PAS and Maternal Mental Health

Psychosocial Support: Resources for PAS Patients, Families & Providers

Nicole Cirino MD, IF, CST, PMH-C

Reproductive Psychiatrist

Professor

Director, Division of Reproductive Psychiatry

Department of Obstetrics and Gynecology

Baylor College of Medicine/ Texas Children's Hospital

Lisa M. Noll, Ph.D., IMH-E, PMH-C

Licensed Psychologist

Division of Psychology

Department of Pediatrics

Baylor College of Medicine

Baylor College of Medicine

Baylor College of Medicine

No Relevant Financial Disclosures or Conflicts of Interest

Baylor College of Medicine

The Women's Place – Center for Reproductive Psychiatry

Meet our team

Our team has extensive experience evaluating, diagnosing and treating women with mental health issues related to the reproductive cycle. They are available to provide ongoing care during reproductive transitions or consultative services in partnership with their current clinician.

Nicole H. Cirino, MD
Reproductive Psychiatrist

Osarumen Nicole Doghor, MD
Reproductive Psychiatrist

Karen Louise Horst, MD
Reproductive Psychiatrist

Christina Treece, MD
Reproductive Psychiatrist

Megan Howard, MD, MPH
Reproductive Psychiatrist

Sindhura Vangala, MD
Reproductive Psychiatrist

Lisa Noll, PhD
Psychologist

Kimberly Samuels, PhD
Psychologist

Locations

The Women's Place offers virtual and in-person appointments. In-person appointments are available at the following locations:

Texas Medical Center
6651 Main St., Level 3, Suite F350
Houston, TX 77030
Phone: 832-826-5281

Pearland
9003 Broadway St.
Pearland, TX 77584
Phone: 281-412-4335

Northwest Houston
13215 Dotson Rd., Suite 360
Houston, TX 77070
Phone: 832-826-5281

Baylor College of Medicine

Learning Objectives

- ✓Describe the common mental health disorders that may present in women with PAS.
- ✓Describe common themes across the perinatal period in women with PAS.
- ✓Recognize Implications for care during the perinatal period and beyond.
- ✓Recognize the symptoms of Perinatal PTSD
- ✓Access current state and federal resources designed to help obstetric providers with treatment and referrals of perinatal psychiatric conditions.

Mental health conditions are the lead cause of pregnancy related deaths (22.7%) & preventable pregnancy related deaths (100%)

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

MMRIA MATERNAL MORTALITY REVIEW INFORMATION APP

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.

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.

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	%
Race and ethnicity		
Hispanic	146	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
Age at death (years)		
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
Education		
12th 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.

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

CDC

MATERNAL 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.[1] 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.[2]

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.[3] Co-occurring depression, anxiety disorder, and substance use disorder (SUD) are also common among women of reproductive age.[4] Professional and clinical organizations have issued recommendations to address screening and treatment for perinatal depression.[5–7] 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,[8] and the American Academy of Pediatrics recommends screening for postpartum depression during well-child visits.[9] Yet barriers to care limit access to and use of mental health services among pregnant and postpartum people.[10] Untreated perinatal mood and anxiety disorders have high societal costs[11] and deleterious effects on maternal and infant outcomes.[12]

State and local MMRCs are uniquely positioned to evaluate the events in a pregnant or

Susanna L. Trost 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 Lifeline for Moms Program, University of Massachusetts Medical School/UMass Memorial Health, in Worcester, Massachusetts.

Preventable?

- History of Depression 75%
- Past or current substance abuse: 66%

MMRIA MATERNAL MORTALITY REVIEW INFORMATION APP

ERASE MM

REVIEW to ACTION

Baylor College of Medicine

Maternal Experience with PAS: Common Themes

Perinatal mental health sequelae of PAS disorders	
Stage of Perinatal Care	**Mental health sequelae arising from PAS**
Antepartum – length of weeks before delivery	Depression, anxiety, rumination, guilt, grief
Intrapartum – time of delivery	PTSD, birth trauma, life-threatening experience
Postpartum – weeks to years after delivery	Depression, anxiety, PTSD, disempowerment, loss of identity

