise use of diazepam, consider contraception ; tackle use of cannabis; further optimisation of quetiapine dose

- **5/2020->** Non adherence with Rx regimen and ongoing use of cannabis –relapse -> NS-> course of ECT x 12 -> resolution

A pattern identified:

- Poor social supports,
- Unstable accommodation
- Irregular sleep/wake cycle (including caring for 11/12 old baby 7/2012)
- Repeated erratic –none adherence to prescribed oral medication
- Continuing substance use (THC mainly , but including ETOH)

Why patients don't take prescribed medication



Oehl M, et al. *Acta Psychiatr Scand.* 2000;102(Suppl. 407):83–6.

Summary: symptoms/phenomenology in RC

Summary of some phenomenology / symptoms/ behaviours of irritable mania symptoms and behaviours and psychosis RC has presented with:

- highly agitated and dysregulated
- aggressive behaviour
- conspiratorial beliefs and the associated belief that she needed "to sacrifice her own freedom to save others' lives."
- command auditory hallucinations
- paranoid/ persecutory delusions
- referential delusion about magpies communicating with her through whistles and following her home ; also having the ability to communicate with them via her "vibrations and energy." " They followed me and came to tell me I have a right to be "…"It's all in the universe …they have helped me before."
- delusion about aliens invading Earth to abduct her daughter (Jesse) who supposedly had special abilities that attracted their attention
- grandiose delusions
- religiose delusions: " I think I'm a saint."/claims of being a "psychic"

Developmental /Family/Social hx-1

- Born in Hobart 31/05/1987, and raised in Tasmania , middle of 3 (older brother-by 1 yr- baker ; and younger sister by 7 yrs-lives in Hobart and also has provide some support in recent times)
- Mother smoked cannabis throughout her pregnancy with RC-> lived in caravan for a while
- "Born blue" with cord around her neck but not needing perinatal special care
- Parental separation when RC was 7 and divorced when she was 14- difficult time for her with court battles ; mother blamed father.
- Mother-> h/o alleged "loss of control and lots of screaming"
- Dad (?indigenous) was a "pot grower"; multiple family relocations around Tasmania ? Work-related ; RC closer to him

Developmental /Family/Social hx-2

- Allegedly exposed to DV by step-father : physically and emotionally abusive- " Scared to go home as a child because of DV"
- History of sexual abuse not elicited –but suspected in view of her reported early and frequent sexual encounters from her teenage years onwards
- Had opportunity to move to Canberra with mother but chose to stay in Launceston- as not close to her
- Left home at 15-> lived with BF and others -> unstable itinerant lifestyle-> smoking cannabis and binge drinking from that age; engaged in DSH at age 16 -> LSD , magic mushrooms and speed occasionally in late teens /early twenties

Developmental /Family/Social hx-3

- Long time estrangement from mother , recent limited contact but was become more supportive of RC in recent times, as has her brother .
- Supportive biological father lives in St Mary
- Estranged from most of her family members except for father
- First longer-term relationship -> pregnancy with first child/daughter
- Lived alone in rental accommodation for a while before she had baby-> "feeling very lonely"
- **2015**-27yo single mother . Mirena IUD in situ, 3yo toddler-play appropriate, no attachment or child safety concerns
- Reported seeing a counsellor with father regarding her traumatic early family hx
- Some (unclear)connection with local aboriginal community

Education and employment history

- Alleged marked bullying and teasing for 3 years at school –"but loved school- Art and Maths best subjects " /Duke of Edinburgh Award ; "did not fit in and Principal was mean to me."
- Worked at *Woolworths* and *Hungry Jacks* while at school
- Left school early [went to live with boyfriend and then a share house] and attempted to return to study as a mature age students to complete her year 12 studies , however was unsuccessful and left at the end of yr 11.
- Recent participation in UTas University Preparation Program –study skills
- Worked in the sex industry
- Unemployed and on DSP

Forensic and Substance use history

- In the context of relapse -> convictions for DUI, failure to comply with police and aggressive , drink-driving and failure to stop at scene of a crash -> court referred to Forensic MHS for assessment (Kate)
- Binge ETOH-but abstained during pregnancy
- Had used ETOH prior, due to social isolation , loneliness and loss of custody of daughter
- Long-term daily use cannabis since age 15 " [got it] from everywhere" and continuing during her pregnancy- "organic –not hydro…little amount to relax." Was friends with dealer ; hydro caused bad reaction –shadows/AH-hearing the thoughts of others and paranoid thinking ~ 2017/18
- Still smoked cannabis during her pregnancy

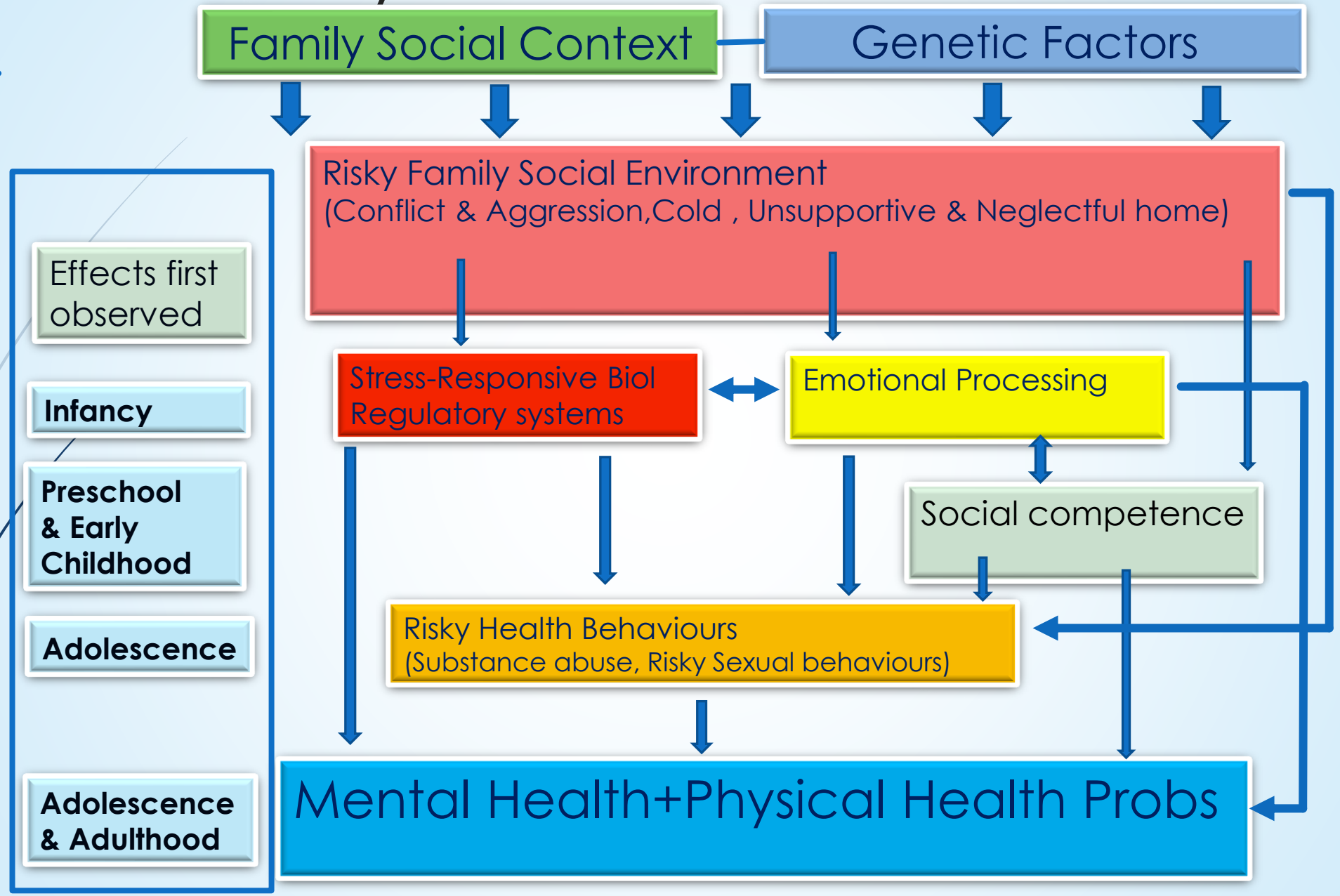
Family psychiatric history

- Father suffered from depression and was ? treated with ECT
- Mother-> h/o alleged anger mangement difficulties
- Younger sister has a h/o DSH
- Other family psychiatric hx unknown (eg for schizophrenia and BP)

What is the potential impact of stressful life events(ACEs) in **the mother's** background history?

Problems and families…or problematic families

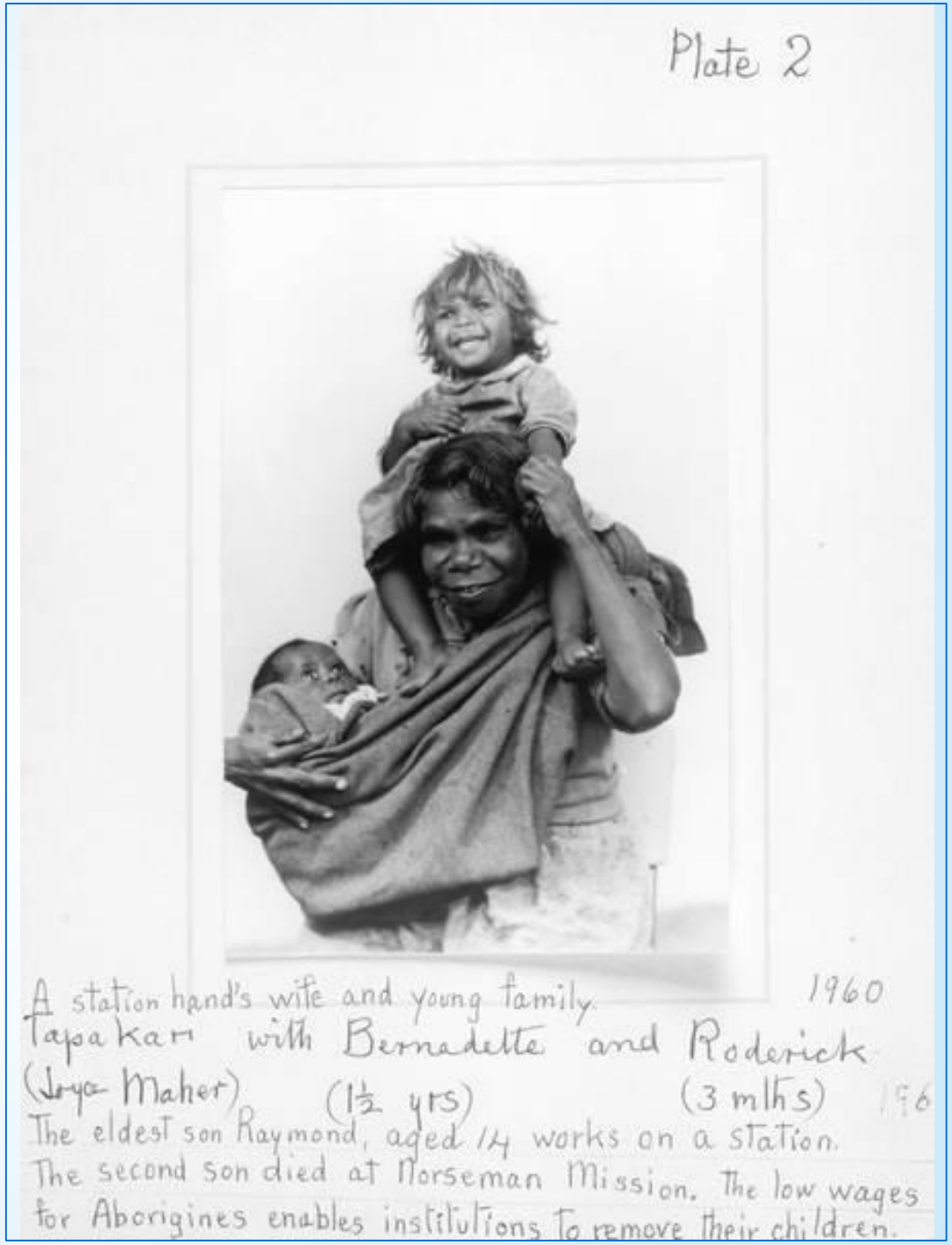
Risky Families Model



Repetti et al 2002, *Psychological Bullettin*

Intergenerational trauma

- "Hurt souls beget hurt souls" [1]
- "Trauma lines" -trauma that runs across generations" [2]



1. Noel Pearson –Indigenous Leader, *Weekend Australian ,27-28/04/2013*

2. Atkinson, J. Making sense of the senseless: feeling bad, being mad, getting charged up. Problematic Drug and Alcohol Use and Mental Illness. Conference Proceeding, 1999; 37-4

Neurobiological basis of parenting disturbance:

[Trans-generational regulatory model of parent-infant interactional disturbance]

Early trauma
Disorganised attachment
Neurodevelopmental sequelae

Early trauma
Disorganised attachment
Neurodevelopmental sequelae

Interactions un-attuned to infant's emotional states

- ⬆ Stress
- ⬇ Capacity for self-regulation
- ⬇ Representation of self
- ⬇ Reflective capacity
- ⬇ Affect recognition/representation
- ⬇ Affective regulation
- ⬇ Interactional reward

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- ⬇ Affective regulation
- ⬇ Interactional reward

Newman LK, Harris M , Allen J , Neurobiological basis of parenting disturbance. Australian and New Zealand Journal of Psychiatry 2011; 45:109-122

Gork spent many a frustrated evening trying to teach his newborn his first recognisable sound

Prevalence of maltreatment in Australia (Australian Maltreatment Study-ACMS)

Before

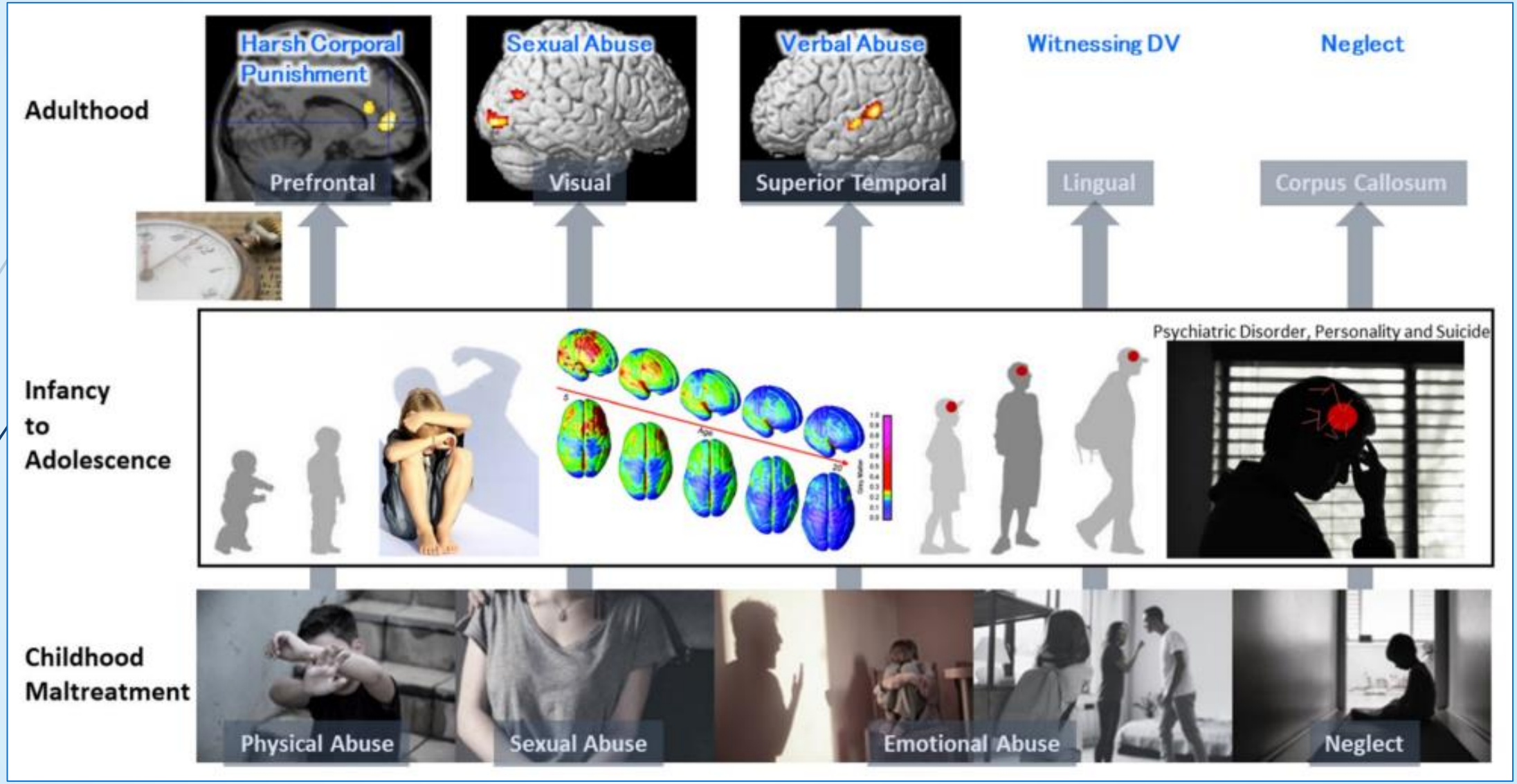
18 years of age

:

