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Perinatal Depression:

Depression in pregnancy and postpartum

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Overview

Today's *conversation*

Objectives

- List symptoms, prevalence, causes, barriers to screening and treatment
- Describe the risk vs benefit of treatment and outcomes of untreated depression
- Discuss different treatment options including medications and therapy
- Name two new FDA approved medications specific for postpartum depression
- Identify useful resources for providers and members
- Summarize how Lucet Care Management can support the member's journey

WHAT WE'LL DISCUSS

Depression: Pregnancy and postpartum

Perinatal depression: varying definitions

DSM-5-TR

Same criteria used for Major Depressive Disorder (MDD). Peripartum onset specifier: during pregnancy or within 4 weeks postpartum.

DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition)

ICD-10

F53 code for postpartum depression. Postnatal onset specifier: within 6 weeks of delivery.

ICD-10 (International Classification of Diseases, Tenth Revision)

ACOG/CDC

Depressive Disorder in pregnancy or within 12 months following childbirth. **Has more clinical utility.**

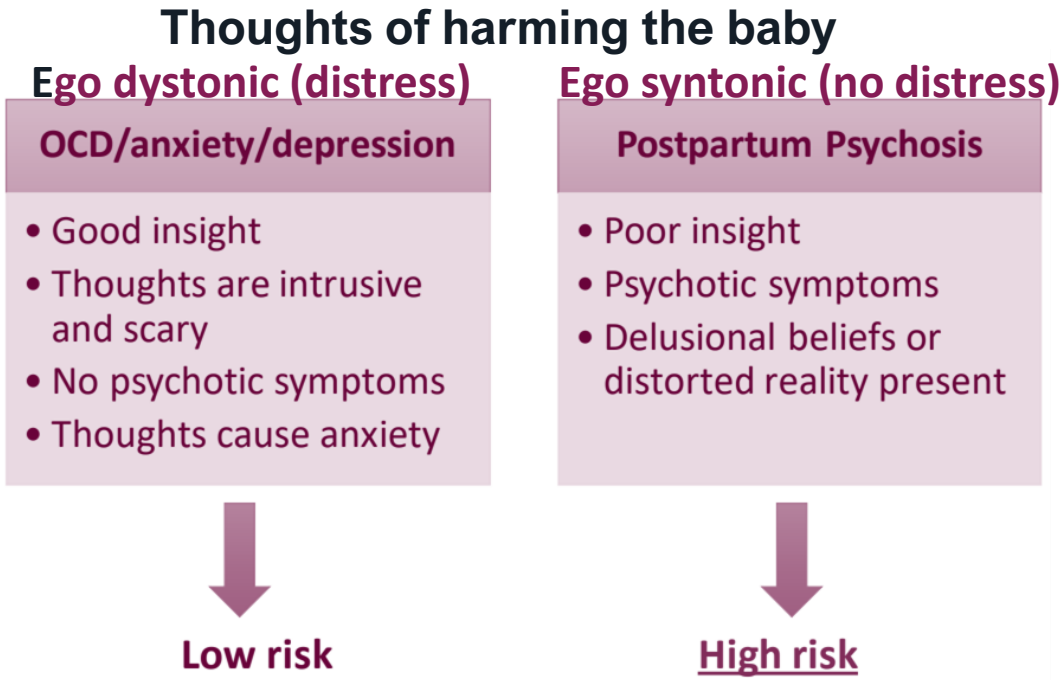
ACOG (American College of Obstetricians and Gynecologists)
CDC (Center for Disease Control and Prevention)

Other perinatal mental health problems

- Perinatal anxiety disorders are common, often comorbid with depression.
- High risk of relapse (30-50%) for Bipolar disorder during pregnancy and postpartum.
- Postpartum psychosis with delusions and hallucinations that tell a woman to harm herself or the baby, is a medical emergency.
- Baby blues is very common in women after giving birth, it is not a mental health disorder and resolves on its own.
- Perinatal substance use disorders, occurs in 5.5% of all deliveries, often comorbid with depression. Stigma and legal issues are a barrier to treatment.

Women's experience of perinatal depression

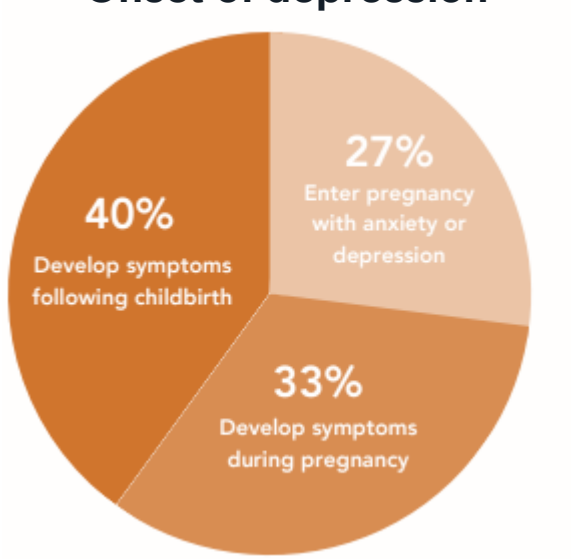
- Depressed, despondent, emotionally numb or angry and annoyed easily.
- Aches and pains that are unexplained or don't go away.
- Feeling overwhelmed by daily tasks or taking care of the baby.
- Sleep and appetite disturbance, loss of energy and fatigue.
- Trouble thinking clearly and making decisions.
- Feelings of worthlessness and guilt, feelings of being a "bad mother".
- Withdrawing from family and friends, isolates self.
- Difficulty bonding with the baby, very little baby talk, does not play with the baby.
- Ego dystonic (cause distress) thoughts of harming the baby are common in postpartum depression. Need to differentiate from postpartum psychosis with risk of infanticide.



Prevalence

How common is perinatal depression

Onset of depression



- 10-16% women have depression in pregnancy (2x rate of general population).
- Postpartum depression seen in 13% of all live births (500,000 women per year).
- Rates going up, 7x higher in 2015 than 2000, also recent covid impact seen.
- Only 50% women with perinatal depression who are identified receive treatment.
- Racial disparities, fewer Black and Latina patients receive treatment.
- SDOH barriers: to care access.

SDOH (Social determinants of health)

Wisner. JAMA Psychiatry. 2013;70:490. Goldman-Mellor. Am J Obstet Gynecol. 2019;221:489.e1

What is Baby blues?

Adjustment	This is not a mental health disorder but rather a period of adjustment after the birth of a baby related to sleep deprivation and hormonal changes.
Symptoms	New mothers experience a range of emotions including sadness, tearfulness, irritability and feeling overwhelmed. Minimal or no impairment in functioning seen.
Time Limited	Baby blues occur in 80% of new mothers within days of delivery, lasts several days, time limited and resolves on its own within 1-2 weeks.
Support	Baby blues responds well to reassurance, increased social supports and rest for the mother.

Need to differentiate from postnatal depression, lasts more than 14 days and impairs the women's daily functioning (including caring for self or baby) and needs treatment.

Postpartum depression in fathers

Postpartum depression in men is Very Real

1/10 fathers have depression postnatal

Prevalence

Past depression, age, finances, hormonal changes, complication in pregnancy /birth, maternal depression, marital discord

Risk Factors

Mental Health Stigma
"Be Strong"
Men's mental health ignored

Stigma

Irritability, indecisiveness, restricted range of emotion, avoidant behaviors, substance use

Symptoms

Adversely affects the family unit and interaction with the child

Impact

- Recognizing and treating paternal depression provides support to the new mom.
- New fathers need support, better parental leave and changed workplace culture.
- Father's support group run by Postpartum Support International is a resource.

Screening for perinatal depression

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Perinatal depression screening recommendation

ACOG

American College of Obstetricians and Gynecologists

Ob/Gyn screen for depression in pregnancy and postpartum

AAP

American Academy of Pediatrics

Pediatricians identify postpartum depression at well baby visits

USPSTF

United States Preventive Services Task Force

Routine depression screening of all pregnant and postpartum women

Commonly used screening tools

A positive screen is not the same as diagnosis

PHQ-9

Patient Health Questionnaire-9

- 9 items, free, self report.
- No anxiety items, includes somatic symptoms.
- Linked to DSM criteria.
- Cut off score is 10 or positive response to suicide question.
- Not specific but validated for peripartum depression.

EPDS

Edinburgh Postnatal Depression Scale

- 10 items, free, self report.
- Has symptoms of both anxiety and depression.
- Excludes somatic symptoms.
- Available in 60 languages.
- Cut-off score is 10 or positive response to suicide question.
- Validated screening tool specific for postpartum but used in pregnancy too.

Other screening

Intimate partner violence

- Screening is very important.

Suicide screening:

- If imminent risk (plan, past suicide attempt, psychotic symptoms, concern about harm to baby or self) need emergency referral.

Substance Use Disorder (SUD)

- Screening recommended by ACOG in early pregnancy.

