



# Perinatal Mental Health – Addressing Maternal Morbidity & Mortality, Promoting Equity, and Advancing Intergenerational Health

---

**Tiffany A. Moore Simas, MD, MPH, MEd, FACOG**

Donna M. and Robert J. Manning Chair in Obstetrics in Gynecology  
Chair, Department of Obstetrics & Gynecology  
Professor of Ob/Gyn, Pediatrics, Psychiatry, PQHS  
Obstetric Director, Lifeline for Moms Program  
Obstetric Engagement Liaison, MCPAP for Moms  
Co-Chair, ACOG Maternal Mental Health Expert Work Group  
Member, AIM Perinatal Mental Health Patient Safety Bundle



# Conflict of Interest Disclosure

- **Dr. Moore Simas:**
  - Lead Engagement Liaison for the Massachusetts Child Psychiatry Access Program for Moms (MCPAP for Moms, MA DMH, Beacon Health Options)
  - Obstetric Director of Lifeline for Moms, UMass Chan Medical School
  - MPI of Lifeline for Moms National Network of Perinatal Psychiatry Access Programs
  - Co-Chair, ACOG EWG Perinatal Mental Health
  - Member, ACOG OB CPG Committee
    - Author/Reviewer, ACOG CPGs on Perinatal Mental Health
  - Member/Author, AIM PMHC Patient Safety Bundle
  - Lead Faculty, IHI PMHC Patient Safety Bundle Change Package
  - MPI, CDC, CDC Foundation, NIMH & ACOG Funding
    - PMH Toolkit
    - PMH e-module
    - PMH & OB integration implementation guide

# Objectives

## The learning objectives are:

- describe the **Patient Care Pathway** to be followed to address perinatal mental health conditions.
- determine how to **screen and evaluate illness severity**, including how to assess intrusive thoughts and risk of harm to self and/or baby.
- recognize the **risks** of untreated perinatal mental health conditions and the importance of providing evidence-based treatment
- increase awareness of **resources** designed to facilitate obstetric care clinicians in addressing perinatal mental health conditions

# Perinatal mental health conditions are one of the most common complications of pregnancy & postpartum

## 1 in 5

women around the world will suffer from a maternal mental health complication



# Perinatal mental health affects mom, child, and family

Preterm delivery  
Low birth weight  
NICU admissions

Cognitive delays  
Motor & Growth issues  
Behavioral problems  
Mental health disorders

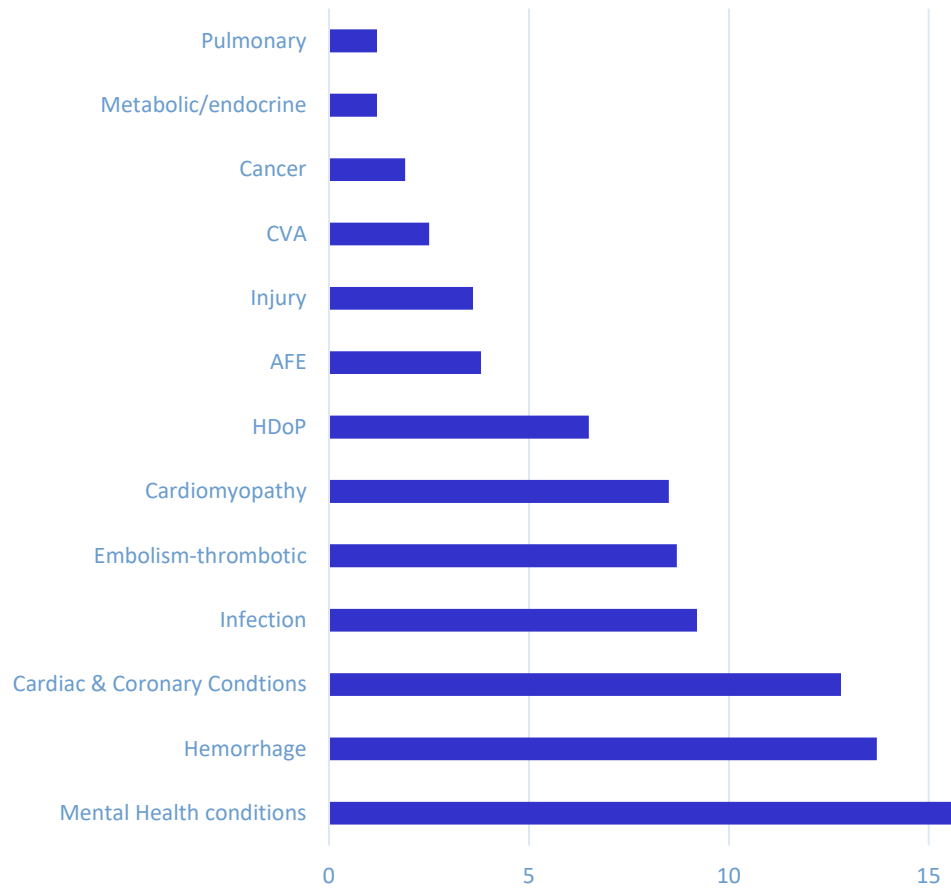


Less engagement in medical care  
Smoking & substance use

Lactation challenges  
Bonding issues  
Adverse partner relationships

# Mental health conditions are the lead cause of pregnancy related deaths (22.7%)

## Causes of Pregnancy-Related Deaths (%)



### Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017–2019

Susanna Trost, MPH; Jennifer Beauregard, MPH, PhD; Gyan Chandra, MS, MBA; Fanny Njie, MPH; Jasmine Berry, MPH; Alyssa Harvey, BS; David A. Goodman, MS, PhD

#### Key Findings

- Pregnancy-related deaths occurred during pregnancy, delivery, and up to a year postpartum.
- The leading cause of pregnancy-related death varied by race and ethnicity.
- Over 80% of pregnancy-related deaths were determined to be preventable.

Data on 1,018 pregnancy-related deaths among residents of 36 states from 2017–2019 were shared with CDC through the Maternal Mortality Review Information Application (MMRIA).

**Table 1. Characteristics of pregnancy-related deaths, data from Maternal Mortality Review Committees in 36 US States, 2017–2019 (N=1,018)\***

	N	%
<b>Race and ethnicity</b>		
Hispanic	144	14.4
non-Hispanic American Indian or Alaska Native	9	0.9
non-Hispanic Asian	34	3.4
non-Hispanic Black	315	31.4
non-Hispanic Native Hawaiian and Other Pacific Islander	6	0.6
non-Hispanic white	467	46.6
non-Hispanic other/multiple races	27	2.7
<b>Age at death (years)</b>		
15–19	29	2.9
20–24	155	15.3
25–29	227	22.4
30–34	297	29.3
35–39	225	22.2
40–44	70	6.9
≥45	10	1.0
<b>Education</b>		
12 <sup>th</sup> grade or less, no diploma	135	13.7
High school graduate or GED completed	396	40.1
Some college credit, but no degree	192	19.4
Associate or bachelor's degree	218	22.1
Advanced degree	47	4.8

\*Race or ethnicity was missing for 16 (1.6%) pregnancy-related deaths; age was missing for 5 (0.5%) pregnancy-related deaths; education was missing for 30 (2.9%) pregnancy-related deaths.

Maternal Mortality Review Committees (MMRCs) are multidisciplinary committees that convene at the state or local level to comprehensively review deaths during or within a year of pregnancy (pregnancy-associated deaths). MMRCs have access to clinical and nonclinical information (e.g., vital records, medical records, social service records) to more fully understand the circumstances surrounding each death, determine whether the death was pregnancy-related, and develop recommendations for action to prevent similar deaths in the future.

National Center for Chronic Disease Prevention and Health Promotion  
Division of Reproductive Health

By Susanna L. Trost, Jennifer L. Beauregard, Ashley N. Smoots, Jean Y. Ko, Sarah C. Haight, Tiffany A. Moore Simas, Nancy Byatt, Sabrina A. Madni, and David Goodman

## Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008–17

**ABSTRACT** Each year approximately 700 people die in the United States from pregnancy-related complications. We describe the characteristics of pregnancy-related deaths due to mental health conditions, including substance use disorders, and identify opportunities for prevention based on recommendations from fourteen state Maternal Mortality Review Committees (MMRCs) from the period 2008–17. Among 421 pregnancy-related deaths with an MMRC-determined underlying cause of death, 11 percent were due to mental health conditions. Pregnancy-related mental health deaths were more likely than deaths from other causes to be determined by an MMRC to be preventable (100 percent versus 64 percent), to occur among non-Hispanic White people (86 percent versus 45 percent), and to occur 43–365 days postpartum (63 percent versus 18 percent). Sixty-three percent of pregnancy-related mental health deaths were by suicide. Nearly three-quarters of people with a pregnancy-related mental health cause of death had a history of depression, and more than two-thirds had past or current substance use. MMRC recommendations can be used to prioritize interventions and can inform strategies to enable screening, care coordination, and continuation of care throughout pregnancy and the year postpartum.

Pregnancy-related complications take the lives of approximately 700 people in the US each year.<sup>1</sup> A previous report on pregnancy-related deaths reviewed by fourteen state Maternal Mortality Review Committees (MMRCs) found that mental health conditions were a leading underlying cause of death, accounting for nearly 9 percent of such deaths.<sup>2</sup>

Rates of depressive disorder diagnoses during delivery hospitalizations increased from 4.1 per 1,000 in 2000 to 28.7 per 1,000 in 2015.<sup>3</sup> Co-occurring depression, anxiety disorder, and substance use disorder (SUD) are also common among women of reproductive age.<sup>4</sup> Professional and clinical organizations have issued recom-

mendations to address screening and treatment for perinatal depression.<sup>5,7</sup> The Council on Patient Safety in Women's Health Care developed a consensus statement to guide the implementation of screening, intervention, referral, and follow-up care of mental health conditions in perinatal care,<sup>8</sup> and the American Academy of Pediatrics recommends screening for postpartum depression during well-child visits.<sup>9</sup> Yet barriers to care limit access to and use of mental health services among pregnant and postpartum people.<sup>10</sup> Untreated perinatal mood and anxiety disorders have high societal costs<sup>11</sup> and deleterious effects on maternal and infant outcomes.<sup>12</sup> State and local MMRCs are uniquely positioned to evaluate the events in a pregnant or

DOI: 10.1377/hlthaff.2021.00615  
HEALTH AFFAIRS 40,  
NO. 10 (2021): 1551–1559  
©2021 Project HOPE:  
The People to People Health  
Foundation, Inc.

**Susanna L. Trost** (soug@cdc.gov) is an Oak Ridge Institute for Science and Education Fellow in the Division of Reproductive Health, Centers for Disease Control and Prevention (CDC), in Atlanta, Georgia.

**Jennifer L. Beauregard** is an epidemiologist in the Division of Reproductive Health, CDC, and a lieutenant in the US Public Health Service, in Rockville, Maryland.

**Ashley N. Smoots** is an epidemiologist in the Division of Reproductive Health, CDC.

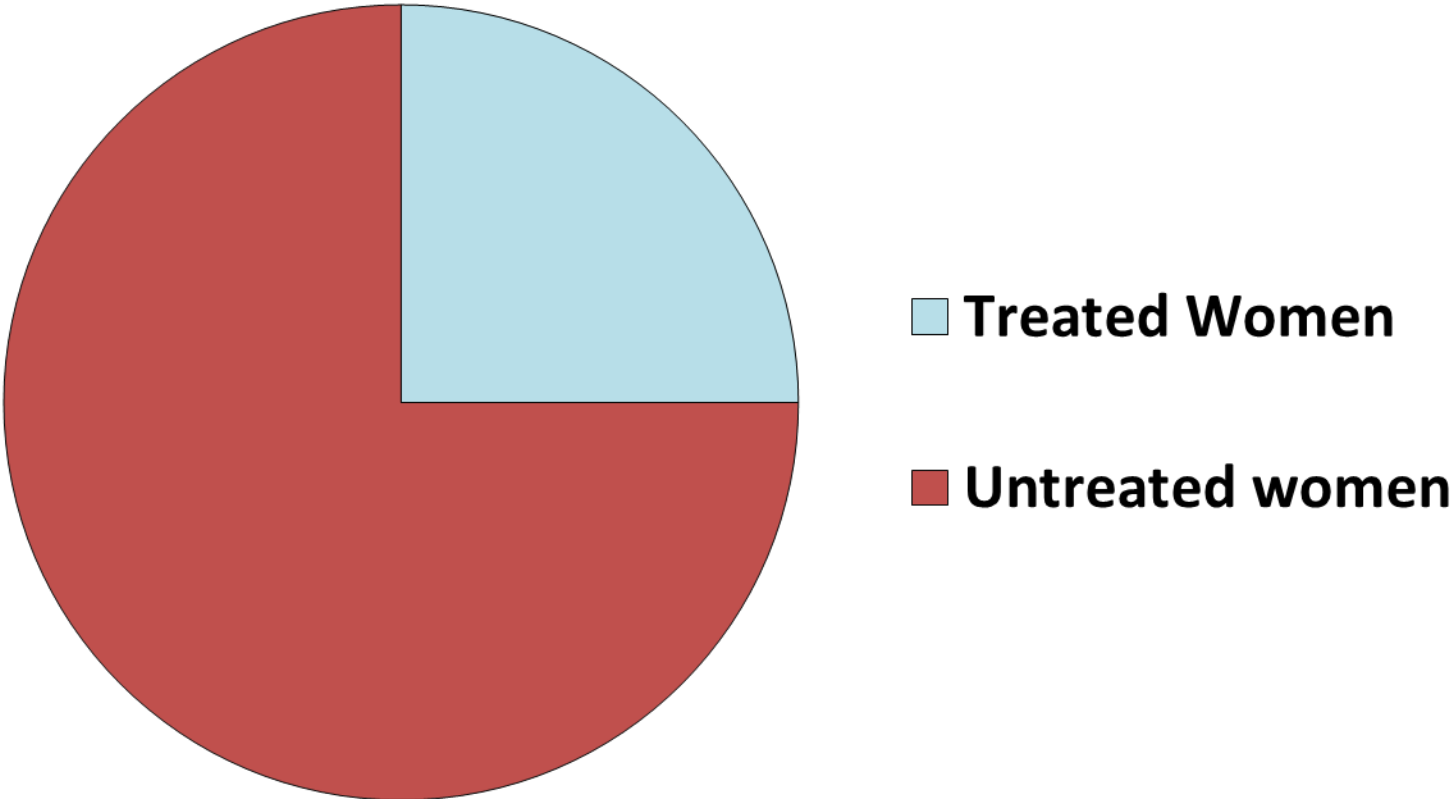
**Jean Y. Ko** is the lead for the Maternal Health and Chronic Disease Team, Division of Reproductive Health, CDC, and a commander in the US Public Health Service.

