Promoting Maternal Mental Health During and After Pregnancy
1 in 7 women suffer from perinatal depression

Two – thirds of perinatal depression begins before birth

- **Pregnancy**: 33%
- **Before pregnancy**: 27%
- **Postpartum**: 40%

Wisner et al. JAMA Psychiatry 2013
Perinatal depression is under-diagnosed and under-treated

Byatt et al. Obstetrics and Gynecology. 2015
Barriers to Treatment

Patient
- Lack of detection
- Fear/stigma
- Limited access

Provider
- Lack of training
- Discomfort
- Few resources

Systems
- Lack of integrated care
- Screening not routine
- Isolated providers

Women do not disclose symptoms or seek care

Underutilization of Treatment

Unprepared providers, With limited resources

Poor Outcomes
Perinatal depression effects mom, child & family

Poor health care  
Substance abuse  
Preeclampsia  
Maternal suicide  

Low birth weight  
Preterm delivery  
Cognitive delays  
Behavioral problems

Forman et al. *Dev and psych* 2007
In 2010, Massachusetts passed a Postpartum Depression Act

PPD Commission

PPD Screening Regulation (if screen must report CPT S3005, 0-6 months)

MCPAP for Moms Funding
MCPAP for Moms serves providers

- OB Care Provider
- Family Medicine Provider
- Psychiatric Care Provider
- OB nursing Staff
- OB clinic social worker or case worker
- PCPs (for lactation advice)
1-855-Mom-MCPAP

- Linkage to resources
- Referral psychiatrist & psychotherapist
- Telephone consultation
Can refer moms to www.mcpapformoms.org
Improved outcomes for moms, babies and families

Obs 80%

Psychiatrists 20%

Detect  Assess  Engage  Triage  Treat

Patients should provide consent in order for you to share personal information with MCPAP for Moms.
Management of perinatal psychiatric disorders

Preconception

Pregnancy

Depression & Anxiety

Bipolar & Psychosis

Postpartum
Think pregnancy for ALL reproductive aged women

Half of pregnancies are unplanned

Discuss and document birth control and risks of teratogenic medication, e.g. valproic acid

Be aware of interaction between BCP and mood stabilizers
  - BCP can decrease lamictal levels
  - Trileptal and Topomax can decrease BCP efficacy

Discuss and document preconception planning
Preconception planning is imperative

**Prenatal vitamin (ALL women):**
- folic acid – 1 gm
- iodide least 150 micrograms

**Beyond prenatal vitamin (if AED):**
- folic acid - 4gm daily starting 12wk prior to conception
Preconception planning is critical

Attempting conception and being pregnant can be (often are) stressful

Therapy is evidence based treatment for depression and anxiety

If on psychiatric medication, preconception is an opportunity to plan and streamline treatment

Call MCPAP for Moms
Management of perinatal psychiatric disorders

Preconception

Pregnancy

Depression & Anxiety

Bipolar & Psychosis

Postpartum
High risk of relapse during pregnancy in woman discontinuing antidepressants preconception

*If tapering medication prior to conception, continue to follow women during pregnancy.
Meds not indicated

Meds indicated

**Meds not indicated**

**Meds indicated**

**Medication Assessment**

**Mild depression**
- No suicidal ideation
- Able to care for self/baby
- Engaged in psychotherapy
- Depression has improved with psychotherapy in the past
- Strong preference and access to psychotherapy
- No recent relapse off medication

**Moderate/severe depression**
- Suicidal ideation
- Difficulty functioning caring for self/baby
- Psychotic symptoms
- History of severe depression
- Recent relapse off medication
- Failed trial of psychotherapy
Prescribing principles for preconception, pregnancy and breastfeeding

Use what has worked (considering available reproductive safety information)

Use lowest EFFECTIVE dose

Minimize switching

Monotherapy preferable

Be aware of need to adjust dose

Discourage stopping SSRIs prior to delivery
Duration and number of depressive episodes is the #1 risk factor for relapse during pregnancy

Socioeconomic status

Marital status

Duration of depressive illness and number of previous episodes

Family history of postpartum depression
Edinburgh Postnatal Depression Scale (EPDS)

Validated in pregnancy and postpartum

10 items

Asks about self-harm
Education about various treatment and support options is imperative
The U.S. FDA antidepressant risk categorization is limited

- Lack of systematic human data
- Lack of clear differentiation between categories
- Risk of maternal illness and benefits of the medication not accounted for