Screening Tool:

Patient Health Questionnaire-9

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

For office coding: Total Score _____ = _____ + _____ + _____

Item scores:
range from 0-3

Total score ≥10 suggests depression

Screening Tool:

Edinburgh Postnatal Depression Scale

1. **I have been able to laugh and see the funny side of things**
   - 0 As much as I always could
   - 1 Not quite so much now
   - 2 Definitely not so much now
   - 3 Not at all

2. **I have looked forward with enjoyment to things**
   - 0 As much as I ever did
   - 1 Rather less than I used to
   - 2 Definitely less than I used to
   - 3 Hardly at all

3. **I have blamed myself unnecessarily when things went wrong**
   - 0 No, never
   - 1 Not very often
   - 2 Yes, some of the time
   - 3 Yes, most of the time

4. **I have been anxious or worried for no good reason**
   - 0 No, not at all
   - 1 Hardly ever
   - 2 Yes, sometimes
   - 3 Yes, very often

5. **I have felt scared or panicky for no good reason**
   - 0 No, not at all
   - 1 No, not much
   - 2 Yes, sometimes
   - 3 Yes, quite a lot

6. **Things have been getting on top of me**
   - 0 No, I have been coping as well as ever
   - 1 No, most of the time I have coped quite well
   - 2 Yes, sometimes I haven't been coping as well as usual
   - 3 Yes, most of the time I haven't been able to cope

7. **I have been so unhappy that I have had difficulty sleeping**
   - 0 No, not at all
   - 1 Not very often
   - 2 Yes, sometimes
   - 3 Yes, most of the time

8. **I felt sad or miserable**
   - 0 No, not at all
   - 1 No, not much
   - 2 Yes, quite often
   - 3 Yes, most of the time

9. **I have been so unhappy that I have been crying**
   - 0 No, never
   - 1 Only occasionally
   - 2 Yes, quite often
   - 3 Yes, most of the time

10. **The thought of harming myself has occurred to me**
    - 0 Never
    - 1 Hardly ever
    - 2 Sometimes
    - 3 Yes, quite often

Item scores:
range from 0-3

Total score ≥10 suggests depression

Note item #10 response

Screening scorecard

Utilization data & barriers/solutions

HEDIS data (2019-2021): despite universal screening recommendation **only 20% women screened** for depression in pregnancy and postpartum. Of the positive screens **only half received follow up.**

- Screening not mandated by most states, mandates only in 10 states. A Comprehensive Look at State Maternal Mental Health Screening and Reimbursement Legislation (2020mom.org)
- Screening alone not sufficient, unless mechanisms in place to respond to a positive screen, need treatment and follow-up.
- Barriers include mental health professional shortage and long wait-times for appointments.
- Important to improve access to care by integrated care, collaborative care models, and telehealth consults with perinatal specialists. MCPAP for Moms, Postpartum Support International - PSI
- Increasing clinician expertise through cross-disciplinary education; access to reproductive psychiatry curriculum for prescribers to improve knowledge and skill to treat perinatal depression. NCRP – National Curriculum in Reproductive Psychiatry (ncrptraining.org)
- CME/CEU opportunities offered by: MATERNAL MENTAL HEALTH NOW - Supporting Parents & Families; Postpartum Support International - PSI

(HEDIS) Healthcare Effectiveness Data and Information Set

Patient barriers to accessing care

- Recognition of symptoms of depression
- Not disclosing symptoms
  - Stigma/Fear of being labeled
  - Belief of personal failure
  - Shame induced by social media (perfect moms)
- Fear of losing children
- Negative beliefs about treatment safety or dependence on medication

Providers must educate women about perinatal depression

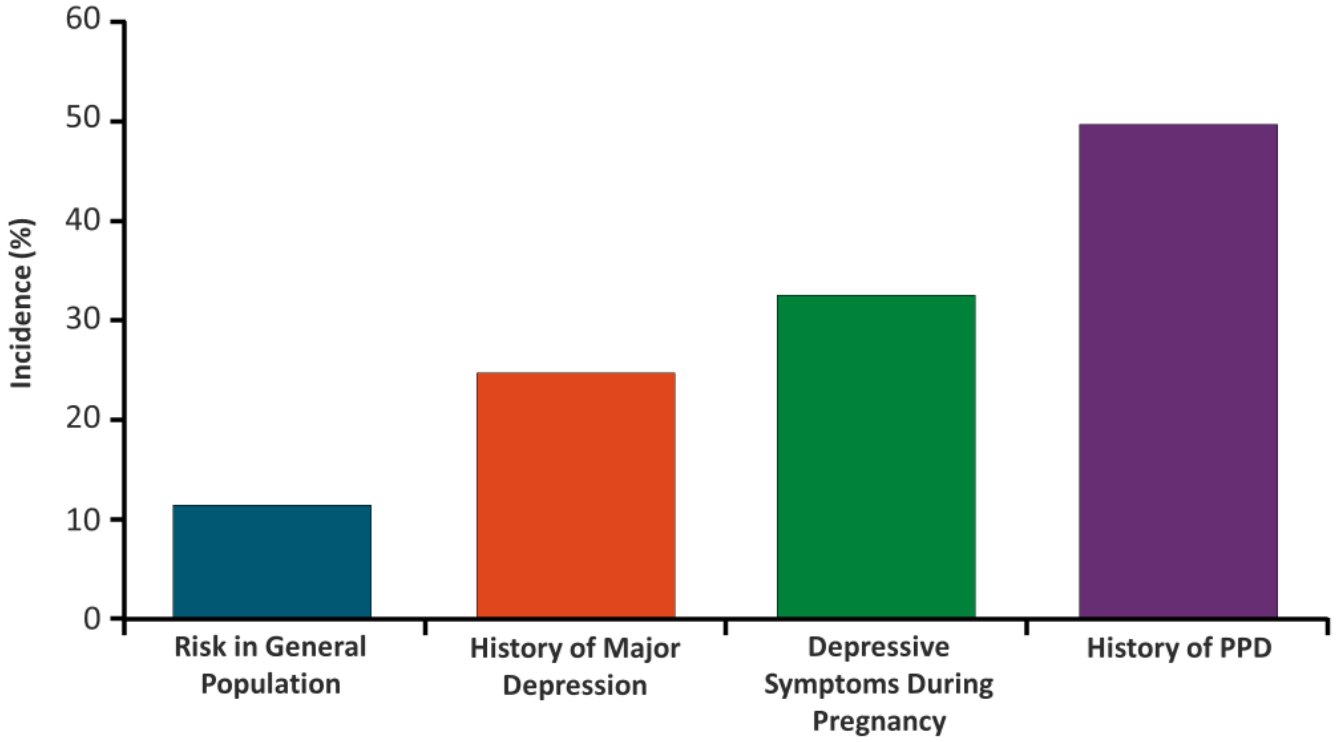
Public awareness campaigns needed

- Lack of family and partner support
- Paid leave/work related issues
- Accessibility to mental health care
- Cultural beliefs/Language barriers
- Women of color & low income more depressed and less access to care
  - Racism: Toxic a Black Woman's story, short film
    Trailer — Toxic | A Black Woman's Story (toxicshortfilm.com)

Psychiatric history predicts risk of perinatal depression

Women with history of MDD, depressive symptoms during pregnancy, or previous PPD are at increased risk for perinatal depression.

When antidepressant (AD) medication is discontinued with planning for or onset of pregnancy, ~70% of women relapse with a MDE during pregnancy.



MDD (Major depressive disorder); PPD (postpartum depression); MDE(Major depressive episode)

Causes of perinatal depression

Key risk and protective factors

Biological	Psychological	Social	Protective
• Chronic illness, medical problems, pain, disability • Teen mother • Unintended pregnancy • Obstetric complications • Preterm/low birth weight • Multiple births • Baby with special needs	• Prior hx depression • Depression/anxiety in pregnancy • Previous postpartum depression • Substance misuse • Hx baby blues • Low self-esteem • Family history of psychiatric illness	• Negative life events/ACEs • Domestic violence • Marital problems • Low social support • Low income • Childcare stress • Minority status • Recent immigrant	• Social Support • Positive parenting related attitude • Better pre-pregnancy self reported health • Sense of community belonging • Breastfeeding • Having a partner who does not have depression

ACEs (adverse childhood experiences)

Maternal suicide

A preventable public health problem

Prevention is Key

Maternal Mortality

- Suicide is a leading cause of maternal death in the perinatal period (pregnancy and 1 year postpartum).
- Suicide and opioid overdose cause 1:4 maternal deaths, rates 2x more than postpartum hemorrhage, the 2nd leading cause of maternal deaths.
- Maternal mortality rates in the USA are the highest among developed countries and are rising.
- Maternal mortality rate 3x higher in Black mothers.
- Tripling in suicidality in new mothers between 2006 and 2017 in commercially insured younger, low income, black women.

Need for Prevention

- Pregnancy and postpartum are a time of **increased access to healthcare**, for these women who died of suicide, **missed opportunity** to prevent tragedy.
- Prevention strategies recommended include **screening and treatment** for mental health problems and **improving access to care**.

Admon LK, et al. Trends in Suicidality 1 Year Before and After Birth Among Commercially Insured Childbearing Individuals in the United States, 2006-2017. *JAMA Psychiatry.* 2020:e203550

Postpartum psychosis

A psychiatric emergency

Response is Key

- Prevalence is 1-2 per 1000 women giving birth.
- Diagnosis: Bipolar disorder (35%), MDD with psychotic features, Schizophrenia, Schizoaffective disorder, drugs (Amphetamines, Hallucinogens, Bromocriptine), Medical conditions (Thyroid disorders, encephalitis).
- Early and sudden onset, usually within 1-2 weeks postpartum.
- Symptoms include delusions, hallucinations (with commands for suicide or infanticide); mood symptoms (mania, depression or mixed); insomnia, confusion/disorientation, thought disorganization, waxing and waning symptoms (may look well temporarily).
- Ego syntonic thoughts of harming the baby (mother thinks thoughts are reasonable and wants to act out on them).
- Infanticide risk 4% and suicide risk 5% with postpartum psychosis.
- One third have recurrence in subsequent pregnancy.
- **Postpartum psychosis is a psychiatric emergency** and requires psychiatric hospitalization for safety concerns. Don't leave the mother alone with her infant.

Infanticide

Andrea Yates case in the news

Andrea Yates drowned her 5 children Noah (7), John (5), Luke (3), Paul (2) and Mary (6 months) in the bathtub on June 20, 2001

Case Study

Raise your hand icon if you remember the story of Andrea Yates

- Andrea was a high school valedictorian, swim team champion and a registered nurse.
- She stated she killed her children to save them from Satan (delusions). Diagnosis of postpartum psychosis and schizophrenia.
- History of suicide attempts and psychiatric hospitalizations. History of postpartum psychosis after the birth of her 4th child.
- Despite medical advice she had a 5th child and was hospitalized with catatonia. She did not disclose psychotic symptoms to family or psychiatrist, taken off Haldol just 2 weeks before the drownings.
- Andrea was indicted for capital murder, her lawyers pleaded insanity, but the jury decided she was competent to stand trial.
- Andrea was considered sane, and her behavior was rational and premeditated (she waited for her husband to leave the house before killing the children, and she later called 911).
- She was convicted of capital murder and sentenced to life imprisonment in 2002 (with no parole for 30 years) but jury did not impose the death penalty. TX law very stringent based on M'Naghten rule from 1843.
- In the 2006 retrial she was found not guilty due to reason of insanity.
- 23 years later, Yates resides at a mental hospital. Her attorney says she waives her right to possible release every year.
- British infanticide Act (1922) adopted by many other countries: only manslaughter conviction due to diminished capacity.