- 1 in 3 children have experienced physical abuse (32%)
- 1 in 4 have experienced sexual abuse (28.5%
- 3 in10 have experienced emotional abuse (30.9%)
- 4 in 10 have experienced domestic and family violence(39.6%)
- 1 in 10 have experienced neglect (8.9%)

1. Matthew B ,Pacella R, Scott JG et al (2023)The prevalence of child maltreatment in Australia: Findings from a national survey. *Medical Journal of Australia 218:S13-18*
2. Bull C, Trott M, Kisely S. Editorial-Addressing the challenge of child maltreatment measurements: Examining the types of data we use and how we use them. *Australian and New Zealand Journal of Psychiatry 2025;59 (4):301-303*

Structural changes depending on the type of childhood maltreatment(CM)



Tomoda A et al . The neurobiological effects of childhood maltreatment on brain structure, function, and attachment. European Archives of Psychiatry and Clinical Neuroscience. Feb 2024 . https://doi.org/10.1007/s00406-024-01779-y

The crucial role of epigenetics: in mediating the effects of acquired life experiences & environmental exposures on brain development & function, and structural brain alterations

- ACE's-abuse
- Inadequate maternal nutrition, traumatic events, maternal stress, prenatal infection, sleep disturbance, caffeine consumption and substance abuse
- Air pollution

Early life exposures(ACEs)
Environmental insults
Maternal factors (eg quality of care provided)

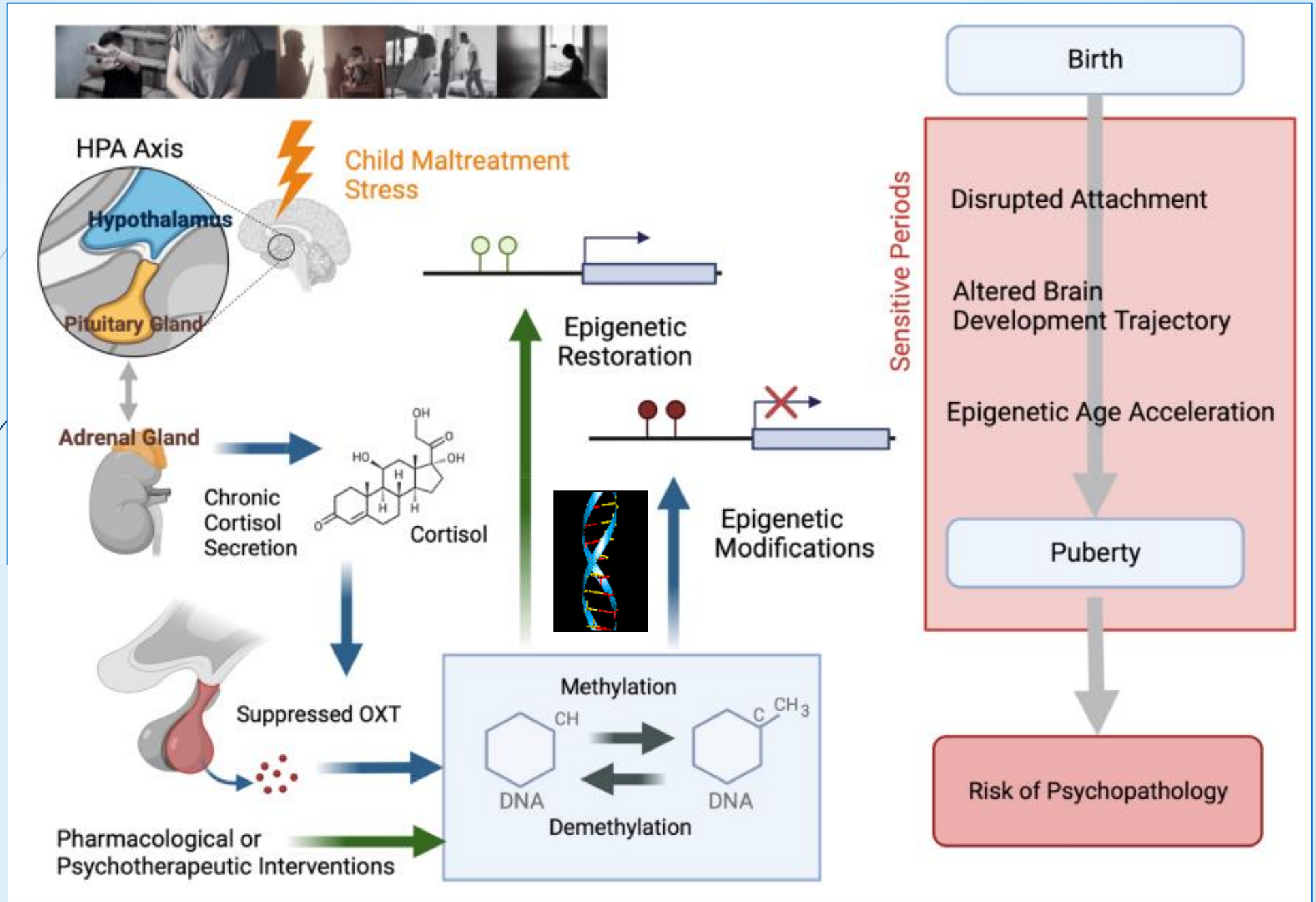
Changes in DNA methylation patterns in hippocampus

In later life affect
1.cognitive function
2.stress reactivity

Prevention , lifestyle, psychological and pharmacological interventions may potentially reverse epigenetic effects

* Negative environmental influences on the developing brain mediated by epigenetic modifications. Komar-Fletcher M. et al. *Explor Neurosci. 2023;2:193–211*
* Tomoda A et al . The neurobiological effects of childhood maltreatment on brain structure, function, and attachment *European Archives of Psychiatry and Clinical Neuroscience. Feb 2024 .. https://doi.org/10.1007/s00406-024-01779-y*

Summary of possible role of epigenetic modification



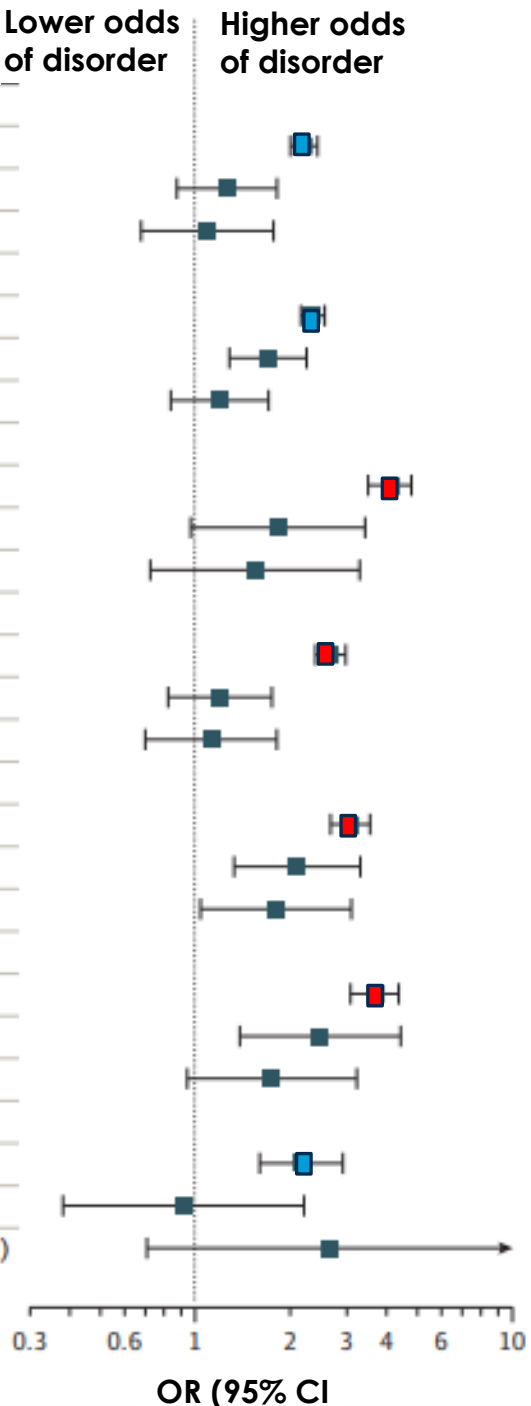
Tomoda A et al . The neurobiological effects of childhood maltreatment on brain structure, function, and attachment European Archives of Psychiatry and Clinical Neuroscience. Feb 2024https://doi.org/10.1007/s00406-024-01779-y

Petrosellini C, McAlpine L, Protti O, Siassakos D. The use of psychotropic medication in the perinatal period. *The Obstetrician & Gynaecologist 2024;26:127-38*.

Association between adverse experience (ACE) subtypes and any psychiatric disorder

(confirmed by recent research)

ACE subtypes	Participants: Total	With disorder	OR (95% CI)
Family violence			
Full cohort	25252	2379	2.21 (2.00-2.43)
DZ	1352	155	1.26 (0.88-1.81)
MZ	962	119	1.09 (0.68-1.77)
Emotional neglect or abuse			
Full cohort	25252	2379	2.35 (2.15-2.56)
DZ	2862	260	1.70 (1.28-2.25)
MZ	1844	197	1.20 (0.84-1.71)
Physical neglect			
Full cohort	25252	2379	4.10 (3.50-4.81)
DZ	298	56	1.83 (0.97-3.44)
MZ	218	52	1.55 (0.72-3.30)
Physical abuse			
Full cohort	25252	2379	2.67 (2.39-2.98)
DZ	1110	139	1.20 (0.82-1.75)
MZ	824	112	1.12 (0.70-1.81)
Sexual abuse			
Full cohort	25252	2379	3.09 (2.68-3.56)
DZ	730	117	2.10 (1.33-3.32)
MZ	458	78	1.80 (1.04-3.11)
Rape			
Full cohort	25252	2379	3.68 (3.09-4.38)
DZ	422	73	2.48 (1.38-4.44)
MZ	312	62	1.75 (0.95-3.23)
Hate crime			
Full cohort	25252	2379	2.16 (1.60-2.92)
DZ	202	22	0.92 (0.38-2.21)
MZ	128	17	2.67 (0.71-10.05)

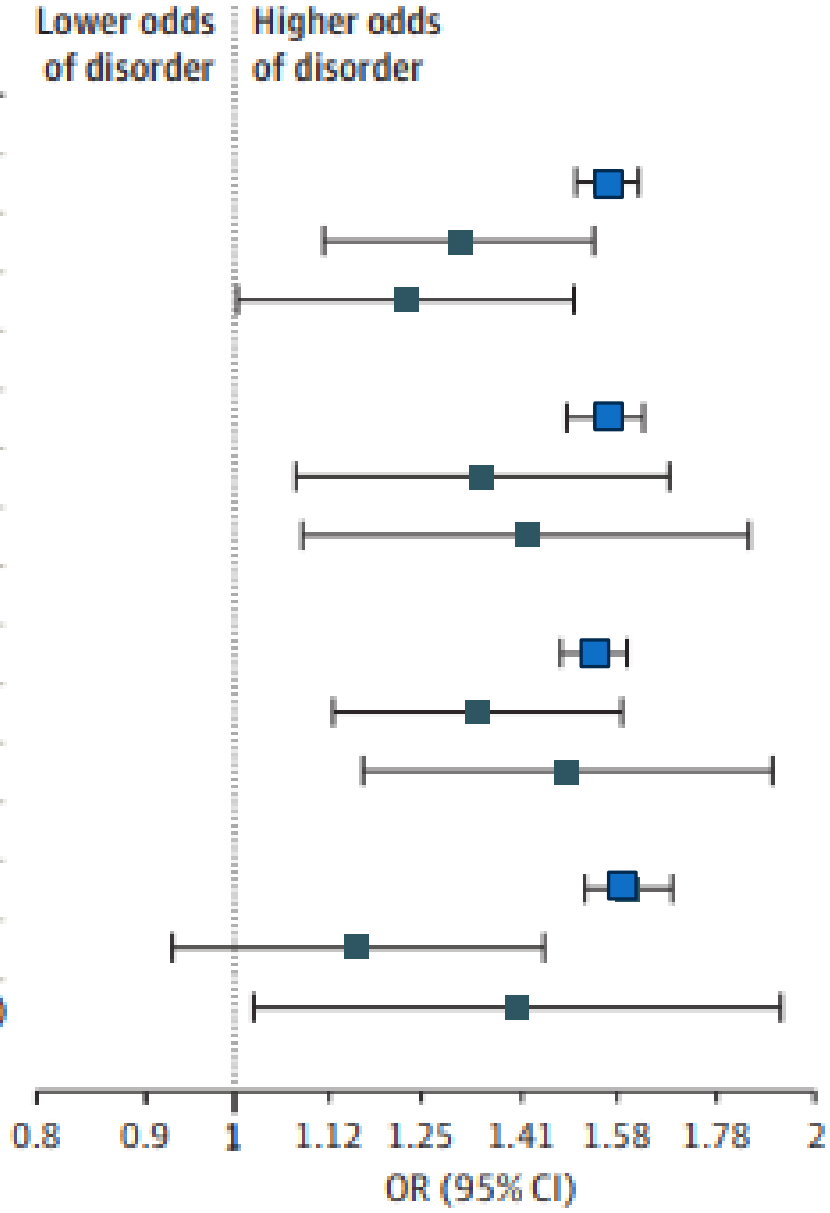


Adverse Childhood Experiences and Adult Mental Health Outcomes . Daníelsdóttir, HB; et al .*JAMA Psychiatry Published online March 6, 2024: E1-8*

What disorders can potentially develop in a **mother** with a trauma history ?

Association between number of adverse childhood experiences & adult onset psychiatric disorder subtypes

Psychiatric disorder subtype	Participants, No. Total	With disorder	OR (95% CI)
Depressive disorder			
Full cohort	25252	1221	1.56 (1.50-1.62)
DZ	4018	223	1.31 (1.11-1.54)
MZ	2834	190	1.23 (1.00-1.50)
Stress-related disorder			
Full cohort	25252	744	1.56 (1.49-1.63)
DZ	4018	127	1.35 (1.08-1.68)
MZ	2834	101	1.42 (1.08-1.85)
Anxiety disorder			
Full cohort	25252	1136	1.54 (1.48-1.60)
DZ	4018	197	1.34 (1.13-1.59)
MZ	2834	179	1.49 (1.17-1.90)
Substance-use disorder			
Full cohort	25252	595	1.60 (1.52-1.69)
DZ	4018	101	1.16 (0.93-1.45)
MZ	2834	78	1 .40 (1.02-1.92)



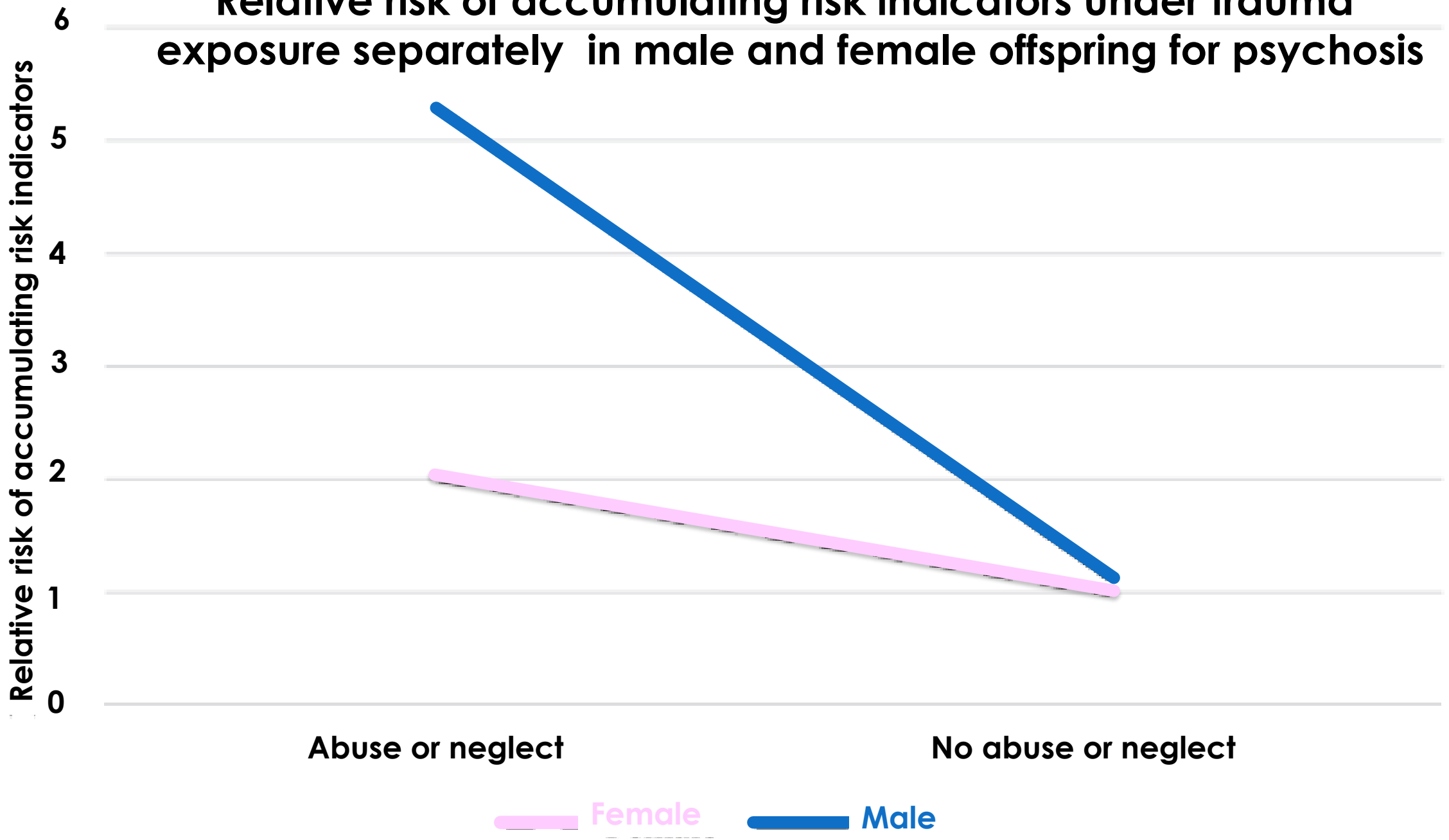
Adverse Childhood Experiences and Adult Mental Health Outcomes .
Daníelsdóttir, HB et al .*JAMA Psychiatry Published online March 6, 2024: E1-8 (A Swedish twin study*

Childhood trauma and psychosis

- Exposure to childhood trauma is common in patients with early psychosis and also those with clinical high risk (CHR) for psychosis, with up to 80% of patients having been exposed to some traumatic experience, and is associated with increased symptomatology
- The experiences of childhood trauma present not only a risk factor for the development of, but also the specific manifestation of, psychotic experiences in later life.

