

Perinatal Mental Health



Lauren Gimbel, MD MSCI
Assistant Professor, Obstetrics & Gynecology
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ABOUT ME

- Obstetrician and Gynecologist at the University of Utah
- Research focus on Perinatal Mental Health
- Obstetrics lead building perinatal mental health program at U of Utah/HMHI
- Medical Lead Utah Department of Health and Human Services AIM Perinatal Mental Health

Lauren.Gimbel@hsc.utah.edu

OBJECTIVES

- Prevalence
- Presentation
- Screening
- Diagnosis
- Treatment
- Resources

NO DISCLOSURES

Stay Calm



DEFINITION

Perinatal Mental Health

Preconception
Pregnancy
Postpartum = up to 1 year after birth

Depression
Anxiety
Bipolar disorder
PTSD
OCD
Schizoaffective, Schizophrenia
Borderline personality disorder
Postpartum psychosis
Eating disorders
Substance abuse

DEFINITION

Perinatal Mood and Anxiety Disorders (PMAD): Mood and anxiety disorders during pregnancy or postpartum

Postpartum: includes up to 1 year postpartum

PREVALENCE

- Perinatal depression: 10-15%
- Perinatal anxiety: up to 20%
- Up to ½ million cases per year



Infographic: Policy center for maternal mental health <https://www.2020mom.org/press-releases>

NON BIRTHING PARENT

- Postpartum depression up to 10% of fathers
 - 3-6 months postpartum
 - Increased risk of maternal depression

Turn On the Lights

Song by Wade Bowen

Overview

Videos

Lyrics



Photo: PSI Utah Help for Dads

<https://www.postpartum.net/get-help/help-for-dads/#:~:text=Postpartum%20Mental%20Health%20is%20a%20Men's%20Issue&text=One%20in%20ten%20dads%20gets,or%20the%20first%20year%20postpartum..> Wade Bowen google search

https://www.google.com/search?q=wade+bowen+turn+on+the+lights&oeq=wade+bowen+turn+on+the+lights&gs_lcrp=EgzjaHJvbWUqDggAEEUYJxg7GIAEGIoFMg4lABBFgcCYOxiABBiKBTIHCAEQABiABDIKCAIQ2UjUAMABSkCAAMQlJUAHABUMCAQGAHIDGIAEGIoFMgcIBRAAGIAEMgYIBhBFGD0yBggHEEUYPdIBCDMwOTFqMG00qAIAAsAIA&sourceid=chrome&ie=UTF-8

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UNTREATED

- Preterm birth, poor prenatal care, substance abuse, less likely to breastfeed, postpartum depression, newborn's own ability to regulate emotions and stress

UNTREATED EFFECT ON INFANT

- Toxic stress on infant
- Compromises bonding and attachment
- Discontinuation of breastfeeding
- Infant sleep
- Less likely to follow anticipatory guidelines and preventative health practices for the child
- Difficulty managing chronic health conditions in young child
- Overuse of healthcare facilities with somatic symptoms
- Child abuse and neglect, family dysfunction
- Cortisol levels in preschoolers
- Child can have poor self-control, peer relationships, school problems, aggression
- Childhood and adolescences: attachment disorders, behavioral problems, depression and other mood disorders
- Early brain development

PMAD

Mood and anxiety disorders are treatable!



In 1 year Obstetrician visits
10-14 prenatal visits
1-2 postpartum visits



In 1 year Pediatric visits
0-1 prenatal visits
8-10 pediatric visits

HOW GOOD ARE WE?

- Screening
 - 50-98% in obstetrics settings
 - 30-50% in pediatric settings
- Surveys
 - Important
 - Responsibility
 - Do not feel confident

HOW GOOD ARE WE?

“I feel I’ve had the appropriate training to treat depression.”

LaRocco-Cockburn A, Melville J, Bell M, Katon W. Depression screening attitudes and practices among obstetrician-gynecologists. *Obstet Gynecol.* 2003;101(5 Pt 1):892-898.