Treatment of depression in pregnancy and postpartum

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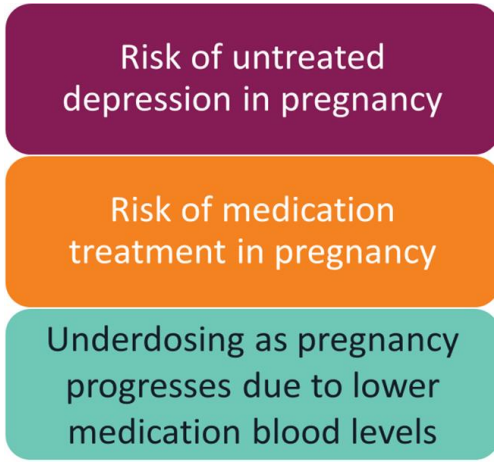
Is it safe to continue my medication in pregnancy?

Lucet Team Role → **Advocate discussion with provider about treatment options**

Individualized risk/benefit discussion is needed:
weighing medication risks vs risks of untreated depression



A decision to treat a pregnant woman with medication is complex and factors to consider include:

- severity of the condition
- from various choices of medication
- consideration of non-medication strategies
- shared decision-making considering patient preferences
- no option is risk free, an individualized tailored approach is needed considering patient's unique circumstances and psychiatric history
- Always clearly document the rationale behind the treatment choice and the discussion with the patient about safety
- Preconception counseling is needed in all women of childbearing age

Don't reduce dose (blood levels of most drugs will drop up to 40-50% in late pregnancy)

Risk of untreated depression to mother and baby

Untreated depression during pregnancy or postpartum has increased risks to both the mother and baby

Economic burden of untreated perinatal depression is $14 billion each year

- Mother has difficulty in conducting daily life, elevated risk of suicide/self-harm and harm to baby.
- Failure to seek prenatal care, poor diet and self care.
- Increased risk of miscarriage, preterm birth, low birth weight, gestational hypertension /pre-eclampsia, need for C-section or instrumental delivery, lower Apgar scores in infant, admission to NICU and fetal death.
- Unhealthy solutions: use of nicotine, alcohol, illicit drugs.
- Suboptimal infant care, poor mother–child attachment, lack of care of other children, and an adverse relationship with the partner.
- Difficult temperament in the infant; impaired cognitive development; emotional and behavioral problems in children.

Risk of antidepressant medication to baby

Providers face the challenge of interpreting the evidence from studies with varying results, newer studies are better designed and show less risk with antidepressant use

After birth, the baby should have comprehensive diagnostics for birth defects and be monitored for any symptoms of withdrawal (PNAS)

- Older data: increased risk for heart malformations with AD (antidepressants). FDA warning for Paroxetine in 2005 (category D). Recent better designed studies support safety (birth defects affect 2-4% of all births in general population regardless of medication use).
- Risk of miscarriage, preterm birth, low birth weight (miscarriage rates 15-20% in general population;10% of all babies born prematurely).
- Persistent pulmonary hypertension **PPHN** (small risk with AD use in late pregnancy).
- Postnatal adaptation syndrome (**PNAS**): withdrawal symptoms, risk 30% with AD use in late pregnancy. Symptoms: jitteriness, irritability, tremor, sleep/feeding difficulty, vomiting, constant crying, seizures, respiratory distress; symptoms resolve in a few days, some babies need special care. **Tapering AD in 3rd trimester does not decrease incidence of PNAS but increased risk of relapse of depression.**

Huybrechts KF, et al. Antidepressant use in pregnancy and the risk of cardiac defects. N Engl J Med. 2014 Jun 19;370(25):397-407.
Ross LE et al: Selective pregnancy and delivery outcomes after exposure to antidepressant medication: a systematic review and meta-analysis. JAMA Psychiatry. 2013; 70(4):436-443.

Antidepressant (AD) use in pregnancy

Does it lead to long-term developmental effects?

Alarming news headlines link AD use in pregnancy to autism – Disputed

Previous Studies

- AD use in pregnancy associated with neurodevelopmental disorders (NDD) in children such as autism
- Results were impacted by poor study design (confounding variables).

Recent study

- Used 2 large health care utilization databases
- Large sample size
- Controlled for confounding variables
- Children were followed long term up to 14 years
- **Take home message:** AD use in pregnancy does not increase the risk of neurodevelopmental disorders in children.

JAMA Intern Med. 2022;182(11):1149-1160. doi:10.1001/jamainternmed.2022.4268

Safety of Antidepressants in breastfeeding

RID (relative infant dose) <10 is safe for breast feeding, provides estimate of baby's exposure to drug from breast milk. All SSRIs fall below this level and are safe.

Sertraline	• Consistent reports of low levels of exposure, relatively large amount of study
Citalopram, escitalopram	• Less systematic study of mom-baby pairs compared with sertraline and paroxetine, observed low levels of exposure to infant via breastfeeding
Paroxetine	• Consistent reports of low levels of exposure, relatively large amount of study • Use limited by tolerability
Fluoxetine	Due to long half-life, may be more likely to be found at detectable levels in infant serum, especially at higher doses; Reasonable for use if a woman has had a good previous response to it and if used during pregnancy.
Bupropion	• Paucity of systematic study; a few case reports in older infants that demonstrate low levels of exposure via breastfeeding; May be advantageous in smokers; Reasonable for use if women have had good previous response; One case report of possible infant seizure
Venlafaxine, Desmethyl venlafaxine	• Higher levels of desmethylvenlafaxine found in breastmilk than venlafaxine • No adverse events reported
Tricyclic Antidepressants	• Considered reasonable for breastfeeding if use clinically warranted; few adverse effects in babies and generally low levels of exposure reported
Newer antidepressants, MAOIs	• Systematic human lacking in the context of breastfeeding for MAOIs, most newer antidepressants • Case series for vortioxetine (N = 3) showing low levels of exposure, duloxetine (N = 1)

MAOI, monoamine oxidase inhibitors.
Drugs and Lactation Database (LactMed). Accessed June 16, 2023. https://www.ncbi.nlm.nih.gov/books/NBK501922/

Patients successfully treated with AD in pregnancy should not change medication for breastfeeding due to risk of relapse

Choose AD with established data rather than newer medication

Monitor the infant for any changes in sleep, feeding, behavior, growth

Low birthweight/premature infants, have less ability to metabolize medications, more adverse effects

Depression treatment: clinical points

Women who discontinue AD during pregnancy or postpartum are 3x times more likely to relapse

Treatment needs to strike a balance between relieving the mother's depression and minimizing exposure of baby to drug

- SSRIs first line in pregnancy and postpartum if Rx naive, research data is reassuring.
- If stable on medication and becomes pregnant don't switch to a safer option (fetus already exposed to medication).
- If past treatment history and depression recurs in pregnancy/postpartum, restart previously effective medication to avoid exposure to >1 AD or untreated illness.
- Single medication at higher dose is preferred over multiple medications.
- Maximize non medication evidence-based treatments.
- Consider new medications Brexanolone and Zuranolone for rapid treatment response in severe postpartum depression.

Evidence based psychotherapy

Can optimally treat many women with mild to moderate perinatal depression (PND)

- **Interpersonal therapy (IPT)** effective in perinatal depression, focuses on role transitions and interpersonal disputes. Emphasis on enhancing social support and strengthening relationships.
- **Cognitive behavior therapy (CBT)** effective in treating both perinatal depression and anxiety.
- **Behavior Activation** reverses the cycle of depression by monitoring mood and modifying behavior by increasing engagement in valued activities.
- **Family therapy** interventions helpful, address co-parenting, couple relational dynamics and dynamics involving extended family members.
- **Dyadic interventions** to support infant-mother attachment such as Attachment and Biobehavioral Catch-up (ABC) and Circle of Security have been validated specifically for perinatal depression.

Prevention of postpartum depression (PPD)

Therapy for prevention of PPD in pregnant women recommended by USPSTF (United States Prevention Services Task Force)[1]

- CBT and IPT are most effective in preventing depression[1]
- Usual course 8 weeks individual or group therapy.

Assess for risk factors in prenatal intake and provide anticipatory guidance about PPD and treatments/supports.

For women with history of postpartum depression but no depression in pregnancy, starting treatment with an antidepressant immediately after delivery is effective in preventing depression.[2]

Self-care: Rest/sleep, Exercise, Nutrition and Support.