Ayalde, Epee-Bekima, Jansen et al., 2023

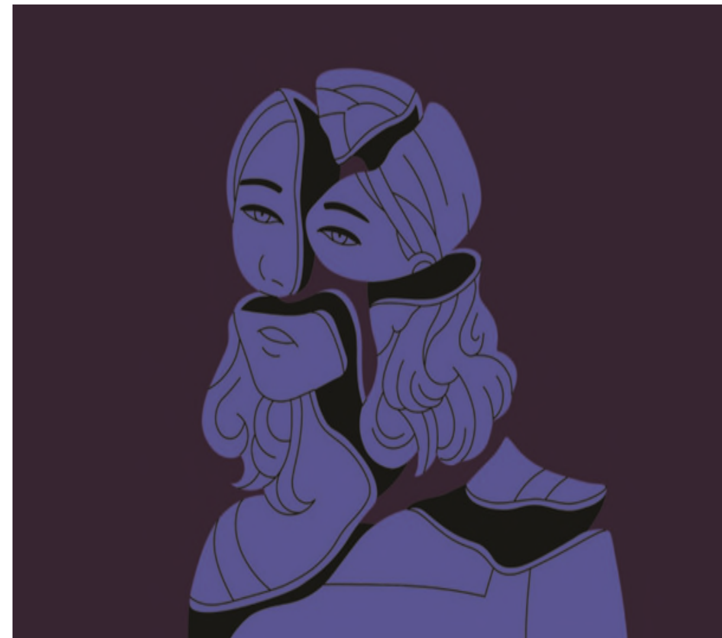
Perinatal Mood and Anxiety Disorders (PMADs)

Large spectrum of diagnoses and severities

Cross socioeconomic, racial, and ethnic lines

Diagnoses:

- Baby blues
- Antenatal depression
- Adjustment Disorder
- Postpartum depression
- Perinatal anxiety
    - OCD
    - PTSD
    - Panic Disorder
    - Tokophobia
- Postpartum mania/hypomania
- Postpartum psychosis



Implications of Untreated PMADs

Prenatal Care

- Fewer prenatal visits
- Inadequate maternal weight gain/poor nutrition
- Poor maternal self-care
- Possible substance use

Obstetrical Complications

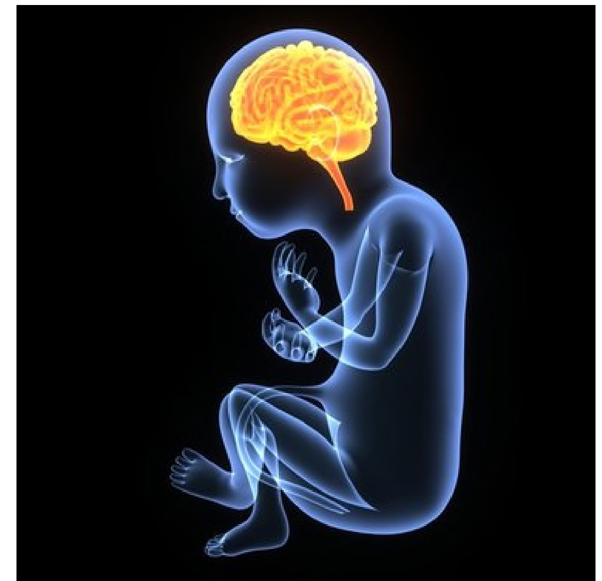
- Intrauterine growth restriction
- Miscarriage
- Preeclampsia
- Preterm labor and birth

Neonatal Outcomes

- Low birth weight
- High levels of reactivity
- Disorganized sleep patterns
- Difficult temperament

Parenting

- Physical and psychological unavailability
- Limited sensitivity toward infant's needs
- Overly sensitive and reactive parenting (anxiety)
- Impaired bonding



Baylor College of Medicine

Mental Health Symptoms and Diagnoses during the Perinatal Period in Women with PAS

- PAS diagnosis is a major life stressor that can contribute to psychiatric co-morbidity.
- Significant association between PAS and PTSD and symptoms of depression and anxiety.
- Mothers with antenatal diagnosis of PAS more likely to experience PTSD symptoms and meet threshold for diagnosis compared to women with uncomplicated cesarean sections.
- Majority of women express a negative memory, driven by fear of death
- Sexual dysfunction well known dysfunction has mental health implications
- Quality of Life
  - physical functioning, role functioning, social functioning and pain at 6 months postpartum
  - Energy/fatigue, emotional well-being, social functioning and pain at 12-months postpartum
  - Physical and social functioning at 36-months postpartum

Ayalde, Epee-Bekima, Jansen et al., 2023; Flanagan & Troup, 2022; Grover, Einerson, Keenan et al., 2020; Michelet et al., 2015; Shainker, Cornely, Astake et al., 2022; Tol et al., 2019; Zaat et al., 2018