**Sarah C. Haight** is a graduate research assistant in the Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, in Chapel Hill, North Carolina. She was an epidemiologist in the Division of Reproductive Health, CDC, at the time of writing.

**Tiffany A. Moore Simas** is the chair of the Department of Obstetrics and Gynecology and medical director of the Lifetime for Moms Program, University of Massachusetts Medical School (UMass Memorial Health), in Worcester, Massachusetts.

100%  
of pregnancy-related  
mental health deaths  
were determined to be  
preventable

# Perinatal mental health conditions are under-detected and under-treated

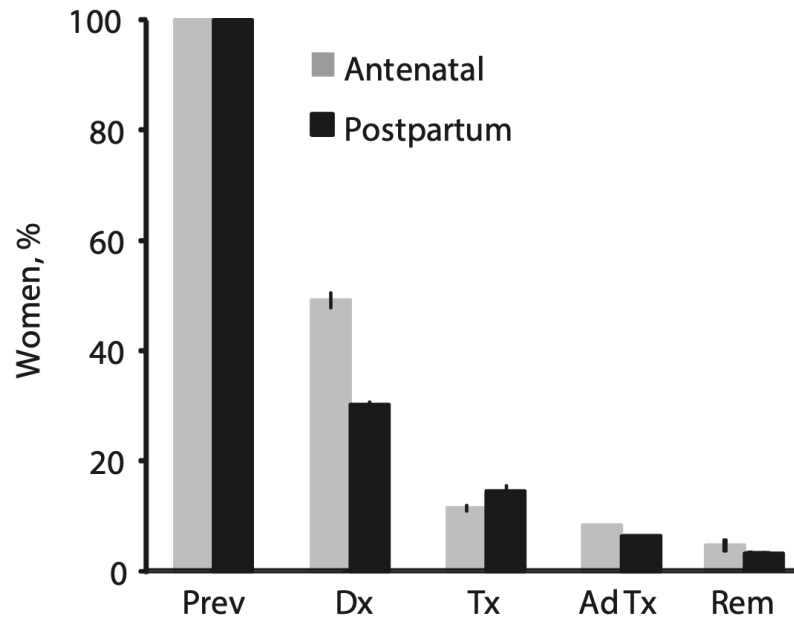


Depression

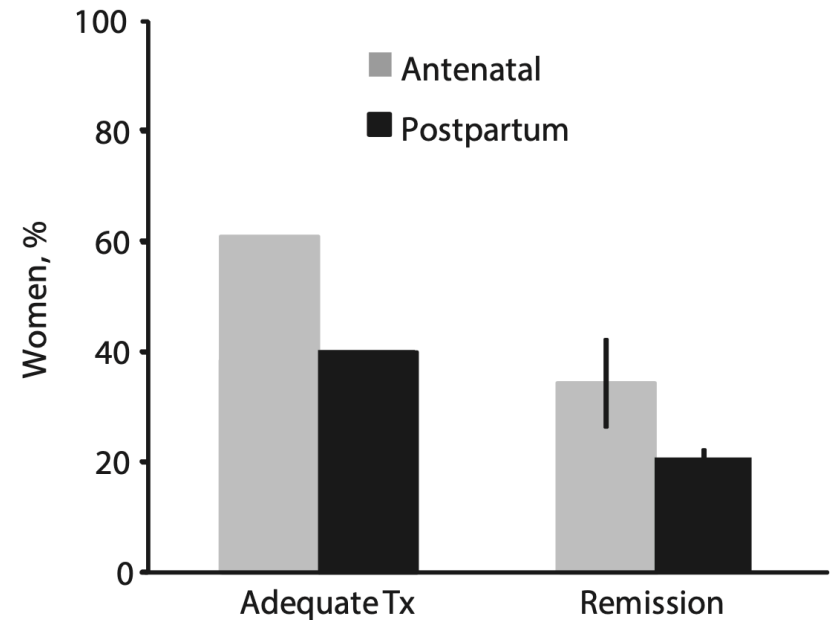


# Percentage of US Women At Each Step of the Perinatal Depression Treatment Cascade

**A. Women With Depression**



**B. Women Treated for Depression**



Abbreviations: Ad Tx = adequate trial of treatment, Dx = diagnosis, Prev = prevalence, Rem = remission, Tx = treatment

**The health care system needs to change to address PMH so perinatal individuals can get the help they need and deserve**



# Professional Societies and Policy Makers Recognize This as a Significant Public Health Issue

---



# Detection through screening alone is not associated with improved mental health outcomes



**Understanding the Patient Care Pathway is critical to addressing PMH conditions**

# Understanding the Patient Care Pathway is critical to addressing PMH conditions



## Detection:

- **Screening:** how to detect if a patient has symptoms or is at risk for developing a mental health condition
- **Engagement:** how to focus on patients' interests and needs, using a strengths-based approach, to maximize their participation in care

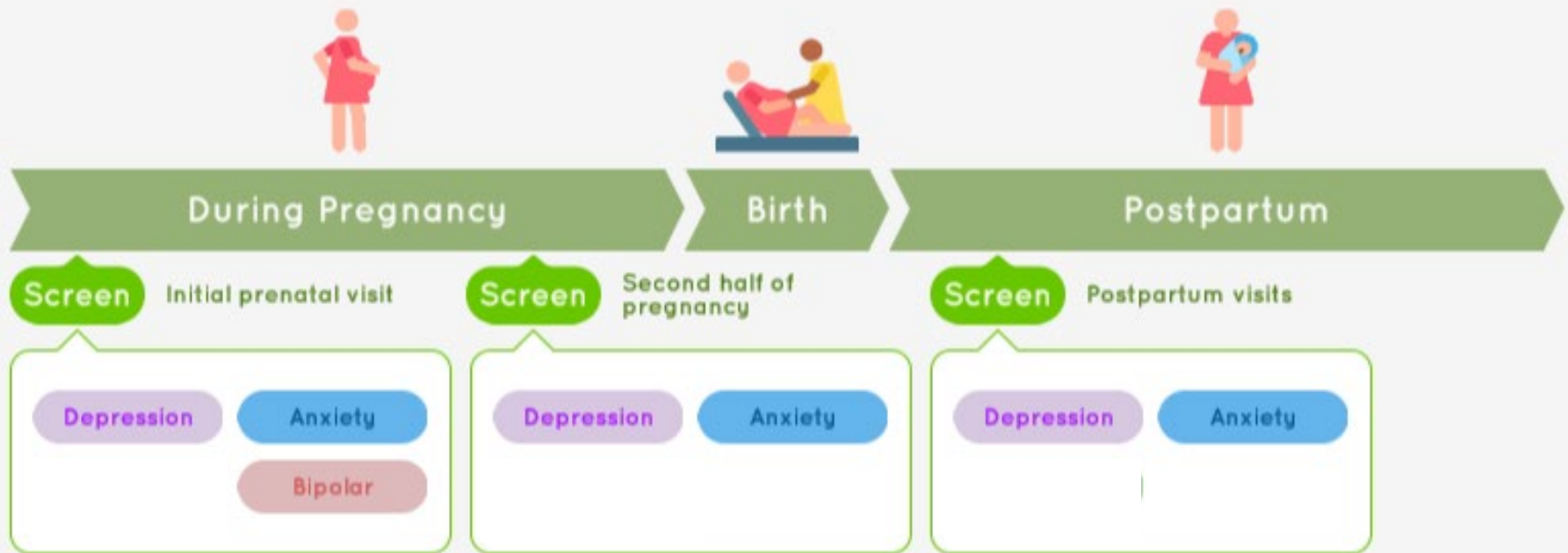
ACOG recommends that everyone receiving well-woman, prepregnancy, prenatal, and postpartum care be **screened for depression and anxiety using standardized validated instruments.**

ACOG recommends that screening for **perinatal depression and anxiety occur at the initial prenatal visit, later in pregnancy, and at postpartum visits.**

ACOG recommends that mental health screening be implemented with **systems in place to ensure timely access** to assessment and diagnosis, effective treatment, and appropriate monitoring and follow-up based on severity.

ACOG recommends screening for **bipolar disorder before initiating pharmacotherapy** for anxiety or depression, if not previously done.

# When to Screen



Given these recommendations and the prevalence of mental health conditions in the perinatal period, Lifeline for Moms recommend screening for depression, bipolar disorder, anxiety, and PTSD at these time points.



# Validated screening instruments exist for perinatal mental health conditions



## Depression PHQ9 or EPDS

## Anxiety GAD7 or EPDS subscale #3-5

## PTSD PC-PTSD

## Bipolar Disorder MDQ or CID

### The Patient Health Questionnaire (PHQ-9)

Patient Name \_\_\_\_\_ Date of Visit \_\_\_\_\_

Over the past 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 asleep, 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're 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

### Edinburgh Postnatal Depression Scale<sup>1</sup> (EPDS)

Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 Your Date of Birth: \_\_\_\_\_  
 Baby's Date of Birth: \_\_\_\_\_ Phone: \_\_\_\_\_

*As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.*

Here is an example, already completed.

I have felt happy:  
 Yes, all the time  
 Yes, most of the time      This would mean: "I have felt happy most of the time" during the past week.  
 No, not very often      Please complete the other questions in the same way.  
 No, not at all

- In the past 7 days:
- I have been able to laugh and see the funny side of things
    - As much as I always could
    - Not quite so much now
    - Definitely not so much now
    - Not at all
  - I have looked forward with enjoyment to things
    - As much as I ever did
    - Rather less than I used to
    - Definitely less than I used to
    - Hardly at all
  - I have blamed myself unnecessarily when things went wrong
    - Yes, most of the time
    - Yes, some of the time
    - Not very often
    - No, not at all
  - Things have been getting on top of me
    - Yes, most of the time I haven't been able to cope at all
    - Yes, sometimes I haven't been coping as well as usual
    - No, most of the time I have coped quite well
    - No, I have been coping as well as ever
  - I have been so unhappy that I have had difficulty sleeping
    - Yes, most of the time
    - Yes, sometimes
    - Not very often
    - No, not at all
  - I have felt sad or miserable
    - Yes, most of the time
    - Yes, quite often
    - Yes, sometimes
    - Not very often
    - No, not at all

### Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Add the score for each column + + +

Use this score to help you decide if you need to do your work, take

**C** In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you:

Have had nightmares about it or thought about it when you did not want to?	No	Yes
Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?	No	Yes
Were constantly on guard, watchful, or easily startled?	No	Yes
Felt numb or detached from others, activities, or your surroundings?	No	Yes

