Maternal Mental Health Recommendations Report

NEW YORK STATE | Office of Mental Health

November 2025

Table of Contents

1. EXECUTIVE SUMMARY 1

1.1: Maternal Mental Health Workgroup Core Principles 2

2. MATERNAL MENTAL HEALTH WORKGROUP RECOMMENDATIONS 3

2.1: Recommendations 3

Project TEACH 3

Increased Focus on Maternal Mental Health and Substance Use Programming / Infrastructure 3

Collaborative Care Medicaid Program 3

Dyadic Care 4

Workforce Development. 4

Public Awareness & Education 4

Community Engagement 4

Child Welfare 4

Screening 5

Peer Support. 5

Doulas 5

Treatment & Care Coordination 5

Data & Quality Improvement 5

Coverage & Benefits 5

2.2: Considerations 6

2.3: Aspirations 10

3: BACKGROUND 12

3.1: Key Terms and Concepts 12

3.2: New York State Legislative History 17

3.3: New York State Maternal Mental Health Landscape 19

3.4: State and National Initiatives 20

3.4.1: *New York Medicaid* 20

3.4.2: *Workplace Benefits* 20

3.4.3: *Workforce Development* 20

3.4.4: *National Initiatives* 22

4: WORKGROUP FINDINGS 24

4.1: Underrepresented Populations and Risk Factors 24

4.1.1: *Risk Factors* 25

4.1.2: *Social Support* . . . 29
4.1.3: *Social Determinants of Health* . . . 29
4.1.4: *Lived Experience of Birthing Persons* . . . 31
4.1.5: *Epidemiology of Maternal Substance Use* . . . 34
4.1.6: *The Realistic Fear of Child Removal* . . . 35
4.2: Understanding Strategies to Improve Screening, Referrals, Prevention, and Treatment of Maternal Health Issues . . . 36
4.2.1: *Screening Guidelines & Venues* . . . 39
4.2.2: *Cultural Humility & Implicit Bias in Screening* . . . 40
4.2.3: *Referral Process* . . . 42
4.2.4: *Prevention* . . . 44
4.2.5: *Treatment* . . . 45
4.3: Evidence-Based Best Practices for Healthcare Providers & Public Health Systems . . . 50
4.4: Potential Private and Public Funding Models . . . 50
4.4.1: *Federal Funding* . . . 51
4.4.2: *Medicaid Reforms* . . . 51
5: CLOSING STATEMENT, CONTRIBUTIONS & ACKNOWLEDGEMENTS . . . 54
5.1: Closing Statement . . . 54
5.2: Contributions . . . 54
5.3: Acknowledgements . . . 54
6: APPENDIX . . . 55
6.1 Appendix 1: Maternal Mental Health Workgroup Methodology . . . 55
6.2 Appendix 2: NKI – OMH Maternal Mental Health Workgroup Systematic Literature Review . . . 63
6.3 Appendix 3: Programs, Policies, and Initiatives . . . 102
6.3.1: *Programs, Policies, and Initiatives Referenced in Report* . . . 102
6.3.2: *Initiatives from Other States* . . . 103
6.4 Appendix 4: Other Maternal Mental Health Related Reports . . . 106
6.5 Appendix 5: Bill Language . . . 107
6.6 Appendix 6: Works Cited . . . 110

List of Tables

TABLE 1: Key Terms and Concepts 12
TABLE 2: State Efforts to Recruit Behavioral Health Workforce Providers 21
TABLE 3: National Initiatives 23
TABLE 4: Underrepresented and Vulnerable Populations Identified by the Workgroup 24
TABLE 5: Maternal Mental Health Workgroup Methods and Members 55
TABLE 6: Maternal Mental Health Workgroup Meeting Summaries 59
TABLE 7: Programs, Policies, and Initiatives 102

List of Figures

FIGURE 1: Maternal Mental Health Workgroup Core Principles 2
FIGURE 2: NYS Maternal Mental Health History 18
FIGURE 3: NYS Pregnancy-Related Mortality Ratio by Race/Ethnicity, 2018-2020 19
FIGURE 4: Risk Factors That Impact PMADS Identified by the Workgroup 25
FIGURE 5: Social Determinents of Health 30
FIGURE 6: Barriers to Implementation of Universal PMAD Screening 37
FIGURE 7: States Raising Awareness Strategies for the Public & Providers 105

1. Executive Summary

This report is pursuant to Health and Mental Hygiene Part PP of the 2023-2024 enacted New York State (NYS) Budget, Chapter 57 of the laws of 2023 which mandated NYS Office of Mental Health (OMH) to convene an interdisciplinary Maternal Mental Health Workgroup to advise the State by studying and issuing recommendations related to maternal mental health, including perinatal and postpartum mood and anxiety disorders.

The Maternal Mental Health Workgroup members met over the course of a year to:

- Share their expertise and lived experience.
- Learn from subject matter experts in maternal mental health and substance use.
- Review the literature.
- Discuss the complex issues facing vulnerable and underrepresented birthing people in NYS.

> *"When I was struggling with severe postpartum depression and anxiety, I felt like I was drowning…and how desperately I wanted to be saved…I just needed someone to throw me a life preserver and pull me out of the water onto the shore."*
>
> *– Maternal Mental Health Workgroup Member*

The Maternal Mental Health Workgroup members collaboratively developed a set of core principles (see Figure 1) that served as the foundation for the recommendations (see Section 2). These core principles were created to ensure that the recommendations aligned with the Maternal Mental Health Workgroup's shared values around issues related to the mental health of birthing people. By grounding the recommendations in these core ideas, the Maternal Mental Health Workgroup aimed to offer a framework that could effectively and pragmatically promote systemic reforms and address key issues.

The Maternal Mental Health Workgroup examined vulnerable and underrepresented populations and the associated risk factors that put these populations most at risk for maternal mental health and substance use challenges. The Maternal Mental Health Workgroup identified strategies to improve screening, prevention, referrals, and treatment for these challenges. They also explored state and national initiatives, evidence-based, evidence-informed and promising practices for health care providers and the public health system, as well as potential public and private funding models to inform the recommendations developed.

