Maternal perinatal mental health

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Perinatal mental health

- Pregnancy and 12 months postpartum
  - Women with pre-existing mental health problems who become pregnant
  - Women who develop mental health problems antenatally
  - Women who develop mental health problems postnatally
  - And their children and family

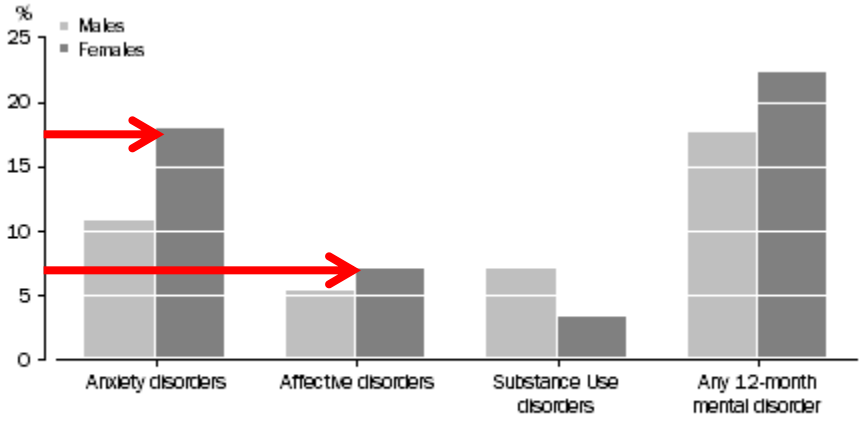
How common are mental disorders in women

- 12 month prevalence
  - Any anxiety disorder 17.9%
  - Any affective disorder 7.1%
  - Any substance use disorder 3.3%

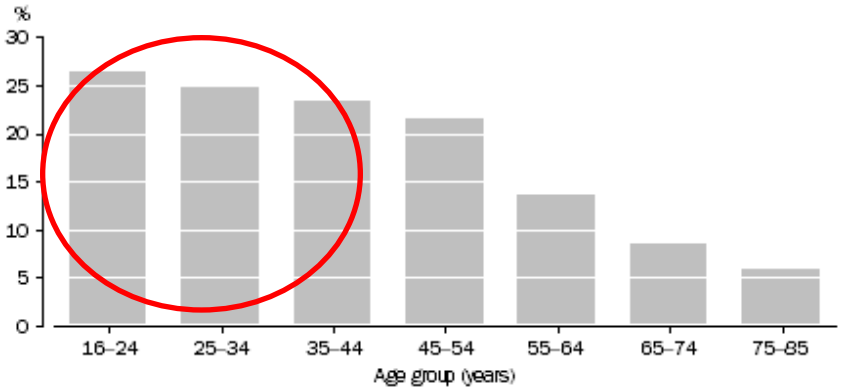
- Schizophrenia and related disorders 0.5-1.0%

- Bipolar disorder
  - Type 1 0.8-1.0%
  - Type 11 2-3%

- Personality traits/disorders
  - BPD 4.5%



(a) Persons who met criteria for diagnosis of a lifetime mental disorder (with hierarchy) and had symptoms in the 12 months prior to interview. A person may have had more than one mental disorder.



(a) Persons who met criteria for diagnosis of a lifetime mental disorder (with hierarchy) and had symptoms in the 12 months prior to interview. A person may have had more than one mental disorder.
(b) Persons who had a 12-month mental disorder as a proportion of all persons in that same age group.

The uncommon but serious problems in pregnancy

The uncommon but serious problems in pregnancy

- Schizophrenia and bipolar disorder
  - Diagnosis usually predates pregnancy
  - Illness may have an impact on
    - Planning pregnancy
    - Maternal ante-natal obstetric care
    - The pregnancy and health of the foetus
    - The delivery and immediate post-delivery period
    - The mother-infant relationship
  - The pregnancy may have an impact on maternal mental health

Women with schizophrenia

- Fertility of women with schizophrenia=general population
- Pregnancy more often unplanned and/or unwanted
- Pregnancy often accompanied by a range of risk factors including
  - The effects of the maternal psychotic illness
  - The effects of maternal psychotropic medication
  - Poor nutrition
  - Substance abuse-nicotine, alcohol, illicit drugs
  - Poverty
  - Homelessness
  - Poor social support
  - Being victims of violence
  - Poor attendance for ante-natal obstetric care