Baylor College of Medicine

Themes of Women with PAS: Diagnosis to Postpartum

- Pregnancy
  - ‘It’s not until you are told’
  - ‘Sad but safe’
  - ‘Relying on others can be unbearable.’
  - Living with PAS
    - Lack of knowledge
    - Experiences of care and planning for birth
  - Coping with uncertainty
    - Getting on with it
    - Emotional Toll

- Bartels, Horsch, Cooney et al., 2022; Bartels, Mulligan, Lalor et al., 2020

Baylor College of Medicine

Themes of Women with PAS

- Delivery/Birth
  - ‘fear of dying’
  - ‘no one believed I could be in so much pain’
  - A traumatic experience
    - Saying goodbye
    - Experiencing trauma
    - Witnessing trauma (by fathers)
  - Feeling safe in the hands of experts
    - Safety in expert team
    - Relief at surviving
- Postpartum
  - ‘It’s not all over when you go home’

- Bartels, Horsch, Cooney et al., 2022; Bartels, Mulligan, Lalor et al., 2020

Baylor College of Medicine

Implications for Care: Perinatal Period and Beyond

- Early recognition of distress and symptomatology recommended at all stages of perinatal care.
- Integration of mental health services in care of women with PAS
  - Beginning at time of diagnosis and offered/available throughout care
- Consideration of the postnatal journey
  - Physical recovery, emotional impact of surviving a birth with risk for maternal mortality, uncontrolled pain, changing identity and irrevocable infertility; impact on relationships; challenges with care (antenatal vs. postpartum)
  - Fathers
    - Want mental health support
    - Want to be empowered to ask for help
    - Want dedicated time to be with birthing mother on day of delivery
- Ayalde, Epee-Bekima, Jansen et al., 2023; Bartels, Horsch, Cooney et al., et al., 2022; Goulding, Casey, Reed et al., 2022; Javadifar et al, 2023

Baylor College of Medicine

Mental Health Intervention in the Management of PAS

- Mental health intervention during antepartum
  - Foster hope and resilience toward potential outcomes, address negative cognitions and false beliefs about dx
  - Coping strategies and prepare for what to expect
    - Establish a mental health support for follow up care if needed
  - Psychopharmacology for moderate to severe symptoms
- Mental health intervention during intrapartum
  - Symptoms of re-experiencing addressed through Trauma Focused interventions, personal identity, loss, and posttraumatic growth.
  - Medical management including shared decision making as appropriate

Ayalde, Epee-Bekima, Jansen, 2023; Bartels, Horsch, Cooney et al., 2022; Bartels, Mulligan, Lalor et al., 2020; Einerson, Watt, Sartori et al., 2011

Baylor College of Medicine

Mental Health Intervention in the Management of PAS

Mental health interventions in postpartum

- Treatment of depressive and posttraumatic symptoms through model of Trauma Informed Care
- Coherence of multidisciplinary team
- Psychological flexibility reduces trauma symptoms in postpartum PTSD associated with PAS
- Intervention for mother-baby (e.g., Child-Parent Psychotherapy) given birth trauma

Ayalde, Epee-Bekima, Jansen, 2023; Erickson, Julian, Muzik, 2019; Flanagan, Troup, 2022; Sachdeva, Nagle, Gopalan et al., 2022;

Baylor College of Medicine

Diagnoses and Treatment of Perinatal PTSD

Baylor College of Medicine

Prevalence of Perinatal PTSD

Prevalence of PTSD @ 6 weeks post-partum 2-6%

- High risk perinatal population 15%

Prevalence of PTSD @ 6 months post-partum 1.5%

General pop. who develop PTSD after a trauma 20%

Grekin and O'Hara 2014

Risk Factors for P-PTSD

Maternal Risk Factors

- Pre-existing psychiatric condition
- Prior traumatic experiences - CSA
- Trait anxiety
- Nulliparity
- Unplanned pregnancy
- High risk pregnancy

L and D related Risk Factors:

Objective:

- Preterm delivery
- Emergency c-section
- Instrumental delivery
- Previous postpartum hemorrhage
- Postpartum hemoglobin <9 g/dl

Subjective:

- ✓ *Uncontrolled pain*
- ✓ *High level of fear for self or baby*
- ✓ *Perceived lack of control*
- ✓ *Perceived lack of support from partner and/or staff*