BARRIERS

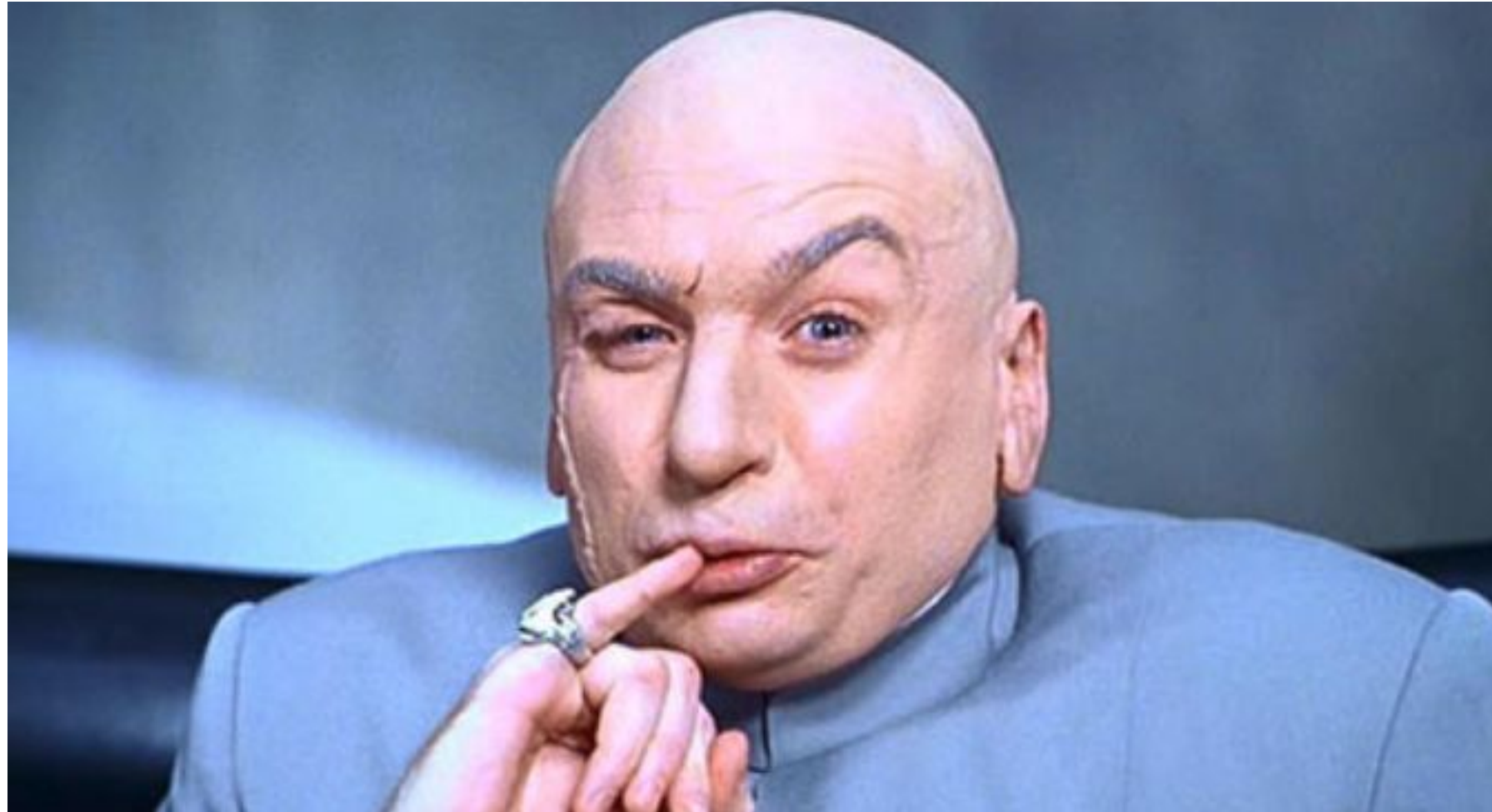


Photo: <https://robertkaplinsky.com/work/dr-evil/>

WHAT DO PATIENTS WANT?

- Historical pressure positive experience
- Trust, avoid judgment
- Receptive to mental health advice

Source: Sleath B, West S, Tudor G, Perreira K, King V, Morrissey J. Ethnicity and prenatal depression: women's experiences and perspectives on communicating about their emotions and feelings during pregnancy. *Patient Educ Couns.* 2005;58:35-40. doi: 10.1016/j.pec.2004.03.019. Goodman JH. Women's attitudes, preferences, and perceived barriers to treatment for perinatal depression. *Birth.* 2009;36:60-9. doi: 10.1111/j.1523-536X.2008.00296.x. Heneghan AM, Mercer M, DeLeone NL. Will mothers discuss parenting stress and depressive symptoms with their child's pediatrician? *Pediatrics.* Mar 2004;113(3 Pt 1):460-7. doi:10.1542/peds.113.3.460

SCREENING

ACOG Formal Recommendations
screen for perinatal depression **and** anxiety at the
initial prenatal visit, **later** in pregnancy, and at
postpartum visits

SCREENING

AAP Formal Recommendations

screen for postpartum depression at the well-child visits at **1, 2, 4 and 6 months** of age

consider screening non-birthing parent at 6 months

SCREENING TOOLS

– Depression

- Edinburgh postnatal depression scale (**EPDS**)
 - Positive screening >10
 - Suicidal ideation: question #10
- Patient health questionnaire-9 (**PHQ-9**)
 - Positive screening >10
 - Suicidal ideation: question #9

– Anxiety

- Generalized Anxiety Disorder-7 (**GAD-7**)

WHEN DO THESE DISORDERS PRESENT?

Onset Timing, Thoughts of Self-harm, and Diagnoses in Postpartum Women With Screen-Positive Depression Findings

Katherine L. Wisner, MD, MS; Dorothy K. Y. Sit, MD; Mary C. McShea, MS; David M. Rizzo, MSW; Rebecca A. Zoretich, MEd; Carolyn L. Hughes, MSW; Heather F. Eng, BS; James F. Luther, MA; Stephen R. Wisniewski, PhD; Michelle L. Costantino, MHA; Andrea L. Confer, BA; Eydie L. Moses-Kolko, MD; Christopher S. Famy, MD; Barbara H. Hanusa, PhD

Source: Wisner KL, Sit DKY, McShea MC, et al. Onset Timing, Thoughts of Self-harm, and Diagnoses in Postpartum Women With Screen-Positive Depression Findings. *JAMA Psychiatry*. 2013;70(5):490.

WHEN DO THESE DISORDERS PRESENT?

1. Postpartum 40%
2. During pregnancy 33%
3. Before pregnancy 27%

WHAT ARE DIAGNOSES?