Women with schizophrenia

- Impact of mental illness on pregnancy-
  - present late, avoid maternity care
  - IUGR due to poor self care
  - ↑ rates preterm delivery, antepartum haemorrhage and placental abruption
  - More difficulty managing labour, and higher rates of caesarian section
- Impact of mental illness on neonatal outcomes-
  - ↑ rates of
    - cardiovascular and other congenital abnormality
    - stillbirth and neonatal death
    - failure to thrive

Women with schizophrenia

- Impact of pregnancy, childbirth on mental health of woman-
  - ↑ risk of relapse
  - Risk of incorporation of pregnancy and baby in delusional system
- Effects of psychotropic medication
  - During pregnancy
    - On mother e.g. increased risk of gestational diabetes
    - On foetus
  - With breastfeeding
- Impact of maternal mental illness on attachment and parenting abilities

Women with bipolar disorder

- Impact of mental illness on pregnancy
  - risks of untreated depression
  - untreated mania poses clear risks due to impulsivity and poor judgement
  - Mania resulting in poor self care is dangerous for both mother and child
- Impact of mental illness on neonatal outcomes
  - Risks of untreated depression
  - Specific risks of untreated bipolar disorder are not known, little research available

Women with bipolar disorder

- Impact of pregnancy, childbirth on mental health of woman
  - Risk of relapse in pregnancy and post-partum is high-
    - Of women *currently receiving treatment*, 23% have illness episode in pregnancy and 52% in the postpartum period (Viguera et al 2011)
    - First lifetime episode occurred in the perinatal period in 7.6%
    - Risk is increased if cease mood stabilizers, esp if cease suddenly
    - Post-partum relapse esp first 24-36 hours, and continuing high risk for 3 weeks

Women with bipolar disorder

- Effects of psychotropic medication
  - During pregnancy-mood stabilizers may have teratogenic effects
  - With breastfeeding-some risks to neonate
    - Avoid lithium and lamotrigine
    - Care with carbamazepine and valproate
- Impact of maternal mental illness on attachment and parenting abilities

Effects of parental mental illness

- Parenting and parent-infant interaction
  - Illness-related deficits may include:
    - lack of emotional warmth and intimacy;
    - attentional deficits;
    - Impaired maternal competence
      - Lack of confidence
      - Poor decision making and functional ability
      - Neglect
  - Infrequent, but important, may be clear ***risk of harm to baby*** -omission or commission
- Attachment relationship

Improving maternal perinatal mental health of women with schizophrenia and bipolar disorder

- Include consideration of reproductive choices in routine care
- Early detection and monitoring of pregnancy
- Team approach in pregnancy and postpartum

Healthy Babies for Mothers with Serious Mental Illness: A Case Management Framework for Mental Health Clinicians

http://www.nmahsmh.health.wa.gov.au/projects/healthybabies.cfm.

Women with schizophrenia and bipolar disorder

- Include consideration of reproductive choices in routine care
  - Contraception-woman ‘at risk’ of or wanting to become pregnant
  - Unplanned or unwanted pregnancy- TOP option
  - Plan for pregnancy-preconception advice
    - Treatment of mental illness- GP, mental health clinician, psychotropic medication and other treatments
    - Lifestyle- nutrition, smoking, alcohol, illicit drugs
    - Housing, safety, social support

Women with schizophrenia and bipolar disorder

- Early detection and monitoring of pregnancy
  - (obstetric) ‘high risk’ pregnancy-specialist obstetric care
  - High risk time for management of mental illness-specialist psychiatric care
- Team approach- midwife, obstetrician, GP, mental health; birth plan
- Early consideration of parenting capacity
- Post-birth-baby with mother
    - Supports in community, treating team incl MCHN, GP, mental health, child protection, child and family support
    - Parenting capacity and attachment relationship