1)JAMA 2019; 321(6):580–587. doi:10.1001/jama.2019.0007
2)Wisner KL, et al. Prevention of postpartum depression: a pilot randomized clinical trial. Am J Psychiatry. 2004 Jul;161(7):1290-2. doi:10.1176/appi.ajp.161.7.1290)

New FDA approved medications for postpartum depression: Brexanolone and Zuranolone

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Brexanolone (Zulresso)

FDA approved in 2019 for postpartum depression

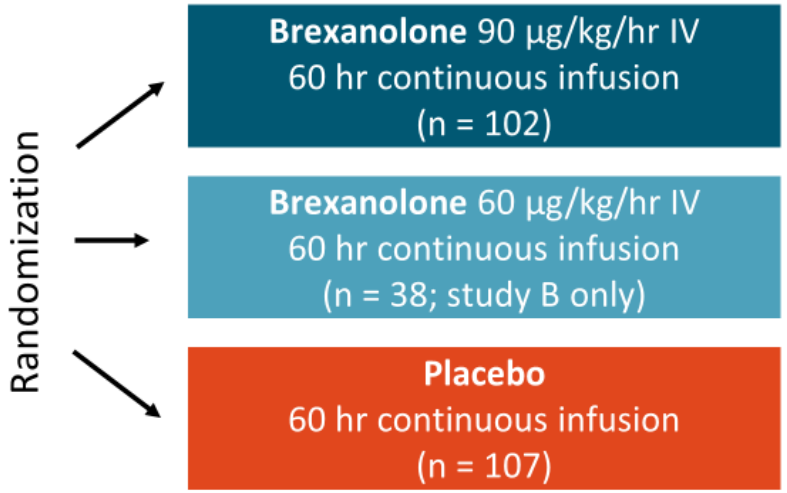
Injection: 100 mg/20 mL (5 mg/mL) single-dose vial

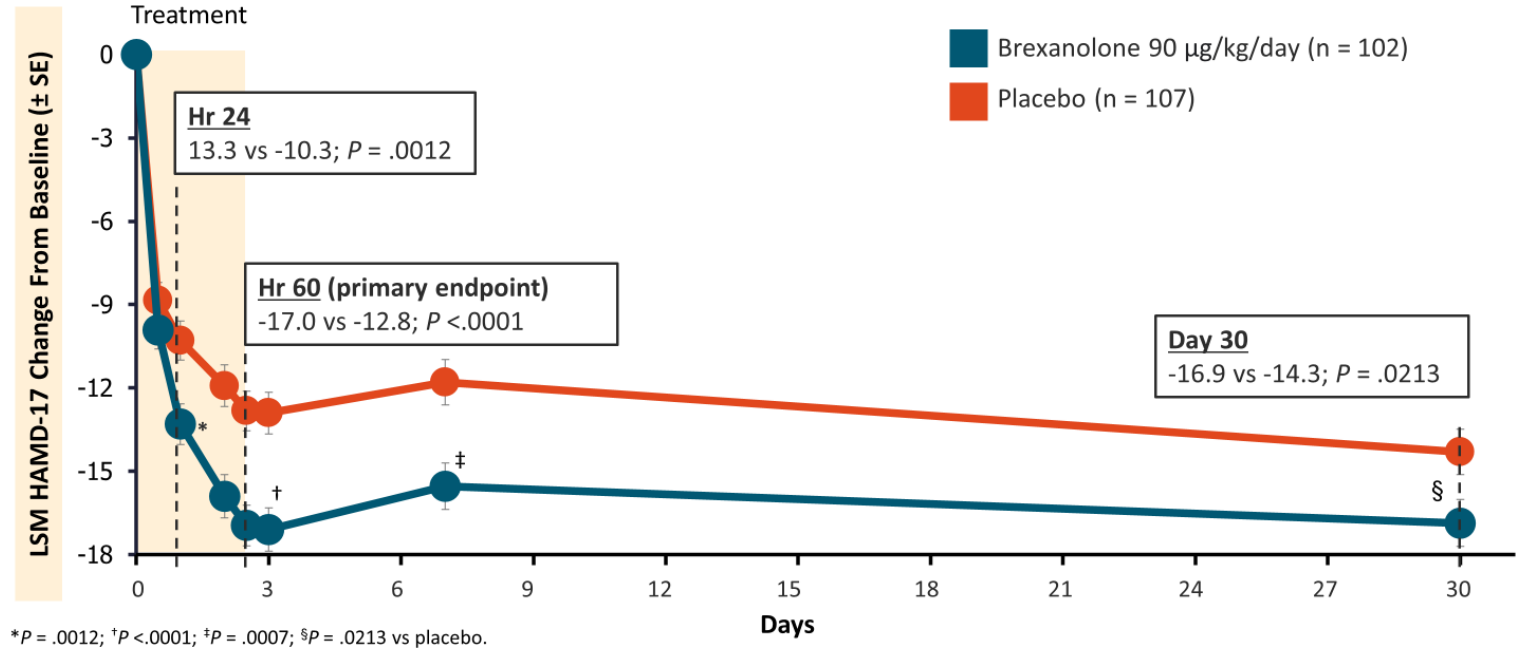
Dose 60-90 µg/ kg/hour

Black box warning for excessive sedation and loss of consciousness

- First in class medication with specific indication for moderate to severe postpartum depression.
- Brexanolone is a Schedule IV medication.
- IV infusion administered in medically supervised setting over 60 hours (2.5 days) with additional 12-hour observation.
- Available only through the restricted Risk Evaluation and Mitigation Strategy (REMS) program due to excessive sedation and loss of consciousness.
- Rapid onset of benefit within days, other AD take weeks for response.
- Durable effect seen to 30 days after treatment completed.
- Common side effects: headache, somnolence, dizziness, dry mouth, nausea, fatigue and infusion site pain.
- Drug cost is $35,000 for treatment course.
- Barriers include cost, insurance coverage and need to administer it by IV over several days in a hospital.

3 randomized placebo controlled clinical trials of Brexanolone in postpartum depression





Meltzer-Brody. Lancet. 2018;392:1058

Zuranolone (Zurzuvae)

1st pill for postpartum depression approved by FDA in Aug 2023

Black box warning for impairment while driving or operating heavy machinery for 12 hours after dose during the 14-day treatment

- Fast acting, improvement seen in days, traditional ADs can take 6 weeks to work.
- Short course: 50 mg daily for 14 days (in the PM with a fatty meal).
- Side effects: somnolence, dizziness, confusion. Also, diarrhea, headache and urinary tract infection. Higher risk of falls.
- Schedule 4 medication, has abuse potential.
- Zuranolone may cause suicidal thoughts/behavior in patients ≤ 24 years.
- In clinical trials no loss of consciousness or increased suicidal ideation/behavior observed.
- Women should use effective contraception during and for one week after the Rx ends, risk of fetal harm based on animal studies.
- Zuranolone is present in low levels in breast milk, no data on effect in breastfed infant.
- Cost of full 14-day Zuranolone treatment is $15,900.

ROBIN (Phase 3 RCT):

Zuranolone 30 mg vs PBO in PPD

POPULATION

150 Women

Women ages 18-45 y with postpartum depression and Hamilton Rating Scale for Depression (HAMD-17) score ≥26

Mean (SD) age, 28.3 (5.4) y

INTERVENTION

153 Individuals randomized

76 Zuranolone
Oral zuranolone, 30 mg, every evening with food for 14 d

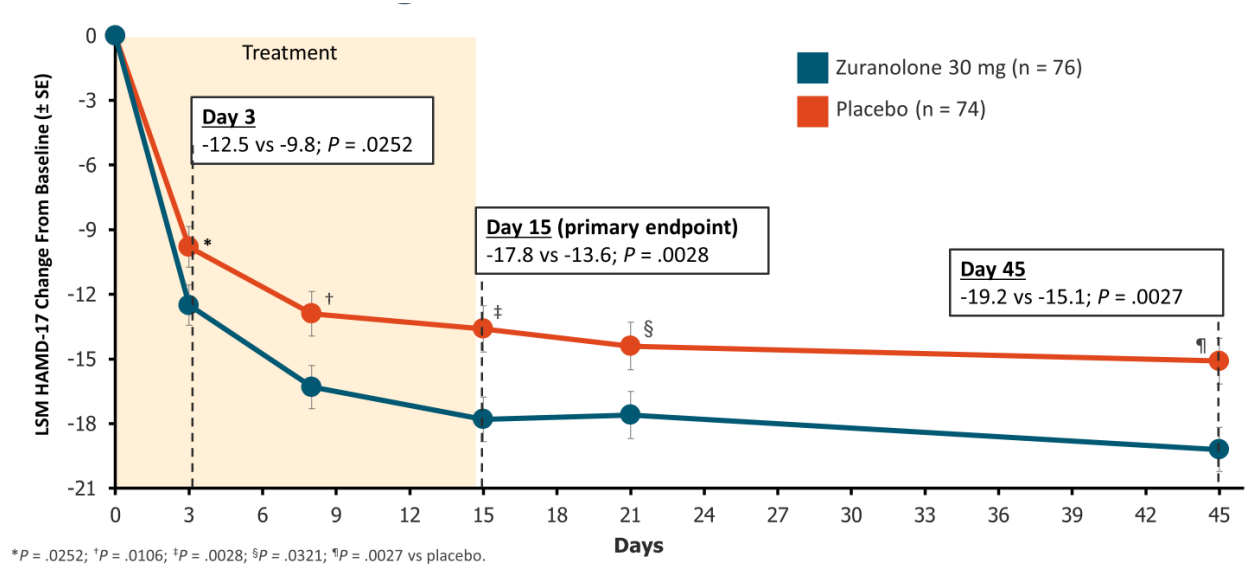
74 Placebo
Oral placebo capsule every evening with food for 14 d

SETTINGS / LOCATIONS

27 Clinical sites in the US

PRIMARY OUTCOME

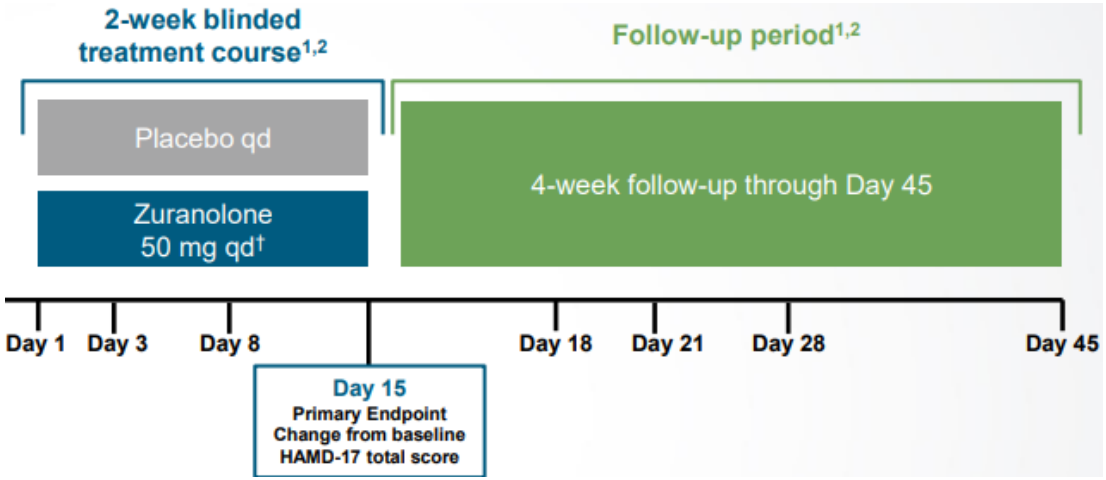
Change from baseline in depressive symptoms at day 15, as measured by HAMD-17 score (range, 0-52, with higher scores indicating more severe depression)