Does not inform decision making
No decision is risk free

SSRIs are among the best studied classes of medications used in pregnancy

Case of Ms. Y
Absolute risk of birth defects when antidepressants taken in first trimester is small

Data is inconsistent, paxil has most been controversial

Absolute risk of persistent pulmonary hypertension (PPHN) appears small

Baseline rate of 1-2 per 1000 births, may increase to 3-4 in 1000 births

Small increase risk of preterm labor & low birth weight

Depression can also increase risk of preterm labor and low birth weight

Possible transient neonatal symptoms with exposure to antidepressants

Transient and self-limited syndrome that may occur in up to 30% of neonates

No data to support taper in third trimester

Studies do not suggest long-term neurobehavioral effects on children

Case of Ms. X
When possible, slowly taper benzodiazepines, with goal to be on lowest possible dose

**Possible risks**

- Cleft lip/palate
- Preterm birth
- Low birth weight
- Neonatal withdrawal syndrome/possible small risk of floppy infant

**Guidelines**

- Monotherapy preferable to polypharmacy, so optimize SSRI first
- Fewer/no active metabolites (lorazepam) may be safer
Management of perinatal psychiatric disorders

Preconception

Pregnancy
  Depression & Anxiety
  Bipolar & Psychosis

Postpartum
Imperative to address bipolar disorder

Wisner et al. JAMA Psychiatry. 2013
High risk of relapse for bipolar disorder after medication discontinuation postpartum

Viguera et al. AJP 2000
Risk for recurrence of bipolar disorder increases after medication discontinuation in pregnancy

Yonkers et al. AJP 2004
Bipolar disorder increases risk of postpartum psychosis

1-2/1000 women

>70% bipolar disorder

24 hrs – 3 weeks postpartum

Mood symptoms, psychotic symptoms & disorientation

R/o medical causes of delirium

Psychiatric emergency

4% risk of infanticide with postpartum psychosis
<table>
<thead>
<tr>
<th>Relative Safety In Pregnancy</th>
<th>Mood Stabilizer</th>
<th>Key Clinical Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safer</td>
<td>Typical antipsychotics (haloperidol, perphenazine)</td>
<td>Used clinically in pregnancy for over 50 years.</td>
</tr>
<tr>
<td></td>
<td>Lamotrigine</td>
<td>Not show increase in teratogenicity. Not show delay in neurodevelopment.</td>
</tr>
<tr>
<td>Caution</td>
<td>Atypical antipsychotics</td>
<td>While no major findings, data is limited.</td>
</tr>
<tr>
<td></td>
<td>Lithium</td>
<td>Absolute risk of cardiac malformation rare. (Epstein’s anomaly 0.01-0.05%) Watch for ‘floppy baby’ syndrome.</td>
</tr>
<tr>
<td>Avoid if possible</td>
<td>Carbamazepine</td>
<td>Increased risk of cleft lip/palate. Risk of reduced head circumference, lower birth weight and shorter length.</td>
</tr>
<tr>
<td></td>
<td>Valproic acid</td>
<td>Increase risk of multiple malformations. (~8-9%) Lower IQ.</td>
</tr>
</tbody>
</table>

Marsh W, Viguera, Bipolar D/o Through Pregnancy and Postpartum, Psych Annals ‘12
Folic acid supplementation with AED in Pregnancy

Carbamazepine

Valproic Acid

Folic acid
(4mg x 12 weeks preconception)
Lithium use in pregnancy as been associated with risks to mother and baby

**Maternal risks**
- Preterm labor
- Polyhydramnios & polyuria/polydipsia

**Neonatal risks:**
- Prematurity
- Large for gestational age
- Cardiac defects: Epstein’s anomaly
- Neural tube defects: possible small
- Neonatal adaption/floppy baby
- Long-term developmental issues?
Pharmacokinetics change during pregnancy

Δ in drug conc

Blood flow Δs

Respiratory Δs

↑ cardiac output

↓ albumin

↑ plasma volume

↑ GFR
Lithium serum concentration decreases in pregnancy

Therapeutic index of 0.6-1.2 mEq/L

Li clearance is 20-30% of GFR

Varies with GFR
*Established therapeutic drug level and narrow therapeutic index of 0.6-1.2mEq/L

**Lithium clearance increases by 30-50% due to ↑ renal blood flow

Frequent TDM may be required in some cases

- Lithium initiation
- Medical comorbidities affecting absorption clearance
- Titrating lithium for symptom management