The common mental health problems during and following pregnancy

The common mental health problems during and following pregnancy

- Depression
  - Depressive symptoms are common during pregnancy, peak during T3 and fall following delivery
    - 25% have high rates of depressive symptoms,
    - 10% have depressive disorder during pregnancy
  - Postpartum ‘blues’
    - Time-limited mood disturbance in the postpartum period-prevalence rate up to 80%
  - Postnatal depression
    - Rates of non-psychotic depression are greater than rates during reproductive years outside childbirth-up to 15%
    - Half of the women depressed postpartum were depressed antenatally i.e. only 50% of cases of depression in postpartum are new onset

The common mental health problems during and following pregnancy

- Anxiety
  - Rates of GAD and OCD are higher in perinatal population cf general population; but rates of PD and PTSD are similar
  - And >10% experience significant anxiety symptoms- but do not meet criteria for disorder
  - Pregnancy-specific anxiety common-? Prevalence
    - Fear of giving birth
    - Fear of having a physically or mentally handicapped child
    - Concern about one's own appearance
  - Commonly co-occurs with depression

Women with depression

- Impact of depression on the pregnancy
  - Lack of care about the pregnancy, late and/or irregular attendance antenatal care
  - poor health behaviours-smoking, alcohol
  - Risk of suicide, foeticide
  - Increased rate of spontaneous abortion
  - Increased risk gestational hypertension and subsequent preeclampsia
- Poor maternal-foetal attachment

Women with anxiety and depression

- Impact of anxiety and depression on the baby
  - Foetus-greater arousal during pregnancy - alteration in
    - foetal heart rate variability (a marker for fetal distress),
    - foetal movement patterns-more body movements during REM sleep
    - foetal sleep-wake cycles-greater wakefulness
  - Neonatal outcomes- Increased frequency of
    - IUGR (<2500gm)
    - spontaneous preterm birth (<37 weeks)
    - low APGAR scores,
    - admission to NICU
    - neonatal growth retardation

Women with anxiety and depression

- Infants exposed to antenatal anxiety and/or depression
  - are highly reactive, have poorer interaction with mother, and have poorer scores on infant development measures
- Poorer long term developmental outcomes for the child
  - Developmental delay
  - Lowered IQ in adolescence
  - Impaired language development
  - increased rate of emotional and behavioural problems
  - increased rate of ADHD
  - Association with criminality

Women with anxiety and depression

- Effects of psychotropic medication
  - During pregnancy
  - breastfeeding

Women with anxiety and depression

- Impact of depression and anxiety on attachment and parenting abilities
- Depression-negative themes of being a ‘bad mother’
  - Not ‘liking’ the baby; not having a bond; inability to tolerate crying
  - Infant does not love them; thinks they are a ‘bad mother’
  - Feelings of failure, that partner is better parent (jealousy)
  - Sense of helplessness and hopelessness
- Anxiety
  - about not being “perfect”; about other people’s perceptions of self as a mother
  - Preoccupation with baby’s health e.g., that baby will stop breathing in the night (checking++), that baby is not putting on weight/ feeding enough
  - Obsessional thoughts about harming the baby *e.g.,* in the bath or while out in pram (traffic, trains)
  - Difficulty in separating from baby