The Maternal Mental Health Workgroup engaged the Nathan S. Kline Institute for Psychiatric Research (NKI) Division of Social Solutions and Services Research (SSSR), Center for Research on Cultural and Structural Equity in Behavioral Health (C-CASE) to systematically review white and gray literature and summarize the current state of knowledge regarding social and clinical risk factors for maternal mental health conditions, systemic discrimination, and culturally relevant interventions (see Appendix 2).

The recommendations from the Maternal Mental Health Workgroup, along with its findings, are being submitted via this report to the Governor, the Temporary President of the Senate, the Speaker of the Assembly, the Minority Leader of the Senate, and the Minority Leader of the Assembly.

1.1 Maternal Mental Health Workgroup Core Principles

FIGURE 1 - MATERNAL MENTAL HEALTH WORKGROUP CORE PRINCIPLES

Recognize the stigma surrounding maternal mental health and substance use challenges.
Improve the understanding that policies are needed that reinforce improved behavioral outcomes for birthing persons with maternal mental health and substance use challenges.
Collaborate with birthing persons, families, community and faith-based organizations, cultural groups, schools, healthcare providers, and community leaders to identify maternal mental health and substance use needs, create programs that promote positive outcomes, elevate the voices of those with lived experiences, and adapt evidence-based practices to be culturally humble and responsive to the needs of the community.
Advocate for the alleviation of fear of child removal and child welfare involvement when people are interacting with the medical system and disclosing maternal mental health or substance use challenges.
Recognize that peers are often more trusted by birthing persons, especially peers who have lived experiences with maternal mental health and/or substance use conditions.
Focus on efforts to reduce inequities in prenatal and perinatal care that cause stress, pregnancy complications, and negative perinatal mental health outcomes due to race, ethnicity and socio-economic status.
Build trust with underrepresented and vulnerable communities, particularly the Black community, to undo generations of deeply rooted distrust in institutions and health care systems that provide maternal mental health and substance use services.
Encourage and promote the recruitment and development of a diverse, representative workforce to increase the capacity to screen and provide services that address maternal mental health and substance use challenges.
Advocate for the implementation and provision of adequate reimbursement for a trauma-informed approach to screening and care for birthing persons to promote positive mental health and substance use outcomes for mother and child.

2. Maternal Mental Health Workgroup Recommendations

To address maternal mental health and substance use challenges in New York State, the Maternal Mental Health Workgroup proposed equity-centered, and culturally humble and responsive recommendations. Considerations for future actions and aspirations requiring additional resources were also identified and outlined in this section. This approach was guided by the Maternal Mental Health Workgroup's core principles and aims to provide a multi-pronged, comprehensive blueprint for improving systems of care for birthing people and their families.

2.1 Recommendations

The recommendations set forth below have been identified by the Maternal Mental Health Workgroup as actionable, and with current resources, can be accomplished in two years.

Project TEACH[1]

- Promote Project TEACH offerings including:
    - Trainings and education on how to prevent, screen, identify, and treat maternal mental health and substance use conditions to all primary care, pediatric, obstetrician-gynecologist (OB-GYN), and behavioral health providers.
    - Consultation line to increase collaboration regarding medication regiment decision-making between OB-GYNs and psychiatric providers.
    - Provider educational materials, which are eligible for continuing medical education (CME) credits, to increase provider awareness of best practices and guidelines regarding use of psychiatric medication and treatment during the perinatal period.
    - The Project TEACH referral network to assist providers navigating the referral process.
    - Consultations being billable under Medicaid.

Increased Focus on Maternal Mental Health and Substance Use Programming / Infrastructure

- Identify and pursue, when appropriate, additional federal funding. Consider perinatal mental health in future funding cycles when issuing NYS grants to reduce mental health related mortality among birthing persons.

Collaborative Care Medicaid Program

- Advocate for the expansion of the implementation of the Collaborative Care Medicaid Program in maternal health practices.
- Promote the benefits of co-location of behavioral health services and OB-GYN services and rapid referral to appropriate levels of care matching symptom acuity with timely follow-up.

[1] *Project TEACH is a New York State Office of Mental Health funded program that offers support to primary care, ob/gyn and psychiatric clinicians who are treating perinatal and/or pediatric patients with mental health concerns. www.projectTEACHny.org*

Dyadic Care

- Support the implementation of community, health-care facility, or home-based programs to prevent maternal mental health and substance use challenges including the statewide expansion of the HealthySteps Program, an evidence-based integrated care model that pairs physicians with behavioral health specialists in pediatric settings to screen for emotional and social support needs of children and their families, including screening and referral linkages for maternal depression, assistance with navigating the emotional complexities of parenthood, and addressing needs related to social determinants of health.

Workforce Development

- Develop and disseminate specialized maternal mental health trainings for 988 crisis counselors to better provide compassionate care, support, and necessary resources to pregnant individuals and new parents who experience mental health distress.

Public Awareness & Education

- Publish an issue of Behavioral Health News dedicated to maternal mental health and substance use issues.
- Promote public awareness and education programs including:
    - OMH's Strategic Plan for Stigma Reduction funding mechanism to support community based public awareness campaigns focused on eliminating the stigma of maternal mental health and substance use. The funding is provided through a tax check-off program. Existing trainings available through continuing education credits and certifications for completion of perinatal mental health training programs.
    - National campaigns and scale existing local and state-wide campaigns that aim to raise awareness, educate, and reduce stigma surrounding maternal mental health and substance use throughout NYS in a coordinated way through the Community Outreach and Public Education (COPE) bureau.
    - The NYS Trauma Informed Network and Resource Center.
- Use social media to lift the voices of those with lived experiences in easily shareable formats (e.g., YouTube advertisements, short TikTok videos, brief Twitter posts).

Community Engagement

- Publicize the treatment resources and supports that the Postpartum Resource Center of New York is implementing with existing community partners to strengthen the perinatal mental health support network.

Child Welfare

- Continue to collaborate with the Office of Children and Family Services (OCFS) as they develop a new community pathway under the federal Family First Prevention Services Act to transform the child welfare system and avoid unnecessary child welfare involvement.