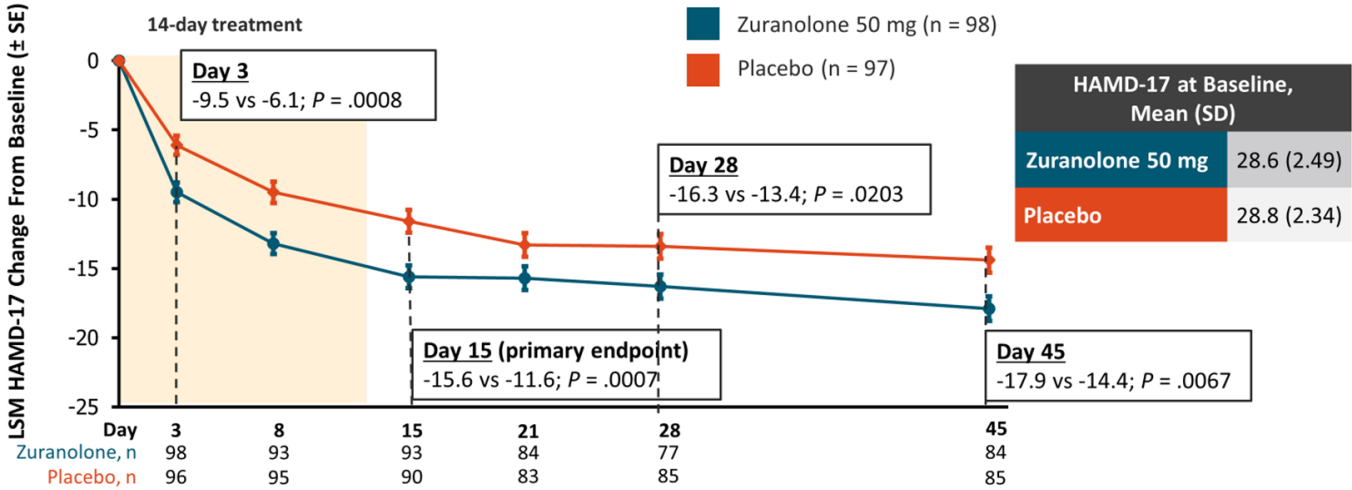


RCT (randomized controlled trial); PBO (placebo); PPD (postpartum depression)
Deligiannidis KM. JAMA Psychiatry. 2021;78:591

SKYLARK Phase 3 RCT:

Zuranolone 50 mg vs PBO in PPD





Study included 196 postpartum women with HAMD≥26 (severe depression)

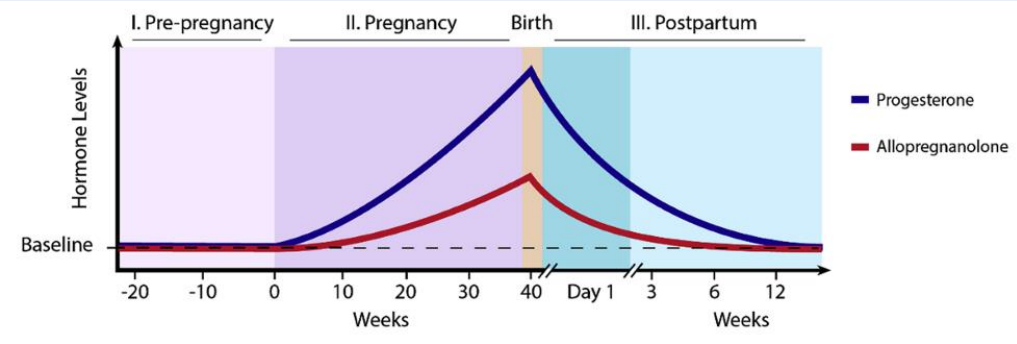
RCT (randomized controlled trial); PBO (placebo); PPD (postpartum depression)

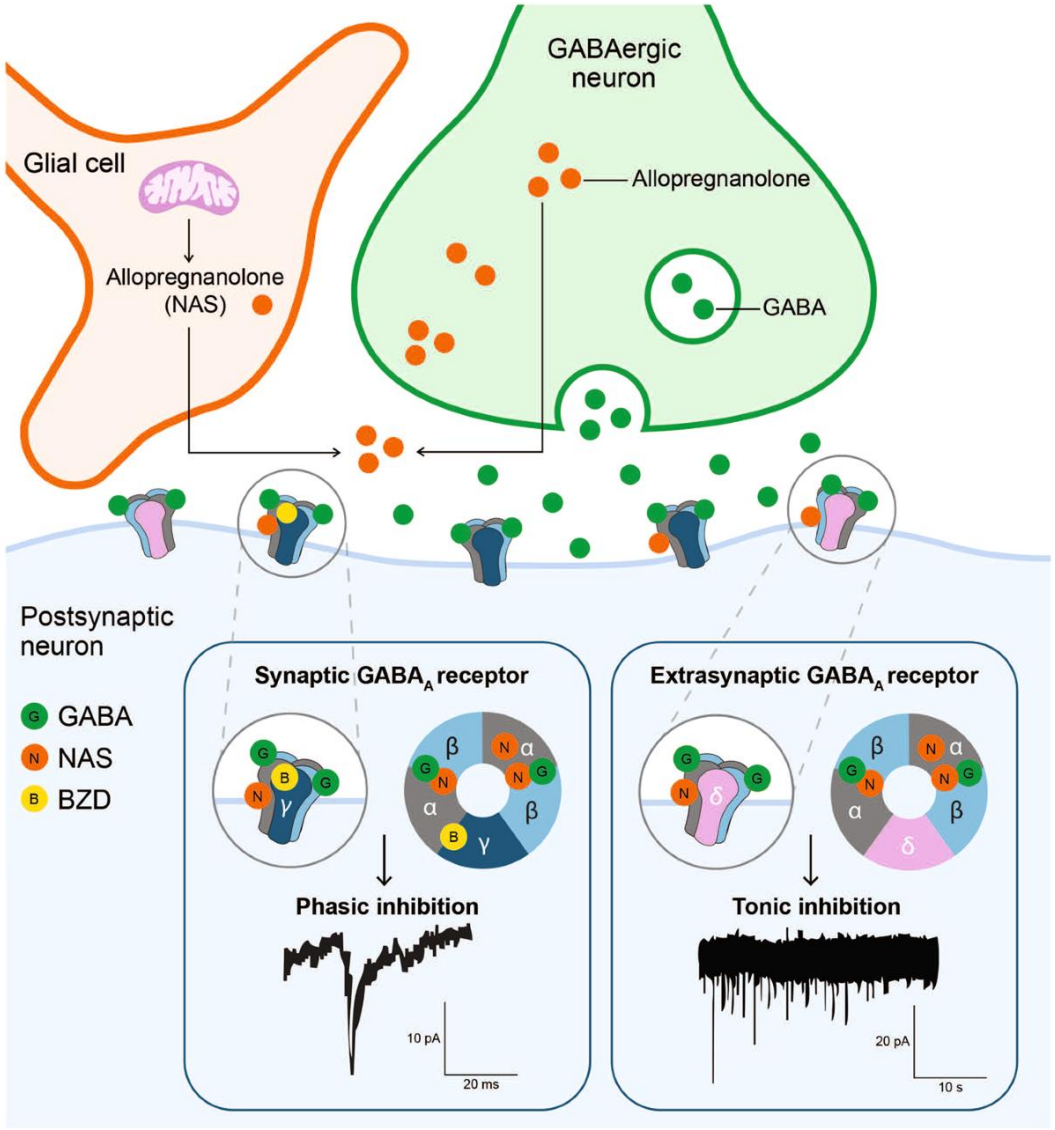
Deligiannidis. Am J Psychiatry. 2023;180:668

Mechanism of Action

Act on GABA receptors unlike other AD (SSRI/SNRI)
PAM: Positive Allosteric Modulator of $GABA_A$ receptor

- New meds synthetic forms of Allopregnanolone
- ALLO hormone regulates mood
- ALLO levels fall rapidly after childbirth
- Meds restore ALLO level





Unlike benzodiazepines, ALLOs bind to both synaptic and extrasynaptic receptors

ECT use in pregnancy and postpartum

ECT is particularly useful when rapidly effective treatment is important

- Indicated for severe psychotic depression, catatonia, extremely high risk of suicide/infanticide, medication resistant illness, fluid and food refusal leading severe physical decline (dehydration, malnutrition).
- ECT decision requires weighing risks to mother & fetus from ineffective treatment of severe depression vs. the risks associated with ECT. Rapid response, very useful when the mother is at high risk for self harm or severely compromised in her ability to take care of herself and her baby.
- Safety and efficacy of ECT during pregnancy established over decades of treatment and support its use when indicated.
- ECT treatment in pregnancy requires a multidisciplinary team with obstetrics, psychiatry and anesthesiology and should be administered in a hospital setting or delivery room (to allow obstetric monitoring and neonatal support if needed).
- ECT not associated with congenital malformations, miscarriage, or infant neurodevelopmental concerns. Most common maternal risk is premature contractions, seen in up to 24% patients in later pregnancy.
- Most common fetal risk is transient fetal bradycardia and fetal cardiac monitoring is recommended.