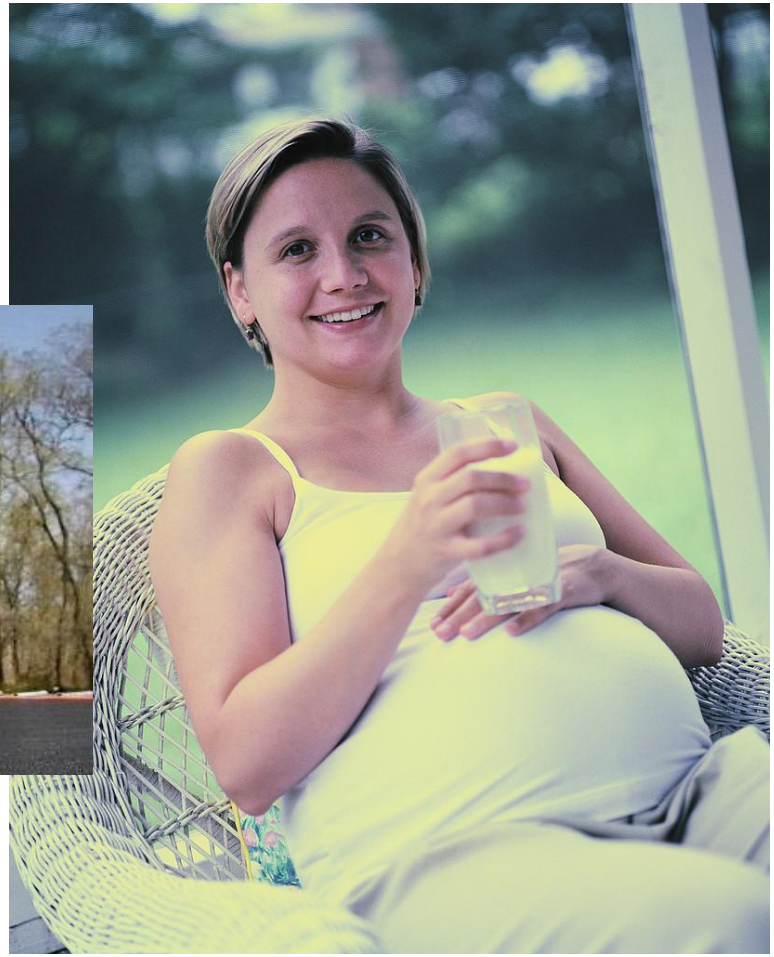
Effects of parental mental illness

- Mothers with high levels of depression
  - Interact differently with their infants v non-depressed women
    - Show less behavioural synchrony with their infant
    - Less responsive to their infant's cues
    - Less affirming of their infant's behaviour
  - Are less likely to feel confident in the mothering role
- And in turn, infants of depressed mothers are more likely to display insecure attachment relationships

Personality problems/disorders

- Personality style per se ± co-morbidity
- Cluster B most problematic
  - esp borderline traits- instability of interpersonal relationships, self-image and affect, and marked impulsivity
- Co-morbidity-depression, alcohol and drug use
- Attachment difficulties-often require interventions to promote maternal responsiveness and secure attachment

Management of women with perinatal mental health problems



Management-general principles

- Intervene early if you can-prevention/minimisation of problems
- Treat the presenting complaint/ illness using the same approach or techniques used in non-pregnant women
- but remember:
  - There is (or soon will be) an infant
  - Assess maternal competence & be mindful of the risks
- When concerns or ‘at risk’ consider extended post-natal stay
  - Reduce over-stimulation & sleep deprivation
  - Establish breastfeeding (if appropriate)
  - Assist maternal confidence
- If acutely unwell consider Acute Inpatient Unit VS Mother Baby Unit VS permanent separation at birth
- Be aware of some of the logistical & practical limitations for a pregnant woman / new mother

Management-general principles

- Where possible meet the partner
  - provide psycho-education
  - address issues within the relationship
  - another perspective
- Mobilise available of social supports
- Useful resources
  - mothers' groups, play groups, specific parenting supports for mothers with mental illness, PANDA, peer support
- Clinical services
  - If possible, a system/network
  - Antenatal and postnatal may vary but include
    - General Practitioners
    - MCHN
    - Family support
    - Psychologist/psychiatrist (public and private)

Management- general principles

- Treatment should be guided by a risk-benefit analysis
  - Risk to mother of treating/not
  - Risk to foetus/newborn of treating/not
- Untreated maternal mental illness poses a risk to both mother and child
- Psychological therapies-e.g. ST, CBT, IPT are safe, but not effective for more severe disorders
- Medications should be prescribed with caution for appropriate indications
- Any management plan should include the partner (where possible)

Management-general principles

- Maternal mental illness can affect
  - Maternal parenting abilities
  - Mother-infant attachment
- Parent-infant perinatal intervention may be required

Psychotropics in Pregnancy

Why prescribe?

- Pregnancy *not* protective for mental illness
- Relapse of schizophrenia or bipolar disorder poses risks for mother and baby
- Antenatal depression and anxiety have adverse effects on mother and baby
- Postnatal depression is common and is associated with significant morbidity

Why prescribe?

- Risk benefit analysis-prescribe v not prescribe
    - Risk to mother/pregnancy
    - Risk to infant
- If disorder is mild-moderate use a non-pharmacological intervention
- Routes of foetal exposure
  - Placental transfer-measure cord: maternal ratios
  - Amniotic fluid-generally measures of amniotic fluid: maternal serum ratios not reliable

Are psychotropic drugs safe in pregnancy?