Screening

- Amplify the recommendations from the Postpartum Depression Screening Protocols and Tools: A Review of Evidence of Adequacy and Equity Report and encourage the administration of validated screening tools by providers that are responsive to the full spectrum of maternal mental health and substance use challenges, including suicidal ideation and social determinants of health.

Peer Support

- Support and scale already established NYS peer support programs, particularly those that focus on underrepresented and vulnerable populations and highlight the benefits of having a peer support specialist as a member of an integrated model of care team.

Doulas

- Promote awareness and use of the NYS Medicaid doula services benefit within the OMH network:
    - Recommend that mental health providers and peers who serve Medicaid enrolled birthing people inform all patients/clients about the availability of doula services.
    - Highlight the services that doulas can provide, and the value of such services, in public information campaigns aiming to raise awareness of maternal mental health challenges and advocate for exploring the feasibility of private health plan coverage for doula services.

Treatment & Care Coordination

- Consider a designation for behavioral health providers specializing in maternal mental health and substance use.

Data & Quality Improvement

- Leverage existing mortality and morbidity data among birthing people to help inform future NYS mental health and substance use initiatives.

Coverage & Benefits

- Continue to collaborate with other state agencies to codify payment and coverage parity under Medicaid for telehealth.
- Advocate to examine the feasibility of expanded coverage of parental behavioral health services in employer sponsored health plans, break time for prenatal and postpartum health needs, and time off for the non-birthing person to be able to support the birthing person and bond with the child, and amplify workplace parental mental wellness so employees feel comfortable addressing these issues.
- Advocate for employee benefits to support parental mental health. Consistent with the U.S. Preventive Services Task Force, encourage employee assistance programs to screen for anxiety disorders and depression and refer pregnant and postpartum people at increased risk to counseling interventions.

2.2 Considerations

Listed below are considerations proposed by the Maternal Mental Health Workgroup that would require dedication of additional resources and/or time.

Project TEACH

- Continue to work to expand Project TEACH and partner with the NYS Office of Children and Family Services (OCFS) in the pediatric setting.
- Leverage and consider extending access to Project TEACH to promote partnerships with community-based maternal mental health care providers.
- Explore expanding access to Project TEACH to representatives of child welfare agencies and partnerships with community-based maternal mental health providers to increase awareness of available support services and best practices regarding maternal mental health and substance use.

Increased Focus on Maternal Mental Health and Substance Use Programming / Infrastructure

- Increase the rates of screening and successful referrals for perinatal mental health and substance use issues, and increase the use of peer-support programs for perinatal mental health and substance use needs.
- Collaborate with NYS Department of Health (DOH) to develop additional perinatal mental health and substance use related objectives for New York's 2026-2030 Health Resources and Services Administration (HRSA) Title V Block Grant application and strategic plan, and evaluate progress towards those objectives on an annual basis through quantitative metrics.

Collaborative Care Medicaid Program

- Study reimbursement rates for collaborative care services under the NYS Collaborative Care Medicaid Program.
- Work with other state agencies towards the adoption of the Collaborative Care model for maternal mental health and substance use care with commercial insurance companies.

Dyadic Care

- Collaborate with NYS DOH to assess the feasibility of developing a statewide network of Maternal Health Homes. Include the opportunity to enhance the role of existing Health Homes to support maternal mental health, with the possibility of care coordination for the birthing person-child dyad.
- Advocate for guidance to prenatal care providers and mental health providers for warm handoffs and care coordination for the birthing person-child dyad.
- Amplify funding opportunities for community-based social support organizations to develop and implement parent-child Dyad Therapy focused education and social support programs to establish and strengthen the parent-child bond.
- Elevate the importance of home visiting programs for birthing people and infants in NYS.

- Publicize programs such as the NYS Maternal, Infant and Early Childhood Home Visiting (MIECHV) Initiative and long-term home visiting programs including, but not limited to:
    - Healthy Families NY, a program for new parents that focuses on primary prevention and building positive parent child relationships and school readiness.
    - Nurse-Family Partnership, a home visitation program for first time moms conducted by nurses.

Workforce Development

- Modify clinical curriculum to incorporate the voices of those with lived experience and case studies of lived experience of maternal mental health and substance use challenges in training programs for both practicing health care professionals as well as students.
- Explore leveraging Managed Care Technical Assistance Center (MCTAC) for the dissemination of perinatal mental health training certification courses administered by maternal mental health care and advocacy organizations, such as Postpartum Support International, The Motherhood Center, and the Postpartum Resource Center of New York.

Public Awareness & Education

- Use the OMH Community Mental Health Promotion & Support (COMHPS) model to explore adapting the previously successful communication strategies for health information campaigns with a focus on maternal mental health and substance use (e.g., a pilot like the barbershop/beauty salon campaigns). This strategy has been successful in Black, Indigenous, and people of color (BIPOC) communities.
- Host a Mental Health News Education (MHNE) roundtable discussion about maternal mental health and substance use.
- Collaborate with other NYS agencies to create public awareness strategies and campaigns for birthing people and their families, with focuses on:
    - Destigmatizing and normalizing maternal mental health challenges.
    - Advocating for birthing people to receive the assistance they need so they can avoid unnecessary involvement with child protective services.
    - Increasing awareness of leave policies and how to access benefits including paid leave, break time, and reasonable accommodations.
- Announce successful partnerships that aim to build trust in the child welfare system among birthing persons.
- Consider the feasibility of implementing programs to help engage persons in treatment via hopeful, motivational messages via email, text message, or other digital means.
- Identify and publicize existing successful partnerships between health care providers and existing community-based organizations to provide wraparound care for birthing persons, including addressing social determinants of health.

Community Engagement

- Collaborate with community-based organizations to incorporate wraparound care to birthing people in their service delivery models, including addressing social determinants of health.
- Promote the engagement of vulnerable communities in participatory research
- Consider using the strategies outlined in the Substance Abuse and Mental Health Services Administration (SAMHSA) Adapting Evidence-Based Practices for Under-Resourced Populations guide to strengthen the body of scientific literature exploring the efficacy of community-based interventions and programs and cultural adaptation strategies used to tailor such programs to minoritized communities.