Ward, H.B., Fromson, J.A., Cooper, J.J. *et al.* Recommendations for the use of ECT in pregnancy: literature review and proposed clinical protocol. *Arch Womens Ment Health* **21**, 715–722 (2018). https://doi.org/10.1007/s00737-018-0851-0

Resources

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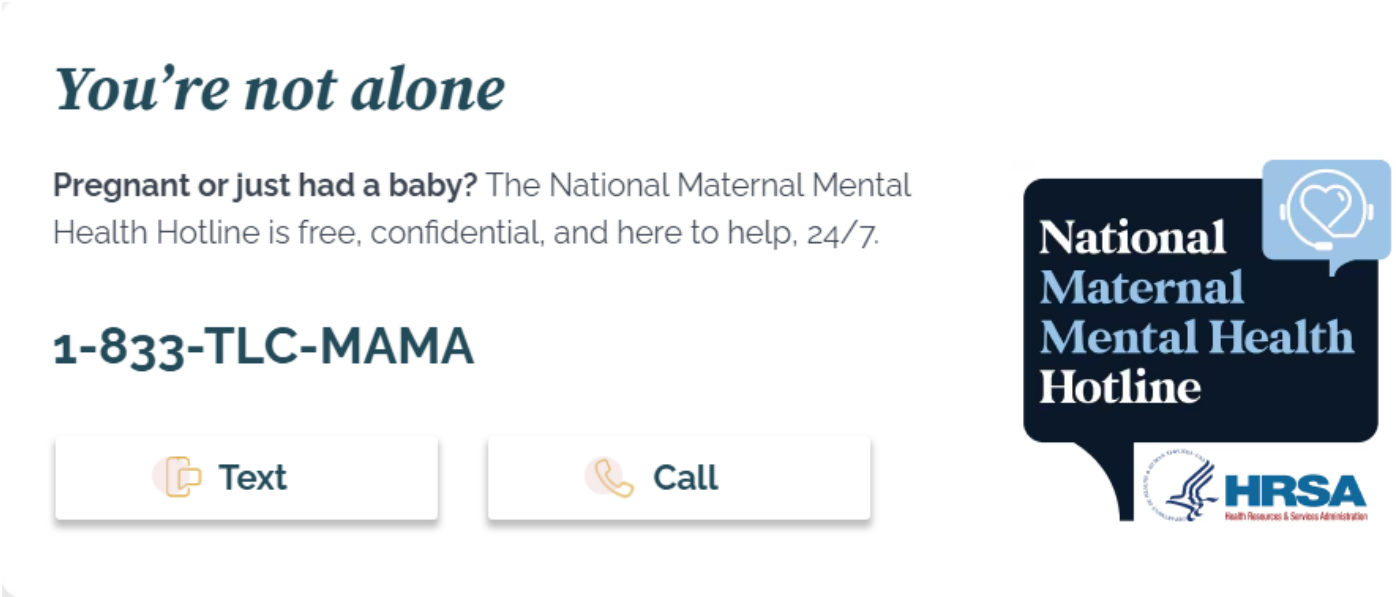
HRSA (Health Resources and Services Administration)

National Maternal Mental Health Hotline

Launched on Mother's Day 2022

HRSA

- Available in English and Spanish
- Interpreters for 60 languages
- Trained hotline counselors
- Provides emotional support
- Information about resources
- Referral to healthcare providers
- Not a crisis line
- For imminent danger to self or others call 911
- For crisis contact National Suicide and Crisis Lifeline at 988



Provider resources

Prescribing medication in perinatal depression

- Manufacturer's medication labeling ("prescribing information") and medication information resources such as Micromedex (www.micromedexsolutions.com) and Lexicomp (www.wolterskluwer.com/en/solutions/ lexicomp).
- LactMed: part of the National Library of Medicine USA. Free online access: https://www.ncbi.nlm.nih.gov/books/NBK501922/
- Infant Risk Center, Texas Tech University Health Sciences Center, free call center for parents and clinicians with questions about medications during pregnancy and breastfeeding (Call 806-352-2519). Has app MommyMeds.
- MotherToBaby: https://mothertobaby.org, medication fact sheets, contact for no-charge consultation, free patient education information materials, bilingual information both English and Spanish.
- The Breastfeeding Network: https://www.breastfeedingnetwork.org has factsheets on medications in breastmilk.
- Reprotox: summaries on effects of medications on pregnancy, reproduction, and development www.reprotox.org
- Massachusetts Child Psychiatry Access Program (MCPAP) for Moms, provides access to resources, referrals, and consultation with perinatal psychiatrists. MCPAP for Moms

PSI Website:

Inpatient Perinatal Psychiatric Programs

- 3 programs listed on PSI website; multidisciplinary services tailored to perinatal women
  - Unit in NC first in US, established 2011
  - 5 beds, locked psychiatric unit
  - Infants visit but no overnight stay
- Most women get inpatient care on general psychiatric unit, separated from their baby
- Mother baby units are gold standard for new mothers in England, baby stays with mom, 22 units vs 3 in US

•North Carolina: Chapel Hill NC – UNC Perinatal Psych Inpatient Unit
•New York: Northwell Health Perinatal Psychiatry Service
•California: El Camino Inpatient Psychiatric Care Women's Specialty Unit
•Louisiana: Women's hospital Baton Rouge planning to open 10 bed inpatient MH unit for pregnant/postpartum, 9/24

PSI Website:

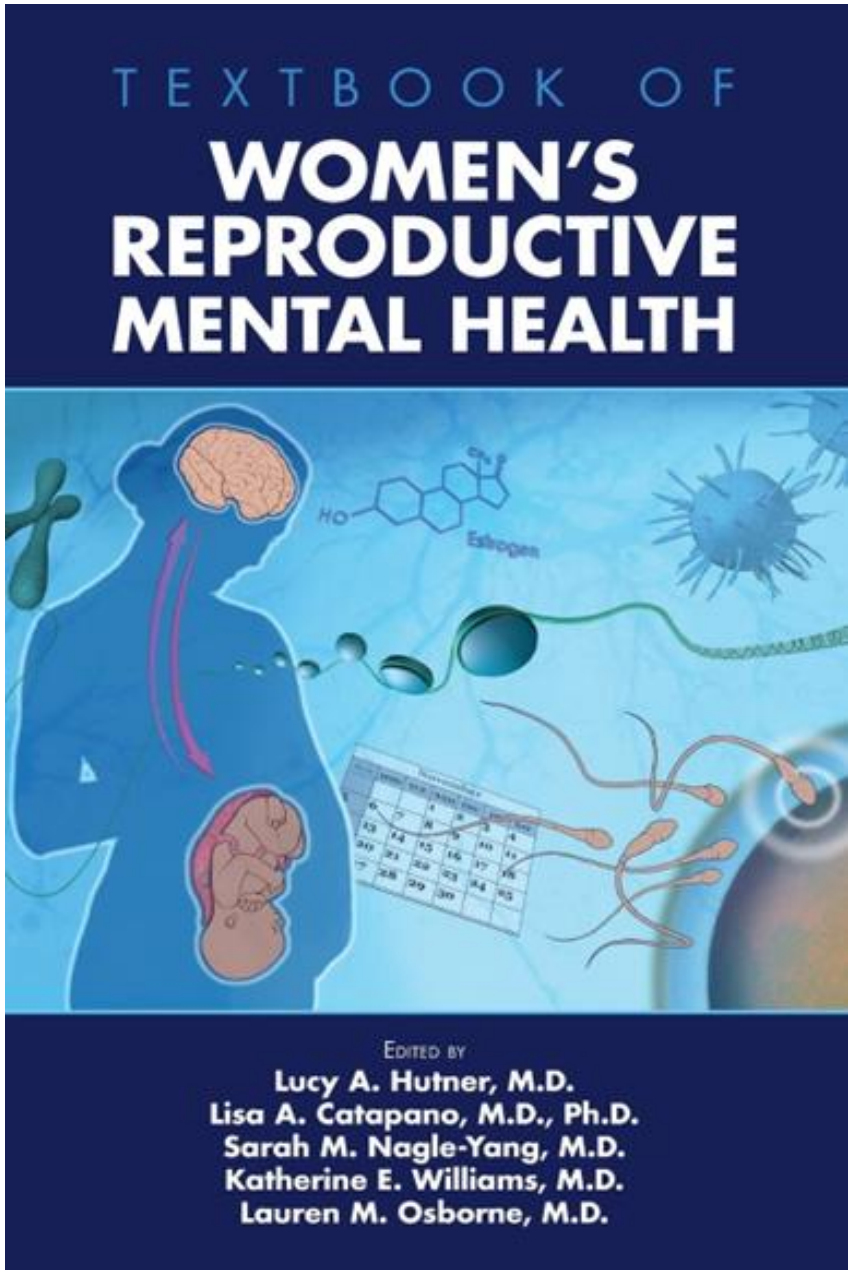
IOP and PHP Perinatal Psychiatric Programs

- 29 programs listed on PSI website
- Located with prenatal care/obstetric hospital, reduces stigma and better access to care
- Provide individual, group, family/couple and mother-infant dyad therapy and medication management
- Mothers attend with babies, helps with bonding

•California: Mountain View CA – El Camino Hospital Maternal Outreach Mood Services (MOMS)
•California: Newport Beach CA – Hoag Hospital Maternal Mental Health Clinic
•California: Pasadena CA – Huntington Memorial Hospital Maternal Wellness Program
•California: San Diego CA – UC San Diego Maternal Mental Health Program
•California: Los Angeles, CA – UCLA CA Resnick/Maternal Mental Health Program
•Florida: Gainesville, FL – Better Beginnings Mommy & Baby Day Program
•Florida: Jacksonville, FL – The Motherhood Space Day Program
•Illinois: Hoffman Estates, IL – Ascension Illinois Perinatal IOP at Alexian Brothers Women & Children's Hospital
•Michigan: Grand Rapids MI – Pine Rest Mother and Baby Program
•Minnesota: Minneapolis MN – Redleaf Center for Family Healing/Hennepin Healthcare Mother-Baby Program
•Minnesota: Brooklyn Park MN – PrairieCare
•Minnesota: Eden Prairie, MN – Nystrom & Associates, Ltd. Mother Baby Intensive Outpatient Program
•Missouri: St. Louis, MO – Mercy Birthplace Mother-Baby Intensive Outpatient Program
•New Jersey: Long Branch, NJ – Monmouth Medical Center Perinatal Mood & Anxiety Disorders Program
•Nevada: Reno, NV – Thrive Wellness Reno – It Takes a Village
•New York: New York, NY – The Motherhood Center of New York
•New York: Queens, Nassau and Suffolk Counties NY – Perinatal Psychiatry Services at The Zucker Hillside Hospital and South Oaks Hospital
•North Carolina: Raleigh, North Carolina – Anchor Perinatal Wellness IOP
•Ohio: River Root Counseling Mother & Baby Perinatal Intensive Outpatient Program
•Pennsylvania: Philadelphia PA – Drexel University Mother Baby Connections Intensive Outpatient Program
•Pennsylvania: Pittsburgh, PA – Women's Behavioral Health West Penn Hospital Allegheny Health Network
•Pennsylvania: Pittsburgh, PA – Alexis Joy D'Achille Center for Women's Behavioral Health at West Penn Hospital
•Rhode Island: Providence RI – Brown/Women & Infants Day Hospital Program
•Utah: Riverton and Payson, UT – Serenity Recovery and Wellness
•Utah: South Jordan, UT – Reach Counseling Utah.com
•Utah: Salt Lake City, UT – St. Marks Outpatient Perinatal Program
•Virginia: Dominion Hospital HCA Virginia Health System
•Washington: Seattle, WA – Swedish Perinatal Center for Perinatal Bonding and Support
•Washington D.C: The Mother-Baby Intensive Outpatient Program