- Reproductive loss
  - miscarriage, FDIU, stillbirth
- Pregnancy complications
  - hypertension, pre-eclampsia, gestational diabetes
- Neonatal outcomes
  - preterm birth, low or excessive birth weight, sedation, withdrawl effects
- Structural abnormalities
  - Baseline rate 3-5%
- Neurodevelopmental problems

TGA categories

Australian categorisation of drugs

- Category A
  - taken by large no of women
  - no evidence increased risk malformations or other direct or indirect harmful effects on foetus or neonate
- Category C
  - caused or suspected of causing harmful effects on foetus or neonate
  - may be reversible
  - no malformations

TGA categories

Australian categorisation of drugs

- Category B (**limited** no of women) human data are lacking or inadequate and so subcategorisation is based on animal studies.
- Allocation to category B does NOT imply greater safety than category C
- Category B-no increase in malformation or other harmful effects
  - B1 animal studies support this
  - B2 animal studies inadequate or lacking
  - B3 animal studies show evidence increased occurrence foetal damage (unknown significance in humans)

TGA categories

Australian categorisation of drugs

- Category D
  - cause/suspected of causing malformations or irreversible damage to foetus
  - Note in some cases assigned D as ‘suspected’
  - Note, not necessarily contraindicated e.g. anticonvulsants
- Category X (high risk permanent damage)

Timing of exposure effects risk

- Structural abnormalities are typically associated with early pregnancy exposure-period of maximum vulnerability is 3-12 weeks
  - Drug is considered teratogenic if it raises the risk of congenital physical malformations over the baseline level of birth defects which is 3-5%
- Detrimental effects on neurobehavioural, motor and cognitive development are potentially associated with exposure *throughout or later in pregnancy*

The decision to prescribe or not

- Risks to mother/pregnancy
  - Of medication
  - Of untreated maternal mental illness

Antipsychotics

- Studies-multiple case reports, limited prospective observational and cohort studies
- Reproductive loss
  - No evidence of increased rate of spontaneous abortion or SB in women with psychiatric disorders treated with antipsychotics

Antipsychotics

- Pregnancy complications
  - Increased rate of gestational diabetes in women treated with a variety of antipsychotics; also more likely to require caesarian section
- Neonatal outcomes
  - Increased rates pre-term birth and lower birth weight (FGAs)
  - Increased birth weight SGAs esp olanzapine and clozapine
  - Low APGAR at birth, respiratory difficulty
  - Extapyramidal SEs- FGAs

Antipsychotics

- Structural abnormalities
  - Case reports of variety of abnormalities
  - On balance little evidence antipsychotics are teratogenic- but the studies are problematic
    - Definition of malformation, exposure dose and duration, smoking and substance abuse, poor antenatal care, medical co-morbidity, genetic factors
    - No clear risk can be attributed to FGAs in pregnancy
    - Insufficient data re SGAs to inform prescribing policy except on a case-by-case basis
- Neurodevelopmental outcomes
  - Limited studies, no consistent findings

Antipsychotics

- C category
  - haloperidol, droperidol, chlorpromazine, zuclopenthixol, flupenthixol, fluphenazine
  - Clozapine
- B 1 category
  - Pimozide
- B2 category
- B3 category
  - Risperidone, olanzapine, paliperidone, trifluoperazine, amisulpiride, aripiprazole, ziprasidone, quetiapine
- *Balanced against risk to mother and infant of untreated maternal schizophrenia or related disorders*

Mood stabilisers-antiepileptics

- Retrospective and prospective cohort studies, registry cohorts
- Neonatal outcomes
  - Reduced head circumference-CBZ (VPA)
  - Lower birth weight-CBZ (VPA)
  - Neonatal hypoglycaemia- VPA
  - Sedation, withdrawl, toxicity
  - Neonatal hepatotoxicity LTG, CBZ
  - Coagulation defects (Vit K) CBZ