Screening

- Consider developing guidance regarding screening for perinatal mood and anxiety disorders (PMADs) to improve health outcomes for birthing people with mental health and substance use challenge
- Promote existing billable screening opportunities and screening in both traditional settings (e.g., prenatal OB-GYN visits) and non-traditional settings (e.g., home visits, with peer support, pediatric offices, daycares, Head Start facilities, and mobile clinics in rural settings) and consider frequency, especially for persons with preexisting mental health conditions.
- Advocate for adequate reimbursement for mental health, substance use, and social need screening for all birthing persons, whether through public or commercial insurance.
- Work with other state agencies to distribute guidance to practitioners and birthing parents about maternal mental health and substance use disorder screening protocols that prioritize positive behavioral outcomes for birthing persons.

Peer Support

- Consider adding a specialty certification for paraprofessionals and peers working with special populations to lift-up and empower natural supporters and those with lived experience.
- Assess the feasibility of training peer specialists to screen for maternal mental health and substance use issues.
- Explore the feasibility for bidirectional warm handoffs with peer support specialists and mental health providers.

Doulas

- Promote awareness and use of the NYS Medicaid doula services benefit:
    - Recommend that health care and social support providers who serve Medicaid enrolled birthing people to inform all patients/clients about the availability of doula services.
- Work to develop policies and/or guidance for health plans to provide coverage for doula services.
- Encourage the enrollment of NYS Medicaid doula service providers and advocate for exploring the feasibility of private plan coverage for doula services.
- Publicize training opportunities through the Office of Addiction Services and Supports (OASAS) for doulas in universal harm reduction and how to administer overdose education in a non-stigmatizing way.

Treatment & Care Coordination

- Collaborate with OASAS to promote quality service delivery for birthing people in NYS OMH/OASAS integrated service settings, including certified community behavioral health clinics (CCBHCs), and promoting step up/down approaches.
- Publicize the benefits of and advocate for the expansion of mental health and substance use care in nontraditional settings including telehealth and mobile health options.
- Attempt to locate resources which could be utilized for increased funding opportunities to offer evidence-based models of Group Prenatal Care on a statewide basis and promote known offerings for Group Prenatal Care.
- Work with state agencies to define triage pathways for high-risk birthing persons.
- In partnership with other NYS Agencies, identify funding opportunities that can expand a statewide reach for community-based perinatal mental health and substance use clinics to provide education and support for perinatal persons, particularly in Brown or Black communities and rural communities, that focus on prevention, psychoeducation, peer support, and higher levels of care including intensive outpatient program (IOP)/partial hospitalization program (PHP), and medication-assisted treatment for substance use disorders.
- Identify statewide perinatal partial hospitalization and intensive outpatient programs (PHPs/IOPs), such as The Motherhood Center of NY and The Child Center of NY, Macari and explore the feasibility of expanding outpatient mental health programs with a maternal mental health specialty that offer a higher level of care (e.g., Intensive Outpatient Programs (IOP) or Partial Hospitalization Programs (PHP)) for higher acuity PMADs.
- In tandem with other statewide agencies, consider the feasibility of replicating programs like the Hushabye Nursery in Arizona, a program for birthing people with substance use challenges that includes a prenatal program, basic education for families and inpatient services for both birthing people and their children.
- Consult with other state agencies to make known the core Alliance for Innovation on Maternal Health (AIM) patient safety bundles for consideration of implementation.

Data & Quality Improvement

- Partner with NYS DOH to continue to prioritize maternal mental health as an area of focus for the NYS Perinatal Quality Collaborative (PQC) that incorporates culturally humble and responsive practices and collaborate with the NYS Perinatal 51 Collective to explore developing and implementing strategies to meet perinatal mental health related objectives identified in the 2026-2030 HRSA Title V Block Grant application.
- Collaborate with NYS DOH to encourage Medicaid Managed Care Organizations (MMCOs) to prioritize maternal mental health and substance use challenges through performance improvement projects and/or focused clinical studies. Investigate the opportunity to analyze public health surveillance and data sources, including electronic medical records (EMR) and Medicaid patient data maintained via the NYS OMH PSYCKES to identify high risk birthing people and those who should be engaged in follow-up to ensure timely referral and follow-up to confirm that they are receiving care appropriately matched to their needs.
- Consider issuing or promulgating existing guidance to perinatal behavioral health care providers and payers participating in eligible Medicaid programs to support the use of the NYS OMH PSYCKES. PSYCKES facilitates the sharing of client-level data based on Medicaid claims for behavioral health diagnoses and services among health care organizations, including those licensed by NYS OMH or OASAS, MMCOs, Federally Qualified Health Centers (FQHCs), local government units (LGUs), and hospitals.

Coverage & Benefits

- Continue to collaborate with NYS agencies, including but not limited to, NYS DOH, OASAS, OCFS, and the statewide social care networks to ensure maternal mental health is a focus for individuals receiving services and supports including screening and referral networks addressing the social needs of birthing people funded under the New York Health Equity Reform (NYHER) Waiver.
- Collaborate with other state agencies to:
    - Explore providing guidance to commercial and State health plans about developing and sponsoring case management services for maternal mental health.
    - Seek increased Medicaid reimbursement rates for the full range of behavioral health services for birthing persons, including perinatal partial hospitalization and intensive outpatient programs.
    - Educate the public about recent Medicaid coverage revisions and newly available services.
    - Develop policies and/or guidance for commercial plans to cover comprehensive perinatal behavioral health services, with coverage and payment parities for telehealth services.
    - Explore establishing pay parity requirements with Medicaid for commercial plan coverage of social supports for birthing persons.
- Ensure insurance reimbursement for perinatal mental health screening activities is on reimbursement schedules for all providers who may provide care to birthing persons, including but not limited to OB-GYNs, pediatricians, doulas, and home visit care providers.
- Study the feasibility of requiring commercial plans to provide pay parity to the Medicaid reimbursement rate for behavioral health services for birthing persons.