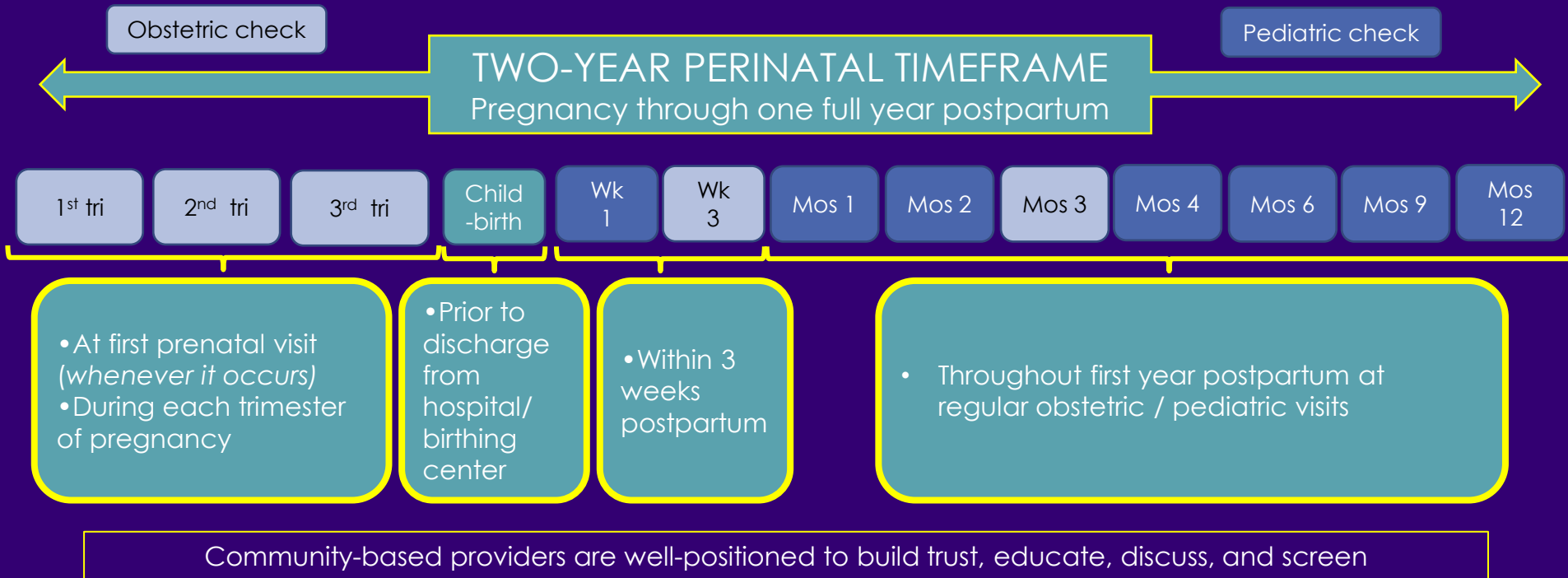
### THE MOOD DISORDER QUESTIONNAIRE

Instructions: Please answer each question to the best of your ability.

	YES	NO
1. Has there ever been a period of time when you were not your usual self and...		
...you felt so good or so happy that other people thought you were not your normal self or you were so hyper that you got into trouble?	<input type="radio"/>	<input type="radio"/>
...you were so irritable that you shouted at people or started fights or arguments?	<input type="radio"/>	<input type="radio"/>
...you felt much more self-confident than usual?	<input type="radio"/>	<input type="radio"/>
...you got much less sleep than usual and found you didn't really miss it?	<input type="radio"/>	<input type="radio"/>
...you were much more talkative or spoke much faster than usual?	<input type="radio"/>	<input type="radio"/>
...thoughts raced through your head or you couldn't slow your mind down?	<input type="radio"/>	<input type="radio"/>
...you were so easily distracted by things around you that you had trouble concentrating or staying on track?	<input type="radio"/>	<input type="radio"/>
...you had much more energy than usual?	<input type="radio"/>	<input type="radio"/>
...you were much more active or did many more things than usual?	<input type="radio"/>	<input type="radio"/>
...you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?	<input type="radio"/>	<input type="radio"/>



# DRAFT FRAMEWORK FOR PMH EDUCATION & SCREENING



# SCREENING RATIONALE

At first prenatal visit  
(*whenever it occurs*)

- Obtain baseline
- 1/3 of those experiencing PPD enter pregnancy with symptoms

During each trimester  
of pregnancy

- Build trust, reduce stigma, create safe relationship
- 1/3 of those experiencing PPD start symptoms during pregnancy

Prior to discharge from  
hospital / birthing center

- Birth may be first interaction with medical provider
- Opportunity for educating new parents and family members

Within 3 weeks  
postpartum

- Baby Blues resolve by 2-3 weeks
- Peak onset of postpartum psychosis

Throughout first year  
postpartum

- Peak onset of PMH disorders is 3-6 months postpartum
- Peak incidence of suicide is 6-9 months postpartum

# Understanding the Patient Care Pathway is critical to addressing PMH conditions



## Assessment:

- **Differential diagnosis:** how to distinguish mood disorders from each other as co-morbid conditions and differentiate them from other medical illnesses
- **Severity and risk:** how to look for the key markers of illness severity and how to assess risks for patient and infant

# Considering the differential diagnosis is an important aspect of the assessment



**Depression**



**Anxiety**



**OCD**



**PTSD**

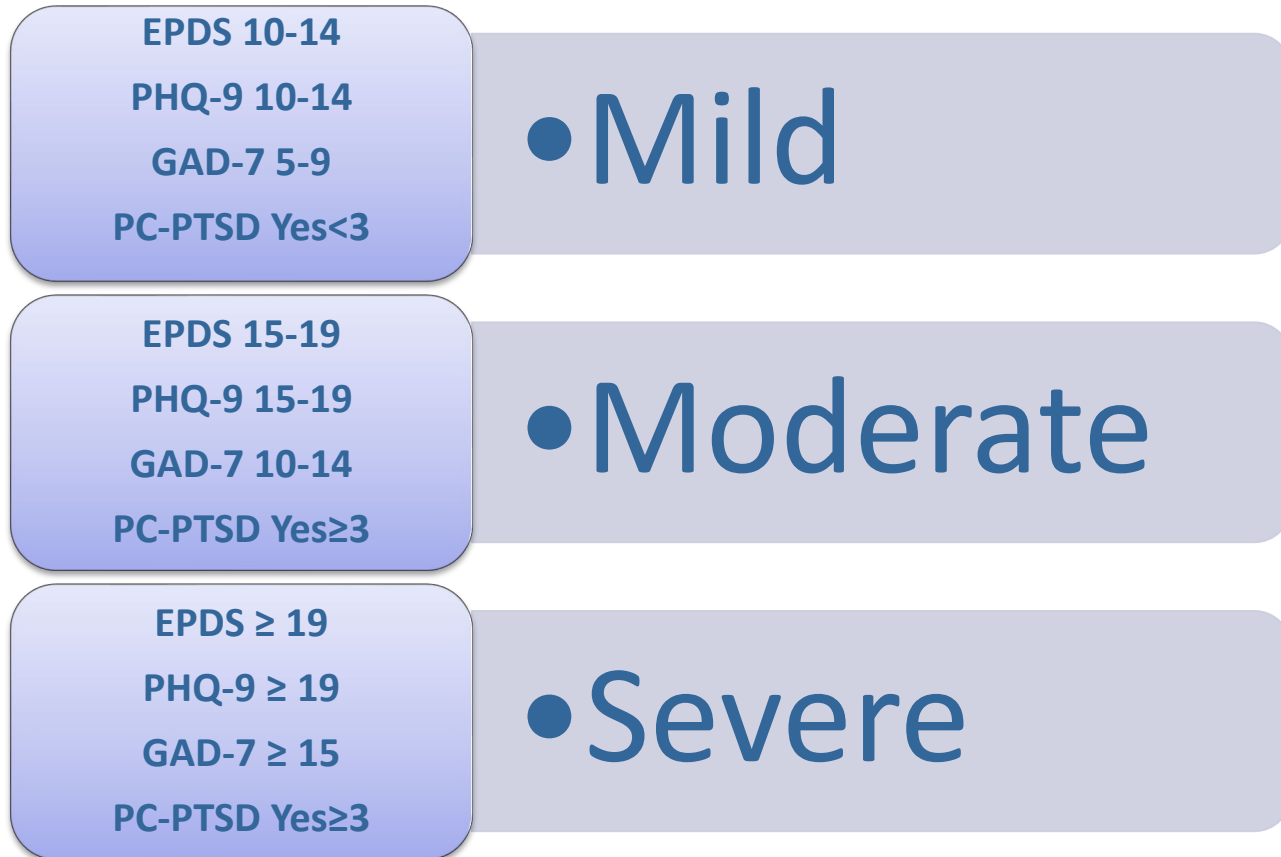


**Bipolar D**



**Psychosis**

# Score on screeners correlates with illness severity however further assessment is needed



**Symptom severity directs treatment intensity**

# Assess for co-morbidities and medical causes

PTSD and other anxiety disorders

Substance use disorder

Medical causes



Check TSH, CBC, B12, Vitamin D, and folate

# To assess, ask about symptoms and illness severity

- Recent stressors
- Duration of symptoms
- How often symptoms occur
- Feeling of hopeless, helplessness
- Current treatment (medications/therapy)
- Family history
- Prior symptoms
- Previous suicide attempt(s)
- Past psychiatric treatment (medication/therapy)
- Previous psychiatric hospitalizations
- Current suicidal ideation, plan, intent



# For depression, symptoms must occur > 2 weeks



**DEPRESSED MOOD AND** At least 5 of the following must be present for at least 2 weeks:

- **Sleep** – increased or decreased
- **Interest or pleasure** – decreased
- **Guilt/worthlessness**
- **Energy** – decreased or fatigued
- **Concentration/difficulty making decisions**
- **Appetite and/or weight increase or decrease**
- **Psychomotor activity** – increased or decreased
- **Suicidal ideation**