- Most common primary diagnosis
 - Unipolar depressive disorder 69%
 - Bipolar disorder 23%
 - Anxiety disorders 6%
 - Substance use disorders 1%
 - Other disorders 1%
 - No diagnosis 2%

WHAT ARE DIAGNOSES?

- Co-morbid disorders common
 - 2/3 of women with depression had co-morbid disorder
 - Most commonly anxiety

RISK FACTORS

- **History of mental health disorder**
- Family history
- Traumatic birth or infant admission to NICU or preterm birth
- Stressful life events
- Lack of social support
- Breastfeeding difficulty
- Unintended pregnancy
- Trauma history (i.e. domestic violence)
- Lower income or education, Medicaid insurance
- Relationship status (single or marital discord)
- LGBTQI Community

HOW DO PATIENTS PRESENT?

- Similar to non-puerperal major depressive episodes
- Irritability, agitation, anger, hypervigilance...
- Anxiety often prominent
- Co-morbid disorders
- Somatic symptoms often overlap with normal

DIAGNOSIS

- DSM-5 Criteria
- Depression
 - SIG-E-CAPS



DIAGNOSIS

- Rule out and refer
 - Bipolar (hypomania/mania)
 - Psychosis
 - Safety

- Comorbid condition
 - Anxiety

Euthymia



MAINTAIN VS DISCONTINUE

Relapse of Major Depression During Pregnancy in Women Who Maintain or Discontinue Antidepressant Treatment

Lee S. Cohen, MD

Lori L. Altshuler, MD

Bernard L. Harlow, PhD

Ruta Nonacs, MD, PhD

D. Jeffrey Newport, MD

Adele C. Viguera, MD

Rita Suri, MD

Vivien K. Burt, MD, PhD

Victoria Hendrick, MD

Alison M. Reminick, BA

Ada Loughead, BA

Allison F. Vitonis, BA

Zachary N. Stowe, MD

Context Pregnancy has historically been described as a time of emotional well-being, providing “protection” against psychiatric disorder. However, systematic delineation of risk of relapse in women who maintain or discontinue pharmacological treatment during pregnancy is necessary.

Objective To describe risk of relapse in pregnant women who discontinued antidepressant medication proximate to conception compared with those who maintained treatment with these medications.

Design, Setting, and Patients A prospective naturalistic investigation using longitudinal psychiatric assessments on a monthly basis across pregnancy; a survival analysis was conducted to determine time to relapse of depression during pregnancy. A total of 201 pregnant women were enrolled between March 1999 and April 2003 from 3 centers with specific expertise in the treatment of psychiatric illness during pregnancy. The cohort of women was recruited from (1) within the hospital clinics, (2) self-referral via advertisements and community outreach detailing the study, and (3) direct referrals from the community. Participants were considered eligible if they (1) had a history of major depression prior to pregnancy, (2) were less than 16 weeks' gestation, (3) were euthymic for at least 3 months prior to their last menstrual period, and

Source: Cohen LS, Altshuler LL, Harlow BL, et al. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*. 2006;295(5):499-507.

MAINTAIN VS DISCONTINUE

Table 3. Relapse of Major Depression During Pregnancy

Relapse Status	All Women	Medication Status			
		Maintained	Increased	Decreased	Discontinued
No relapse	115 (57.2)	61 (74.4)	11 (55.0)	22 (64.7)	21 (32.3)
Relapse by trimester					
All	86 (42.8)	21 (25.6)	9 (45.0)	12 (35.3)	44 (67.7)
First	44 (51.2)	11 (52.4)	7 (77.8)	5 (41.7)	21 (47.7)
Second	31 (36.0)	9 (42.9)	2 (22.2)	3 (25.0)	19 (43.2)
Third	11 (12.8)	1 (4.8)	0 (0.0)	4 (33.3)	4 (9.1)

Source: Cohen LS, Altshuler LL, Harlow BL, et al. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*. 2006;295(5):499-507.

PMAD TREATMENT

Based on severity

- Mild: lifestyle + psychotherapy
 - Lifestyle: **sleep**, exercise, healthy eating, social
- Moderate/Severe: above + medications