Michel1 C, Kindler J, Kaess M. Traumatic experiences in childhood and the development of psychosis spectrum disorders. *European Child & Adolescent Psychiatry (2022) 31:211–213*

Relative risk of accumulating risk indicators under trauma exposure separately in male and female offspring for psychosis



Michel1 C, Kindler J, Kaess M. Traumatic experiences in childhood and the development of psychosis spectrum disorders. *European Child & Adolescent Psychiatry (2022) 31:211–213*

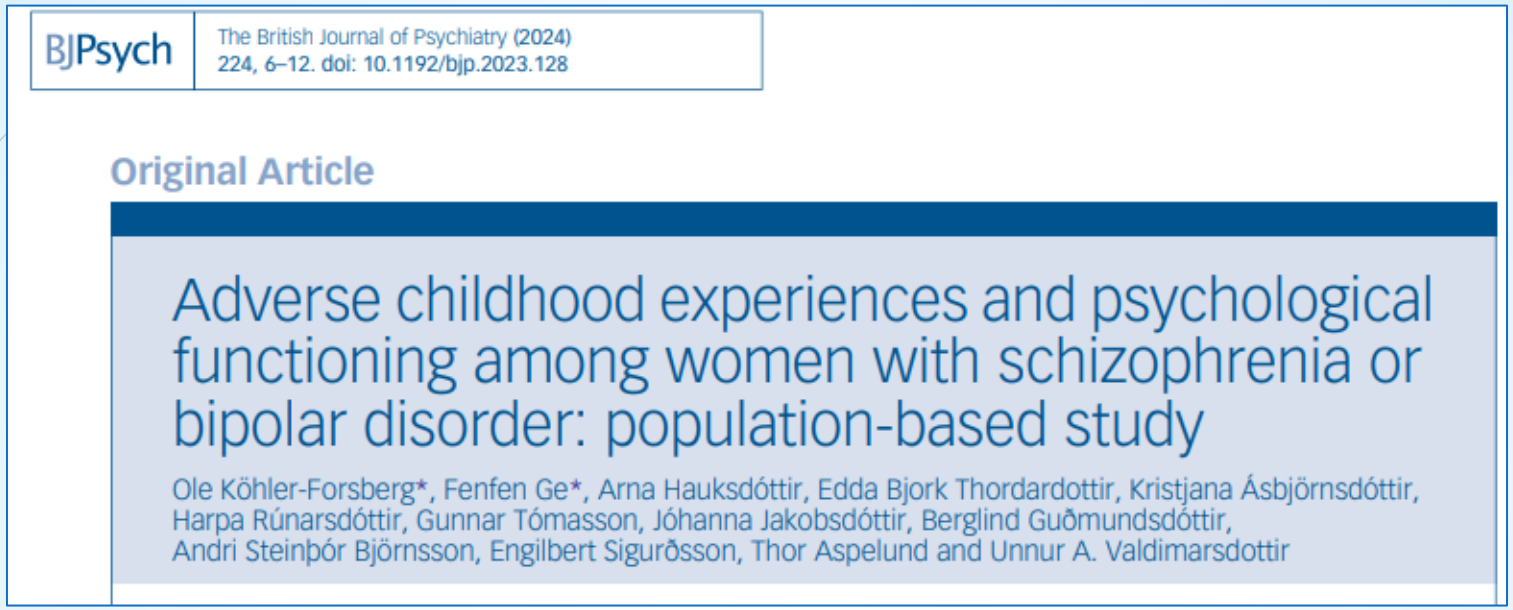
Conclusions

Findings from the Coggan & Cannon review suggest that:

- there is a dynamic interplay between childhood trauma and other exposures and risk factors;
- the role of childhood trauma needs to be considered across the continuum of psychotic outcomes and in the context of a range of psychopathological trajectories and outcomes; and
- psychopathological outcomes associated with a history of childhood trauma are often multidimensional and do not fit within traditional diagnostic classifications.

Coughlan H and Cannon M. Does childhood trauma play a role in the aetiology of psychosis? A review of recent evidence. *BJPsych Advances (2017), vol. 23, 307–315*

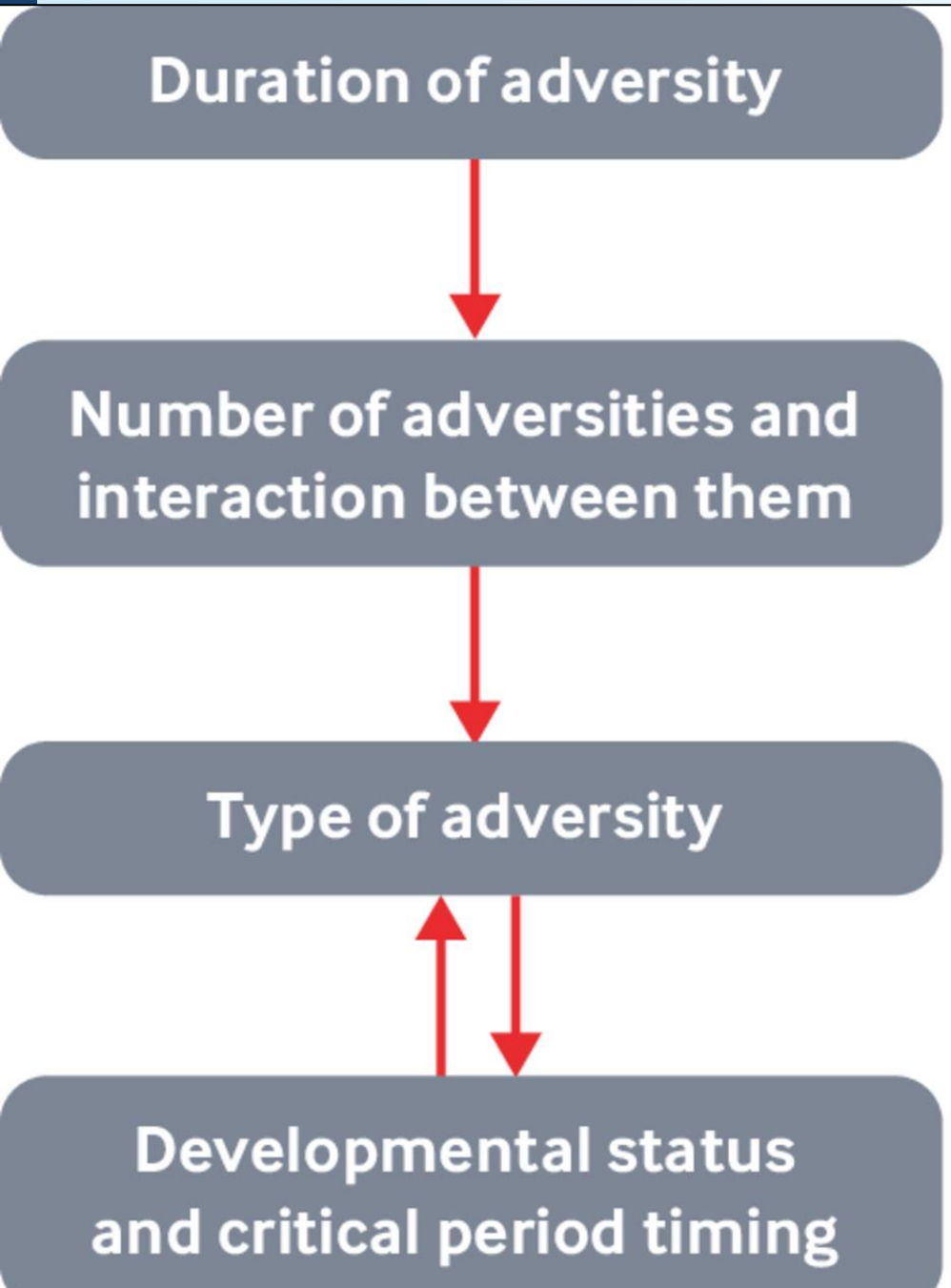
ACEs and schizophrenia/bipolar disorder



- Women with schizophrenia or bipolar disorder show a strong history of ACEs, which may interfere with their psychological functioning and, therefore, need to be addressed as part of their treatment, for example, with trauma-focused psychotherapy

Köhler-Forsberg O et al. Adverse childhood experiences and psychological functioning among women with schizophrenia or bipolar disorder: population-based study. *The British Journal of Psychiatry (2024) 224, 6–12.*

Summary: Interplay of adversities, context and human



Nelson CA et al TOXIC STRESS AND PTSD IN CHILDREN .Adversity in childhood is linked to mental and physical health throughout life *BMJ 2020;371:m3048*

But RC had important strengths and protective factors

- Talented [Indigenous]artist and has sold her work
- Cooking and gardening
- Desire to further her education
- Driving license
- Cert II in business admin-> plan to do Cert III
- Reportedly stable 2nd longer-term relationship
- Improved family support
- Improved engagement with MHS during recent pregnancy
- Attempting (though struggling)to reduce/cease cannabis use
- Some(but not consistent) awareness when becoming unwell

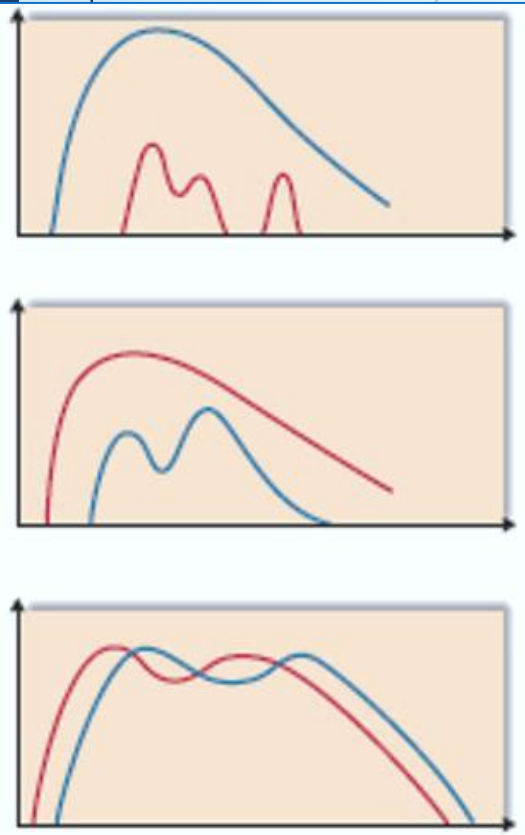
Diagnostic history

- DSH
- DIP
- FEP
- MD-> suicidality
- Schizophrenia
- Bipolar disorder I
- Schizoaffective disorder

https://youtu.be/vqgSO8_cRio

Diagnosis and differential diagnosis

DIP-> (suicidal attempt)->FEP->bipolar disorder I ->schizoaffective disorder -"given the prominence of psychotic features"



Schizophrenia

Mood symptoms not prominent

Mood disorder

Schizophrenic symptoms occur after mood symptoms and appear to be secondary

Schizoaffective disorder

Schizophrenic and mood symptoms equally prominent

Symptoms of schizophrenia

Symptoms of mood disorder

ABC of Psychological Medicine

- AHs
- Delusions
- Thought disorder

AND

- Depressed mood
- Depressive symptoms

OR

- Elated or irritable
- Manic symptoms

Symptoms present within the same uninterrupted episode of illness

Andrews G et *al in Management Of Mental Disorders, 2013: 379-380*

Understanding RC : Formulation

Why is : **this person** presenting with **this problem** at **this time**

Presenting:

- florid psychosis/mania-schizoaffective disorder
- risk to self and foetus

Precipitating

- psychosocial stressors
- non adherence
- continuing substance use

Predisposing:

- indigenous background
- likely attachment difficulties
- family violence; physical/emotional abuse
- ? sexual abuse
- acrimonious parental separation
- family psychiatric history
- risk-taking behaviours: sexual, substance use, no contraception;
- grief/loss re,1st relationship and child and css
- impaired negotiation of several erikson stages

Perpetuating:

- see precipitants

Protective :

- strengths
- improved social supports (family , wrap around services . MHS case manger/care coordinator)
- new partner
- new child
- greater willingness to engage with MHS and GP

Prognostic

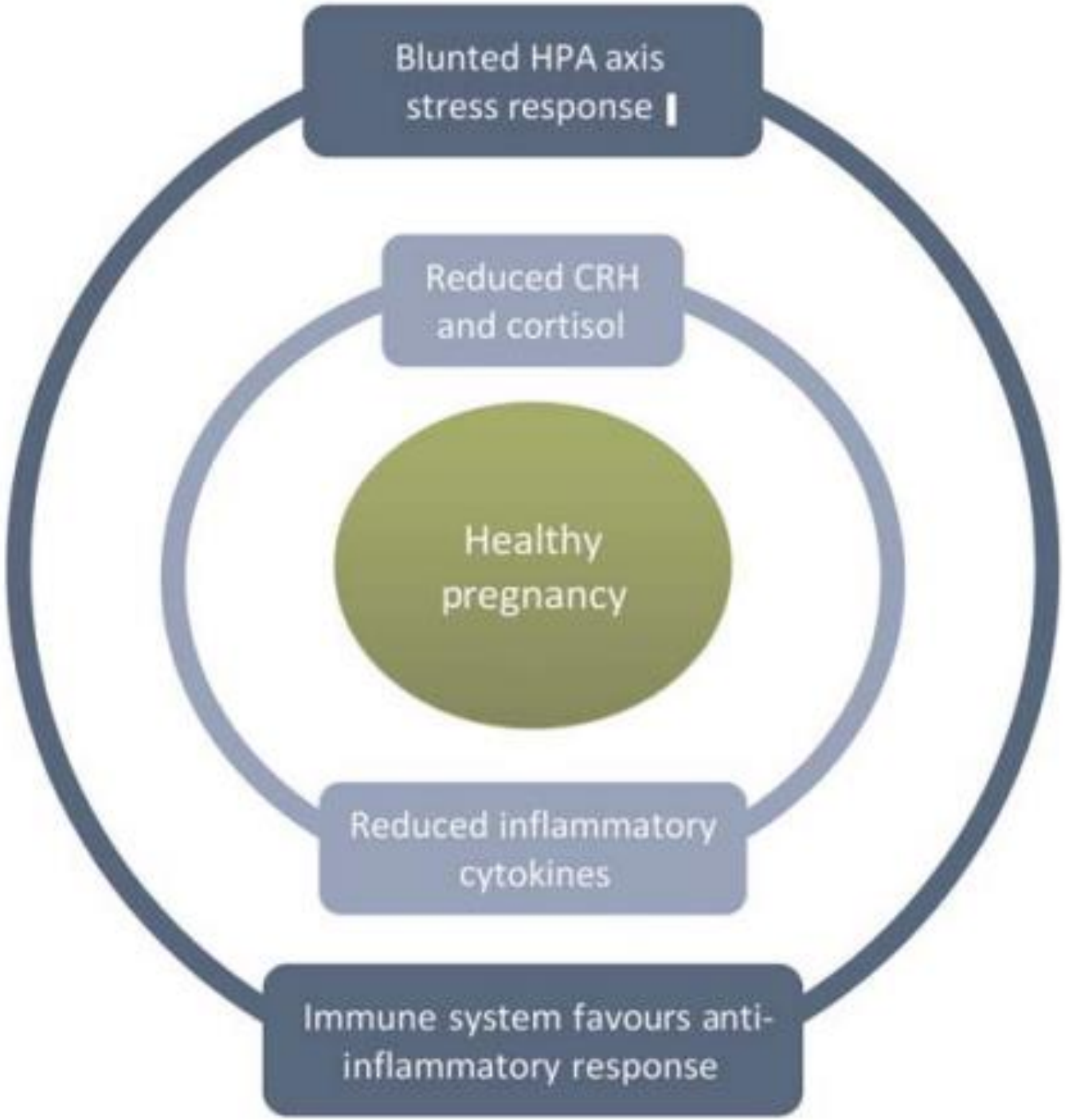
good if:

- seeks help early
- continues adherence with treatment regimen
- avoids substance use

poor if:

- does the opposite –> relapse and readmission
- further relationship fractures
- further CSS involvement

What is the impact of stress on pregnancy?