Mood stabilisers- lithium

- Pregnancy complications
  - Lithium toxicity
  - polyhydramnios
- Neonatal outcomes
  - Prematurity
  - Poor respiratory effort and cyanosis
  - Increased birth weight (large for gestation)
  - Hypotonicty, lethargy, hyperglycaemia, hyperbilirubinaemia
  - Goitre, hypothyroidism
  - Nephrogenic diabetes

Mood stabilisers-lithium

- Structural abnormalities
  - Increase Ebstein's anomaly (displacement of tricuspid valve into RV)-occurs in 1 in 20,000 general population; risk is 1 in 1,000 following lithium exposure
- Neurodevelopmental outcomes
  - Limited data re outcomes of children exposed to lithium in utero

Mood stabilisers

- Polytherapy increases risk of structural abnormality
- Risk of malformations reduced if folate taken throughout pregnancy
- Early pregnancy investigations-
  - high resolution morphological ultrasound with assessment of nuchal translucency to assess for NTD and other malformations
  - Lithium exposure-high resolution ultrasound and foetal echocardiogram at 16W
  - Foetal growth surveillance

Mood stabilisers

- D Category -carbamazepine, valproate, lamotrigine
- D Category -lithium

- *Balanced against risk to mother and infant of untreated maternal bipolar or related disorders*

Antidepressants

- Meta-analyses, retrospective and prospective cohort studies, case-controlled studies
- Reproductive loss
  - Apparent increase in spontaneous abortion- but studies did not control for psychiatric illness state; and they controlled variably for factors such as age, smoking, drug use
  - No suggestion of increased risk of FDIU or SB

Antidepressants

- Pregnancy complications
  - One study has shown an increased risk of hypertension and possibly pre-eclampsia in women exposed to SSRIs beyond the first trimester
- Neonatal outcomes
  - Studies have shown a significant increase in pre-term births (<37 weeks gestation)
    - Seen with TCA and SSRI, SNRI
    - Longer exposures are more likely to decrease gestational age
    - Infants exposed to either SSRI or depression are more likely to be born prematurely than those who are unexposed or partially exposed

Antidepressants

- Neonatal outcomes
  - Poor neonatal adaptation-jitteriness, irritability, temperature instability, hypotonia, tachypnoea, feeding problems, GI symptoms, hypoglycaemia
  - Low initial APGAR score-TCAs, SSRIs
  - Persistent pulmonary hypertension (PPHN)- in babies of mothers exposed to SSRIs
    - Base rate 0.5-2 per 1000; fatal in 10% of cases
    - Risk elevated to 3-6 per 1000 with maternal SSRI use

Antidepressants

- Structural abnormalities-variable results
  - Major congenital malformations-paroxetine
  - Cardiac malformations- increased risk with paroxetine, fluoxetine, TCAs, tetracyclics [VSD paroxetine]
  - Eye abnormalities- paroxetine
  - Ventricular outflow defects- SSRIs
  - Anencephaly, craniosynostosis, omphalocele-SSRIs esp paroxetine
  - Overall, no consistent data on SSRI exposure to support specific morphological teratogenic risks
  - Limb reduction abnormalities-TCAs

Antidepressants

- Neurodevelopmental outcomes
  - Major limitations of studies examining possibility of neurodevelopmental adverse effects of Anti-D's
    - Instruments used
    - Age children assessed
    - Maternal compliance with medication
    - Pregnancy exposure to other medications, alcohol, nicotine, illicit substances
    - Maternal IQ, socioeconomic status, maternal depression
  - Studies have failed to demonstrate any in utero effects of SSRIs or TCAs on later infant cognitive development
  - Two studies have suggested impaired psychomotor development following in utero exposure to SSRIs-but both have methodological problems

Antidepressants

- C category
  - TCAs, SSRIs *except paroxetine*
- B1 category
  - Reboxetine
- B2 category
  - Mianserin, venlafaxine, desvenlafaxine, tranylcypromine
- B3 category
  - Mirtazepine, duloxetine, moclobemide,phenelzine
- D category
  - Paroxetine
- *Balanced against risk to mother and infant of untreated maternal depression/anxiety*