HEALTH EQUITY SCREENING AND TREATMENT

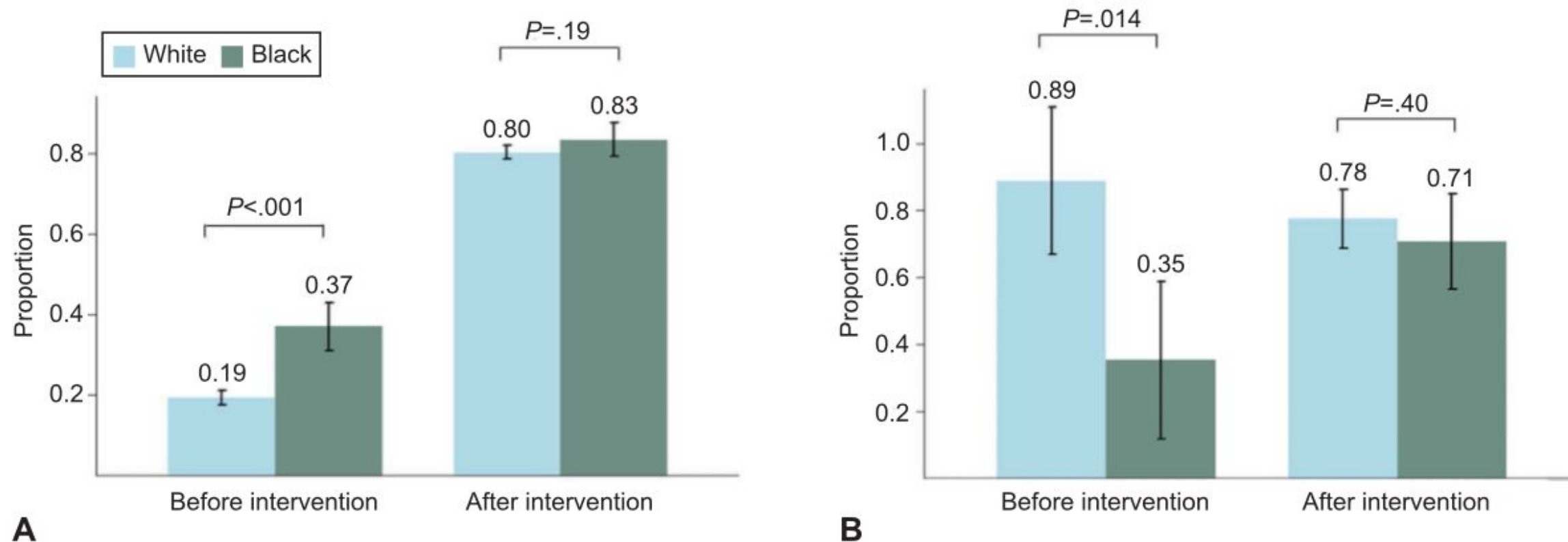


Fig. 2. Antenatal depression screening and treatment recommendation stratified by implementation epoch and race. **A.** Antenatal depression screen completion. **B.** Antenatal depression treatment recommendation. *Error bars represent 95% CIs. Snowber. Collaborative Care and Depression Disparities. Obstet Gynecol 2022.*

MATERNAL MORTALITY REVIEW COMMITTEES

- Suicide and overdose are the leading cause of preventable maternal death during pregnancy and the 1 year postpartum
- Mental health conditions are the leading cause of pregnancy-related death during pregnancy and the 1 year postpartum
 - Mental health conditions = deaths of suicide, overdose or poisoning related to substance use disorder, and other deaths determined to be related to a mental health condition including substance use disorder



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

Source: Trost SL, Beauregard JL, Smoots AN, Ko JY, Haight SC, Moore Simas TA, et al. Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008-17. Health Aff (Millwood). 2021;40:1551-9. doi: 10.1377/hlthaff.2021.00615. Trost SL, BJ, Njie F, et al. Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017-2019. Atlanta, GA; 2022.

MATERNAL MORTALITY REVIEW COMMITTEES

EXHIBIT 1

Characteristics of pregnancy-related deaths with a known cause of death in 14 US states, 2008-17

Characteristics	All known causes of death (N = 421)		Attributable to causes other than mental health conditions (n = 375)		Attributable to mental health conditions (n = 46)		p value*
	Number	Percent	Number	Percent	Number	Percent	
Mother's race/ethnicity							<0.001
Hispanic	33	8	30	8	3	7	
Non-Hispanic Black	158	38	157	43	1	2	
Non-Hispanic White	202	49	164	45	38	86	
Non-Hispanic other	18	4	16	4	2	5	
Missing	10	— ^b	8	— ^b	2	— ^b	
Mother's age, years							0.51
15-24	102	25	88	24	14	31	
25-34	205	50	183	50	22	49	
35 or older	103	25	94	26	9	20	
Missing	11	— ^b	10	— ^b	1	— ^b	
Mother's educational attainment							0.28
High school or less	217	54	193	54	24	52	
Some college	78	19	68	19	10	22	
Associate's or bachelor's degree	71	18	60	17	11	24	
Advanced degree	35	9	34	10	1	2	
Missing	20	— ^b	20	— ^b	0	— ^b	
Covered by Medicaid during prenatal care or at time of delivery							
Yes	191	57	166	56	25	63	
No	143	43	128	44	15	38	
Missing	87	— ^b	81	— ^b	6	— ^b	
Preventability of mother's death							<0.001
Preventable	226	68	189	64	37	100	
Not preventable	106	32	106	36	0	0	
Missing	89	— ^b	80	— ^b	9	— ^b	
Timing of mother's death in relation to pregnancy							<0.001
During pregnancy	139	33	130	35	9	20	
Within 42 days postpartum	183	44	175	47	8	17	
43-365 days postpartum	95	23	66	18	29	63	
Missing	4	— ^b	4	— ^b	0	— ^b	

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

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

Attributable to mental health conditions (n = 46)

	Number	Percent	p value*
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Timing of mother's death in relation to pregnancy

 During pregnancy

 Within 42 days postpartum

 43-365 days postpartum

 Missing

During pregnancy	9	20
Within 42 days postpartum	8	17
43-365 days postpartum	29	63
Missing	0	— ^b

<0.001

<0.001

Source: Trost SL, Beauregard JL, Smoots AN, Ko JY, Haight SC, Moore Simas TA, et al. Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008-17. Health Aff (Millwood). 2021;40:1551-9. doi: 10.1377/hlthaff.2021.00615.