Maternal immune and endocrine adjustments support of healthy pregnancy

Coussons-Read ME. Effects of prenatal stress on pregnancy and human development: mechanisms and pathways. *Obstet Med 2013;6(2): 52-57*

Healthy stress vs unhealthy stress during pregnancy

	Healthy Stress	Unhealthy Distress
Duration	Intermittent	Chronic
Intensity	Mild to moderate	Moderate to severe
Psychiatric diagnosis	Absent	Present
Trauma history	Absent or resolved	Present and unresolved
Chronic environmental strain (e.g., economic deprivation, discrimination, housing instability, exposure to violence)	Absent	Present
How stress is experienced	As challenges that can be met	As overwhelming

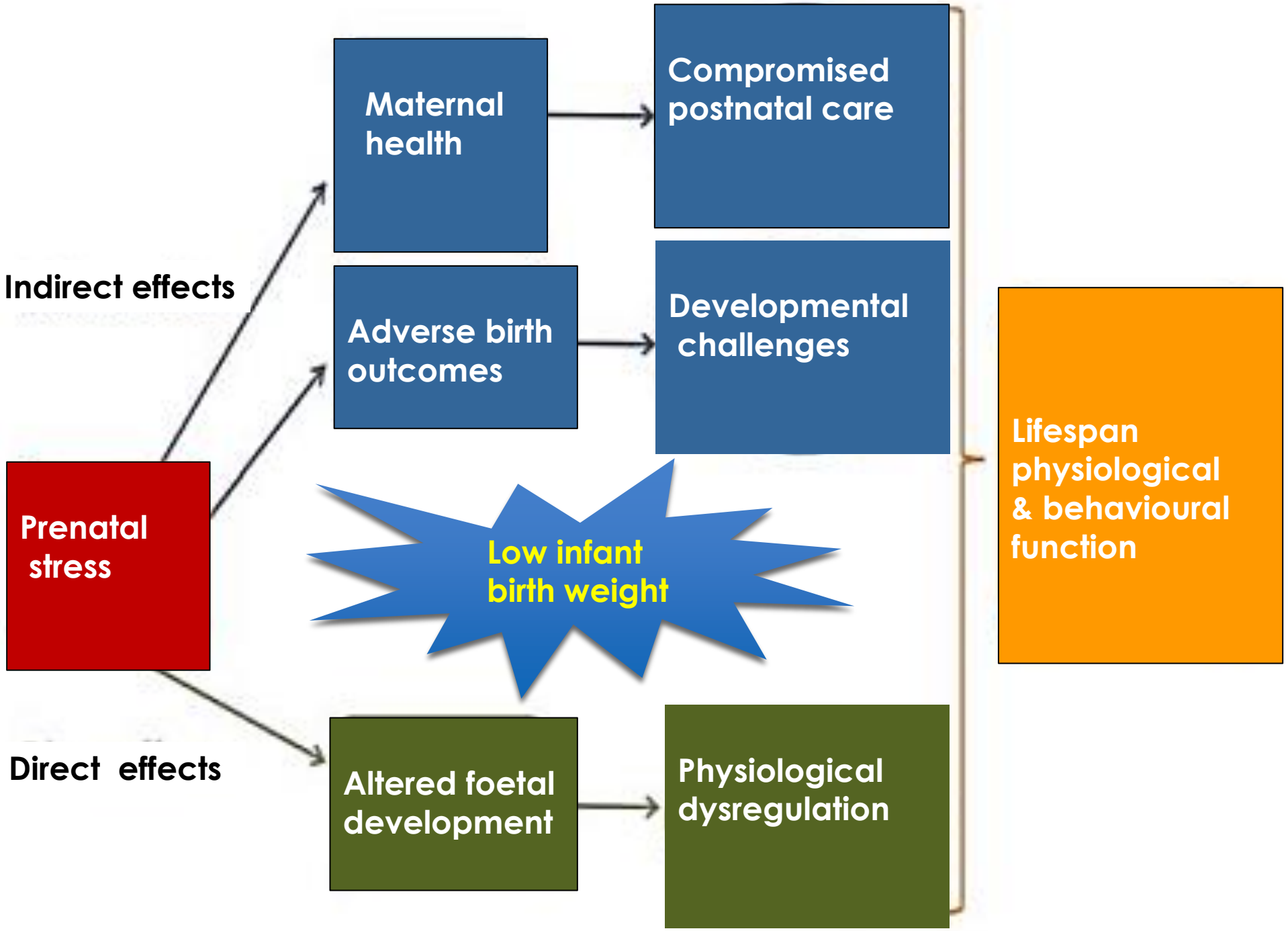
Miller L J Special Report: Stress and Distress During Pregnancy—How to Protect Both Mother and Child. *Psychiatric News* Volume 57, Number 3 https://doi.org/10.1176/appi.pn.2022.03.3.1

Pregnancy and stress

- Stress is multifaceted and an individual's experiences of stress during pregnancy are influenced by not only by the 'stressors' themselves.., but also by the cultural, social and environmental context in which the stressors occur.
- Changes in mother's mood during pregnancy can change her physiology
- This in turn can affect foetal development

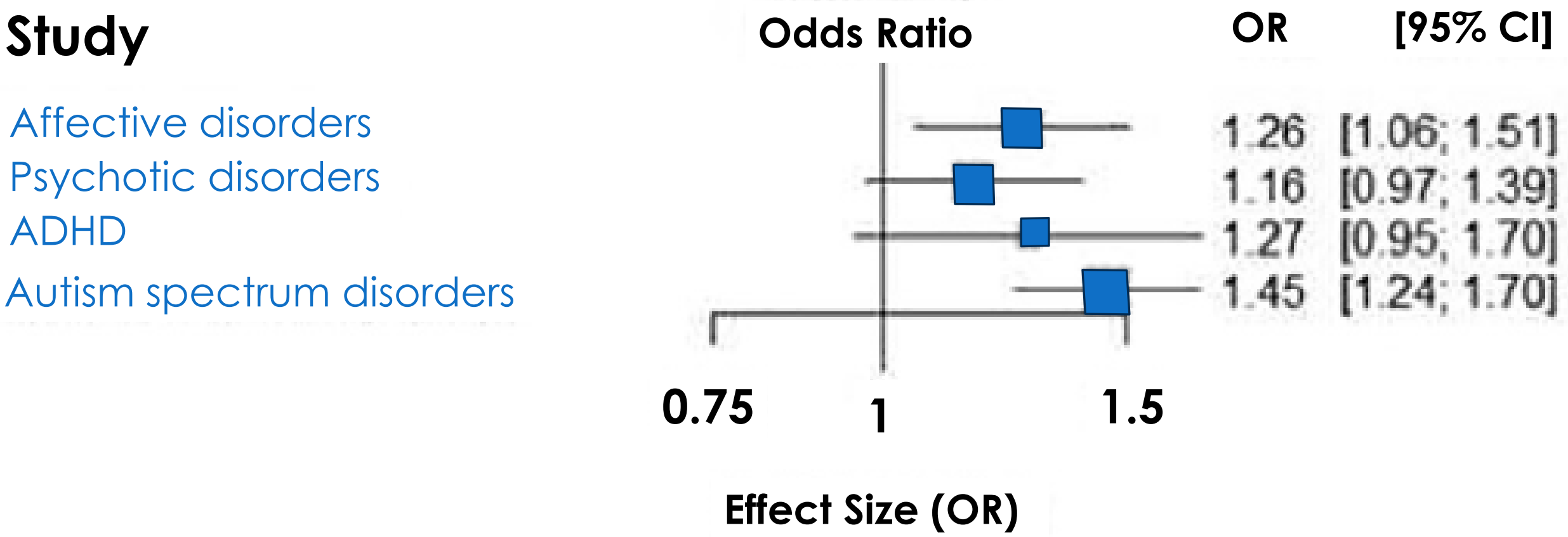
-Coussons-Read ME. Effects of prenatal stress on pregnancy and human development: mechanisms and pathways. *Obstet Med 2013;6(2): 52-57*
-Miller L J Special Report: Stress and Distress During Pregnancy—How to Protect Both Mother and Child. *Psychiatric News Volume 57, Number 3 https://doi.org/10.1176/appi.pn.2022.03.3.1*
-Glover V , O'Donnell K , O'Connor TG. Maternal stress, anxiety, and depression during pregnancy: effects on the fetus and the child . In Kohen D (ed.) *Oxford Textbook of Women and Mental Health . 2010 : pp 265–270*

Effect of prenatal stress pathways on the health and development of offspring



Coussons-Read ME. Effects of prenatal stress on pregnancy and human development: mechanisms and pathways. *Obstet Med 2013;6(2): 52-57*

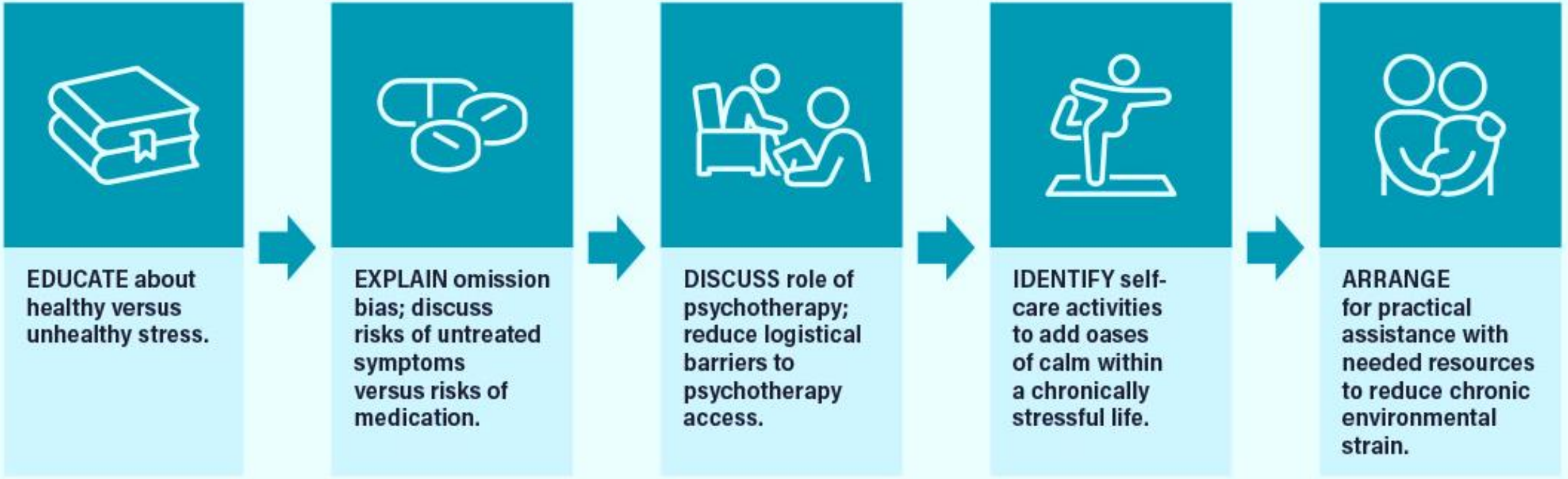
Stress during pregnancy: effect size distribution by type of psychiatric disorders in the baby



Rafael A. Caparros-Gonzalez et al . Stress During Pregnancy and the Development of Diseases in the offspring: A Systematic-Review and Meta-Analysis . *Midwifery 97 (2021) 102939*

What are the general interventions we can use?

Mental health interventions for women experiencing substantial antenatal stress



"Omission bias": which is the tendency for doctors to worry more about the risks of things we *do* (for example, prescribe) than the risks stemming from our failure to act

Miller LJ. Special Report: Stress and Distress During Pregnancy—How to Protect Both Mother and Child. Psychiatric News Volume 57, Number 3https://doi.org/10.1176/appi.pn.2022.03.3.1

Relationship history-2: once more with feeling!

- Second relationship with R (18 yrs older)– her current supportive partner and father of second pregnancy, a fellow pt of MHSN (Dx BP 1) -on off relationship till recent pregnancy and showed himself to be supportive and recommenced his own Rx (*Trinza* -3 monthly paliperidone depot/lithium)when RC fell pregnant
- RC was adamant she wanted another child , also , reportedly , at the instigation of R "before I get any older" , and consequently refused contraception despite repeated psychoeducation and advice not to do so
- As consequence , became increasingly ambivalent about taking prescribed medication

The pregnancy: the mother (RC) and her baby-1

- **17/04/2020** : GP initiated investigation had confirmed a single viable intrauterine gestation
- She stopped taking her prescribed medication

Risks and the perinatal patient

- Some patients choose to discontinue psychiatric medication when trying to conceive and during pregnancy, with limited recognition that this could be associated with increased antenatal and postnatal relapse->
  - Bipolar disorder -> 85% or higher
- **Therefore a pregnant patient will be exposed to active psychiatric illness -> multiple negative outcomes for the exposed baby->**
- In the postnatal period, risks of harm to the newborn …due to untreated or undertreated maternal mental illness-> can have implications for the infant's safety and their cognitive, social, and emotional development.
- Risk of exposure of child to psychiatric illness and unhealthy and unpredictable maternal behaviours

Petrosellini C, McAlpine L, Protti O, Siassakos D. The use of psychotropic medication in the perinatal period. *The Obstetrician & Gynaecologist 2024;26:127–38.*

Pregnancy and mental illness: Balancing Risk/Safety

- Risks must be weighed against the risks of psychotropic medication and/or the treatment burden of psychotherapy.
- Understanding this can protect against omission bias, which is the tendency for doctors to worry more about the risks of things we *do* (for example, prescribe) than the risks stemming from our failure to act

Miller L J. Special Report: Stress and Distress During Pregnancy—How to Protect Both Mother and Child . Psychiatric News 2022; 57 (3)

Psychotropic medication and pregnancy

- Most psychotropic medications are compatible with use in the perinatal period.
- Untreated mental illness carries significant risks for both mother and baby.
- Receiving inconsistent advice from different clinicians
- Individualised risk-benefit discussions , multidisciplinary teams and provision of holistic care.
- Availability of evidence-based resources (2)

1. Petrosellini C, McAlpine L, Protti O, Siassakos D. The use of psychotropic medication in the perinatal period. *The Obstetrician & Gynaecologist 2024;26:127–38*.
2. **COPE: *Australian Clinical Practice Guideline. 2017. Centre of Perinatal Excellence***

Pregnancy and mental illness-1

- Psychiatric illness is a leading cause of maternal mortality and has been identified as part of the wider constellation of biases that contribute to poor obstetric and neonatal outcomes
- Perinatal mental illnesses are largely **under-diagnosed**, and often undertreated
- The perinatal period itself can trigger a mental illness **de-novo**
- The perinatal period is considered to be a high risk time for women with a prior psychiatric diagnosis, potentially-> **re-exacerbation** of the illness
- Untreated (or inadequately treated) psychiatric disorders are associated with adverse events in both the mother and the foetus
- Longer-term severe consequences on both, and during childhood and adolescence for the child.
- Adversely affect the mother-infant dyad

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series *Archives of Women's mental Health 2024;27:157-178*

Risks of untreated or inadequately treated mental illness during pregnancy -2

- Some psychiatric disorders -> increased risk of self-harm, which can be intentional or indirect, through **chaotic or risk-taking behaviour**.
- Disorders -> barrier to healthy lifestyle measures, and rates of smoking, poor diet and substance misuse are higher in people with untreated mental illness.
- Maternal illness can affect pregnancy through increased inflammatory activity, and behavioural changes such as poorer nutrition, reduced physical activity and disordered sleep which may accompany a period of illness.(Coussons-Reid 2013)
- Late booking and poor engagement with antenatal care may also contribute to worse obstetric outcomes

Petrosellini C, McAlpine L, Protti O, Siassakos D. The use of psychotropic medication in the perinatal period. *The Obstetrician & Gynaecologist 2024;26:127–38*.