Baylor College of Medicine

Sentilhes et al. (2017):

Baylor College of Medicine

PTSD criteria: symptoms must be present for >1 month

*Acute Stress Disorder 3 days -1 month

A) Exposure to actual or **threatened death, serious injury or sexual violence**

- **To you or a loved one (such as the baby)**
- Repeated exposure to others' trauma (first responders, doctors, medical or social workers)

The person's response involves intense fear, helplessness, or horror

B) Intrusive symptoms

intrusive images of emergently being rushed to the operating room for CS or PPH

vaginal bleeding, crying of her baby, doctors faces, skin to skin

C) Avoidance

not attending appointments at the hospital where the birth took place

avoiding the infant

D) Negative cognitions

self-blame for a perinatal outcome

foreshortened future

E) Alterations in arousal and reactivity

- easy startling when the baby cries
- insomnia and anxiety that baby is not alive

C	Posttraumatic Stress Disorder (PC-PTSD-5)	Sometimes things happen to people that are unusually or especially frightening, horrible, or traumatic. For example: • A serious accident or fire • A physical or sexual assault or abuse • An earthquake or flood • A war • Seeing someone be killed or seriously injured • Having a loved one die through homicide or suicide

Have you ever experienced this kind of event? Please circle the response that indicates your answer:	0 **NO**	1 **YES**
If NO, you are finished. Thank you for completing this survey! If YES, please continue: *If NO, score is 0*		
In the past month, have you…		
have had nightmares about the event(s) or thought about the event(s) when you did not want to?	**0 NO**	**1 YES**
tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of	**0 NO**	**1 YES**
been constantly on guard, watchful, or easily startled?	**0 NO**	**1 YES**
felt numb or detached from people, activities, or your surroundings?	**0 NO**	**1 YES**
felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may	**0 NO**	**1 YES**
Number of YES responses	______	

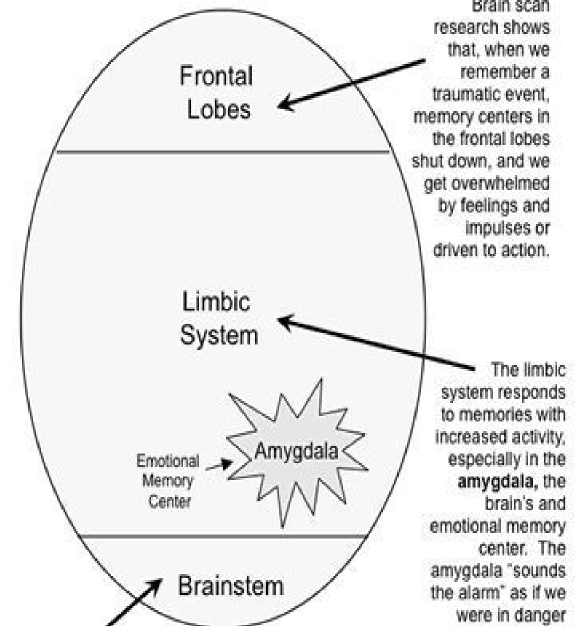
Scoring: If the first item response is NO, the score is 0. If the first item response is YES, sum the number of YES for the last five questions. A score ≥3 indicates a positive screen for PTSD. Use page 21, "PTSD" section to consider treatment options. Consider administering the PCL-C in the Supplemental Materials.

Done! Thank you for completing this questionnaire!

Baylor College of Medicine

Interventions after Perinatal Trauma

1. Acute: < 7 days. Low light, don't force debrief, educate.
2. Subacute: 2 weeks – 6 months
   a) PTSD screen at 2-6 week visit and referral if positive.
   b) Debriefing: Reintegration
      - Fill in details to help them process.
      - Interpersonal validation, empathy.
      - Educate on trauma response.
   c) Medication intervention
      - SSRI (adjunctive Prazosin, Propanolol)
3. Chronic: > 6 months
   - Exposure therapy and medication



Cirino, N Knapp Obstetrics and Gyn Survey 2019

Baylor College of Medicine

ACOG Caring for Patients Who Have Experienced Trauma Committee Opinion April 2021

- In addition to best practices for treating trauma, The Obstetrician Familiar with on incorporate practices of the trauma-informed model of care
- Recognize the effect of trauma on patients AND the health care team
- Implement Universal screening for current trauma and a history of trauma
- Trauma-informed Care:

  "a strengths-based service delivery approach that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both practitioners and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment"

Table 1. Four C's—Skills in Trauma-Informed Care

Calm	Pay attention to how you are feeling while caring for the patient. Breathe and calm yourself to help model and promote calmness for the patient and care for yourself.
Contain	Ask the level of detail of trauma history that will allow patient to maintain emotional and physical safety, respect the time frame of your interaction, and will allow you to offer patients further treatment.
Care	Remember to emphasize, for patient and yourself, good self-care and compassion.
Cope	Remember to emphasize, for patient and yourself, coping skills to build upon strength, resiliency, and hope.