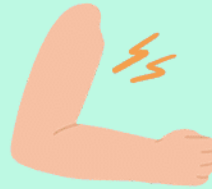




# Generalized Anxiety Disorder (GAD) Symptoms



**Excessive anxiety  
and worry**



**Increased muscle  
aches or soreness**



**Impaired  
concentration**



**Fatigue**



**Irritability**

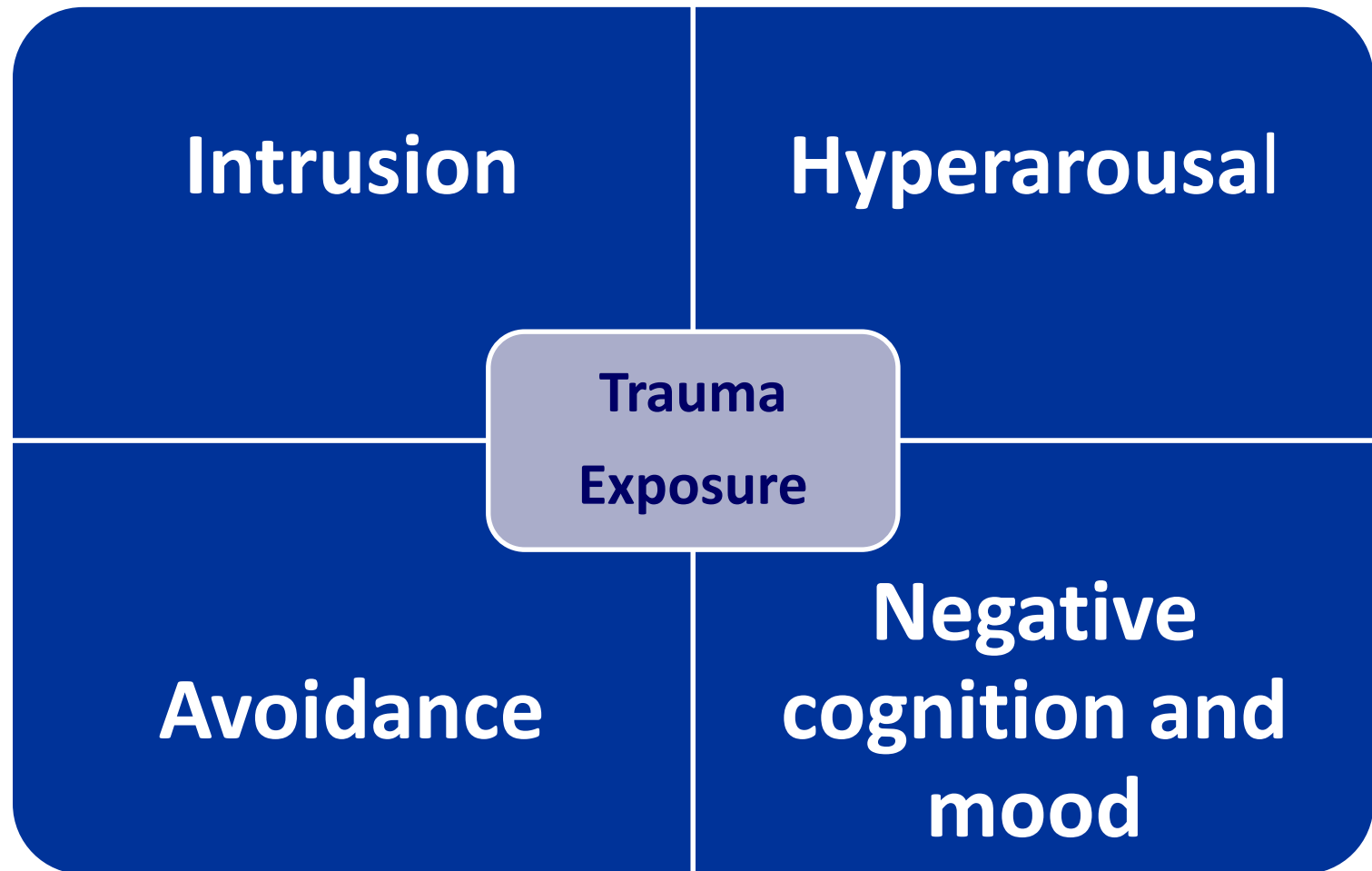


**Restlessness**

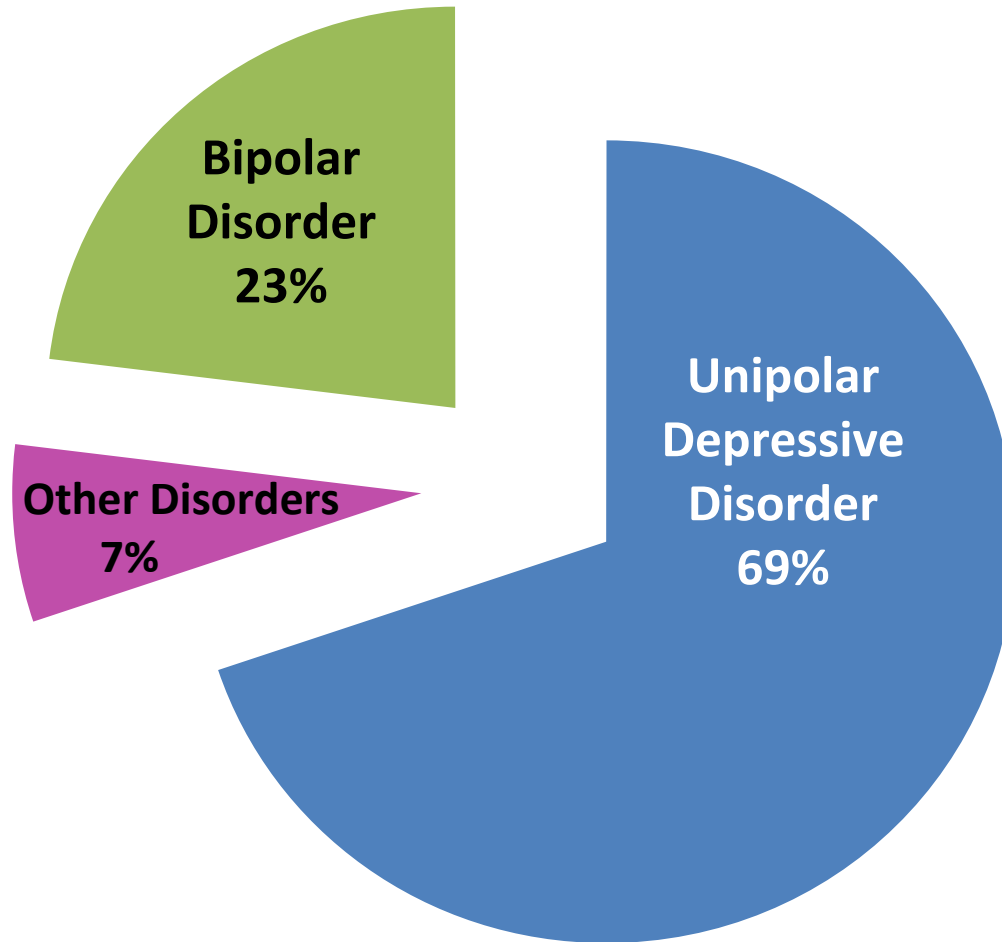


**Difficulty sleeping**

# Posttraumatic stress disorder hijacks the natural threat detection and response system



# It is imperative to rule out bipolar disorder especially prior to initiating pharmacotherapy



**Prescribing unopposed antidepressant can precipitate mania and increase risk of other negative outcomes**

# Bipolar disorder increases risk of postpartum psychosis

1-2/1000 women

>70% bipolar disorder

24 hrs – 3 weeks postpartum

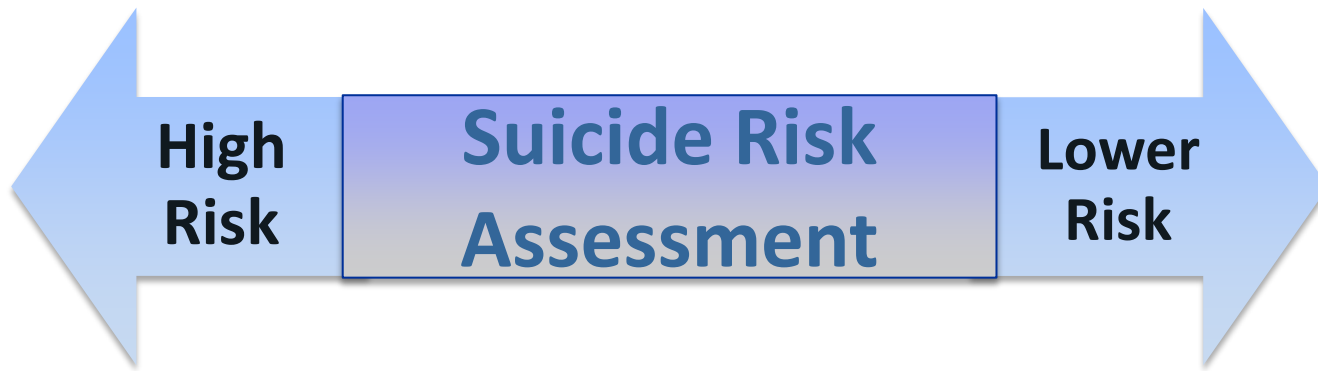
Mood symptoms, psychotic symptoms  
& disorientation

R/o medical causes of delirium

Psychiatric emergency

Increased risk of suicide & infanticide





**History of suicide attempt**

**High lethality of prior attempts**

**Recent attempt**

**Current plan**

**Current intent**

**Substance use**

**Lack of protective factors  
(including social support)**

**No prior attempts**

**If prior attempts, low  
lethality & high  
rescue potential**

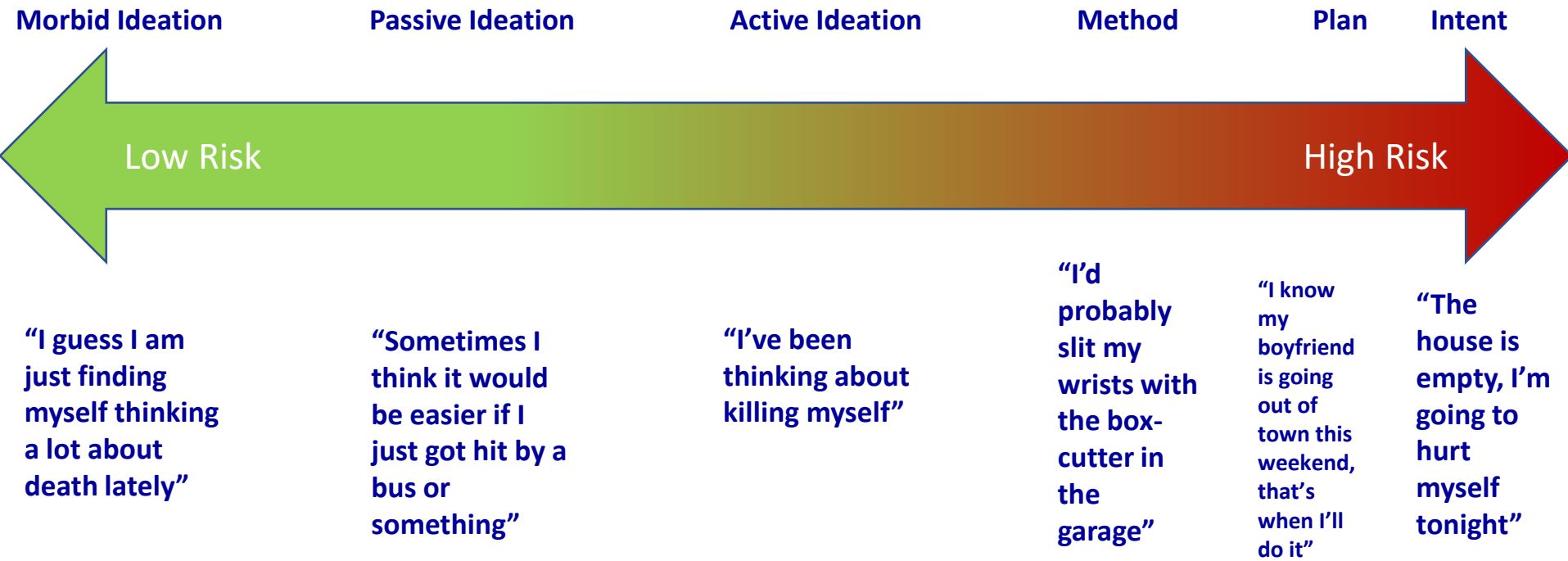
**No plan**

**No intent**

**No substance use**

**Protective factors**

# Always assess SLAP: Specificity, Lethality, Access, Previous attempts



# Thoughts of harming the baby are not always a psychiatric emergency

## OCD/anxiety/depression

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



**Low risk**

## Postpartum Psychosis

- Poor insight
- Psychotic symptoms
- Delusional beliefs or distorted reality present



**High risk**

# Understanding the Patient Care Pathway is critical to addressing PMH conditions

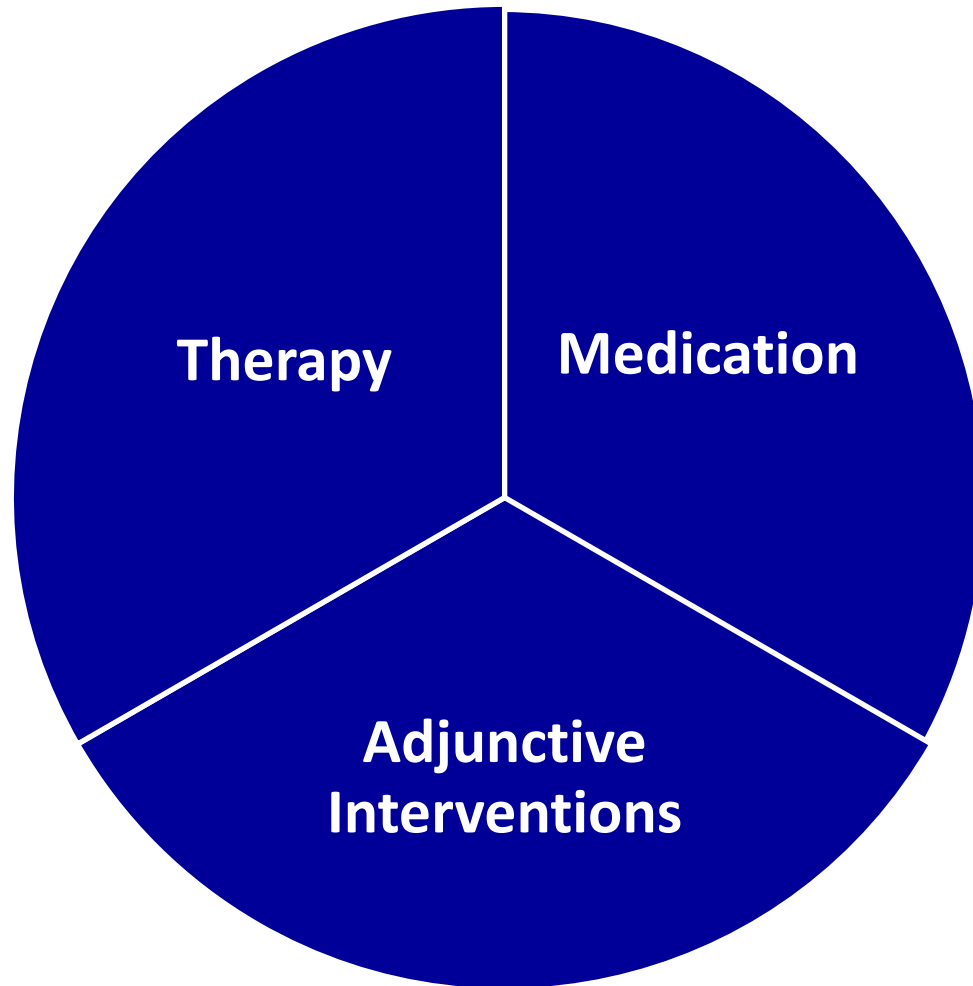


## Treatment:

- **Evidence-based treatments:** how to discuss and provide various treatment and support options, including therapy, medication, and adjunctive interventions



# Three pillars of treatment for perinatal mental health conditions – elucidate preferences



# Individual therapy is first-line treatment for mild illness

**Cognitive behavioral therapy**

**Interpersonal psychotherapy**

**Group, couples, family therapy**



ACOG recommends that obstetricians be prepared to **counsel patients** on the benefits and risks of psychopharmacotherapy for perinatal mental health conditions

...and **initiate psychopharmacotherapy** for perinatal depression or anxiety disorders.