Pregnancy and bipolar disorder
(or schizoaffective disorder)

General effects of **bipolar disorder (BP)**on maternal and foetal health during pregnancy-1

- Mothers: BP during pregnancy have an increased risk of some complications:
  - preterm birth,
  - threatened preterm labour,
  - gestational hypertension,
  - instrumental delivery.
- Baby: BP and its psychotic treatment also have adverse effects on:
  - foetal health and development,
  - increasing the risks of congenital malformations,
  - small HC and CNS problems,
  - SGA < 10^{th} percentile and, so, requiring neonatal hospital readmission.
- BP does not increase the incidence of stillbirth and infant mortality

SGA Small for Gestational Age

Mohamed MA et al. Effects of bipolar disorder on maternal and fetal health during pregnancy: a systematic review. *BMC Pregnancy and Childbirth (2023) 23:617.*

Effects of **bipolar disorder** on maternal and foetal health during pregnancy-2

- More research is needed to determine the effects of BD on :
  - cardiovascular events risk in mothers,
  - obstetric complications: such as
    - neonatal hypoglycaemia,
    - neonatal morbidity,
    - spontaneous respiration >2 min,
    - intubation,
    - naloxone administration,
    - neuromotor performance of infant, and
    - occurrence of rare syndromes,
    - developmental disorders,
    - autism, epilepsy, and
    - convulsions to the offspring, due to the limited number of available studies and insufficient information.
- Because of the inconsistent findings among the included studies regarding severe SGA, LGA, caesarean section, APH, GDM, Apgar score < 8, low birth weight, and foetal distress, conducting more studies is crucial to determine the effects of BD on these complication

SGA Small for Gestational Age
LGA Large for Gestational Age

Mohamed MA et al. Effects of bipolar disorder on maternal and fetal health during pregnancy: a systematic review. *BMC Pregnancy and Childbirth (2023) 23:617.*

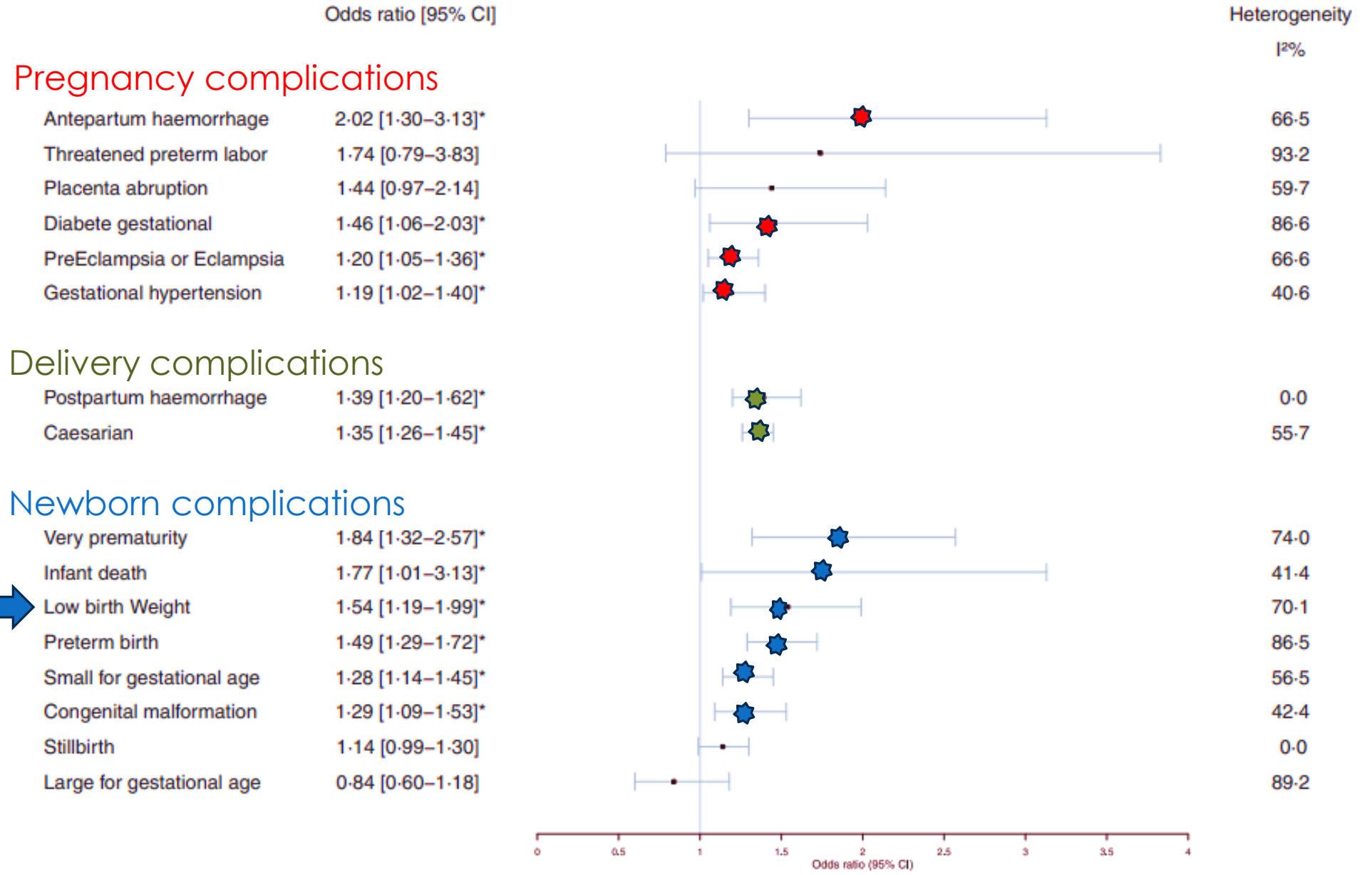


Fig. 2: Forest plot presenting odds ratios (ORs) and 95% confidence intervals (CIs) for associations between pregnancy, delivery, and newborn complications. Significant results are marked with an asterisk (*). Heterogeneity across studies is expressed as I^2 percentages for each outcome.

Summary of maternal and neonatal complications in pregnant women with bipolar disorder

Etchecopar-Etchart D et al. Maternal and neonatal complications of pregnant women with bipolar disorder: a systematic review and meta-analysis. ***eClinicalMedicine 2025;79:*** *103007/www.thelancet.com Vol 79 January, 2025*

Conclusion of paper

"Our analysis of nearly 50,000 cases of pregnant women with bipolar disorder suggest that these women may be at a higher risk of experiencing 12 complications related to pregnancy, delivery, and neonatal outcomes compared to unexposed women. "

Etchecopar-Etchart D et al. Maternal and neonatal complications of pregnant women with bipolar disorder: a systematic review and meta-analysis. *eClinicalMedicine 2025;79: 103007/www.thelancet.com Vol 79 January, 2025*

What are the specific concerns about pharmacotherapy treatment during pregnancy ?

Bipolar disorders and psychotropic medication

Prophylaxis

- Consider using the same drug that was effective for acute treatment depending on its safety during pregnancy and breastfeeding.
- Discuss treatment options with the patient and, if they consent, their significant other(s).

During the first trimester,

- Olanzapine, quetiapine, or,
- Lamotrigine -if depression is prominent , for prophylaxis
- Lithium is usually avoided during the first trimester because of the increased risk of congenital malformations; however, if the patient only responds to lithium and the likely benefits of using lithium outweigh the potential harms, lithium may be used with close supervision

From the second trimester onwards,

- Lithium is preferred for prophylaxis; however, it should not be used while breastfeeding—for advice on managing lithium use during pregnancy see here.
- If lithium is not used, olanzapine, quetiapine, or, if depression is prominent, lamotrigine are preferred for prophylaxis of bipolar disorder—see drug regimens here.
- Carbamazepine can be started in the second trimester for prophylaxis of bipolar disorder—see here for advice on carbamazepine use during pregnancy.
- Do not start sodium valproate during pregnancy

Therapeutic Guidelines > Psychotropic > Psychotropic use during pregnancy. 2023

How was RC treated -2?

RC's psychopharmacotherapy history

- **Antipsychotics:**
  - quetiapine XR (poor compliance, excessive drowsiness)
  - asenapine
  - paliperidone depot (poor compliance) (2013)
  - aripiprazole depot
  - olanzapine (weight gain
  - haloperidol
  - benztropine

- **Mood Stabilisers** :
  - sodium valproate (poor efficacy, poor compliance)
  - lithium (compliant, good clinical response)
- **ADs** : citalopram (self ceased-> mania)
- Diazepam PRN
- Prior successful courses of **ECT**, but none given not during first pregnancy with Jesse

Management and progress: during latest admission (our presentation)

- Admission to NS -> TO-> routine screening on admission -> "Early stages of pregnancy"- pregnancy (6/52 – BhCG tested)
- SW: "her treating team are exploring the best way forward in terms of medications given her condition."
- Liaison with Perinatal team in Hobart/St Helens Hospital; planned liaison with LGH Indigenous Liaison Worker. (Anna Norris reg at NS!)

Pharmacotherapy regimen

Options used in accordance with evidence and guidelines and in consultation with the perinatal team in Hobart:

- Quetiapine-
- Olanzapine-oral and IM
- Haloperidol-oral and IM

Why we resorted to ECT

- **RC not responding to recommended pharmacotherapy, together with other de-escalation interventions**
- **25/08/2020 ->** Emergency ECT approval granted by MHRT pending application; New course of ECT proposed -> and variation of TP, to include **ECT course (BF 0.5s)** :
- "RC has had a ECT in 2018, 2019 and 2020-> POSITIVE and RAPID responses wit minimal associated side-effects."
- Outcome expected : **Rapid and safe resolution of symptoms leading to reduction of serious risk the illness process poses to RC and the foetus."**

MSE , management and progress at NS IPU

- **02/09/2020->** HDU for extended periods: "increasingly verbally and physically threatening and aggressive/assaultive towards staff and co pt-> seclusions: banging on door ; naked and masturbating on mattress ; highly agitated , aggressive. psychotic symptoms, persecutory delusions ; regularly taking clothes off and running around HDU."
  - Described by nursing staff as "out of control after 2nd ECT… screaming and biting...threatening to harm baby if taken from her by CPS. "
  - "Pt was so agitated , verbally and physically aggressive towards staff whilst being escorted to ECT + code black team." " tried to calm , reassure pt.
  - "Pt was so agitated it was hard to settle he-> Code Black Team."
- **09/09/2020 ->** report to CSS made by RC's Case manager at ACMHS " Given details that RC's has said that if this baby was taken by CPS she would kill it 'slit its throat', confirmed that she is pregnant and is under a TO at NS.

COURSE OF ECT COMPLETED (BF 0.5s –BRIEF X12) -> successful remission of psychiatric symptoms and behavioural dysregulation-> reduced LOS-> earlier DC-> greater focus of pregnancy

- **19/9/2020->** SW NS requested ACMHS OT Functional Assessment (ABAS-3)-> to assist with NDIS application

Who is ECT for ?

Patients who:

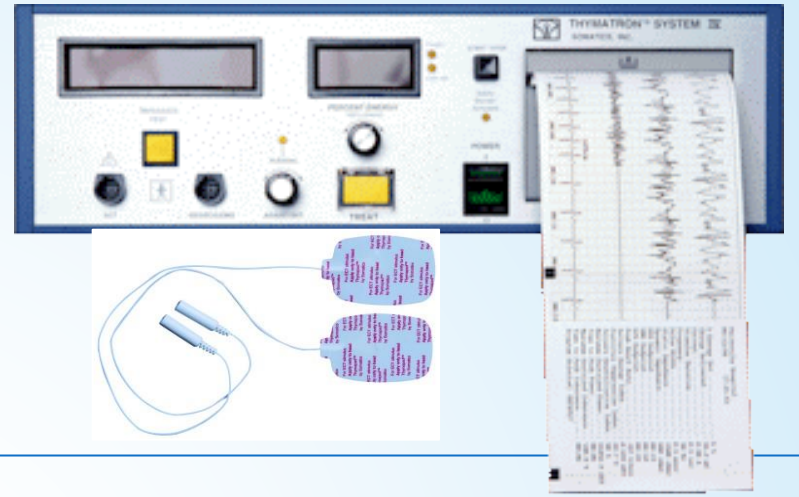
- Have had previous positive response to ECT
- Are non-responsive to pharmacological treatments,
- Severe psychiatric symptoms
- Mania

But need to consider special populations:

- Peripartum/Pregnancy
- All pregnant women in studies receiving ECT during the first trimester had a severe psychiatric disorder with associated psychosis or suicidal ideation

The American Psychiatric Association (APA) recommendations for ECT

How is it done?: The ECT Team



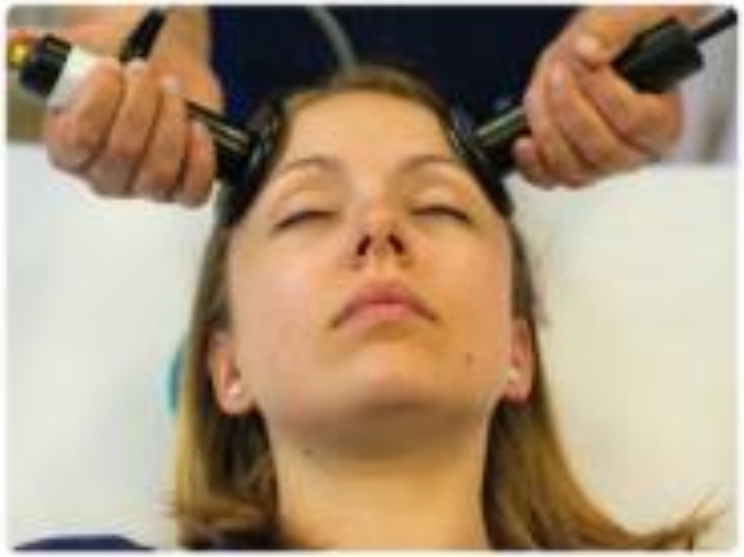
Psychiatrist-credentialed

- Registrar-supervised
- RN-ECT specialist
- Anaesthetist
- Anaesthetic nursing staff
- Monitoring: communication with patient throughout, review consent/MHRT documents , time out; "baseline" tracing, stimulating electrodes-+/- gel /saline, EEG, ECG, IV line access, oximetry, BP, mouth guard; hyperventilation, anaesthetic and muscle relaxant