Modified from Kimberg L, Wheeler M. Trauma and trauma-informed care. In: Gerber MR, editor. Trauma-informed healthcare approaches: a guide for primary care. Cham, Switzerland: Springer; 2019. p. 25–56.

Baylor College of Medicine

Perinatal Mental Health Resources

Meet our team

Our team has extensive experience evaluating, diagnosing and treating women with mental health issues related to the reproductive cycle. They are available to provide ongoing care during reproductive transitions or consultative services in partnership with their current clinician.

Nicole H. Cirino, MD
Reproductive Psychiatrist

Osarumen Nicole Doghor, MD
Reproductive Psychiatrist

Karen Louise Horst, MD
Reproductive Psychiatrist

Christina Treece, MD
Reproductive Psychiatrist

Megan Howard, MD, MPH
Reproductive Psychiatrist

Sindhura Vangala, MD
Reproductive Psychiatrist

Lisa Noll, PhD
Psychologist

Kimberly Samuels, PhD
Psychologist

Locations

The Women's Place offers virtual and in-person appointments. In-person appointments are available at the following locations:

Texas Medical Center
6651 Main St., Level 3, Suite F350
Houston, TX 77030
Phone: 832-826-5281

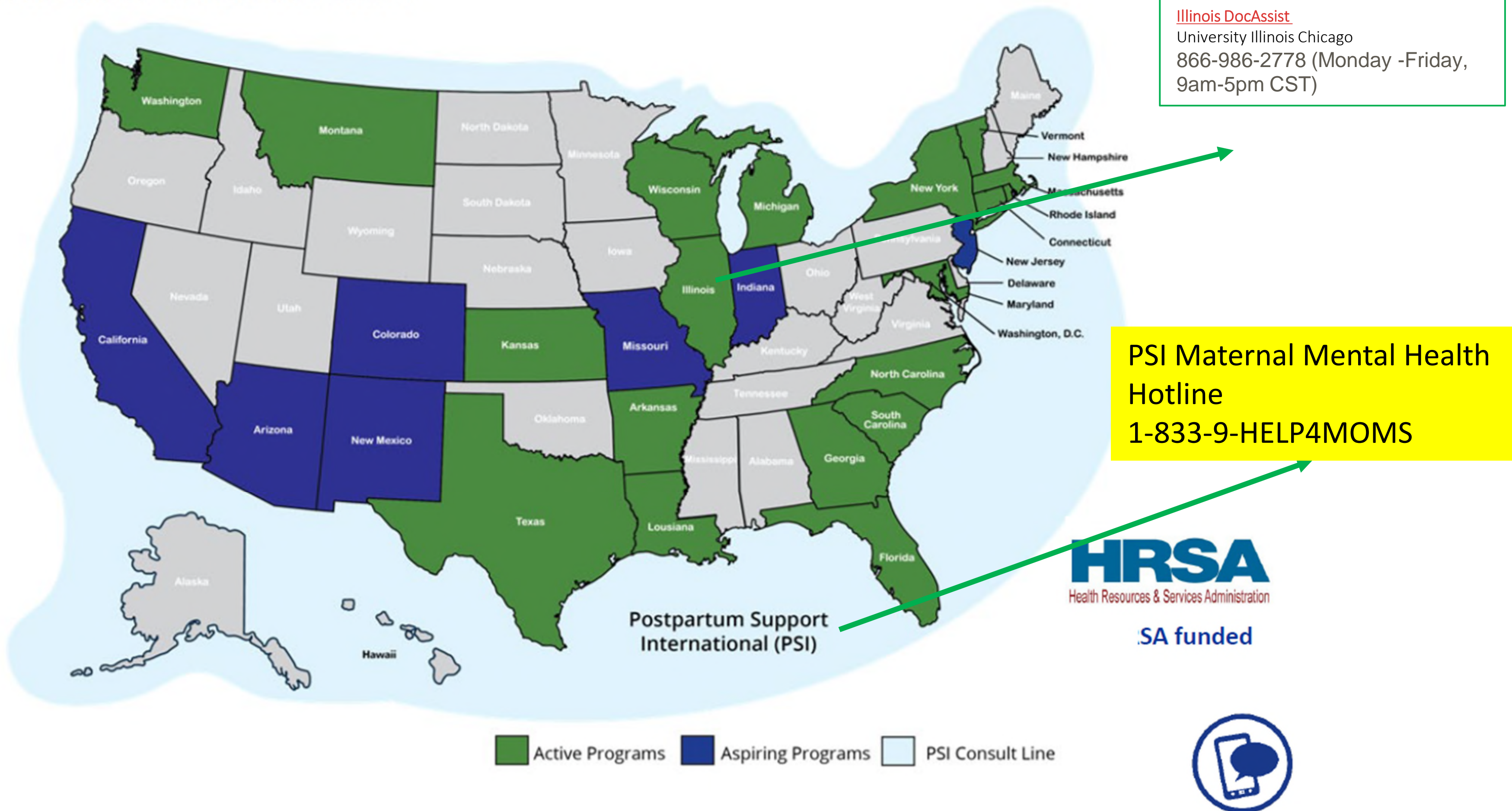
Pearland
9003 Broadway St.
Pearland, TX 77584
Phone: 281-412-4335