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MATERNAL MORTALITY REVIEW COMMITTEES

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



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

Table 3. Distribution of pregnancy-related deaths by timing of death in relation to pregnancy, data from Maternal Mortality Review Committees in 36 US states, 2017–2019*

	N	%
During pregnancy	216	21.6
Day of delivery	132	13.2
1–6 days postpartum	120	12.0
7–42 days postpartum	233	23.3
43–365 days postpartum	301	30.0

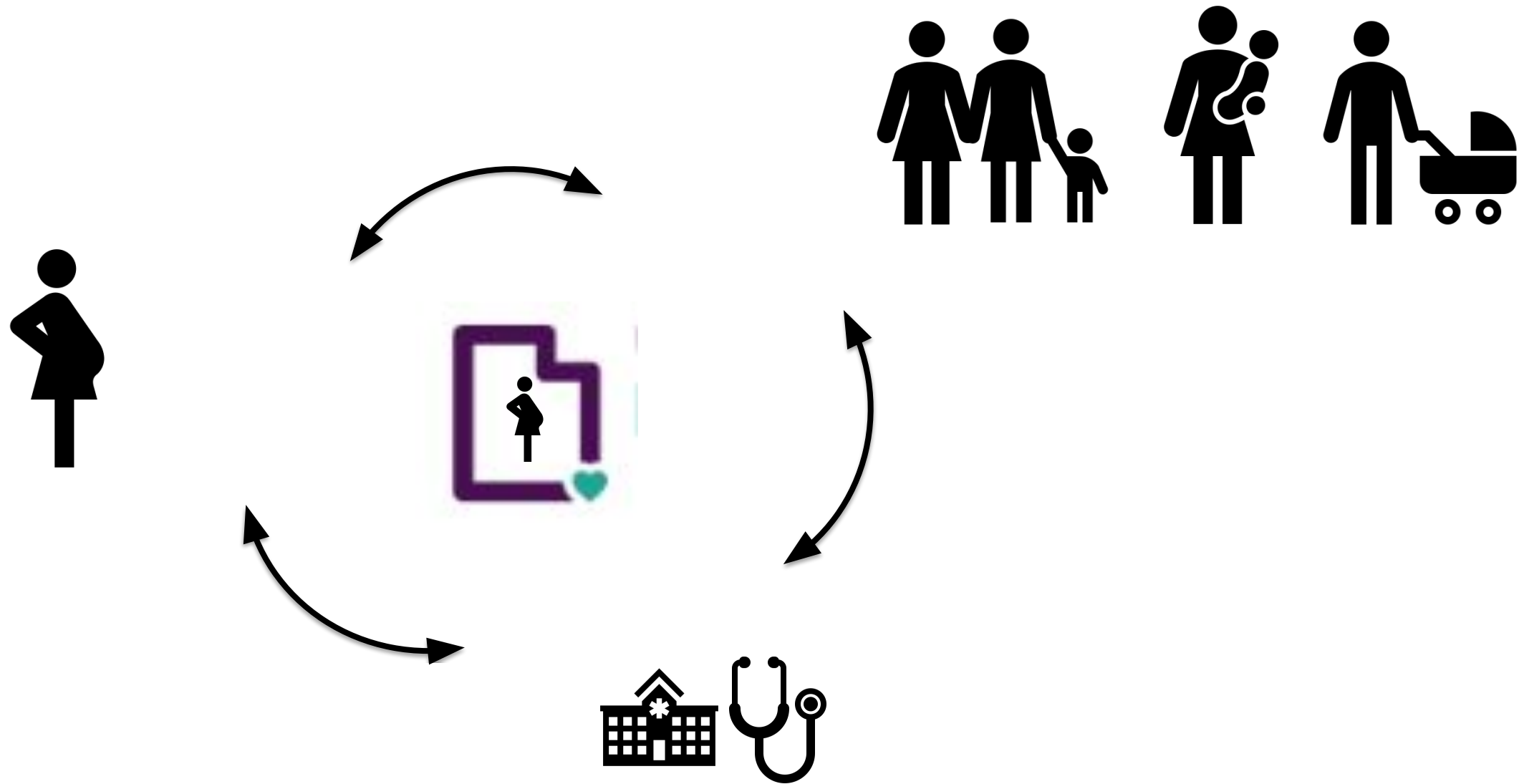
*Specific timing information is missing (n=2) or *unknown* (n=14) for 16 (1.6%) pregnancy-related deaths.

Among pregnancy-related deaths with information on timing,
53% occurred 7–365 days postpartum.

ILLNESS COURSE

- Majority of women improve
- Around 30% still meet criteria (4m-3y)
- Risk of recurrence

TEAM BASED APPROACH



ACOG CLINICAL PRACTICE GUIDELINES



CLINICAL PRACTICE GUIDELINE

NUMBER 4

JUNE 2023

June 2023

REPLACES COMMITTEE OPINION 757, NOVEMBER 2018

Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum



CLINICAL PRACTICE GUIDELINE

NUMBER 5

JUNE 2023

REPLACES PRACTICE BULLETIN NUMBER 92, APRIL 2008

Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum

Source: American College of Obstetrics and Gynecologists. Treatment and management of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 5. 2023.

<https://pubmed.ncbi.nlm.nih.gov/37486661/> American College of Obstetrics and Gynecologists. Screening and diagnosis of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 4. 2023.