2.3 Aspirations

Set forth below are aspirations for future action proposed by the Maternal Mental Health Workgroup that will each require dedication of additional fiscal resources:

- Explore developing a new bureau at OMH to promote cross-divisional Maternal Mental Health/Substance Use Disorder initiatives and the implementation of the report recommendations.
- Review possible funding opportunities that aim to implement a universal light-touch home visit (in person or virtually) program for families with new babies that includes maternal mental health and substance use screenings in conjunction with a behavioral health specialist who can take a warm handoff immediately if screenings show rising risk or are positive.
- Explore the feasibility of developing a pilot program for mother-baby inpatient psychiatric units. The pilot program would keep birthing people and their children together in hospital settings to provide inpatient psychiatric care to postpartum birthing people in crisis without disrupting the parent-child dyad.
- Provide education to clinics, including Certified Community Behavioral Health Clinics (CCBHCs), about issues surrounding maternal mental health.
- Work to train individuals interacting with birthing persons, including providers, mental health and substance use counselors, nurses, allied health staff, and nonclinical community-based workers (e.g., doulas and peer support specialists) about mental health and substance use disorders, stigma, implicit bias, cultural humility,

trauma-informed care, and social determinants of health to promote the overall wellness of the birthing person, not just the infant.

- Make available resources to encourage normalized conversations about maternal mental health and substance use challenges between birthing people and providers, both traditional (i.e., OB-GYNs,) and non-traditional (i.e., doulas and community health workers) to eliminate the discomfort that birthing people may feel when admitting that they are struggling. Such conversations should be initiated during wellness visits, specific mental health and social need screenings, and consultations relating to health, wellness, and parenting guidance for birthing persons. Start by asking individuals who are pregnant or postpartum, “Are you ok?”.
- Consider including loan forgiveness for professionals entering the perinatal behavioral health care workforce in future funding cycles.
- Collaborate with OASAS and OCFS to develop a designation for behavioral health (BH) care providers that specialize in maternal mental health and substance use such as the Center of Excellence.
- Collaborate with OASAS and OCFS to develop a procedure for behavioral health providers to apply for this designation through the state licensing process and attest to meeting a certain standard during license renewal.
- Collaborate with OASAS and OCFS to create an online registry to publicize those providers who have achieved the designation for transparency.
- Promote use of culturally humble and responsive screenings for maternal mental health, substance use, and basic social needs into routine care for all birthing people from the preconception period through one year postpartum with appropriate and timely follow-up.
- Integrate peer support into prenatal and postpartum care for birthing people beginning at their first prenatal appointment and extending through at least one year postpartum.
- Support implementation of triage pathways and hospital guidelines for high-risk birthing people and invest in higher levels of behavioral health care to meet the needs of birthing people with acute psychiatric symptoms.

3. Background

Every year, an estimated 500,000, or one in five, birthing people in the United States experience perinatal mood and anxiety disorders (PMADs) during pregnancy and/or in the first year postpartum.[1] PMADs include prenatal and postpartum depression (perinatal/peripartum depression or PPD), anxiety, and perinatal onset obsessive compulsive disorder (OCD), post-traumatic stress disorder (PTSD), bipolar disorder, and psychosis. PMADs are generally temporary and treatable but can lead to serious consequences for both parent and child if left untreated. Unfortunately, approximately 75% of birthing people who suffer from PMADs are not diagnosed or treated, leading to grave consequences ranging from high-risk pregnancies and poor childhood cognitive development to substance use, self-harm, or suicide among birthing people.[2] The prevalence of PMADs and related mental health challenges, particularly among birthing people of color, have reached alarming levels in NYS, and in the U.S. at large.

PPD is the most frequently diagnosed PMAD. PPD is a severe and potentially life-threatening form of depression that can occur during pregnancy or the postpartum period, characterized by two or more weeks of consistently depressed mood, feelings of worthlessness, changes in sleep and appetite, and suicidal ideation.[3] During the first two weeks of the postpartum period, a reported 50% to 75% of parents experience "baby blues," which include symptoms like exhaustion, mood swings, and feelings of being overwhelmed.[4] Baby blues are a common response to the stressful and challenging first few weeks of parenthood and generally resolve without treatment.[5] However, in some cases, instead of subsiding, the symptoms seen in baby blues intensify into serious mental health conditions like postpartum onset PPD. PPD that occurs during the postpartum period generally emerges between four and 30 weeks postpartum and affects 12.5% birthing persons, with higher prevalence among certain high-risk groups, including persons of color, persons of low socioeconomic status, persons with a high degree of social stressors, and persons with a history of mental illness.[6,7] Other severe PMADs, such as perinatal onset bipolar disorder and psychosis, pose an even greater risk of maternal self-harm and suicide, and include feelings of wanting to harm the baby.[8] The high prevalence of baby blues and the rapid onset of PMADs underscores the need for robust screening and treatment practices throughout pregnancy and the postpartum period for timely and responsive intervention to prevent mental health crises among birthing persons.

Maternal mental health is a complex public health issue, encompassing a range of mental health disorders that can affect birthing people during pregnancy and the postpartum period. These disorders have profound implications not only for the birthing people but also for their children and families.

3.1 Key Terms and Concepts

TABLE 1 - KEY TERMS AND CONCEPTS

Key Term/Concept	Definition
Certified Community Behavioral Health Clinic (CCBHC)	Integrated care model for mental health, substance use disorders, and physical health services and treatment.[9]
Cultural humility	Engagement in an ongoing dynamic process of self-reflection, personal critique, and acknowledgement of one's biases that informs deeper understanding of and respect for the complexity of one's identity.[10] Cultural humility "recognizes the shifting nature