Textbook of Women's Reproductive Mental Health

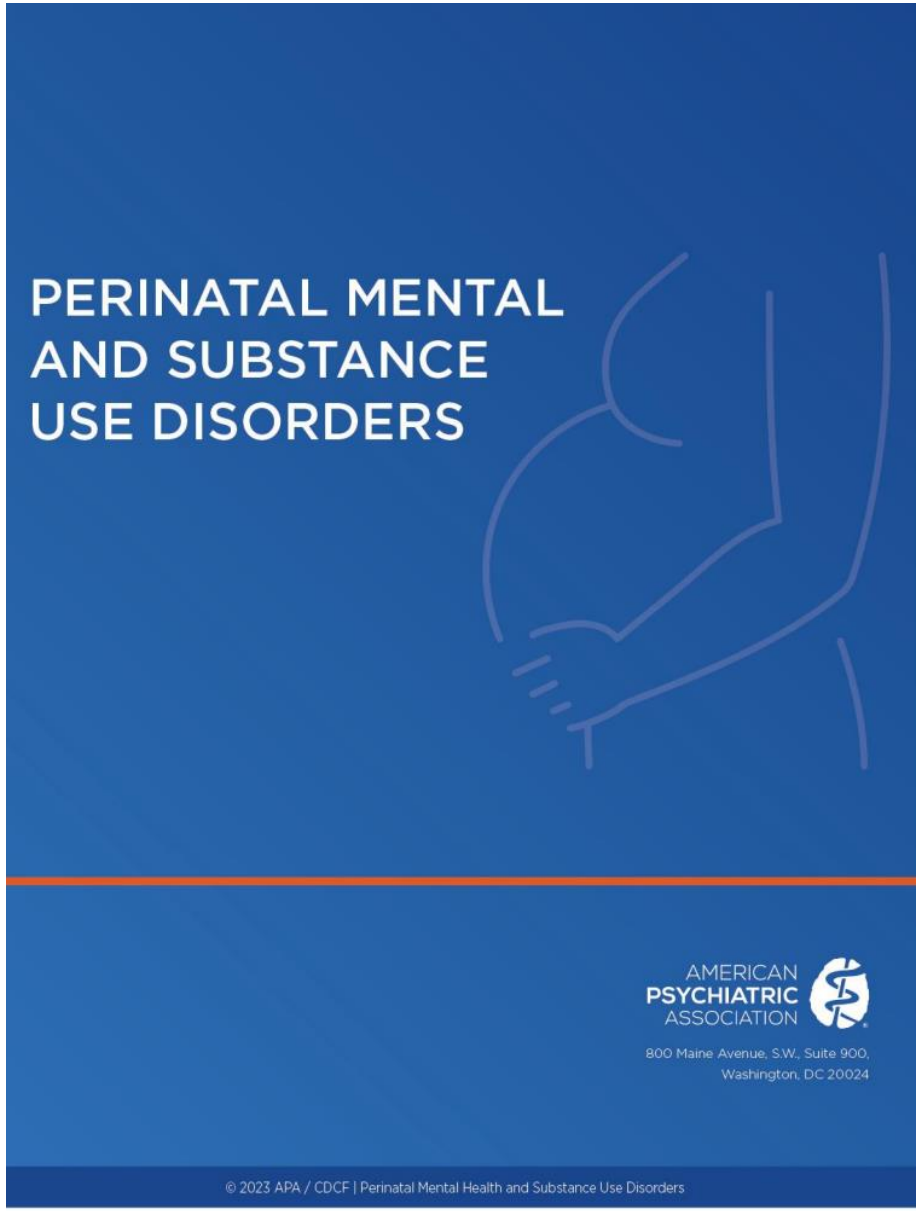
First ever textbook of reproductive psychiatry, American Psychiatric Association Publishing, (2022), list price $135



APA (American Psychiatric Association)

Perinatal mental health *toolkit*

Includes white paper, webinars and factsheets for patients and prescribers



https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf

https://www.psychiatry.org/psychiatrists/practice/professional-interests/women-s-mental-health/maternal-mental-health-toolkit

Concluding remarks

Screening all pregnant and postpartum women

- Key to identification of depression via valid screening instruments

Referral to treatment needed

- Improves outcomes in both mother and baby

Treatment Options

- Pharmacological treatment with standard antidepressants and new antidepressants targeting GABA system
- Nonpharmacological treatment options including psychotherapy and ECT
- Goal of treatment is to keep the mother well for positive outcomes for both the mother and baby.

Pregnancy and Postpartum Mental Health

Care Management Services

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Pregnancy and postpartum mental health

How can care management assist this population?

Case Study	Care Management	How we can help	Resources
			
Review of a member's journey with care management services during a challenging time	Women and families can be assisted with mental health during pregnancy and postpartum	Techniques and skills utilized by care managers Collaboration and connection to care	Resources available to help this population on their journey of growth and improved health

Case study

- 27-year-old female
- Rural town with limited resources
- Strong family support system
- Financial difficulties
- Housing issues
- 6 weeks postpartum at time of referral from HP
- Thoughts of self-harm
- Major depressive disorder and anxiety disorder

What risks need to be addressed?
How could CM support this family?

Case study results

Health Plan Referral to Lucet

Demographic Information

- 27-year-old female
- Rural town with limited resources
- Strong family support system
- Financial difficulties
- Housing issues
- 6 weeks postpartum at time of referral from HP
- Thoughts of self-harm
- Major depressive disorder and anxiety disorder

Interventions

- Empathy, emotional support
- Assessed for safety/risk at each call
- Reviewed referral options for OP care
- Psychoeducational information regarding mental health concerns
- Provided free postpartum resources, crisis lines and coping skills
- Discussed importance of medication adherence
- SW referral submitted to help with financial difficulties

Outcomes

- Member made appointment herself and began telehealth therapy
- Established care with a prescriber for continued follow-up with medications
- PHQ-9 score decreased from 16 to 7 within 7 weeks
- Utilized support system to prioritize self-care and use of coping skills
- Returned to work
- Bonded with baby
- Financial assistance provided and housing secured

Lucet perinatal support

- Dedicated CM
- Specialized training
- Informational emails and huddles with health plan
- Ongoing Safety/risk assessment
- Consistent communication with referring CM
- Case shaping and collaboration
- Specialized resources

How care managers can help

Maximize Connectivity
Confirm connection to care
Assist with building support network

Guide Member to Care
Utilize health plan resources and referrals
Provide referrals for therapy and psychiatry

Empower Need Identification
Assess safety/risk on each call
Evaluate needs of member & family
Follow-up frequency needs
Setting SMART Goals
Assess and help reduce stressors or barriers to care

Educate on Options
Explain benefits and levels of care
Employ motivational interviewing techniques
Share about coping skills and support groups

Collaborate with Others
Work with health plan and providers
Round with MD and team
Address support needs (family, groups, medical CM)

Motivational Interviewing

Coping skills & self-care to manage symptoms

Symptom Management

Rest/Relaxation	Expression	Companionship	Health/Spirituality
✦ Sun exposure	✦ Hum or sing	✦ Massage	✦ Yoga
✦ Watch your favorite movie	✦ Dance	✦ Touch	✦ Mindfulness
✦ Take a timeout	✦ Journal	✦ Intimacy	✦ Meditation
✦ Listen to music	✦ Draw or paint	✦ Connect with loved one on phone	✦ Prayer
✦ Read a book	✦ Hobbies	✦ Meet for coffee	✦ Positive affirmations
✦ Take a nap	✦ Laugh	✦ Pet an animal	✦ Healthy snacks
✦ Enjoy a bath	✦ Have a good cry		✦ Deep breathing
	✦ Gardening		✦ Connect to nature