<https://pubmed.ncbi.nlm.nih.gov/37486660/>

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WHAT WE ARE TELLING OB-GYNS

- Screening recommendations
- Diagnosis
- Treatment
 - Type of treatment based on severity
 - Conservative, psychotherapy, pharmacologic
 - Risk untreated illness vs risk of a medication
 - First line medication is a selective serotonin reuptake inhibitor (SSRI)
 - Breastfeeding

ACOG CLINICAL PRACTICE GUIDELINES

First-line Treatment Options for Mild, Moderate, or Severe Depression, Anxiety Disorder, and PTSD

Table 1 Medication	sertraline*	fluoxetine	citalopram**	escitalopram**
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- Psychoeducation for
 - Sleep
 - Exercise
 - Balanced nutrition

Safety and Efficacy of Pharmacologic Interventions for Postpartum Psychosis

Postpartum psychosis is a psychiatric emergency. Treatment within the scope of obstetricians, assessment, recommendations, by a psychiatrist, include sedating agents such as olanzapine or haloperidol with benzodiazepines such as lorazepam. If used, benztropine or diphenhydramine is administered to prevent extrapyramidal symptoms. (GOOD PRACTICE POINT)

ZURANOLONE- ACOG PRACTICE ADVISORY

- Depression onset in third trimester or within 4w postpartum
- Patient is within 12 months postpartum
- FDA no severity but studies severe depression
- 50mg in evening with fatty meal for 14 days
 - CNS depressant effects: reduce to 40mg in evening
 - Severe renal or hepatic impairment: initiate at 30mg
 - CYP3A4 inhibitors: may need dose adjustments; CYP3A4 inducers should be avoided
- * • Can use alone or as adjunct to other oral antidepressants like SSRIs or SNRIs

(loading gun) vs. non-suicidal self-injurious actions.

Source: American College of Obstetrics and Gynecologists. Treatment and management of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 5. 2023. <https://pubmed.ncbi.nlm.nih.gov/37486661/> American College of Obstetrics and Gynecologists. Screening and diagnosis of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 4. 2023. <https://pubmed.ncbi.nlm.nih.gov/37486660/> ACOG Practice Advisory Zuranolone

PROVIDER ROLE

- Screening
- Diagnosing
 - Assess for bipolar disorder, psychosis and safety
 - Comorbid condition like anxiety
- Treatment
 - Based on severity
 - All: Conservative recommendations: sleep, getting outside, exercise, healthy eating
 - Mild: Psychotherapy
 - Moderate to Severe: Psychotherapy plus Medications
- Refer when indicated

HEALTHCARE SYSTEM ROLE

- Screening
 - Universal
- Diagnosing
 - Resources for providers
 - Resources for patients
- Treatment
 - Resources for conservative recommendations
 - Resources for providers
 - Resources for patients
 - Models of care
- Refer when indicated
 - Models of care

OUR ROLE

- Destigmatize, advocate
- Screen, diagnose, treat
- Refer when appropriate

HOW TO DO THIS?