ECT modalities –lead placements

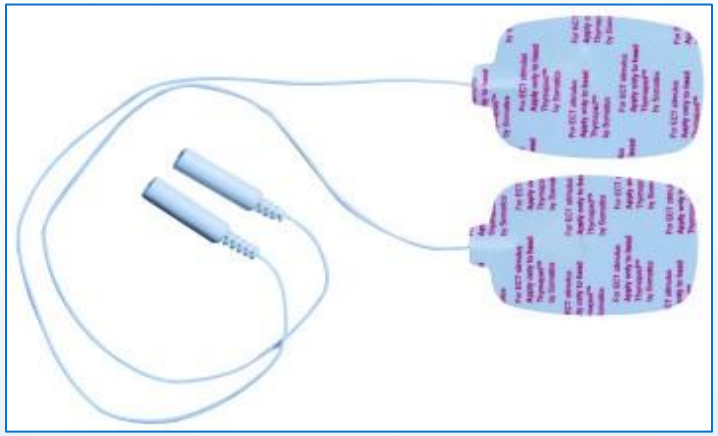
Bitemporal

Bifrontal



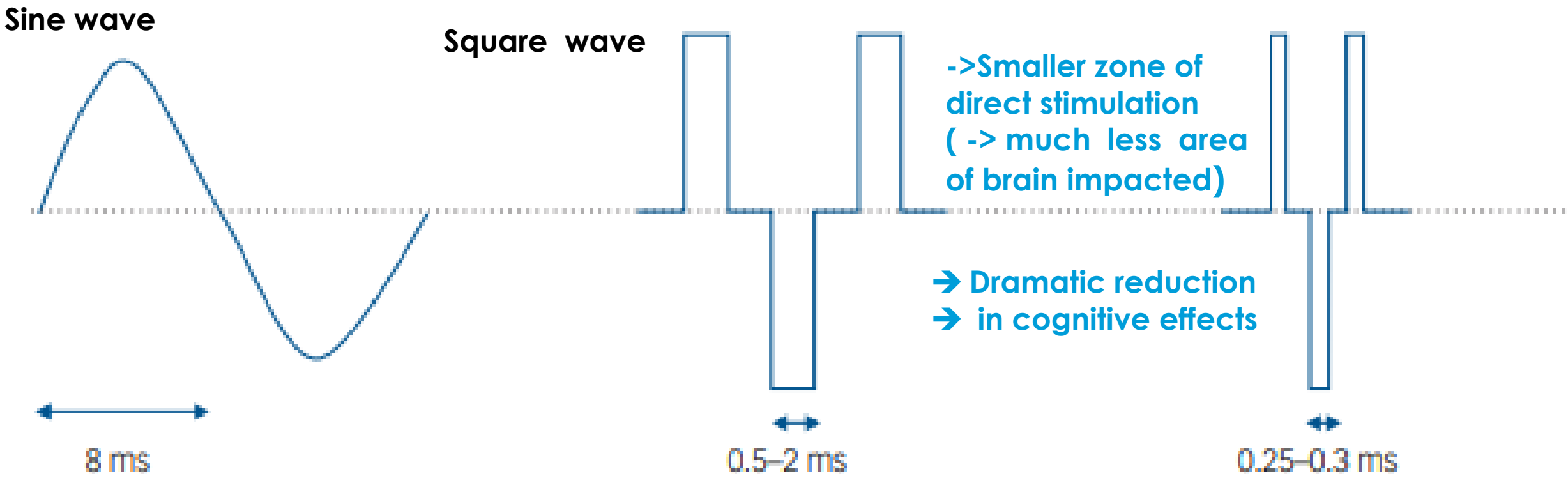
Right unilateral

Treating leads we use

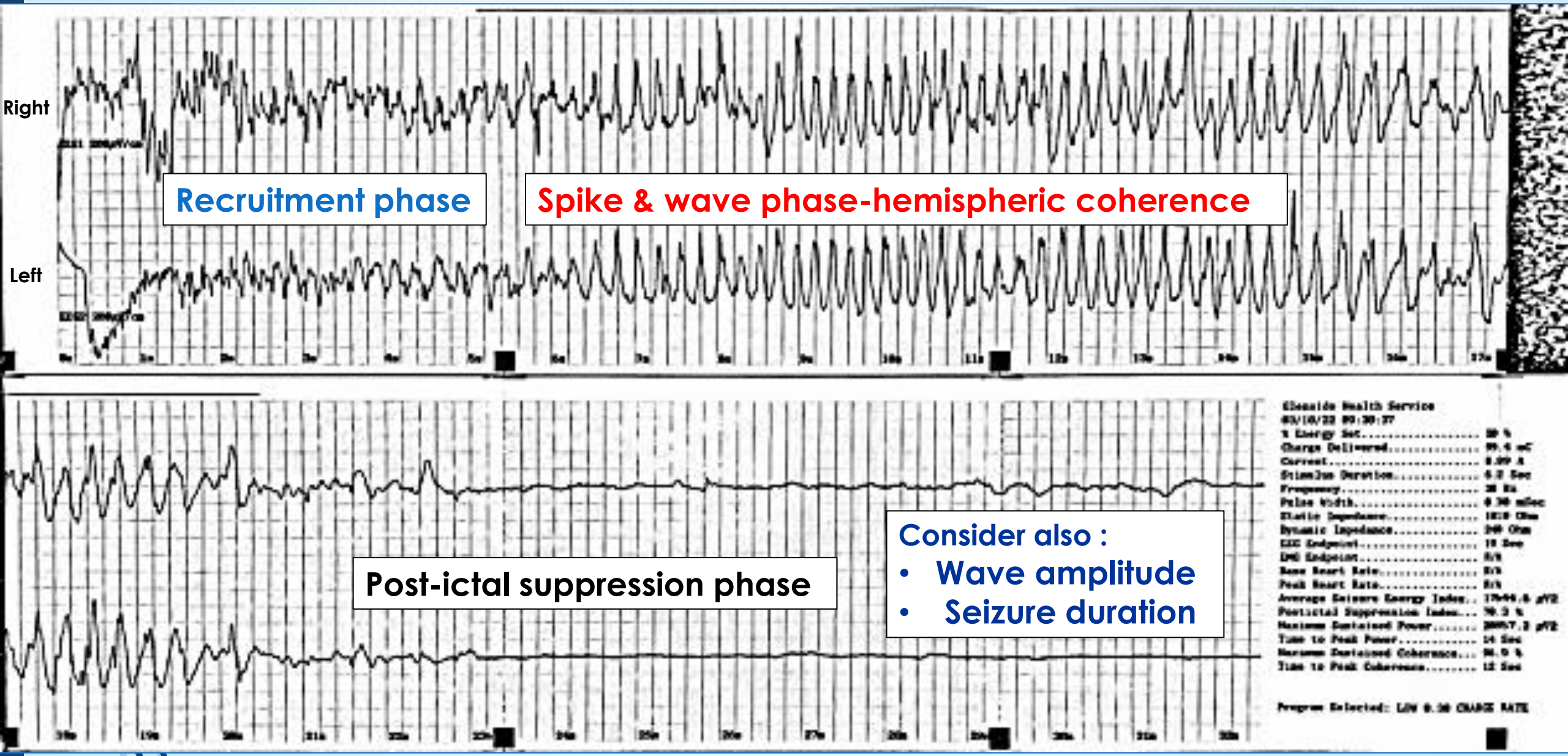


Gel
+/- saline

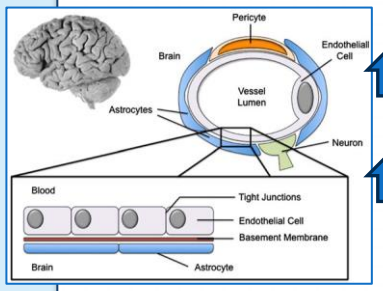
Pulse width: narrowing of square wave



EEG tracing: reading post ECT=adequate seizure

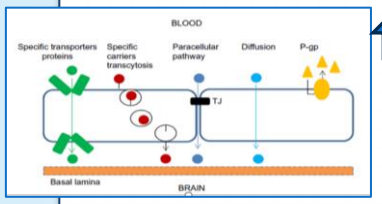


Mechanism of action summary



BBB permeability

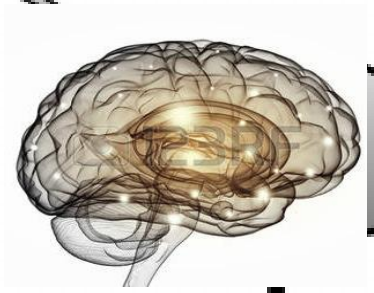
cerebral blood flow



cerebral metabolic rate

Pathways across BBB

ECT



Recent studies-

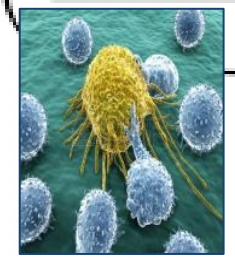
- Transient induction of increased pro-inflammatory cytokines,
- Increased expression of brain-derived neurotrophic factor (BDNF),
- Gene polymorphism,
- Enhanced activity in the GABAergic, glutaminergic and dopaminergic systems,
- Enhance neurogenesis, synaptogenesis and remodelling of synapses in hippocampus.

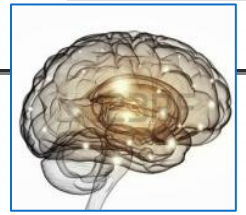
epigenetic changes

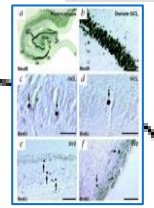
gene expression changes

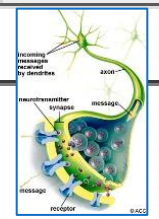
Anticonvulsant hypothesis

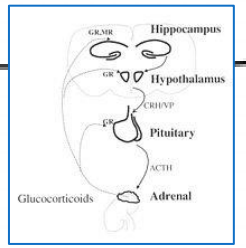
changes in the immune system ? changes in cortical activity ? neuro-genesis ? changes in neurotransmitters ? changes in HPA-axis activity











relief of depressive symptoms

ECT side effects

- Side effects can derive from:
  - directly from the electrical activity induced by ECT
  - indirectly from the anaesthetic
  - drugs used during the treatment
- Most common side effects reported are localized
  - pain or injury, myalgia, headache, nausea, confusion,
  - anterograde and retrograde amnesia (usually transient)-rare now days ; reversible and returns to normal within 4-6 weeks; minimised/uncommon with RUL Ultra Brief
- Rare severe side effects :
  - prolonged seizures and status epilepticus, laryngospasm,
  - peripheral nerve palsy, onset of manic/hypomanic symptom
  - transient hemiparesis, hemianopsia, dysphasia,
  - arrhythmia, and even death

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

Clinical indications and remission

- Severe depression (eg. with psychosis, catatonia):

  REMISSION EXPECTED IN 90%

- Less severe, medication-non responsive depression:

  REMISSION RATES 50-60%

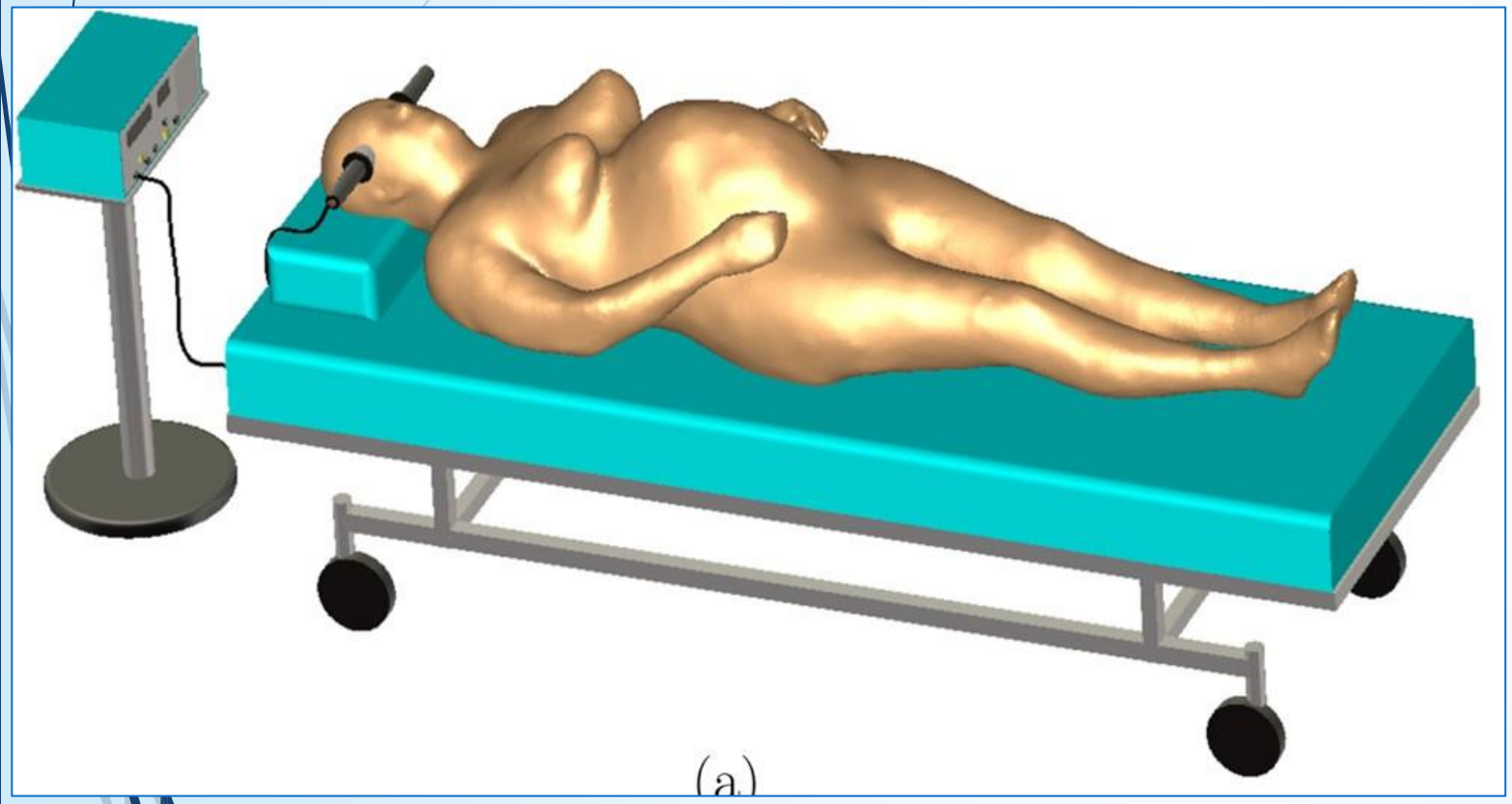
- **Severe mania:**

  REMISSION 80-90%

- ECT has the same effect on patients regardless of whether the patient is diagnosed with either unipolar depression or bipolar depression (78% vs 80%)

Bailine S et al., 2010]

So: what about the use of ECT in pregnant bipolar/schizoaffective pts?



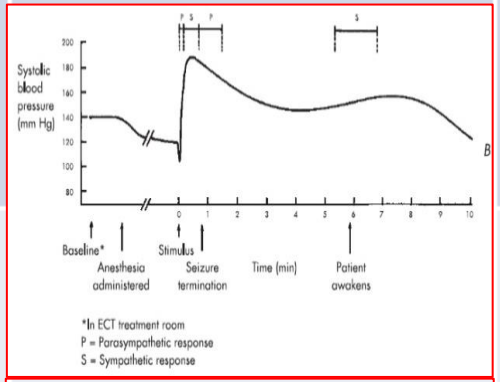
Pregnancy and ECT

- Not responsive to other treatments
- Need to stop medication with teratogenic potential
- Limited data suggest that ECT is relatively safe during the first trimester
- Potential adverse events of ECT- vaginal bleeding , abdominal pain and miscarriage→ more details below
- The possible adverse consequences of ECT illness should be weighed mental illness, against the potential benefits of ECT on being untreated, which in turn can lead to:
  - increased risk of preterm birth ,
  - low birth weight
  - developmental delay ,
  - disorganised attachment
  - lack of value-driven decision-making capacity

Calaway , K et al. A systematic review of the safety of electroconvulsive therapy use during the first trimester of pregnancy. *Journal of ECT. 2016, 32 (4), 230-235;* .
Kellner, c. Technique for performing electroconvulsive therapy (ECT) in adults. *UpToDate July 2020, 1-20*

Consideration of risks of the procedure itself

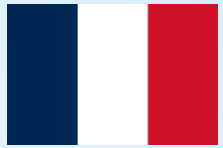
	Anaesthesia		Electrical stimulus/ induced seizure	Other anaesthesia factors
	Inducing Agent (propofol/ methohexitone)	**Muscle relaxant (Succinyl choline)**		
Mother	No significant issues	Duration of action increases after 30 weeks of gestation	Status Epilepticus	Aspiration
Foetus	Potential neuronal cell injury (under investigation). Neither drug is associated with teratogenicity.	Passes placental barrier in negligible quantities	Fetal distress from fluctuations in maternal blood pressure and uterine hypo-perfusion	Bradyarrythmia due to hypoxemia during apnoeic phase
Pregnancy	Long history of use of propofol and methoxitone in pregnancy for caesarian section		Induction of premature contractions or labour; abdominal pain; placental abruption	Aortocaval compression and the supine hypotension syndrome after 18 weeks gestation



Parasympathetic & Sympathetic response : Blood Pressure

Lakshmana R. et al ECT In Pregnancy 2014

Complications according to trimester of pregnancy



- The indications for electroconvulsive therapy (ECT) during pregnancy are the same as in the rest of adult patients.
- In individuals with a psychiatric history, it is possible for a relapse of mental illness to occur during pregnancy, although the risk is considerably higher during the postpartum period.
- ECT is considered an effective and safe treatment option **in all three trimesters of pregnancy and the postpartum period.**
- During the informed consent process, patients should be informed about the potential impact of ECT as well as alternative treatment options.

Arribas-Simon B et al . Bipolar Disorder in Pregnancy: A Challenging Case Managed with Maintenance Electroconvulsive Therapy. *Abstract EPP0037 from the 32nd European Congress of Psychiatry European Psychiatry. 2024; 67(s1): S115-S116*

2024 Swedish population-based nationwide registries study (n=95)

- "ECT was associated with positive treatment response in pregnant women with severe psychiatric disorders.
- The response rate to ECT was high in pregnant but similar to that of non-pregnant women. (74% and 65% respectively)
- No adverse outcomes related to pregnancy and childbirth could be directly linked to ECT.
- The risks of premature birth and of slightly poorer condition in newborns were higher in women who did not receive ECT than those who did.
- This emphasises the need for increased attention to severe psychiatric disorders during pregnancy."