Northwest Houston
13215 Dotson Rd., Suite 360
Houston, TX 77070
Phone: 832-826-5281

Perinatal Psychiatry access network (Peripan)

- PeriPAN is available for any provider who sees women throughout their pregnancy journey including those:
  - Trying to become pregnant
  - Currently pregnant
  - Post-Partum up to one year
- Live from Monday to Friday from 8 AM to 5 PM
  - Voicemails are returned the next business day or at scheduled time
- We can help while your patient is waiting for an appointment, or if the patient wants to remain in your care

Perinatal Psychiatry Access Programs exist throughout the Country as state or healthcare-based entities including 1 National consult line



Baylor College of Medicine

Expansion of Peer Support/ Establishment of 1st Hotline – Postpartum Support International

postpartum.net

National Maternal Mental Health Hotline

1-833-943-5746 (1-833-9-HELP4MOMS)

Leer en español | Frequently Asked Questions | Download Promotional Materials

24/7, Free, Confidential Hotline for Pregnant and New Moms in English and Spanish

The National Maternal Mental Health Hotline can help. Call or text 1-833-943-5746 (1-833-9-HELP4MOMS). TTY users can use a preferred relay service or dial 711 and then 1-833-943-5746.

Available Support Groups

Support for Perinatal (Pregnancy and Postpartum) Mood and Anxiety Disorders

- + Adoptive and Foster Parents Support for the Early Years
- + Bipolar Support for Perinatal (Pregnancy and Postpartum) Moms and Birthing People
- + Birth Moms Support Group
- + Black Moms Connect
- + Birth Trauma Support
- + Dad Support Group
- + Military Moms - Perinatal Mood Support Group
- + NICU Parents
- + Mental Health Support for Special Needs and Medically Fragile Parenting
- + Mindfulness for Pregnant and Postpartum Parents
- + Perinatal (Pregnancy & Postpartum) Mood Support for Moms
- + Perinatal (Pregnancy & Postpartum) OCD Support for Moms
- + Perinatal Support for Latinx Moms and Birthing People
- + Perinatal Support for South Asian Moms (Formerly Desi Chaat)
- + Postpartum Psychosis (PPP) Support for Moms
- + Pregnancy Mood Support Group
- + Pregnant and Postpartum Parents of Multiples
- + Queer & Trans Parent Support Group
- + Support for Parents of One to Four Year Old Children
- + Support for Parents of High Needs Babies

Support for Pregnancy and Infant Loss & Fertility Challenges

- + Black Moms in Loss Support Group

Baylor College of Medicine

Perinatal PTSD Resources:

Traumatic Childbirth: Cheryl Tatano Beck

Trauma and Recovery: Herman
The Body Keeps the Score: Dessel Van Der Kolk

Resources for patients:

1. Trauma and Birth Stress Resources: http://www.tabs.org.nz/
2. Solace for Mothers: http://www.solaceformothers.org
3. Online Support Groups: http://www.postpartum.net/psi-online-support-meetings/