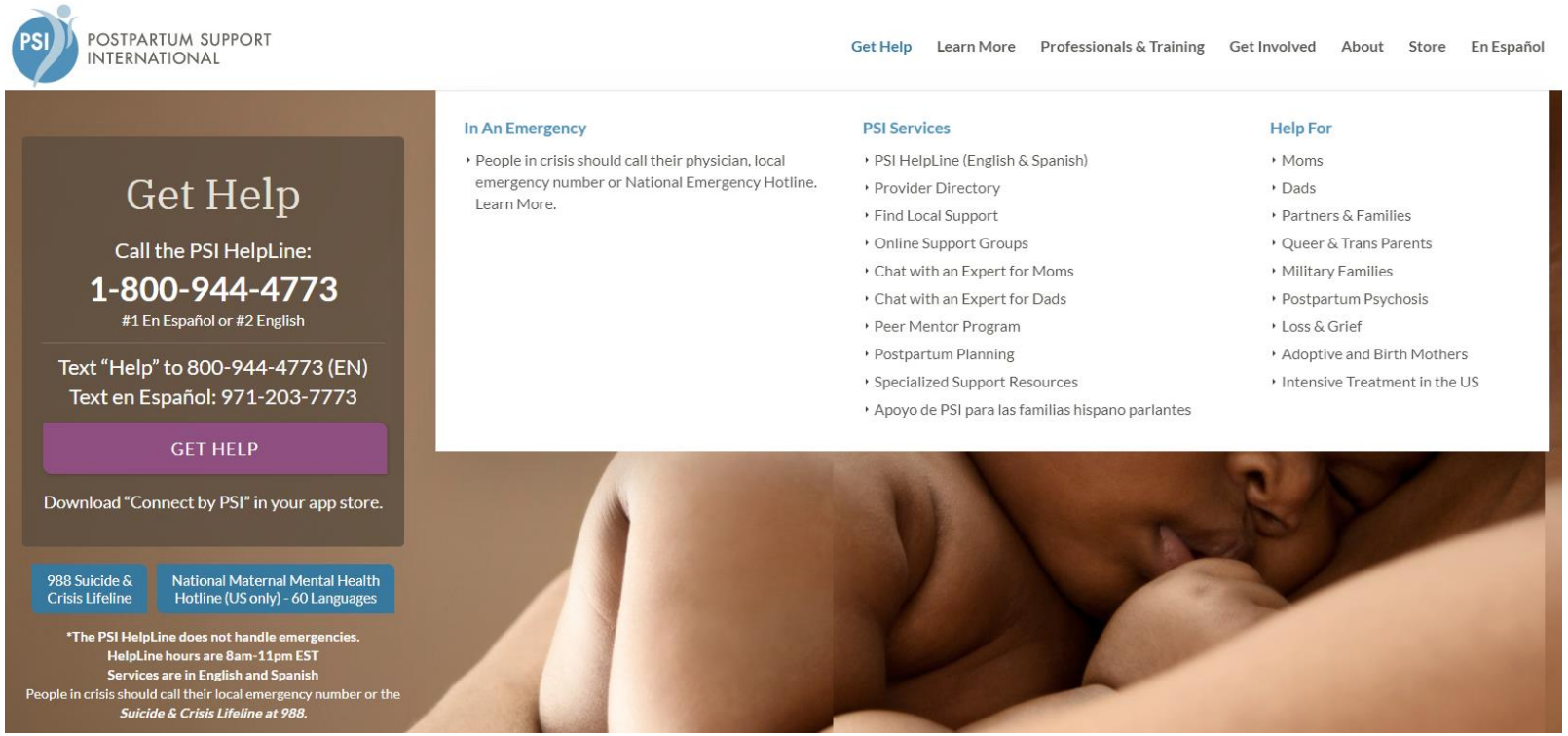
https://www.postpartum.net/

Resources: Postpartum Support International

Helpline: 1.800.944.4773. Text in English: 800-944-4773 | Text en Espanol: 971-203-7773

PSI

- Specialized support resources
- Perinatal psychiatric consult line
- Online support groups
- Online provider directory
- PSI helpline
- Chat with experts
- Peer mentor program
- Postpartum planning

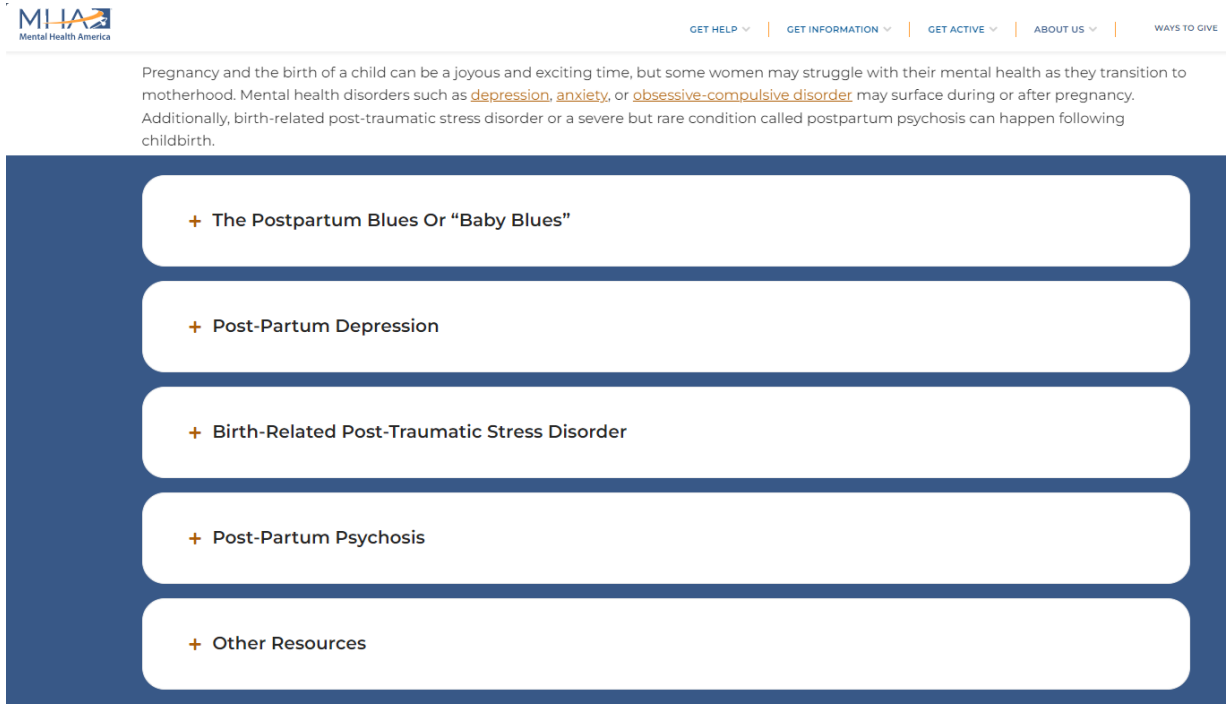


https://mhanational.org/conditions/pregnancy-and-postpartum-disorders

Resources: Mental Health America (MHA)

MHA

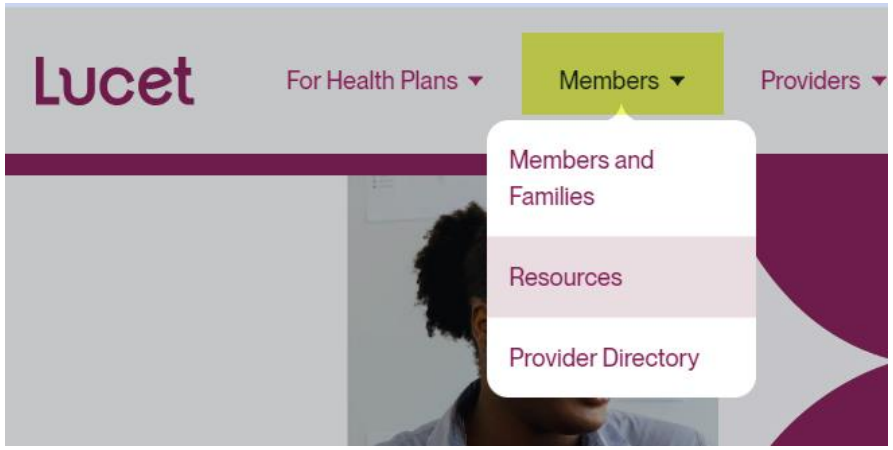
- Education on perinatal mental health
- Crisis Resources
- Warmlines
- Education on different types of treatment and providers
- Locating treatment options
- Overcoming negative thoughts
- Online screening (or take a mental health test)
- Other Resources
- App: Check in with yourself



https://lucethealth.com/

Resources: Lucet Website

LUCET



I Need Health Resources

- What is Advance Directive
- Apps for Mindfulness, Stress and Mental Health Support
- Community Resources
- Wellness Plan
- Crisis Resources
- Mindful by Blue KC
- Stamp Out Stigma
- Eating Disorder Awareness Toolkit
- Autism Inclusion & Advocacy Toolkit
- Mental Health Awareness Toolkit
- Post-Traumatic Stress Disorder (PTSD) Toolkit
- Minority Mental Health Toolkit

Your role in perinatal care

Be a part of the Solution

What Now?

When supporting members:

- Be aware of signs of perinatal (during and post pregnancy) depression
- Encourage member to advocate for self and ask questions of their provider
- Assist with Health Literacy around treatment options and medication
- Provide resources
- Coordinate care with providers including asking questions about use of antidepressants during or post pregnancy
- Assist in addressing barriers to care

References and resources

Listed in order as they appear on the slides

- Wisner. JAMA Psychiatry. 2013;70:490. Goldman-Mellor. Am J Obstet Gynecol. 2019;221:489.e1
- USPSTF (United States Preventative Services Task Force)
- A Comprehensive Look at State Maternal Mental Health Screening and Reimbursement Legislation (2020mom.org)
- MCPAP for Moms, Postpartum Support International - PSI
- NCRP – National Curriculum in Reproductive Psychiatry (ncrptraining.org)
- MATERNAL MENTAL HEALTH NOW - Supporting Parents & Families; Postpartum Support International – PSI
- Trailer — Toxic | A Black Woman's Story (toxicshortfilm.com)
- Admon LK, et al. Trends in Suicidality 1 Year Before and After Birth Among Commercially Insured Childbearing Individuals in the United States, 2006-2017. *JAMA Psychiatry.* 2020:e203550
- Huybrechts KF, et al. Antidepressant use in pregnancy and the risk of cardiac defects. N Engl J Med. 2014 Jun 19;370(25):2397-407. doi: 10.1056/NEJMoa1312828. PMID: 24941178; PMCID: PMC4062924.
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References and resources

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- Ward, H.B., Fromson, J.A., Cooper, J.J. et al. Recommendations for the use of ECT in pregnancy: literature review and proposed clinical protocol. Arch Womens Ment Health 21, 715–722 (2018). https://doi.org/10.1007/s00737-018-0851-0
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- www.wolterskluwer.com/en/solutions/ Lexicomp
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- Infant Risk Center, Texas Tech University Health Sciences Center, free call center for parents and clinicians with questions about medications during pregnancy and breastfeeding (Call 806-352-2519).
- https://mothertobaby.org
- https://www.breastfeedingnetwork.org
- www.reprotox.org
- MCPAP for Moms
- https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf
- https://www.psychiatry.org/psychiatrists/practice/professional-interests/women-s-mental-health/maternal-mental-health-toolkit
- https://www.postpartum.net/ - PSI
- National Maternal Mental Health Hotline: 1-833-TLC-MAMA
- National Suicide and Crisis Lifeline 988

Questions?

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