# There is no such thing as no exposure

**Need to balance and discuss the risks and benefits of medication treatment and risks of untreated mental illness**



## How to educate patients about treatment with antidepressants

### Antidepressant use during pregnancy:

- Does not appear to be linked with birth complications
- Has been linked with small but inconsistent risk of birth defects when taken in the first trimester, particularly paroxetine
- Has been linked with transient (days to weeks) neonatal symptoms (tachypnea, irritability, insomnia)
- Has inconsistent, overall reassuring, evidence regarding long-term (months to years) neurobehavioral effects on children

### Under-treatment or no treatment of perinatal mental health conditions:

- Has been linked with birth complications
- Can increase the risk or severity of postpartum depression
- Can make it harder for moms to take care of themselves and their babies
- Can make it harder for moms to bond with their babies
- Can increase risk of mental illness among offspring
- Has been linked with possible long-term neurobehavioral effects on children

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



**Meds may not  
be indicated**

## **Medication Assessment**

**Meds  
indicated**

**No suicidal ideation**

**Able to care for self/baby**

**Engaged in psychotherapy**

**Depression/Anxiety has improved with  
psychotherapy in the past**

**Strong preference and access to  
psychotherapy**

**Moderate/severe depression  
and/or anxiety**

**Suicidal ideation**

**Difficulty functioning or caring for  
self/baby**

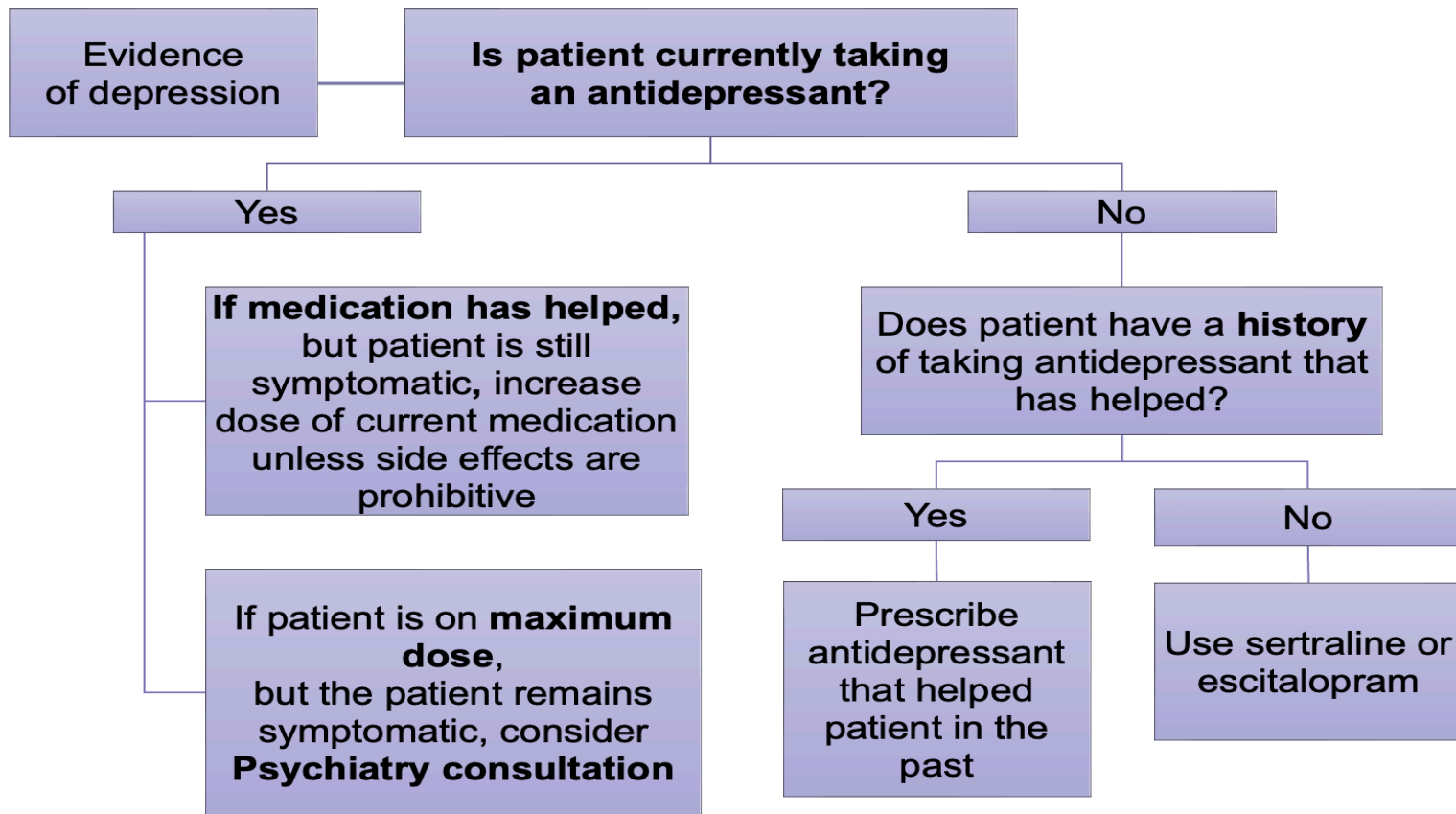
**Psychotic symptoms present**

**History of severe  
depression/anxiety and/or suicide  
ideation/attempts**

**Comorbid conditions (Depr + Anx)**

ACOG recommends that **SSRIs be used as first-line pharmacotherapy** for perinatal depression and/or anxiety. SNRIs are reasonable alternatives.

Pharmacotherapy should be **individualized** based on prior response to therapy (if applicable). If there is no pharmacotherapy history, **sertraline** or **escitalopram** are reasonable first-line medications.



# Start antidepressants at a low dose and increase in small increments every 4 days

SSRIs	Starting & Increment Dose (mg/day)	Target Dose (mg/day)
sertaline (Zoloft)	25	75-200
citalopram (Celexa)	10	20-40
escitalopram (Lexapro)	5	10-20
fluoxetine (Prozac)	10	20-80

**Tell women only to increase dose if tolerating  
Otherwise, wait until side effects dissipate before increasing**



# Same prescribing principles apply during preconception, pregnancy and breastfeeding

**Use what has previously worked**

**Use EFFECTIVE dose**

**Minimize switching**

**Monotherapy preferable**

**Be aware of need to adjust dose with advancing pregnancy**

**Discourage stopping SSRIs prior to delivery**

# Antidepressants are generally well tolerated

## Temporary

Nausea

Constipation/Diarrhea

Lightheaded

Headaches



## Long-term

Increase in appetite/weight gain

Changes in sexual interest/experience

Vivid dreams/insomnia

Direct patients to take medication with food to decrease side effects

# **Educate patients about side effects when starting an antidepressant**

**Side effects often improve after 2 weeks or so**

**Typically takes a month or more for therapeutic effects**

**Can take them either in AM or PM depending on effect**

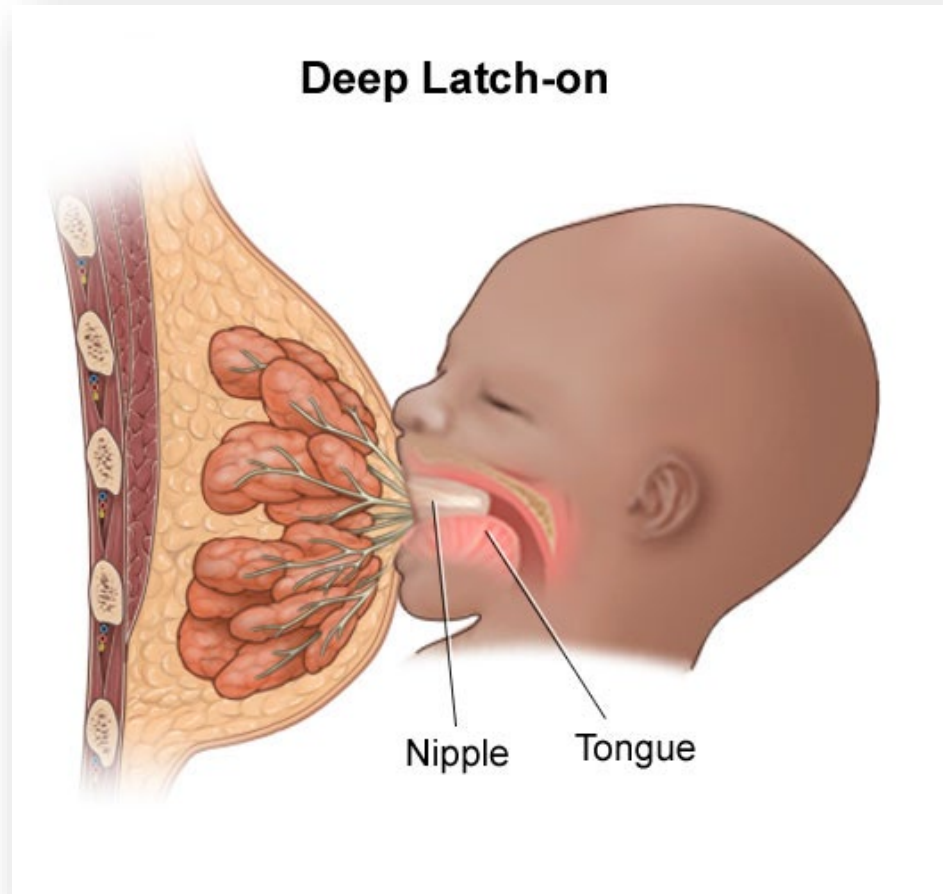


# **Breastfeeding generally should not preclude treatment with antidepressants**



**SSRIs and some other antidepressants are considered a reasonable option during breastfeeding**

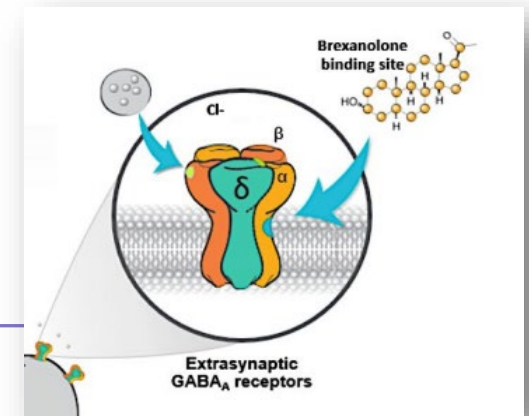
# Sertraline, paroxetine, & fluvoxamine have lowest passage into milk



**ACOG recommends against withholding or discontinuing medications for mental health conditions due to pregnancy or lactation status alone.**

ACOG recommends **consideration of brexanolone administration** in the postpartum period for moderate-to-severe perinatal depression with onset in the third trimester or within 4 weeks postpartum.

# BREXANOLONE (Zulresso) Allopregnanolone formulation



## BENEFITS

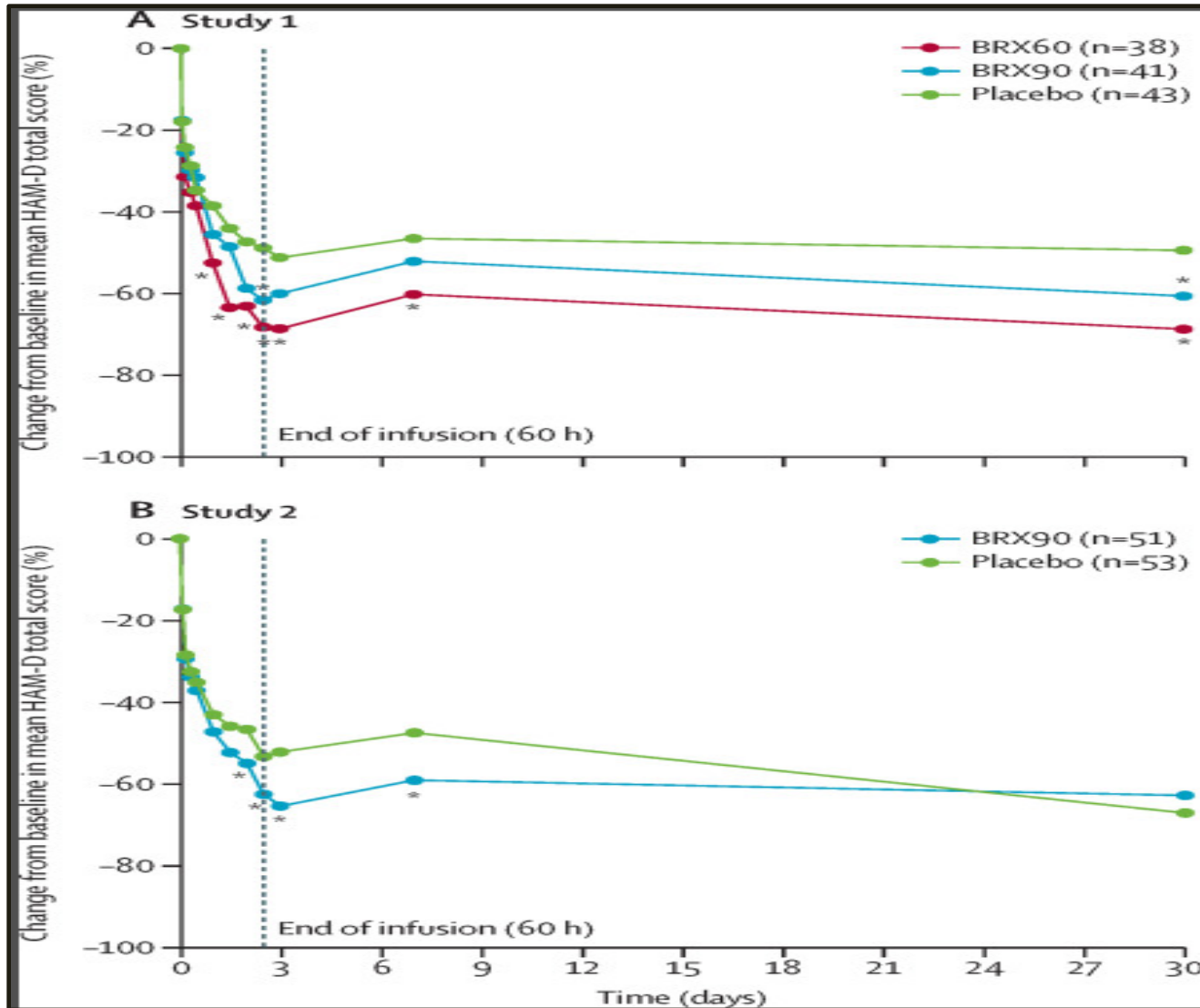
- Large effect size
- Rapid onset of response and remission of symptoms (1-2 days)