Key Term/Concept	Definition
	of intersecting identities" and encourages curiosity and genuine attempt to understand a person's identities related to race and ethnicity, gender, sexual orientation, socioeconomic status, education, social needs, and other characteristics.[11] Cultural humility is different from cultural competency, which is loosely defined as the ability to engage knowledgeably with persons across cultures. Cultural competency implies that amassed knowledge regarding different cultures increases competence, that such cultural knowledge is generalizable, and that there is an endpoint to cultural learning at which one attains competency.[12]
Evidence-based, evidence-informed, and promising practices	For evidence-based practices the efficacy has been specifically evaluated through biomedical and/or behavioral research studies. For evidence-informed practices the efficacy is supported by data collected through biomedical and/or behavioral research, but such research does not examine or evaluate the specific practices. For promising practices have clinical data and anecdotal information which suggest that they may improve outcomes, there is little or no scientifically collected evidence basis. This document uses "evidence-based practices" broadly to describe practices that are evidence-based, evidence-informed, or promising practices.[13]
Group prenatal care	Group prenatal care is a health care delivery model for pregnant people in which 8-12 patients of similar gestational age are provided prenatal medical care and education as a group.[14] The group meets at scheduled intervals where patients receive individual and group-based medical care then participate in facilitated education discussions regarding maternal and child health topics. This care model aims to increase social support and self-efficacy among expecting parents and fosters more active communication between patients and providers. In the group prenatal care model, birthing people receive 15-20 hours of prenatal care over the course of their pregnancy, compared to the two to four hours of care received with traditional prenatal care models.[15] Evidence suggests that group prenatal care leads to improved patient and provider satisfaction and more equitable maternal and infant health outcomes.[16]
Health-related social needs (HRSN)	The Centers for Medicare & Medicaid Services defines HRSN as individual-level unmet adverse social conditions that contribute to poor health. (e.g., housing instability, nutrition insecurity). HRSN are a result of underlying social determinants of health.[17]

Key Term/Concept	Definition
Implicit bias	Refers to internalized stereotypes, attitudes, and judgments that unconsciously affect our perceptions, actions, and decisions. Implicit bias leads to unequal treatment of persons based on race, ethnicity, gender, sexual orientation, and other characteristics. In medical settings, implicit bias results in discriminatory practices that negatively impact patient care and perpetuate disparities in health care access.[18]
Integrated Care	Integrated care, also known as interprofessional care or coordinated care, is an approach to provision of health care "characterized by a high degree of collaboration and communication among health professionals." Integrated care is provided by an interprofessional care team rather than a single provider and includes the establishment of a comprehensive treatment plan to address the holistic biological, psychological, and social needs of a patient. The care team can include physicians, nurses, psychologists, and other types of health professionals, like social workers or community health workers.[19]
Intensive Outpatient Program (IOP)	Intensive Outpatient Programs (IOPs) are commonly used treatment approaches for mental health and substance use challenges that do not rise to a level of acuity that requires hospitalization. In an IOP, the patient attends individual and group therapy sessions at a frequency prescribed by an individualized care plan, but generally for two to four hours per session, three to five days a week. IOPs offer structured therapeutic treatment and skill-building with less frequent medical psychiatric oversight than partial hospitalization or inpatient programs. An IOP is considered an intermediate level of ambulatory care and can be used as an entry point to behavioral health or substance use treatment, a stepdown in level of care from partial hospitalization, inpatient, or residential programs, or a step up in level of care from traditional outpatient treatment. IOP is a flexible intensive treatment option appropriate for patients who do not need 24/7 supervision or care but do need intensive behavioral intervention.[20,21]
Intersectionality	Intersectionality is a theoretical sociological framework premised upon the concept that "human experience is jointly shaped by multiple social positions" or identities, including race, gender, religion, and sexuality. In order to fully understand the human experience, particularly experiences of oppression, one must consider how these multiple identities interact with one another to influence a person's life.[22]

Key Term/Concept	Definition
New York Health Equity Reform (NYHER) 1115 Waiver Amendment	Section 1115 of the Social Security Act gives the Secretary of Health and Human Services authority to approve experimental projects that promote the objectives of the Medicaid program and the Children's Health Insurance Program (CHIP). New York has used this policy mechanism to make improvements to its state Medicaid program since 1997 through the Section 1115 Medicaid Redesign Team. The New York Health Equity Reform (NYHER) Amendment was approved by the Secretary of Health and Human Services in January 2024. The goal of the NYHER Amendment is to "advance health equity, reduce health disparities, and support the delivery of social care" through investment into services that advance health-related social need services, health care workforce development, and programs that address population health.[23]
Partial Hospitalization Program (PHP)	Commonly used treatment approaches for acute mental health and substance use challenges. In a PHP, a patient attends four to six hours of intensive treatment per day, five to seven days per week. PHP treatment regimens are more structured than intensive outpatient programs (IOPs) and involve closer medical psychiatric oversight of patients to address any acute psychiatric needs that may emerge. The treatment regimen of a PHP is like that of a short-term inpatient psychiatric program. PHPs are considered an intermediate level of ambulatory care, a step up in level of care from IOPs, but are not as intensive as full inpatient or residential treatment programs.[24,25,26]
Perinatal	Refers to the estimated two-year period around pregnancy, including the time shortly before pregnancy (pre-conception), during pregnancy before birth (prenatal) through the year following birth (postpartum).[27]
"Postpartum blues"	"Postpartum blues" or "baby blues" may include feelings of worry, unhappiness, and fatigue.[28] Baby blues are transient, do not impair function, and resolve within a matter of weeks without treatment.[29] Symptoms usually begin two to three days after birth.[30]
Peripartum Depression (PPD) or Perinatal Depression (PND)	PPD/PND are more severe and last longer than "baby blues."[31,32] Peripartum depression is classified as major depressive disorder, but specifically occurring during pregnancy through one year postpartum. For those experiencing PPD/PND, symptoms are often accompanied by anxiety.[33] The exact cause of peripartum depression is not known but is likely to be a combination of factors, including hormonal changes, genetic vulnerability, and

Key Term/Concept	Definition
	psychosocial stressors. PPD/PND interferes with an individual's ability to engage in activities of daily living (e.g., eating, dressing, preparing meals, etc.) and may include intense symptoms of sadness, anxiety, and hopelessness, loss of interest in activities, withdrawing from friends and family, or intrusive thoughts of hurting self or baby. PPD/PND usually do not resolve on their own and therefore require treatment to minimize or eliminate symptoms.[34]
Perinatal Mood and Anxiety Disorder (PMAD)	A diagnostic category encompassing mood disorders that surface in the perinatal period. These disorders include peripartum/perinatal depression, anxiety, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), bipolar disorder, and psychosis with onset during the perinatal period. Perinatal PTSD can occur in birthing people who have experienced a traumatic birth. Perinatal bipolar disorder and psychosis are the least common but most serious of the postpartum mood disorders and requires immediate care. Symptoms of perinatal psychosis may include agitation, confusion, inability to sleep, delusions, and hallucinations.[35]
Social determinants of health (SDOH)	The World Health Organization defines SDOH as "the conditions in which persons are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life."[36] The U.S. Department of Health and Human Services' Healthy People 2030 broadly categorizes SDOH into five domains: economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context.[37] Examples of SDOH include access to nutritious food, air quality, literacy and language skills, racism, discrimination, and violence. These upstream factors exert a powerful impact on an individual's health and well-being throughout their lives. The unequal distribution of SDOH across a society contributes to disparities and inequities in population health.[38]