Arnison T et al , Safety and response to electroconvulsive therapy during pregnancy: Results from population-based nationwide registries . *Acta Psychiatr Scand. 2024;150:360–371.*

Systematic review of case reports series: literature available: 1947-2023

NOTE:
Swedish study not included as likely not yet published

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

ECT–related complications severity : **mother**

Low grade (n)	*Moderate grade (n)*	*Severe grade (n)*
Hypomanic symptoms (3)	Late-onset contraction (1)	Cardiac insufficiency (1)
Pelvic pain (2)	Moderate memory loss (1)	Complete heart block (1)
Supraventricular tachycardia (1)	Placental abruption (1)	Diabetes insipidus (1)
Transient hypotension (1)	Pneumothorax (1)	Prolonged epileptic crisis (1)
Transient increase in hormones (1)	Pre-eclampsia (5)	Renal insufficiency (1)
Transient memory loss (1)	Preterm delivery (7)	Status epilepticus (1)
Uterine contraction (4)	Vaginal bleeding (3)	

In brackets, the number of times that complication has been reported

Low-grade complications were those that resolved spontaneously and/or did not require medical intervention

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

ECT–related complications severity : **child**

Low grade (n)	*Moderate grade (n)*	*Severe grade (n)*
Transient fetal arrhythmias (10)	Hyaline membrane disease (1)	Abortion/death (5)
Transient fetal spasms (1)	Pyloric stenosis (1)	Cerebellar infarct (1)
		Club foot deformity (1)
		Congenital hip dysplasia (1)
		Tonic extension upper limbs (1)
		Transient heart failure (1)

In brackets, the number of times that complication has been reported

Low-grade complications were those that resolved spontaneously and/or did not require medical intervention

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

Times ECT-related complications reported

Complication	*N* (%)
Complications in mothers ($n=38$)	
Low grade	13 (34.2%)
Moderate grade	19 (50%)
Severe grade	6 (15.8%)
Complications in child ($n=23$)	
Low grade	11 (47.8%)
Moderate grade	2 (8.7%)
Severe grade	10 (43.5%)

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

Summary: Pregnancy , mental illness & ECT-1

- ECT appears to be relatively safe and effective therapeutic choice
- Exposure to treatment before and during ECT or anaesthetic during ECT, may have contributed to complications reported
- The *RC Psych (UK)* recommends it as the first line treatment for pregnant women with:
  - severe depression
  - serious risk to their physical health or their baby
  - high suicidal risk,
  - severe psychomotor retardation ,
  - physical deterioration
- ECT used when effective pharmacotherapy cannot be safely administered
- See also RANZCP ECT Guidelines 2019

Cipolla S et al . Safety of electroconvulsive therapy (ECT) in pregnancy: a systemic review of case reports series. *Archives of Women's mental Health 2024;27:157-178*

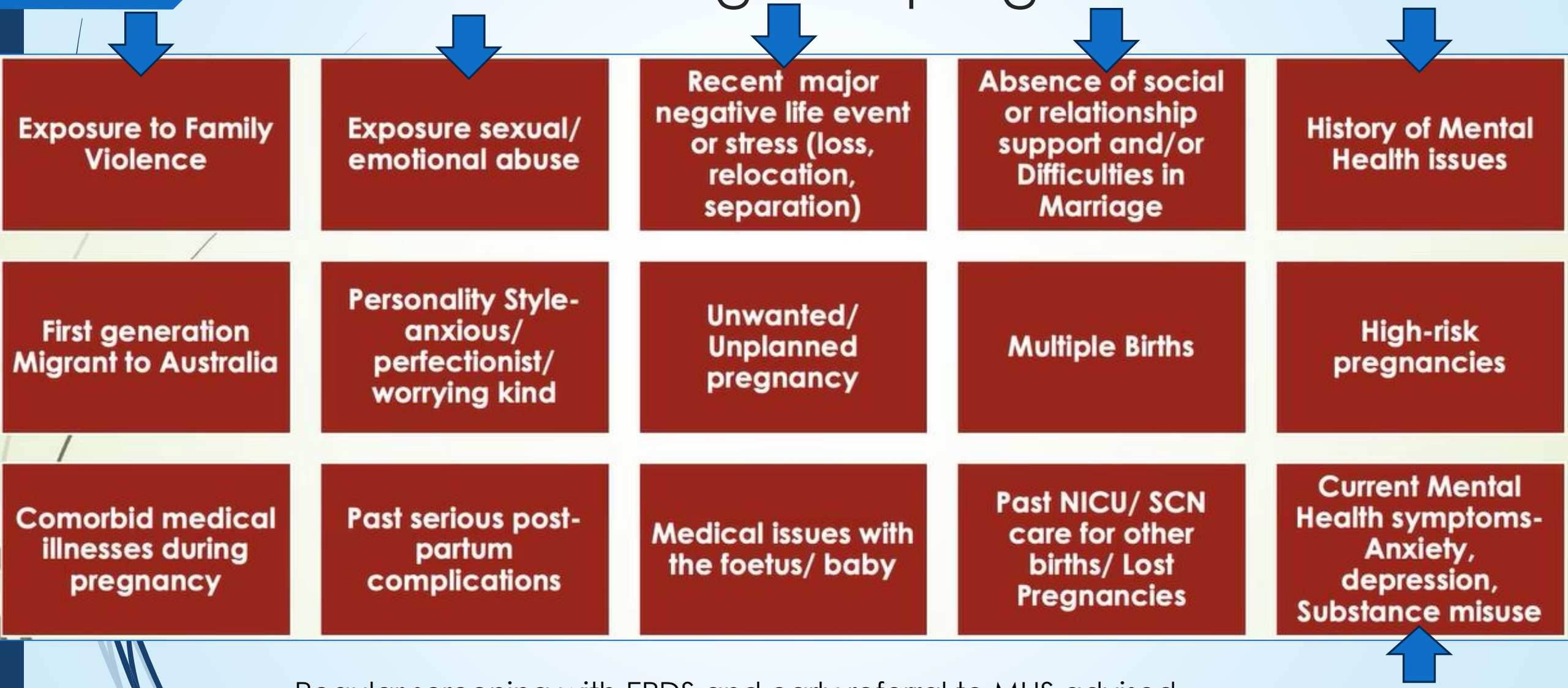
Summary: Pregnancy , mental illness & ECT-2

- Relatively safe , rapid and effective for pregnant women with bipolar disorder
- Advantages:

1. Minimal exposure to foetus of potentially deleterious effects of psychotropics
2. Quickest recovery when compared to medications
3. Reduced hospital stay-> reduced social disruption
4. Quicker return to overall psychosocial functioning

What happened after RC was discharged from NS ?

Antenatal screening for perinatal mental health high risk pregnancies



Regular screening with EPDS and early referral to MHS advised

DC: Management & progress- in community-1

- Meds: haloperidol 10mg BD, olanzapine 5mg mane and 10mg nocte, folic acid 500mcg daily, Multi-V daily)
- **21/09/2020-> Antenatal Care (AC) referral : High Risk Pregnancy status communicated**
- **23/09/2020->** AC/Midwife review -> 10 weeks – " She is in a fairly new relationship [of 14 weeks] and partner [father of baby] is very supportive [lives with him]. Both parents are happy with pregnancy… RC feels she needs some support [from SW]and is awaiting for drug support program."
- **24/09/2020** and **16/10/2020->** home visit by CM
  - Busy with "luxurious" veg gardening, cooking – focus on healthy eating and regular exercise/walking daily with partner , shopping with R; cleaning house-tidy;
  - Good ADLs/IADLs and self-care
  - Linked with perinatal SW at ACMHS
  - No ETOH; continuing to smoke cigs; **making efforts to stay off cannabis** (usually hydroponic)- but finding it a challenge
  - **Adherent with oral med regimen**
  - No breakthrough symptoms and no risk concerns reported
  - RC expressing concerns re "loosing this baby to welfare."
  - Reconnecting with family and some friends

Management & progress- in community-2

- **06/10/2020**-> Visited by CM and perinatal SW-> no major concerns
- **14/10/2020**-> Unborn Baby Alert (UBA) made to CSS- reported by 2 unknown sources:
  - Older daughter refusing contact with mother as not had contact with her for over a year ; reported to be terrified of going back to RC's care.
  - Concerns expressed re R 's (partner)psychiatric Hx of BP I , and due to alleged aggressive and impulsive behaviour when not taking prescribed meds .
  - RC reported to be excited and happily planning for arrival of her baby

RV 26/11/2020: @ 17 weeks

- Reconnected with her family and planned visit to grand mother on her 90th
- "My mental health is good"
- In good general health; good self care; sleep wake rhythm related to "restless legs"
- "Looks happy and calm" –MSE normal

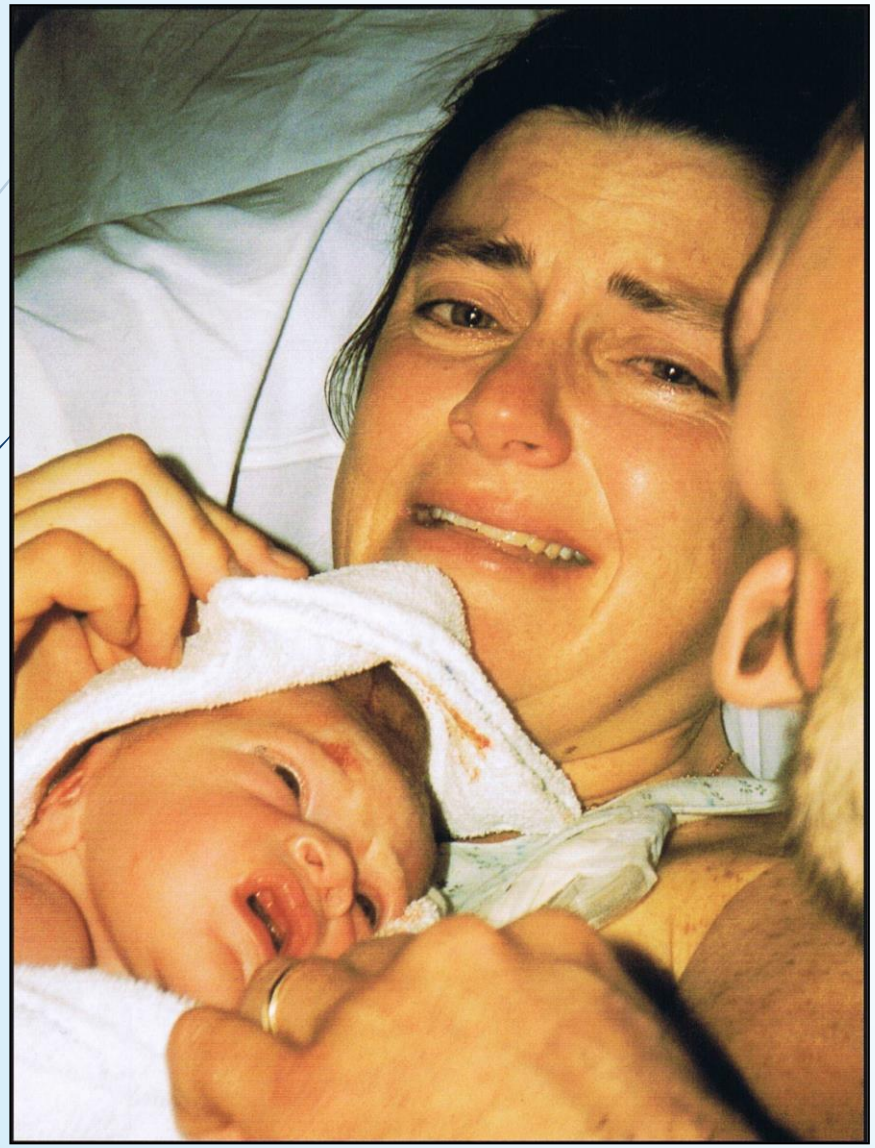
Management and progress-3

- **RV 18/12/2020: 20 weeks**
  - "Feeling baby's movements together with R…having a girl –excited"
  - Looking forward to a healthy pregnancy ,breast feeding and bonding with her baby
  - Reporting reduced confidence in navigating roads while driving since had ECT; suspected loss of autobiographical memory-reassured would improve with time, and encouraged to keep driving as her confidence improved
  - Rx: further optimisation of olanzapine, (10mg mane 15mg nocte), Haloperidol 10mg BD and diazepam 5mg PRN TDS for restless legs .
  - Sleep hygiene and stress Mx strategies, ongoing psychoeducation re drug use and pregnancy
- **15/02/2021-30weeks**-> Seen by very experienced locum psychiatrist/CD-> confirmed Dx
- **5/3/2021- 32 weeks** -> CM and Psychiatrist home visit : Antenatal Care-> 2 weekly , ongoing "bush" cannabis use ; no breakthrough symptoms
- **26/03/2021**- 37 weeks -> reported regular and frequent RVs/assertive follow-up by ACMHs and at home-> RC felt well supported by her partner and talking lovingly about their relationship-> no evidence of relapse noted

Management and progress-4

- Ongoing liaison with Obstetrics High Risk Pregnancy team and paediatrics team
- Liaison with Perinatal team (Dr Steph Lorimer) in Hobart:
  - No risk to baby with breast feeding on current regimen (haloperidol 5mg, Olanzapine 5mg mane and 10-15 mg nocte PRN depending on need)
  - Risk of relapse is ~ 50% with signs of psychosis likely to occur around day 2-3 post partum
  - Recommend extended length of stay for observation in the PP Period
  - Given ongoing cannabis use –chart nicotine replacement as it attenuates THC withdrawal symptoms
- **9/04/2021**-> no antenatal concerns ; RC anxious about risk of relapse in the PPP-validated -> concerns also about CPS/CSS checking in and disturbing baby and her-reassured by CM-> sleep hygiene reiterated ; presented well overall;
- **15/04/2021**-> CSS-> new monitoring plan in place and same communicated to RC and R and showed good understanding of the requirement for this

Mum , baby …and dad



- It's a girl!
- L was born 19th April 2021-FT/NVD
- Paediatrics: "Clinically well baby"
- Wt=3204gm ;L=47cm ; HC=34.5cm
- Breastfeeding
- "Hello dad!"

The literature review supports the idea that the father's involvement during pregnancy and delivery can positively influence health outcomes for the man, his partner, and their children

Plantin L, Olukoya AA & Pernilla N. Positive health outcomes of fathers' involvement in Pregnancy and childbirth paternal support: a scope study literature review. *Fathering, Vol. 9, No. 1, Winter 2011, 87-102.*

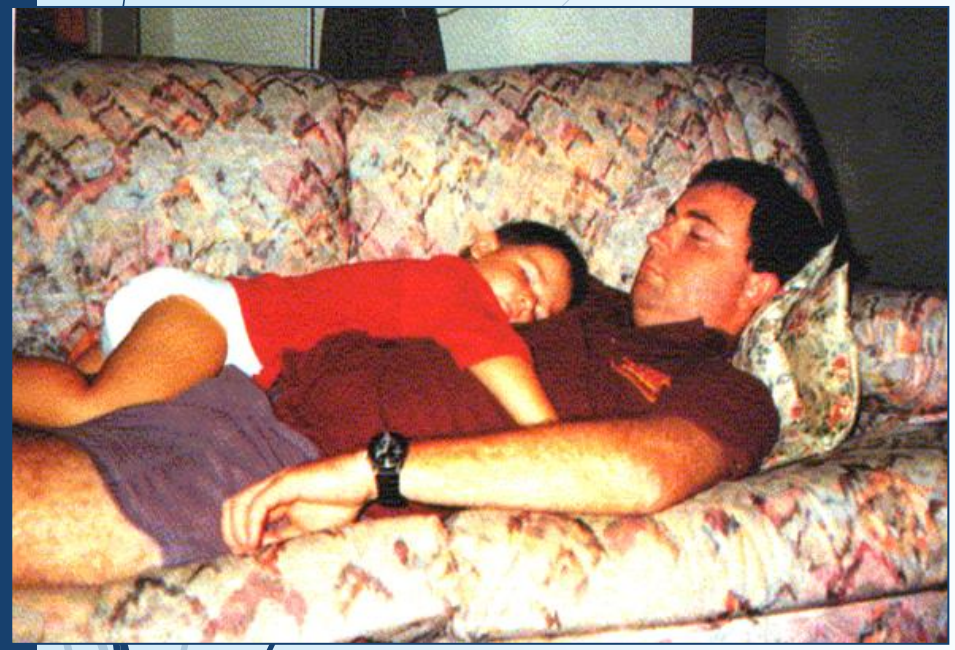
Attachment: dyad or triad ?