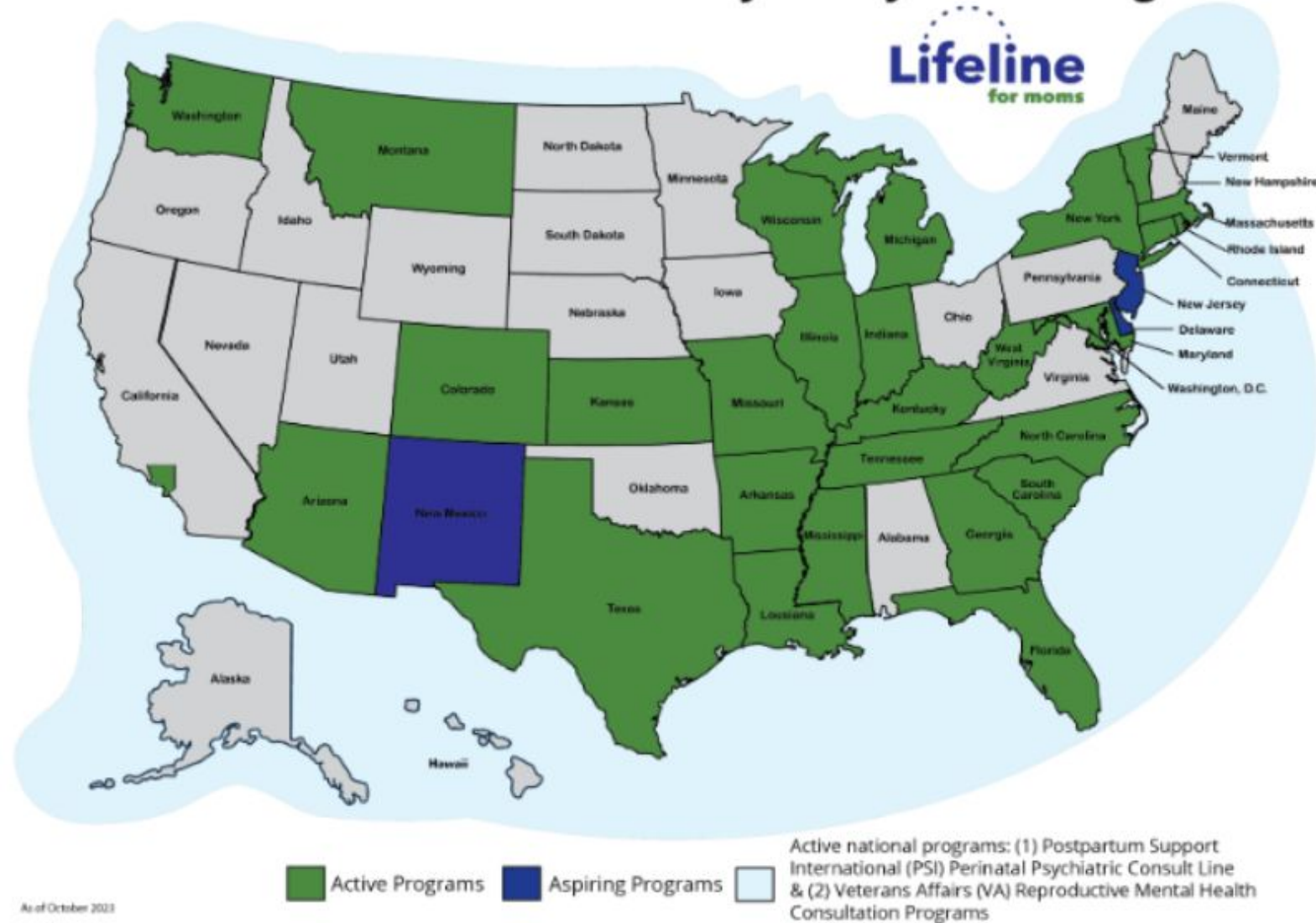


PERINATAL PSYCHIATRY ACCESS PROGRAMS

- Perinatal Mental Health
 - State Specific Psychiatry Access Line
 - PSI Access Program
 - For states that don't have a Psychiatry Access Program

ACCESS PROGRAMS

National Network of Perinatal Psychiatry Access Programs



If your state doesn't have a Perinatal Psychiatry Access Program yet and you are interested in consulting with a perinatal psychiatrist, you can contact the [Postpartum Support International \(PSI\) Perinatal Psychiatric Consult Line](https://www.postpartum.net/professionals/perinatal-psychiatric-consult-line/) online or by calling 877-944-4773.

<https://www.postpartum.net/professionals/perinatal-psychiatric-consult-line/>

NEW RESOURCES

- PMH AIM Bundle
- ACOG Perinatal Mental Health Tool Kit
 - Guide integrate mental health care into OB practice
 - eModules training (free, CME credit)

— eModule —

Addressing Perinatal Mental Health
Conditions in Obstetric Settings

NEED HELP?

- Perinatal Psychiatry Access Programs or PSI Access Program (877-499-4773)
- Medication resources
 - MotherToBaby
 - Reprotox
 - LactMed Drugs and Database
- ACOG Clinical Practice Guidelines - 2023
 - Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum
 - Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum
- **Utah Department of Health and Human Services**
 - <https://mihp.utah.gov/maternal-mental-health>
- Refer/consult

WANT MORE TRAINING?

- Postpartum support international (PSI)
 - certification in perinatal mental health
 - frontline provider training
 - www.postpartum.net/professionals/trainings-events
- ACOG eModules and Provider Toolkit
- MGH Center for Women's Mental Health
 - Womensmentahealth.org
- Pregnancy echo U of Utah ObGyn
 - Pharmacologic treatment of depression 6/2022, anxiety 10/2022, sleeping 4/2023, updates 11/2023

PATIENT RESOURCES

- Utah Crisis Line: 988
- HHS Maternal Health Hotline 24/7: 1-833-9-HELP4MOMS
- PSI Helpline for families 1-800-944-4773 (English and Spanish)
 - PSI Dad resources www.postpartumdads.org
 - PSI smart patients forum or weekly chat with expert through PSI
 - PSI social media
 - PSI online support groups
- Utah PSI Chapter Website
 - <https://www.psiutah.org/>
- **Utah Department of Health and Human Services**
 - <https://mihp.utah.gov/maternal-mental-health>
 - [Maternalmentalhealth.Utah.gov](https://maternalmentalhealth.Utah.gov)
- Group counseling U of Utah (via Zoom 7-8PM)
 - maternalmentalhealth@hsc.utah.edu

REFERENCES

- American College of Obstetrics and Gynecologists. Screening and diagnosis of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 4. 2023.<https://pubmed.ncbi.nlm.nih.gov/37486660/>
- American College of Obstetrics and Gynecologists. Treatment and management of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 5. 2023.<https://pubmed.ncbi.nlm.nih.gov/37486661/>
- American College of Obstetricians and Gynecologists. ACOG Practice Advisory Zuranolone. 2023.
- Berkowitz, C. Maternal Perinatal Mood and Anxiety Disorders: The Role of the Pediatrician. Berkowitz's Pediatrics A Primary Care Approach, American Academy of Pediatrics, 2020.
- Borchers et al Prenatal and Postnatal Depressive Symptoms, Infant White Matter, and Toddler Behavioral Problems. *J Affect Disorder* 2021.
- Byatt N, Masters GA, Bergman AL, Moore Simas TA. Screening for Mental Health and Substance Use Disorders in Obstetric Settings. *Current Psychiatry Reports*. 2020;22(11).
- Cohen LS, Altshuler LL, Harlow BL, et al. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*. 2006;295(5):499-507.
- Cox E (eds) Women's Mood Disorders A Clinician's Guide to Perinatal Psychiatry. 2021. Springer.
- Earls MF, Yogman MW, Mattson G, et al; AAP Committee on Psychosocial Aspects of Child and Family Health. Incorporating Recognition and Management of Perinatal Depression Into Pediatric Practice. *Pediatrics*. 2019;143(1):e20183259
- Goodman JH. Postpartum depression beyond the early postpartum period. *J Obstet Gynecol Neonatal Nurs*. 2004;33(4):410-420
- Goodman JH. Women's attitudes, preferences, and perceived barriers to treatment for perinatal depression. *Birth*. 2009;36:60-9. doi: 10.1111/j.1523-536X.2008.00296.x.