Key Term/Concept	Definition
Structural racism	Structural racism refers to macro-level conditions, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups (e.g., residential segregation, social segregation, institutional policies, etc.) Systemic racism limits the opportunities, resources, power, and well-being of individuals and populations based on race and ethnicity.[39]
The Task Force on Maternal Mental Health's (National Task Force) National Strategy to Improve Maternal Mental Health Care (National Strategy)	The formation of the Task Force on Maternal Mental Health was authorized by Congress pursuant to the Consolidated Appropriates Act, 2023[40] to develop a national strategy to improve maternal mental health and substance use care and outcomes. The National Task Force is a subcommittee of the Substance Abuse and Mental Health Services Administration's (SAMHSA) Advisory Committee for Women's Services (ACWS) and consists of over 100 members from diverse interdisciplinary backgrounds. The National Strategy to Improve Maternal Mental Health Care was published in May 2024 by SAMHSA. The National Strategy is the culmination of the work of the National Task Force and sets forth recommendations for actions to be taken at both the national and state levels to improve perinatal mental health and substance use care and outcomes. This report refers to the National Strategy where the recommendations of the National Task Force align with or complement those advanced by the Maternal Mental Health Workgroup.[41]
A note on gendered language	PMADs and other issues surrounding pregnancy affect all birthing persons, including cis-gendered birthing people and girls, nonbinary, intersex, two-spirit persons, and transgender men. This report is meant to be inclusive of all birthing persons. Descriptions of previous studies are, however, sometimes limited by the methodology and language used by those studies.

3.2 New York State Legislative History

Since 1998, New York has been a leader in passing legislation to improve health outcomes of birthing people by increasing awareness of maternal depression and perinatal Medicaid coverage (see Figure 2). New York continues to be a national leader in workplace benefits and protections, including creation of the first prenatal leave policy in the nation, and continues to expand access to care that promotes equitable maternal mental health outcomes.

FIGURE 2-NYS MATERNAL MENTAL HEALTH HISTORY

- **NYS Public Health Law, Article 28, Section 2803j** required an informational pamphlet be given to every maternity patient upon discharge from the hospital regarding postpartum physical and mental health, including, but not limited to, information about maternal depression.
- **NYS Law, Chapter 199 of the Laws of 2014** defined maternal depression, required maternal care to include education on maternal depression, screenings, and referrals during perinatal period, and required health insurers to cover maternal depression screenings, referrals, and treatment without prior authorization.
- **NYS DFS issues guidance** requiring health insurers to provide full coverage for maternal depression screening at no cost-sharing.
- **NYS Medicaid reimburses for postpartum maternal depression screenings** within the first 12 months postpartum.
- **NYS Medicaid and Child Health Plus (CHP) extend postpartum coverage** from 60 days to 1 year in support of the Biden Administration's Maternity Care Action.
- **Governor declares Maternal Mental Health Awareness Week.**
- **Governor announces extended workplace protections and benefits**, including break time for lactation, up to 12 weeks of parental leave, and up to 20 hours prenatal leave.
- **New York commits $250,000** to expand access to community-based doula services for Medicaid members and creates a statewide doula directory.

Looking to the future, the Fiscal Year (FY) 2025 Enacted Budget commits $1.6 million to the expansion of the NYS Perinatal and Child/Adolescent Psychiatry Access Program, also known as Project TEACH and maternal mental health-specific training for responders staffing the 988 Suicide and Crisis Hotline.[42] New York is committed to

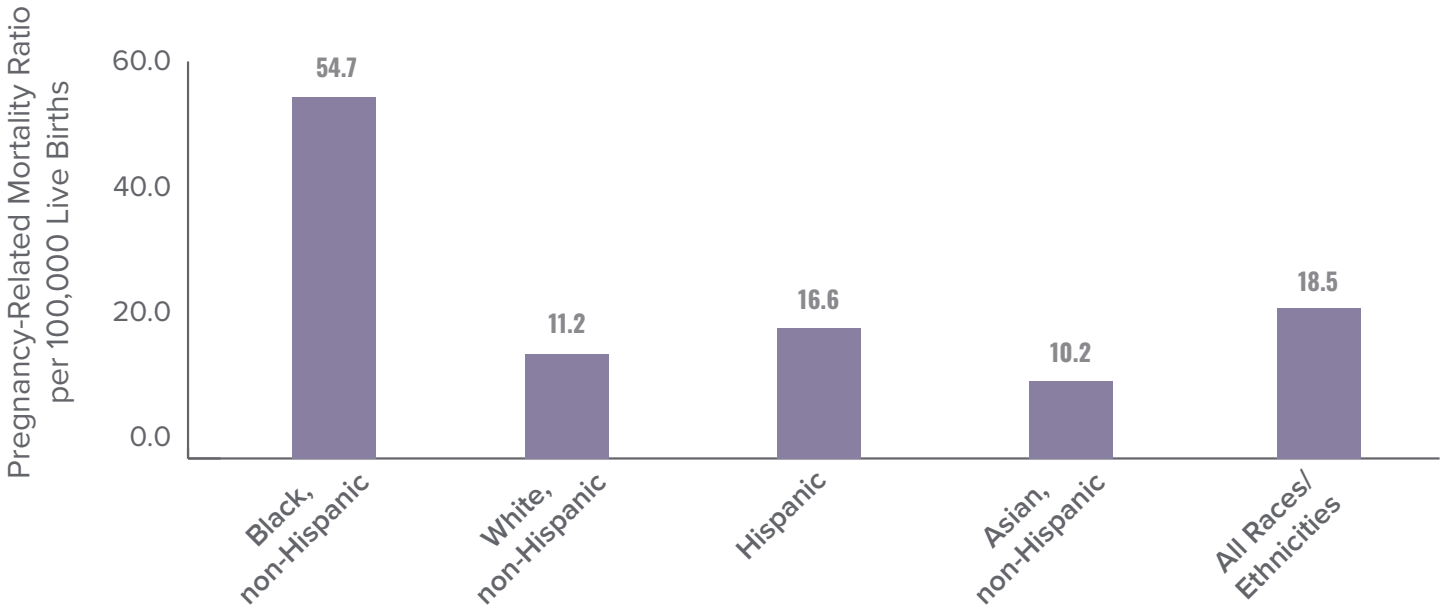
continuing to promote positive mental health outcomes for all birthing persons, beginning with acting upon the recommendations advanced in this report.