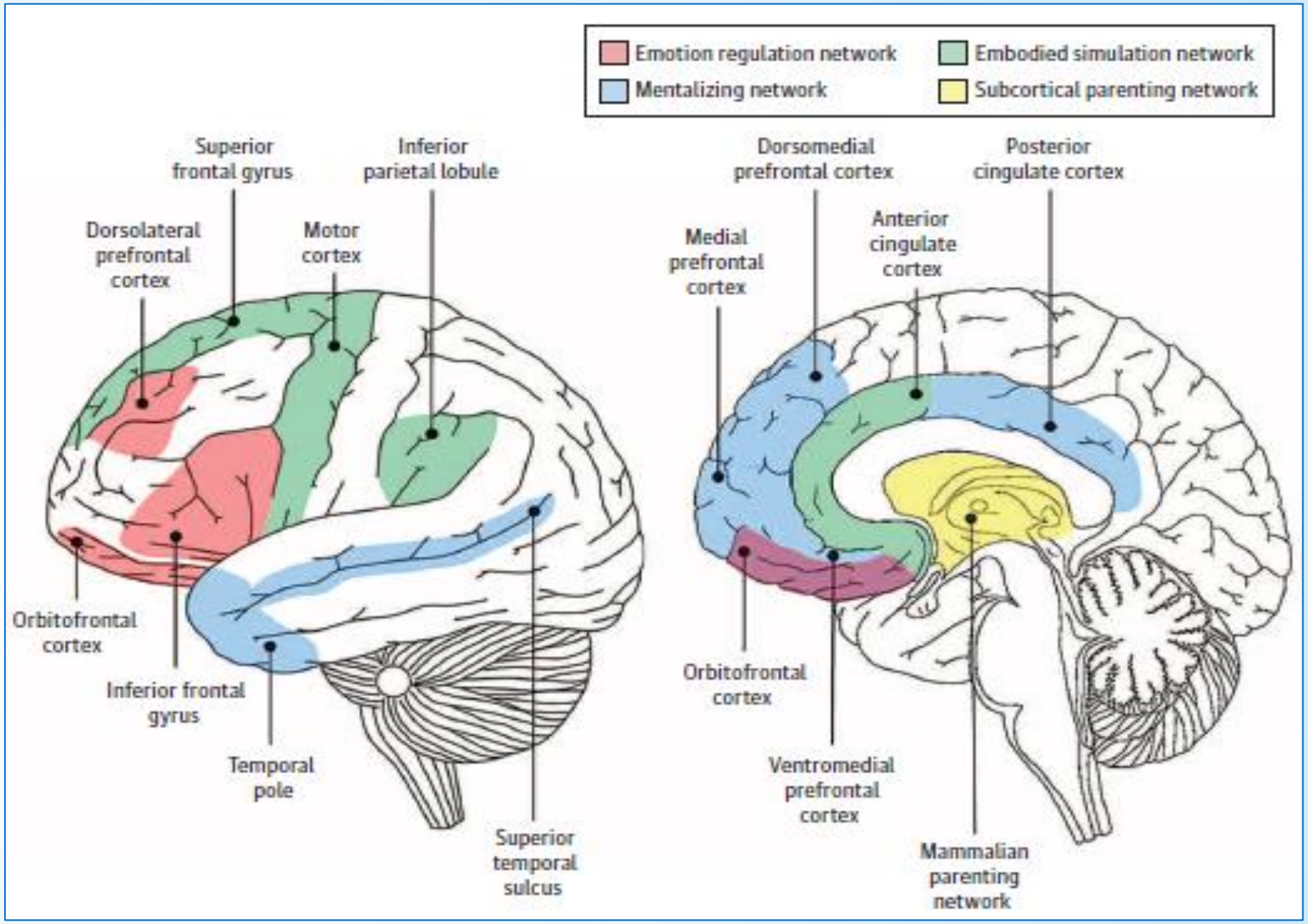
The attachment: dyad or triad

- Bowlby suggests that fathers can fill a role closely resembling that filled by a mother but points out that in most cultures this is uncommon.
- Gender of a caregiver may not be crucial in predicting attachment types/ quality, rather it is the extent of caregiver involvement.
- But, dramatic increases in fathers' early involvement in parenting in many societies around the world demand greater attention to the meaning, development, and consequences of father-child attachment from infancy onward
- The associations between caregiver sensitivity and child-parent attachment tend to be weaker among fathers than among mothers…researchers should pay more attention to child-parent attachment relationships in the context of the family, including coparenting relationships, gatekeeping, and amount of time mothers and fathers provide care to their children.
- The jury is still out it seems

•Bowlby, J. (1969). Attachment and loss. Vol. 1: *Attachment*. Basic Books.
•Ainsworth, M. D. S., Blehar, E. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. John Wiley & Sons
•Brown GL et al (2012). Father Involvement, Paternal Sensitivity, and Father-Child Attachment Security in the First Three Years. J Fam Psychol. 2012 Apr 2;26(3):421–430.
• Ahnert L & Schoppe-Sullivan SJ . Editorial :Fathers from an attachment perspective. *Attachment & Human Development,2020; 22:1, 1-3*
• Fagan J. Broadening the scope of father-child attachment research to include the family context. *Attachment & Human Development,2020; 22:1, 139-142*
•Cabrera NJ . Father involvement, father-child relationship, and attachment in the early years. *Attachment & Human Development,2020; 22:1, 134-138*

Attachment: dad may still important after all!





Brain networks of paternal brain after childbirth

H Bottemanne and L Joly. How the paternal brain is wired by pregnancy. JAMA Psychiatry 2024; November 13, p E1-2

Attachment difficulties

- Excessively traumatic experiences (ACEs) likely to lead to breakdown in development of normal attachment to another.
- An "attachment style" as a way of relating to the environment (internal working models) develop which can become a distorted and incoherent picture of the world."
- Remember Tronick's Still Face Experiments?

(Bowlby,1969)

What happened in the postnatal monitoring period?

Follow-up

- **22/04/2021** Seen in 4 O by CL team
- **24/04/2021**-> EMS (Extended Midwife Service-home visit
  - Self –discharge earlier than anticipated
  - RC looks well , happy and relaxed
  - Breastfeed (3-4 hrly feeds reported also)observed –lots of swallow and good attachment
  - Parenting skills that were observed seemed appropriate
  - House clean and tidy .
  - Bassinette clean and well set-up
  - Baby observed to be sleeping as per SIDS recommendations
  - Baby's clothing appropriate and clean
  - Has FCH appointment on 28/04/2021
- Regular visits by CSS
- **29/04-25/05/2021**- ACMHS team RV–CM -> no major concerns raised
- **16/06/2021- 8/52** post partum-> Reg RV -> haloperidol 5mg mane and olanzapine 5mg mane and 15mg nocte -> consultant psychiatrist RV

ACMHS RV baby L - 4 months

Active monitoring by CSS

Baby L

- Waking only once at night -> RC adequate sleep
- Breastfeeding (domperidone to stimulate milk production)only
- Lower weight percentile , but putting on weight
- **No problems with milestones**
- RC reading to L

RC

- RC eating well and cooking meals
- Good ADLs
- **Reported not using ETOH or THC**
- **Seen to be engaging appropriately with her daughter**
- RC was motivated to stay well
- Planning more walks with L in pram
- Planning to breast feed at least for 9/12
- Engaged with GP follow up and support services
- Stable psychiatrically -> TO discharged by psychiatrist

Mother-child dyad: paediatric assessments

Paediatrics/P-nutrition review-1

01/09/2021- Baby L 4.5 months

- Seen with mother RC
- Referred because of faltering growth
- Breastfeeding plus 1-2 x bottles /day only limited intake
- Just introduced solids
- In between play, tummy time, walks and nursey rhymes-dad can distract her for 15-20mins once hits 1hr mark , but then demands food.
- Some support from maternal grandfather
- L falls asleep at breast or self settles to sleep
- Developmentally- smiling , laughing . vocalising -> normal movements; happy , interactive baby
- Impression: faltering growth in a baby , most likely due to poor intake , but who is also likely to be constitutionally small

Paediatrics /P-nutrition RV-2

03/11/2025-6.5 months

- "Baby L is a beautiful 6.5 months old girl with **faltering weight"**
- Weight continues to fall below 3rd centile (5.66kg)- and later plateauing
- (slow weight gain)
- **RC demonstrates excellent attachment to baby L**
- Baby L is an interactive and happy girl with no dysmorphic features and no evidence of micronutrient deficiency on examination
- Impression: Continued faltering despite increasing input.

20/12/2025- 8 months

- **Good attachment**
- **Normal developmental progress**
- Ongoing breast feeding plus supplemental oral feeds

19/01/2022- 9 months

As above

Baby L at 9 months

24/11/2021-ACMHS psychiatrist RV

- "RC is feeling well currently and has been **feeling stable in her mental state all throughout her pregnancy and since delivering her baby.**
- She says that her **partner has been very supportive** of her and that she feels life is going well having both him and the baby in her life.
- Mood appears to be remaining euthymic with no racing thoughts of flight of ideas, nil grandiose thoughts.
- She is sleeping well except when the baby awakens and wants feeding.
- No psychotic symptoms evident.
- No self-harm or suicidal ideations voiced."

MSE at time of discharge from MHS North

- RC's mood was euthymic and her affect warm.
- Speech normal r/v/t.
- No FTD
- She had no abnormalities of thought stream or content
- No perceptual disturbances.
- No cognitive deficits
- She understood her illness, her warning signs (poor sleep) and the need for medication.
- She was motivated to stay well.
- Reasonable insight and judgement.

Discharge planning

24/11/2021-ACMHS psychiatrist RV

- RC wishes to stay on current medication and has settled since haloperidol reduced to 5mg mane.
- Her weight is stable and she is planning to do more walking with L in the pram when the weather improves.
- She is hoping to continue breast feeding until her baby is at least 9 months old.
- She is well engaged with GP and support services.
- She appears in remission with a stable mood and no psychotic symptoms.
- She has good insight.
- Medications should remain unchanged at this stage as they appear to be efficacious.
- For transfer of ongoing care to her GP

30/11/2021-ACMHS team meeting

RC -Formally discharged to care of GP.

R (partner)- also discharged o GP following ling period of psychiatric stability

How is the family doing?

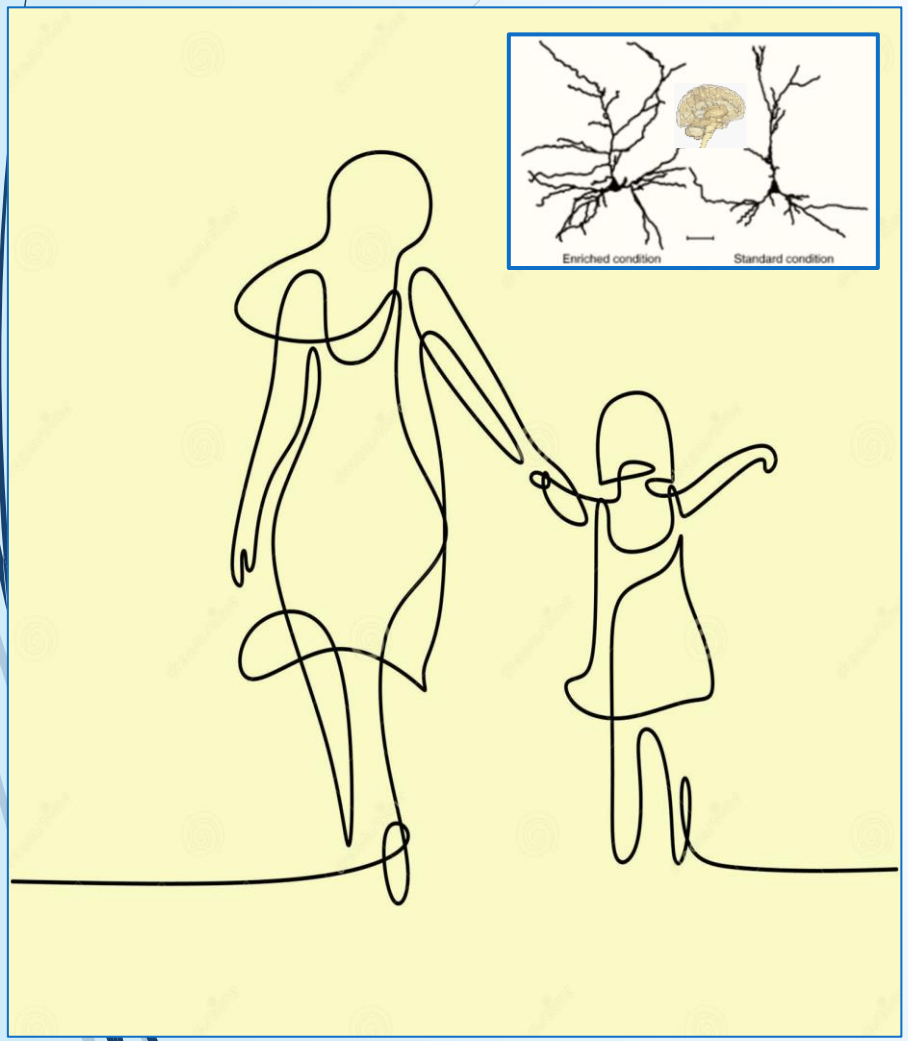
CSS case officer-(CSO): 2/12/2021

"Reports that she will continue to work with RC, R and baby L. Joyce agreeable with d/c and states that this is the best she has seen Rosie in 10 years."

ACMHS:

Doing so well clinically and post monitoring by the MHSN perinatal clinician (SW), was discharged from the service and has not had contact with MHS s for almost 4 years.

Paediatrics /P-nutrition RV, baby-toddler-3



14/02/2022-15/08/2022 - 9.8-15.9 months

"L is just of small stature and within normal parameters for growth"

06/09/2022- 16.5/12 months

- Paediatrician RV
- Discharged from Paediatric Clinic to care of GP at request of RC
- No concerns expressed by paediatrician
- ?RC reasserting control over her life and family
- Impact of an enriched environment->neuroplasticity
- Individual and family resilience

Summary points and conclusion-1

- Generates anxiety among clinicians and patients
- But consider the toxic effects of mental illness on the patient and her baby
- ECT safety record well documented since 1940s
- ECT > 80 years history of use and refinement
- Safe when used in collaboration with MDT including: anaesthetist, psychiatrist and obstetrician
- Usually in emergent and dramatic circumstances e.g. mania, psychotic depression with suicidal thoughts and disorganised thinking -> impulsivity and self-harm
- Our goals were to:
  1. effect a rapid resolution of mother's illness episode
  2. prevent or mitigate the adverse impact of stressful life events in the child

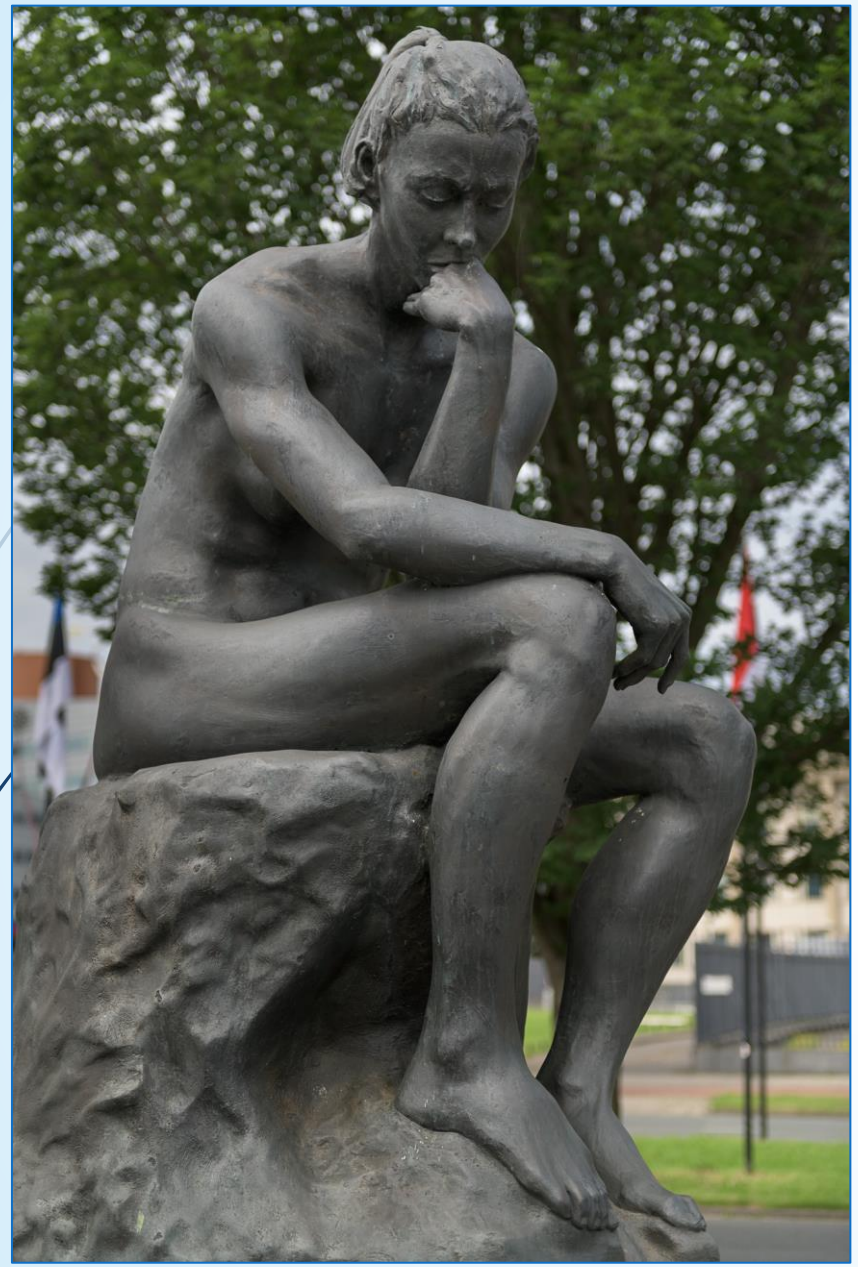
Stern T A et al *Hand book of General Hospital Psychiatry 2025: 807*

Summary points and conclusion-2

- Pharmacotherapy and ECT remain the preferred treatment
- ECT is under-used due to concerns about harm to the foetus
- But considerable experience supports its safe use in severely ill gravid females
- TMS as alternative less likely to -> side effects *
- Psychiatrist (and MHS MDT) need to facilitate the most clinically appropriate intervention in the face of partially informed concerns or objections (omission bias)

* Kim DR et al Neurostimulation and antenatal depression : a review. *Neuropsychtr Dis Treat,. 2015;11:975-982*

So, why would you deny the most effective treatment we have in psychiatry in such a dire situation as that of a pregnant woman suffering from a severe mental illness ?



Reflection –FS Castillo 2018-The Hague

Questions

Reflections

Comments