## CONSIDERATIONS

- 60-hour infusion
  - Requirement for hospitalization
  - Cost
- Common Side Effects
  - **Loss of consciousness**
  - Headache
  - Dry mouth
  - Sedation
  - Dizziness
- No published outcomes > 30 days
- Lactation disruption
- No comparative-effectiveness data with SSRIs



# 3 placebo controlled RCTs showed rapid reduction in depression symptoms, durable at 30 days



# Zuranolone for PPD Tx



- FDA approved Aug 2023 for PPD after 2 phase 3 double-blind placebo-controlled RCTs
- GABA<sub>A</sub> receptor positive modulator
- **Zuranolone 50 mg PO qPM with fatty meal x 14 day**
  - Decreased to 40 mg with CNS depressant effects
  - Start @ 30 mg with severe hepatic or mod-severe renal impairment
  - Adjustments with CYP3a4 inhibitors
  - Avoid with CYP3A4 inducers
- If miss dose, do not double dose in day; complete 14 doses total
- Can be used with SSRIs and SNRIs
- Use effective contraception for ≥ 1 wk after course
- Precautions reference:
  - Impaired ability to drive or engage in other potentially hazardous activities
    - **No driving until at least 12h after each dose**
    - Avoid other CNS depressants
  - CNS depressant effects including somnolence & confusion
  - Increased suicidal thoughts and behaviors

See ACOG PA Aug 2023

# Adjunctive interventions can benefit all patients

## Social Engagement (Identify Sources of Support)

- Partner (re)connection is safe
- Friend connection
- Family connection
- Spiritual/religious connection



## Personal Engagement (Values congruent activities)

- Self-care
- Pleasurable activities
- Self-kindness
- Meaningful activities



## Physical Engagement (Body Positive Approach)

- Balanced Nutrition
- Nourishing movement
- Avoidance of substances (e.g. caffeine, nicotine, EtOH, others)
- Managing medical concerns (not just pregnancy)
- Sleep Hygiene



# Offer other adjunctive interventions as indicated

## Self-Care Plan

Name: \_\_\_\_\_ DOB / MRN: \_\_\_\_\_  
Provider: \_\_\_\_\_ Date: \_\_\_\_\_

Setting goals for things that are within your control has been shown to help women feel emotionally well. Your goals should be fairly easy to start. You do not need to do all of these. Choose one or two to try in the coming weeks.



**1. Stay physically active.** Make sure you make time to address your basic physical needs, for walking for a certain amount of time each day.

During the week, I will spend at least \_\_\_\_\_ minutes doing (write in activities) \_\_\_\_\_  
I will try to do these for \_\_\_\_\_ (minutes each time).

**2. Make time for pleasurable activities.** Even though you may not feel as motivated, or get the same amount of pleasure as you used to, commit to scheduling some fun activity each day - for example, doing a hobby, listening to music, or watching a video.



Things I find pleasurable include: \_\_\_\_\_

During the week, I will spend at least \_\_\_\_\_ minutes doing (choose one or more of these to try in the coming week) \_\_\_\_\_.



**3. Talk or spend time with people who can support you.** It's tempting to avoid contact with people when you're down, but everyone needs the support of friends and loved ones. Explain to them how you feel if you can. If you can't talk about it, that's OK - just ask them to be with you, maybe joining you for one of your activities. Ask for/accept help from others, especially during nighttime feedings.

People I find supportive and helpful include: \_\_\_\_\_

During the week, I will make contact with \_\_\_\_\_ (name/s) and try to talk with them \_\_\_\_\_ times.



**4. Practice relaxing.** For many people, the changes that come with depression - no longer keeping up our usual activities and responsibilities, feeling increasingly sad and hopeless - leads to anxiety. Since physical relaxation can lead to mental relaxation, practicing relaxing is another way to help yourself. Try deep breathing, or a warm bath, or just finding a quiet, comfortable, peaceful place and saying comforting things to yourself (like "It's OK.")

During the next week, I will practice physical relaxation by doing \_\_\_\_\_  
at least \_\_\_\_\_ times, for at least \_\_\_\_\_ minutes each time.



**5. Simple goals and small steps.** It's easy to feel overwhelmed when you're depressed. It can be hard to deal with problems when you're feeling sad and have little energy. Try setting a new goal that is different than above. Try breaking things down into small steps and give yourself credit for each step you accomplish.

The problem is: \_\_\_\_\_ My goal is: \_\_\_\_\_

Step 1: \_\_\_\_\_ Step 2: \_\_\_\_\_

Step 3: \_\_\_\_\_ Step 4: \_\_\_\_\_

People who are experiencing symptoms of depression also have thoughts that they might be better off dead or thoughts about harming themselves. Usually, these thoughts go away once treatment has begun but if these thoughts get worse, if you feel unsafe, or feel you cannot resist the urge to act on these thoughts, please call our office or the suicide hotline at 1-800-273-8255.

Adapted from Depression Self-Care Plan developed by \_\_\_\_\_, 2013



# Understanding the Patient Care Pathway is critical to addressing PMH conditions



## Follow-Up:

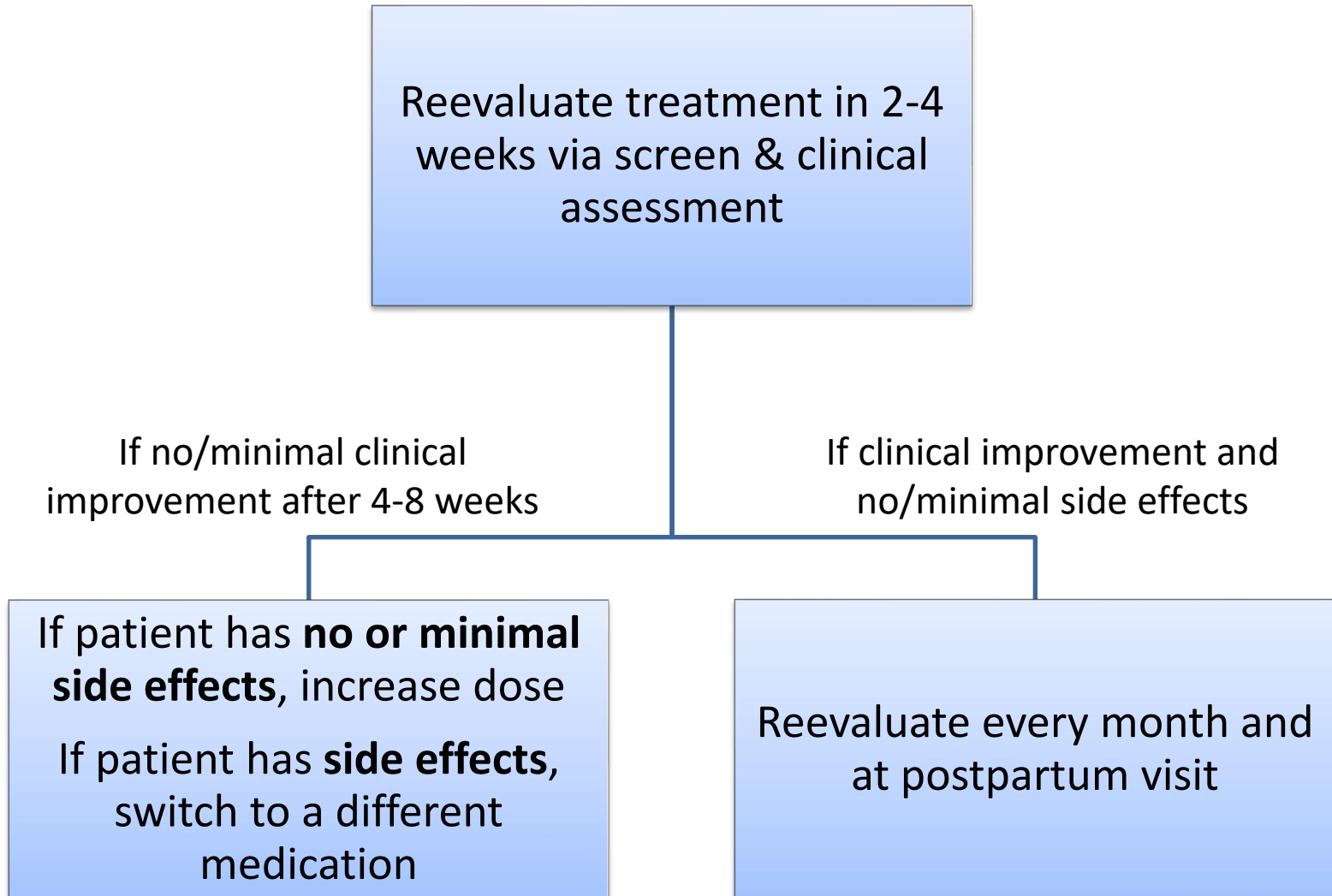
- **Follow-up and monitoring:** how to follow up with patients, monitor symptoms, and adjust treatment until full remission of symptoms, in a proactive manner
- **Ongoing treatment versus discontinuation:** how to manage mental health conditions once the illness is in full sustained remission
- **Resources:** guidance documents, toolkits, perinatal psychiatry access lines and apps to help care for perinatal individuals with MH conditions