Monthly
Weekly or biweekly
month prior to delivery
Monitor closely around delivery

Check maternal lithium level when women present for delivery

Adequate hydration

Avoid nephrotoxins and NSAIDS

Other monitoring for Lithium during pregnancy is also needed

Followed by a high risk Ob

Ultrasound and fetal echocardiogram at 16 to 18 weeks

May consider twice daily dosing, to avoid higher lithium peak levels

Consider monitoring infants’ lithium serum levels, TSH and renal function
Unclear evidence for holding Li 24-48 hrs before delivery

Birth

Check level 24 hrs after birth & after each dose adjustment

Management of perinatal psychiatric disorders

Preconception

Pregnancy

Depression & Anxiety

Bipolar & Psychosis

Postpartum
Psychosis and schizophrenia in pregnancy pose substantial risks to mother and baby

Less prenatal care

Smoking

Prematurity

Poor maternal-fetal attachment

Postpartum psychosis

Matevosyan NR; Arch GynObstetFeb ’11;283(2):141-7.
### Risk of harm to baby

#### OCD/anxiety
- Good insight
- Thoughts are intrusive and scary
- No psychotic symptoms
- Thoughts cause anxiety

#### Postpartum Psychosis
- Poor insight
- Psychotic symptoms
- Delusional beliefs or distorted reality present

<table>
<thead>
<tr>
<th>Low risk</th>
<th>High risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCD/anxiety</td>
<td>Postpartum Psychosis</td>
</tr>
</tbody>
</table>
Use antipsychotics that work, while taking into account relative risks of medications

- Preterm delivery
- Low birth weight
- No single malformation consistently reported
- Increased risk of postnatal adaptation symptoms
- Infant hospitalization NICU stay

Typicals
(lower risk)

Small risk of transient abnormal muscle movement
Evidence suggests NO long-term developmental effects

Atypical
(higher risk)

Metabolic complications
Possible large for gestational age
NO data on long-term effects
There is no such thing as no exposure

Need to balance and discuss the risks and benefits of medication treatment and risks of untreated depression
Management of perinatal psychiatric disorders

Preconception

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Bipolar & Psychosis

Postpartum
Breastfeeding generally should not preclude treatment with antidepressants.

SSRIs and some other antidepressants are considered a reasonable option during breastfeeding.
Sertraline, paroxetine, & fluvoxamine have lowest passage into milk
All psychotropic meds are excreted through breastmilk

<table>
<thead>
<tr>
<th>Medication</th>
<th>AAP</th>
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<tbody>
<tr>
<td>Bupropion</td>
<td>Unknown, but may be of concern</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>Usually compatible with breastfeeding</td>
</tr>
<tr>
<td>Valproic acid</td>
<td>Usually compatible with breastfeeding</td>
</tr>
<tr>
<td>Lamotrigine</td>
<td>Unknown, but may be of concern</td>
</tr>
<tr>
<td>Lithium</td>
<td>Significant side effects, should be used with caution</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Not rated</td>
</tr>
<tr>
<td>Risperidone</td>
<td>Not rated</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>Not rated</td>
</tr>
</tbody>
</table>
Infant monitoring is needed during lactation for certain medications

<table>
<thead>
<tr>
<th>Drug</th>
<th>Infant Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbamazepine</td>
<td>CBZ level, CBC, liver enzymes</td>
</tr>
<tr>
<td>Valproic acid</td>
<td>VPA level (free and total), liver enzymes, platelets</td>
</tr>
<tr>
<td>Lamotrigine</td>
<td>Rash, liver enzymes, lamictal level</td>
</tr>
<tr>
<td>Lithium</td>
<td>BUN, CRE, TSH, CBC</td>
</tr>
<tr>
<td>Typical antipsychotics</td>
<td>Stiffness, CPK</td>
</tr>
<tr>
<td>Atypical antipsychotics</td>
<td>Weight, blood sugar</td>
</tr>
</tbody>
</table>

In summary, psychiatric disorders affect mom, baby and family

Mom
- Suffering
- Poor self-care
- Suicide

Fetus/Pregnancy
- Preterm birth
- LBW
- HTN & Preeclampsia

Child/Family
- ↑ risk of depression
- Child development
- Marriage
- Siblings

No decision is risk-free
In summary, our aim is to promote maternal and child health by building the capacity of front line providers to address perinatal depression.
Please call us with any questions as we are to here to help you

1-855-Mom-MCPAP

www.mcpapformoms.org
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Thank you!