REFERENCES

- Heneghan AM, Mercer M, DeLeone NL. Will mothers discuss parenting stress and depressive symptoms with their child's pediatrician? *Pediatrics*. Mar 2004;113(3 Pt 1):460-7. doi:10.1542/peds.113.3.460
- Howard LM, Molyneaux E, Dennis CL, Rochat T, Stein A, Milgrom J. Non-psychotic mental disorders in the perinatal period. *Lancet*. 2014;384(9956):1775-1788.
- Jarde A, Morais M, Kingston D, et al. Neonatal Outcomes in Women With Untreated Antenatal Depression Compared With Women Without Depression. *JAMA Psychiatry*. 2016;73(8):826.
- LaRocco-Cockburn A, Melville J, Bell M, Katon W. Depression screening attitudes and practices among obstetrician-gynecologists. *Obstet Gynecol*. 2003;101(5 Pt 1):892-898.
- Leiferman JA, Dauber SE, Heisler K, Paulson JF. Primary care physicians' beliefs and practices toward maternal depression. *J Womens Health (Larchmt)*. 2008;17(7):1143-1150.
- Lifeline for Moms- National Network Perinatal Psychiatry Access Programs
- Lucy A. Hutner, M.D., Lisa A. Catapano, M.D., Ph.D., Sarah M. Nagle-Yang, M.D., Katherine E. Williams, M.D., Lauren M. Osborne, M.D., <https://ebooks.appi.org/epubreader/textbook-womens-reproductive-mental-health>
- Postpartum Depression: Action Towards C, Treatment C. Heterogeneity of postpartum depression: a latent class analysis. *Lancet Psychiatry*. 2015;2(1):59-67.
- Postpartum Support International- Psychiatry Consult Line
- Putnam KT, Wilcox M, Robertson-Blackmore E, et al. Clinical phenotypes of perinatal depression and time of symptom onset: analysis of data from an international consortium. *Lancet Psychiatry*. 2017;4(6):477-485.
- Sleath B, West S, Tudor G, Perreira K, King V, Morrissey J. Ethnicity and prenatal depression: women's experiences and perspectives on communicating about their emotions and feelings during pregnancy. *Patient Educ Couns*. 2005;58:35-40. doi: 10.1016/j.pec.2004.03.019.

REFERENCES

- Snowber et al, Associationa Between Implementation of the Collaborative Care Model and Disparities in Perinatal Depression Care, 2022, Obstetrics and Gynecology
- Trost SL BJ, Njie F, et al. Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017–2019. Atlanta, GA; 2022.
- Trost SL, Beauregard JL, Smoots AN, Ko JY, Haight SC, Moore Simas TA, et al. Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008-17. *Health Aff (Millwood)*. 2021;40:1551-9. doi: 10.1377/hlthaff.2021.00615.
- Viguera AC, Tondo L, Koukopoulos AE, Reginaldi D, Lepri B, Baldessarini RJ. Episodes of Mood Disorders in 2,252 Pregnancies and Postpartum Periods. *Am J Psychiatry*. 2011;168(11):1179-1185.
- Vliegen N, Casalin S, Luyten P. The course of postpartum depression: a review of longitudinal studies. *Harv Rev Psychiatry*. 2014;22(1):1-22.
- Wisner KL, Sit DKY, McShea MC, et al. Onset Timing, Thoughts of Self-harm, and Diagnoses in Postpartum Women With Screen-Positive Depression Findings. *JAMA Psychiatry*. 2013;70(5):490.
- Photos/Infographics: AIM Maternal Mental Health Bundle- Perinatal Mental Health. State of Utah from Utah Department of Health and Human Services. UWNQC. Policy center for maternal mental health <https://www.2020mom.org/press-releases>. PSI Utah Help for Dads <https://www.postpartum.net/gethelphelpfordads#:~:text=Postpartum%20Mental%20Health%20is%20a%20Men's%20Iss ue&text=One%20in%20ten%20dads%20gets,or%20the%20first%20year%20postpartum>. Wade Bowen google search https://www.google.com/search?q=wade+bowen+turn+on+the+lights&oq=wade+bowen+turn+on+the+lights&gs_lcrp=EgZjaHJvbWUqDggAEEUYJxg7GIAEGIoFMg4IABBFGCcYOxiABBiKBTIHCAEQABiABDIKCAIQLhjUAhiABDIKCAMQLhjUAhiABDIMCAQQLhhDGIAEGIoFMgcIBRAAGIAEMgYIBhBFGD0yBggHEEUYPdIBCDMwOTFqMGo0qAIAAsAIA&sourceid=chrome&ie=UTF-8. <https://robertkaplinsky.com/work/dr-evil/>

QUESTIONS



UTAH DEPARTMENT OF HEALTH AND HUMAN SERVICES



ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH



Perinatal Mental Health Conditions

Morgan Harris: morganlh@Utah.gov
Lauren Gimbel: lauren.gimbel@hsc.Utah.edu