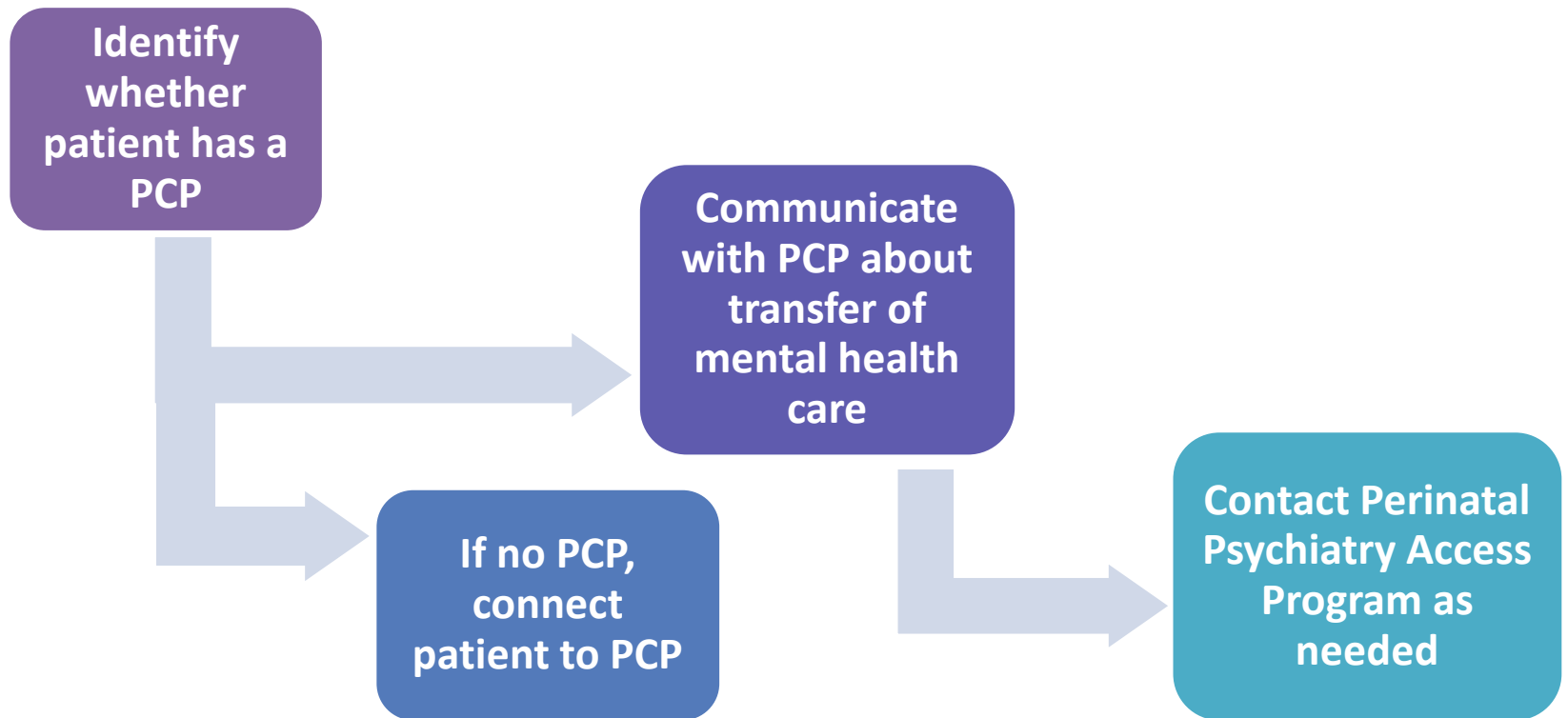
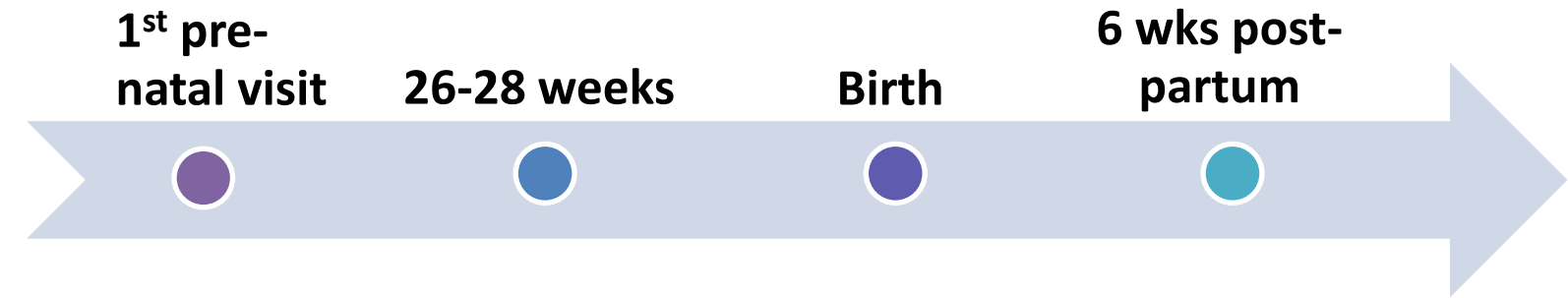
ACOG recommends that a validated screening tool be used to monitor for response to treatment.

If clinically indicated, the pharmacotherapy dosage should be up-titrated, with the goal of remission of depressive and anxiety symptoms.

# Titrate antidepressant dose until depression/anxiety remits



# Transfer of care if cannot follow-up postpartum







# Resources



## Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum

**Committee on Clinical Practice Guidelines—Obstetrics.** This Clinical Practice Guideline was developed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics in collaboration with Tiffany A. Moore Simas, MD, MPH, MEd; M. Camille Hoffman, MD, MSc; Emily S. Miller, MD, MPH; and Torri Metz, MD, MS; with consultation from Nancy Byatt, DO, MS, MBA; and Kay Roussos-Ross, MD.

The Society for Maternal-Fetal Medicine endorses this document.

The Committee on Women's Mental Health of the American Psychiatric Association reviewed and provided feedback on this document.

**PURPOSE:** To review evidence on the current understanding of mental health conditions in pregnancy and postpartum, with a focus on mood and anxiety disorders, and to outline guidelines for screening and diagnosis that are consistent with best available scientific evidence. The conditions or symptoms reviewed include depression, anxiety and anxiety-related disorders, bipolar disorder, suicidality, and postpartum psychosis. For information on psychopharmacologic treatment and management, refer to American College of Obstetricians and Gynecologists (ACOG) Clinical Practice Guideline Number 5, "Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum" (1).

**TARGET POPULATION:** Pregnant or postpartum individuals with mental health conditions. Onset of these conditions may have predated the perinatal period or may have occurred for the first time in pregnancy or the first year postpartum or may have been exacerbated in that time.

**METHODS:** This guideline was developed using an a priori protocol in conjunction with a writing team consisting of one specialist in obstetrics and gynecology and one maternal-fetal medicine subspecialist appointed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics and two external subject matter experts. ACOG medical librarians completed a comprehensive literature search for primary literature within Cochrane Library, Cochrane Collaboration Registry of Controlled Trials, EMBASE, PubMed, and MEDLINE. Studies that moved forward to the full-text screening stage were assessed by two authors from the writing team based on standardized inclusion and exclusion criteria. Included studies underwent quality assessment, and a modified GRADE (Grading of Recommendations Assessment, Development and Evaluation) evidence-to-decision framework was applied to interpret and translate the evidence into recommendation statements.

**RECOMMENDATIONS:** This Clinical Practice Guideline includes recommendations on the screening and diagnosis of perinatal mental health conditions including depression, anxiety, bipolar disorder, acute postpartum psychosis, and the symptom of suicidality. Recommendations are classified by strength and evidence quality. Ungraded Good Practice Points are included to provide guidance when a formal recommendation could not be made because of inadequate or nonexistent evidence.



## Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum

**Committee on Clinical Practice Guidelines—Obstetrics.** This Clinical Practice Guideline was developed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics in collaboration with Emily S. Miller, MD, MPH; Torri Metz, MD, MS; Tiffany A. Moore Simas, MD, MPH, MEd; and M. Camille Hoffman, MD, MSc; with consultation from Nancy Byatt, DO, MS, MBA and Kay Roussos-Ross, MD.

The Society for Maternal-Fetal Medicine endorses this document.

The Committee on Women's Mental Health of the American Psychiatric Association reviewed and provided feedback on this document.

**PURPOSE:** To assess the evidence regarding safety and efficacy of psychiatric medications to treat mental health conditions during pregnancy and lactation. The conditions reviewed include depression, anxiety and anxiety-related disorders, bipolar disorder, and acute psychosis. For information on screening and diagnosis, refer to American College of Obstetricians and Gynecologists (ACOG) Clinical Practice Guideline Number 4, "Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum" (1).

**TARGET POPULATION:** Pregnant or postpartum individuals with mental health conditions with onset that may have predated the perinatal period or may have occurred for the first time in pregnancy or the first year postpartum or may have been exacerbated in that time.

**METHODS:** This guideline was developed using an a priori protocol in conjunction with a writing team consisting of one specialist in obstetrics and gynecology and one maternal-fetal medicine subspecialist appointed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics and two external subject matter experts. ACOG medical librarians completed a comprehensive literature search for primary literature within Cochrane Library, Cochrane Collaboration Registry of Controlled Trials, EMBASE, PubMed, and MEDLINE. Studies that moved forward to the full-text screening stage were assessed by two authors from the writing team based on standardized inclusion and exclusion criteria. Included studies underwent quality assessment, and a modified GRADE (Grading of Recommendations Assessment, Development and Evaluation) evidence-to-decision framework was applied to interpret and translate the evidence into recommendation statements.

**RECOMMENDATIONS:** This Clinical Practice Guideline includes recommendations on treatment and management of perinatal mental health conditions including depression, anxiety, bipolar disorders, and acute postpartum psychosis, with a focus on psychopharmacotherapy. Recommendations are classified by strength and evidence quality. Ungraded

# Zuranolone for the Treatment of Postpartum Depression

Practice Advisory ⓘ | August 2023

## Considerations for zuranolone therapy:

- The daily recommended dose of zuranolone is generally 50 mg. It is taken in the evening with a fatty meal (eg, 400 to 1,000 calories, 25% to 50% fat), for 14 days. Dosage may be reduced to 40 mg if central nervous system (CNS) depressant effects occur. In the case of severe hepatic or moderate to severe renal impairment, dosing should be initiated at 30 mg. Dose adjustments will also be needed if patients are taking medications that are strong CYP3A4 inhibitors and concomitant use with CYP3A4 inducers should be avoided.\*
- If an evening dose is missed, take the next dose at the regular time the following evening; do not take extra doses on the same day. Complete 14 days of treatment total.
- Zuranolone can be used alone or as an adjunct to other oral antidepressant therapy like SSRIs and SNRIs.
- Patients should use effective contraception during the 14-day treatment course and for 1-week after the final dose. Zuranolone may cause fetal harm ⓘ . If pregnancy does occur, there is a registry.\*\*
- Patients should be warned and given precautions about adverse reactions including:
  - Impaired ability to drive or engage in other potentially hazardous activities,
  - CNS depressant effects including somnolence and confusion, and
  - Increased suicidal thoughts and behaviors.
- Patients should not drive or engage in activities requiring complete mental alertness until at least 12 hours after each dose for the duration of the full treatment course. Patients may not be able to accurately assess their own degree of impairment during the treatment cycle.
- Other CNS depressing substances should be avoided (eg, alcohol, benzodiazepines, opioids, tricyclic antidepressants). If unable to avoid, a dose reduction may be necessary.
- The most common side effects include dizziness, fatigue, drowsiness, diarrhea, common cold-like symptoms, and urinary tract infections.
- Zuranolone passes into breast milk, although with a RID lower than that of SSRIs. There are no data on effects on a breastfed infant and limited data on milk production. The patient's clinical need for zuranolone and the developmental and health benefits of breastfeeding should be balanced through a shared decision-making process that considers continuation, pumping and discarding milk through 1-week past treatment completion, and cessation.



# AIM PATIENT SAFETY BUNDLES

AIM develops multidisciplinary, clinical-condition specific patient safety bundles to support best practices that make birth safer. [LEARN MORE](#)



## PERINATAL MENTAL HEALTH CONDITIONS

For the purposes of this bundle, perinatal mental health conditions refer to mood, anxiety, and anxiety-related disorders that occur during pregnancy or within one year of delivery and are inclusive of mental health conditions with onset that predates pregnancy. These conditions include and are not limited to depression, anxiety and anxiety-related disorders like posttraumatic stress disorder and obsessive-compulsive disorder, bipolar disorder, and postpartum psychosis.

<b>READINESS</b>	<b>+</b>
<b>RECOGNITION &amp; PREVENTION</b>	<b>+</b>
<b>RESPONSE</b>	<b>+</b>
<b>REPORTING &amp; SYSTEMS LEARNING</b>	<b>+</b>
<b>RESPECTFUL, EQUITABLE &amp; SUPPORTIVE CARE</b>	<b>+</b>

[View the Introduction to Perinatal Mental Health Conditions video HERE.](#)

### QUICK LINKS


- [Printable Bundle \(PDF\)](#)
- [National Maternal Health Hotline](#)
- [Perinatal Mental Health Conditions Element Implementation Details \(PDF\)](#)
- [Perinatal Mental Health Conditions Implementation Webinar \(Video\)](#)
- [Perinatal Mental Health Conditions Data Collection Plan \(PDF\)](#)
- [Perinatal Mental Health Conditions Bundle Implementation Resources \(PDF\)](#)
- [COMING SOON: Perinatal Mental Health Conditions Change Package \(PDF\)](#)

# Perinatal Mental Health Conditions Change Package

## Readiness

Change Concept	Change Idea	Key Resources and Tools
<p><b>Develop workflows for integrating mental health care into preconception and obstetric care before pregnancy through the postpartum period including provision of pharmacotherapy when indicated</b></p>	<p>Standardize screening processes and roles. Identify a member of the care team whose role includes screening for mental health conditions</p> <p><i>Include mental health screening as part of intake and at regular intervals throughout prenatal care. At a minimum, this schedule should include intake, once in the 3<sup>rd</sup> trimester, and at the postpartum visit *</i></p>	<p><a href="#">American College of Obstetricians and Gynecologists (ACOG): Perinatal Mental Health: Patient Screening<sup>22</sup></a></p>
	<p>Develop a standard process for addressing a positive screen (Who makes the referral? How? When?) and have referral pathways ready</p>	<p><a href="#">Massachusetts Child Psychiatry Access Program (MCPAP) for Moms: Obstetric Provider Toolkit<sup>23</sup></a></p> <p><a href="#">Orange County (OC) Health Care Agency: Perinatal Mood and Anxiety Disorders: Maternal Screening and Care Pathway<sup>24</sup></a></p>
	<p>As feasible, develop a workflow that allows providers to get support from a mental health clinician when a patient screens positive to allow for real-time guidance on appropriate next steps</p> <p><i>If access to mental health clinicians is limited in your community, explore alternative pathways such as working with primary care *</i></p>	<p><a href="#">UMass Chan Medical School: Resources for Integrating Mental Health into Obstetric Settings: Sample Workflows (pp. 57 - 58)<sup>25</sup></a></p> <p><a href="#">Maternal Mental Health Leadership Alliance (MMHLA): Psychiatry Access Programs<sup>26</sup></a></p> <p><a href="#">Postpartum Support International (PSI): Perinatal Psychiatric Consult Line<sup>27</sup></a></p>
	<p>As feasible, set up mechanisms to pre-schedule mental health care for post-delivery in the event of a positive screen during pregnancy</p>	<p><a href="#">Increasing Warm Handoffs: Optimizing Community Based Referrals in Primary Care Using QI Methodology<sup>28</sup></a></p>

# Lifeline for Moms Toolkit provides obstetric clinicians with tools to help them address mental health



Lifeline4Moms Perinatal Mental Health Toolkit

### Screening for mood changes during pregnancy and after giving birth

- Mood changes are very common during pregnancy or after giving birth. They can affect you and your baby's health.
- 1 in 5 women have depression, anxiety or "f" feelings during pregnancy.
- If you are having mood changes, getting help is the best way to feel better. We can help.
- Mood changes are common. Because it is important to them.