Psychotropics in pregnancy-summary

- No blanket rules-tailor to individual patient, involve partner where possible
- Careful risk-benefit assessment
- Use psychological interventions when possible and appropriate
- Avoid 1st trimester exposure when possible
- Use the lowest effective dose for shortest appropriate/sufficient time
- Avoid polypharmacy if at all possible
- Remember that serious mental illness has independent adverse effects on pregnancy/infant
- We want to keep the woman well
- Collaborative approach with range of health providers

Psychotropics and Breastfeeding

Breastfeeding

- Benefits
  - Bottle-fed infants are more prone to infections, allergies, being overweight at school entry, more likely to develop type-1 diabetes
  - Mothers who don’t breast feed are at increased risk of obesity, osteoporosis, and ovarian and breast cancer later in life
  - Breast feeding can promote mother-infant interaction and increase maternal self-esteem
- Generally recommended that breast feeding should be promoted

Breast feeding and psychotropics

- Most drugs pass into breast milk-the amount is influenced by
  - Maternal plasma level-dependent upon dose, timing and route of administration, maternal metabolism and excretion
  - Drug half-life
  - Lipid solubility-breast milk is fatty so concentrates lipophilic drugs such as psychotropics
  - Protein binding- drugs with low plasma protein binding transfer into breast milk
  - Amount of drug ingested-is baby exclusively breast fed or not, timing since last maternal dose
  - Infant metabolism-neonates have reduced capacity to metabolise drugs for at least the 1st 2 weeks-this may be extended if the infant is preterm or ill
  - Infant excretion-neonatal kidney is less efficient than that of an adult

Breast feeding and psychotropics

- What is a safe dose for the infant?
  - Generally a dose which is < 10% of that received by the mother (on a mg/kg basis)
  - A lower value is used for drugs with greater inherent toxicity
  - Consider each case on its own merits as factors such as maternal dose and infant clearance vary widely

The decision to prescribe or not

- Risks to Infant
  - Of medication
  - Of untreated maternal mental illness

Antipsychotics

- FGAs: some excretion occurs, monitor infant for sedation
- SGAs:
  - olanzapine- reports of sedation, jaundice, poor feeding and lethargy, cardiomegaly and shaking
  - Risperidone & Quetiapine -low M:P ratios and no adverse effects reported
  - Clozapine- not recommended -breast milk concentration higher than maternal serum (lipophilic)-reports of sedation, agranulocytosis, cardiovascular instability. IF need to continue and breastfeed then regular FBE from infant and mother

Mood stabilisers

- Avoid polypharmacy and use lowest possible dose
- Monitor for SEs such as sedation, poor suckling, rashes
- Lithium- should be avoided when breastfeeding
- Carbamazepine-considered safe BUT there have been reports of hepatotoxicity, seizure, poor suckling
- Valproate-considered safe BUT there have been reports of thrombocytopenic purpura and anaemia
- Lamotrigine-extensive passage into breast milk
  - Is metabolised by glucuronidation which is immature in neonate and so could lead to accumulation of drug in the infant's system
  - theoretical concern about Stevens Johnson syndrome

Antidepressants

- Most of the antidepressants are excreted in small amounts in breast milk-so amount ingested by infant likely to be clinically insignificant
- Monitor for SEs including sedation, irritability, poor feeding
- TCAs- have been widely prescribed, appear to be relatively safe, levels in infant serum low or undetectable (possible exception of doxepin)-but beware sedation
  - Remember toxic in O/D- mother, other small children
- SSRIs-appear safe, mostly low levels excreted in milk
  - Avoid long half life drugs if possible
- Venlafaxine-limited data, data are reassuring
- Newer antidepressants-limited data
- LT studies on cognitive & behavioural development of infants exposed in breast milk are lacking

Psychotropics in breastfeeding- general guidelines

- No blanket rule, individual decision, informed consent, involve partner when possible
- Sick or preterm infants are at risk cf healthy full-term infants
- If possible use drugs with short half-life; time feeds when maternal serum levels are lowest i.e. just before next dose. May also express milk when serum levels highest and discard milk
- Monitor the feeding activity, sleep and conscious level of any breastfed infant whose mother is on psychotropics
- Remember if mother has to stop breastfeeding guilt and self-blame are common

For more information

- About medication
  - www.ppmis.org.au and RWH Pharmacy Information Line 8345 3190
- General information and advice
  - Centre for Women's Mental Health, RWH 83452070