### Assessing Perinatal Mental Health

Score patient screening assessment: Depression (PHQ-9) 0-27, Anxiety (GAD-7) 0-21, PTSD (PC-PTSD) 0-44, PCL-C 0-51

Score on PHQ-9: 0-4 (No score), 5-9 (Mild), 10-14 (Moderate), 15-19 (Moderate to severe), 20-27 (Severe)

Score on GAD-7: 0-4 (No score), 5-9 (Mild), 10-14 (Moderate), 15-21 (Severe)

Score on PC-PTSD: 0-11 (No score), 12-23 (Mild), 24-44 (Severe)

Score on PCL-C: 0-13 (No score), 14-39 (Mild), 40-51 (Severe)

**To assess the presence and severity of perinatal mental illness, ask about:**

- Depression: Current (worsening), Recurrent, Persistent, Severe symptoms, Impact daily functioning
- Anxiety: Current (worsening), Recurrent, Persistent, Severe symptoms, Impact daily functioning
- PTSD: Current (worsening), Recurrent, Persistent, Severe symptoms, Impact daily functioning

**Determine Illness Severity:**

- MILD:** PHQ-9 score 5-9, GAD-7 score 5-9, PC-PTSD score 12-23, PCL-C score 14-39. No suicidal ideation. No thoughts of harming, harming, or killing self or baby. No or minimal difficulty caring for self or baby.
- MODERATE:** PHQ-9 score 10-14, GAD-7 score 10-14, PC-PTSD score 24-33, PCL-C score 40-49. Suicidal ideation. Some thoughts of harming, harming, or killing self or baby. Possible impact on ability to care for self or baby.
- SEVERE:** PHQ-9 score 15-19, GAD-7 score 15-21, PC-PTSD score 34-44, PCL-C score 50-51. Suicidal ideation, threat and/or plan. Thoughts of harming, harming, or killing self or baby. History of multiple psychiatric hospitalizations. Often needs unable to care for self or baby. May require intensive treatment, hospitalization or other medical interventions. History of multiple psychiatric hospitalizations or other medical interventions. History of multiple psychiatric hospitalizations or other medical interventions.

### Action Plan for Mood Changes during Pregnancy or After Giving Birth

Feeling down, mood swings, feeling anxious, overwhelmed, and scared are very common for women during and after pregnancy. If your feelings are impacting you or your ability to care for you or your baby, you need to make sure you have the resources and support you need. If a few of these feelings sound like you, see below for what you can do.

**Feeling down, mood swings, feeling anxious, overwhelmed, and scared are very common for women during and after pregnancy. If your feelings are impacting you or your ability to care for you or your baby, you need to make sure you have the resources and support you need. If a few of these feelings sound like you, see below for what you can do.**

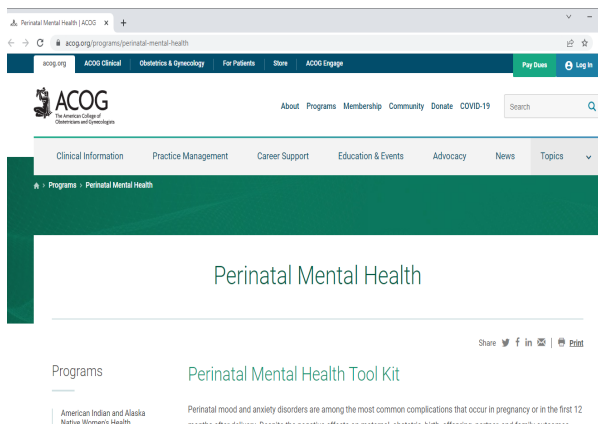
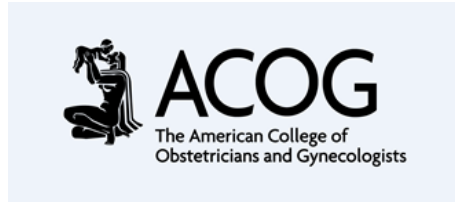
**Feeling down, mood swings, feeling anxious, overwhelmed, and scared are very common for women during and after pregnancy. If your feelings are impacting you or your ability to care for you or your baby, you need to make sure you have the resources and support you need. If a few of these feelings sound like you, see below for what you can do.**

**Feeling down, mood swings, feeling anxious, overwhelmed, and scared are very common for women during and after pregnancy. If your feelings are impacting you or your ability to care for you or your baby, you need to make sure you have the resources and support you need. If a few of these feelings sound like you, see below for what you can do.**

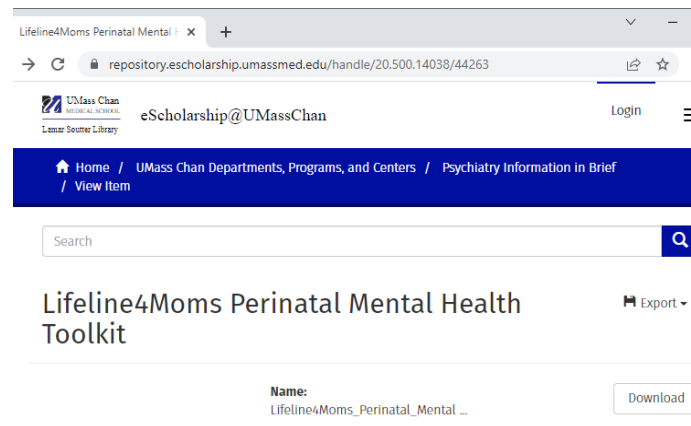
Lifeline for Moms Perinatal Mental Health Toolkit" by Nancy Byatt, Leena P. Mittal et al. (umassmed.edu)



# Lifeline for Moms Toolkit provides obstetric clinicians with tools to help them address mental health



[Perinatal Mental Health | ACOG](https://www.acog.org/programs/perinatal-mental-health)



[Lifeline4Moms Perinatal Mental Health Toolkit \(umassmed.edu\)](https://repository.escholarship.umassmed.edu/handle/20.500.14038/44263)



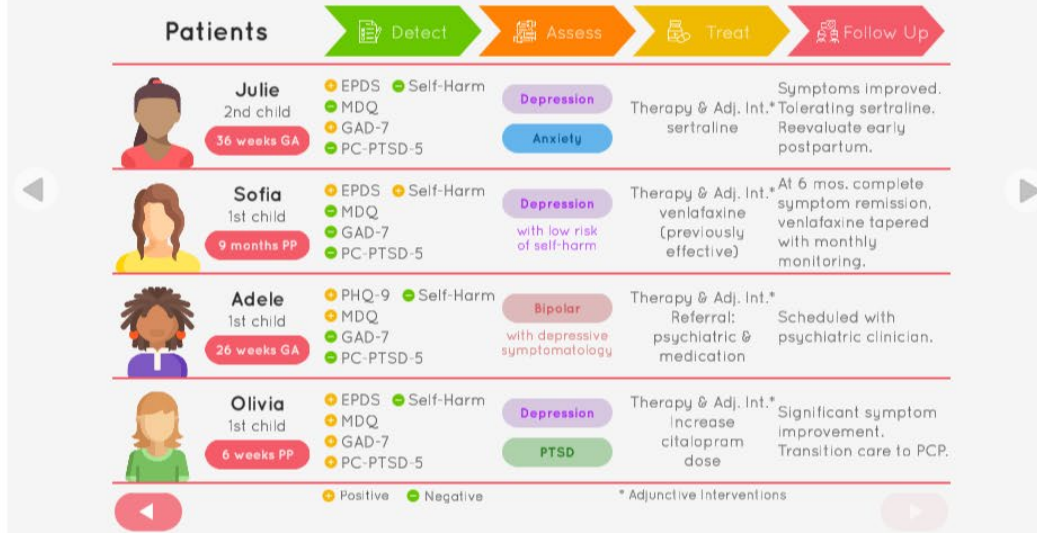


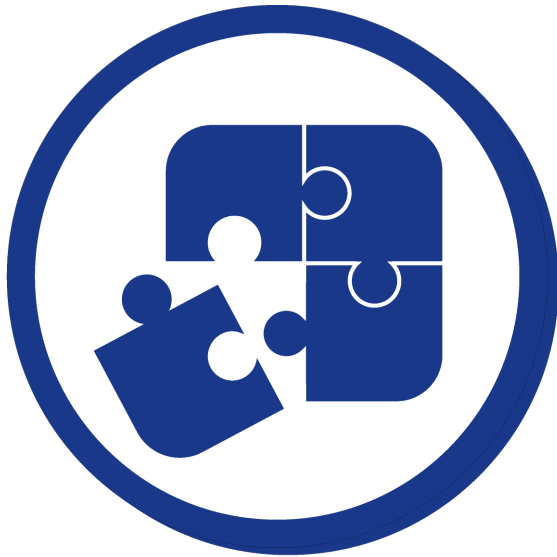
**Lifeline for Moms e-Modules provide training in detection, assessment, treatment and follow-up using self-paced, case-based, interactive design**



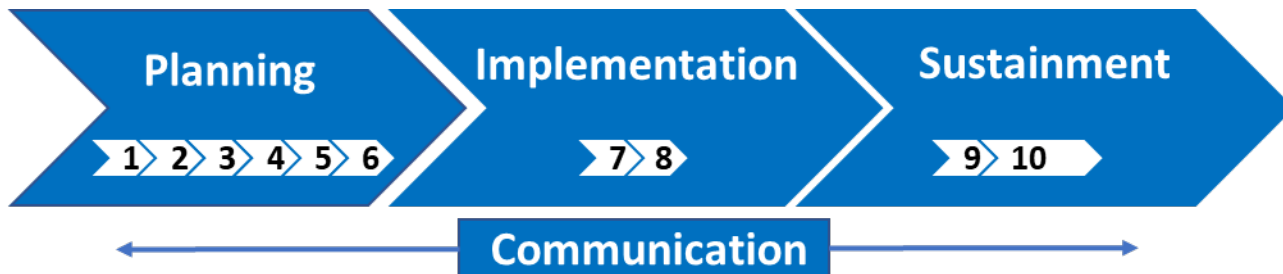


## Dr. Silva's treatment across four patients:





# Implementation Guide for Integrating PMH into OB Practice





**The National Maternal Mental Health Hotline is a free and available across the US**

**1-833-9-HELP4MOMS**

**(1-833-943-5746)**



**Patient-facing Hot-Line (24/7)**  
**National Maternal Mental Health Hotline | [MCHB \(hrsa.gov\)](https://www.hrsa.gov)**

**Integrating mental health care into our practices can be transformative for the perinatal individuals, children and families we serve**



# Thank you!



## **Lifeline for Moms Teams and Collaborators:**

**MCPAP for Moms Team  
Trainees and students  
Massachusetts DMH  
Participating Obstetric Practices  
Participating Perinatal Individuals  
Advisory Council Members  
CDC Collaborators**

## **Funding:**

**CDC 1U01 DP006093, 6 U48DP006381-03-01  
CDC Foundation  
The Perigee Fund  
NIMH 1R41 MH113381-01, 2R42 MH113381-02  
PCORI IHS-2019C2-17367, EACB-23288  
ACOG 6 NU380T000287-02-01  
NIH KL2TR000160**



While the UMass Chan Medical School (“University”) makes every effort to present accurate and reliable information, this material is provided “as is” without any warranty of accuracy, reliability, or otherwise, either express or implied. The University does not guarantee, warrant, or endorse the products or services of any firm, organization, or person. Neither the University nor its officers, directors, members, employees, or agents will be liable for any loss, damage, or claim with respect to any liabilities, including direct, special, indirect, or consequential damages, incurred in connection with this material or reliance on the information presented.

[www.mcpapformoms.org](http://www.mcpapformoms.org)

[www.lifeline4moms.org](http://www.lifeline4moms.org)



Tiffany A. Moore Simas, MD, MPH, MEd, FACOG  
[TiffanyA.MooreSimas@umassmemorial.org](mailto:TiffanyA.MooreSimas@umassmemorial.org)

**Thank you!**