3.3 New York State Maternal Mental Health Landscape

In 2020, 19.5% of pregnancy-related deaths in NYS were attributable to mental health issues. All such deaths occurred in the postpartum period, with the majority falling within 42 and 365 days postpartum, underscoring the importance of continued monitoring of birthing people during the postpartum period.[43]

Black birthing people experience twice the risk of maternal mortality than the national average and are 2.5 times more likely to suffer pregnancy-related death than their White peers.[44] Though NYS' maternal mortality rate is slightly lower than the national average (19.3 vs. 20.4 deaths/100,000 live births in 2020), Non-Hispanic Black birthing people in NYS are about five times more likely to suffer pregnancy-related death than White birthing people, with mortality rates of 54.7 vs. 11.2 deaths/100,000 live births (see Figure 3).[45] While Hispanic and Latinx birthing people carry only a slightly elevated risk of pregnancy-related death as compared to their Non-Hispanic White peers (mortality rates of 16.6 vs. 11.2 deaths/100,000 live births), they are also disproportionately affected by maternal mental health challenges (see Figure 3).[46] Hispanic and Latinx birthing people self-report symptoms of postpartum depression at a comparable rate to their Non-Hispanic White peers, but they are the least likely racial/ethnic group to have these symptoms acknowledged by a health care provider.[47]

FIGURE 3-NYS PREGNANCY-RELATED MORTALITY RATIO BY RACE/ETHNICITY, 2018-2020[48]



3.4 State and National Initiatives

State and national initiatives on maternal mental health and substance use focus on improving access to care, enhancing support services, and addressing the specific needs of prenatal and postpartum individuals. These initiatives aim to integrate mental health and substance use treatment with maternal health care, reduce stigma, and promote early intervention. Together, these state and national initiatives work to provide a comprehensive approach to a maternal mental health and substance use prioritizing prevention, early intervention, and integrated care to improve outcomes for birthing people and their families.

3.4.1 New York Medicaid

As of December 2023, the New York Medicaid program has provided comprehensive health coverage to more than 7.5 million New Yorkers. Medicaid pays for a wide range of services, depending on age, financial circumstances, family situation, or living arrangements. Services are provided through a large network of health care providers that can be accessed directly using a Medicaid card or through a managed care plan if a person is enrolled in managed care. Some services may have small co-payments, which can be waived if it is found unaffordable to the recipient. The enacted 2023-24 Executive Budget of NYS includes expanded Medicaid coverage of preventative care, including coverage and higher reimbursement for doulas.[49]

3.4.2 Workplace Benefits

Pregnancy, childbirth, and the postpartum period present significant physical and psychological challenges to birthing people and their families. Returning to work adds additional expectations and layers of stress to manage, making new parents even more vulnerable. The U.S. is the only wealthy industrialized country that does not mandate paid leave for birthing persons.[50]

On average, birthing people take ten weeks of paid leave, but in states without robust leave policies, some return to work as soon as two weeks postpartum. Paid family and medical leave have a direct and lasting positive effect on the mental health and well-being of both birthing people and their partners, and can decrease household financial stress, which indirectly affects mental health and well-being.[51]

New York recently became the first state in the nation to provide prenatal leave. In addition to prenatal leave, which gives birthing people paid leave time to attend to prenatal health issues, New York has also mandated 12 weeks of parental leave at 66.67% of an employee's salary.[52] This leave compliments the 12 weeks of job-protected, though unpaid, leave provided federally by the Family and Medical Leave Act (FMLA).[53]

In addition to New York, twelve other states (California, Connecticut, Colorado, Delaware, Massachusetts, Maryland, Maine, Minnesota, New Jersey, Oregon, Rhode Island, Washington) and Washington, D.C. have passed paid family and medical leave mandates, most of which include job protection and non-discrimination benefits, as well as continuation of insurance. All states with mandatory leave policies provide 12 weeks of parental leave, except California and Rhode Island, which provide eight weeks and six weeks, respectively.

3.4.3 Workforce Development

Critical workforce shortages and maternity care deserts drive inequities in health care access across the state. To improve maternal mental health outcomes for New York's most vulnerable populations, these deficiencies must be addressed with targeted and thoughtful action. One third of Americans live in an area without a mental health provider and almost half of Americans live in counties without an OB-GYN provider.[54] To recruit behavioral health

workforce providers, New York and other states have engaged the strategies noted in Table 2.

TABLE 2-STATE EFFORTS TO RECRUIT BEHAVIORAL HEALTH WORKFORCE PROVIDERS

STRATEGY	WHAT STATES ARE DOING
Invest in residency/fellowship programs for OB-GYNs and psychiatrists specializing in perinatal health, through partnerships with universities and private health plans as part of their network quality improvement activities.	• Women's Mental Health Fellowship at Brigham and Women's Hospital (MA).[55] • UNC Chapel Hill's Women's Mood Disorders Fellowships (NC).[56] • NYU Women's Mental Health Fellowship (NY).[57] • Sackler Perinatal and Infant Psychiatry Fellowship at Weill Cornell Medicine (NY).[58] • Women's and Reproductive Mental Health Fellowship at Columbia University Irving Medical Center.[59] • Fellowship in Consultation-Liaison Psychiatry at Zucker Hillside Hospital, Northwell Health.[60]
Create perinatal mental health peer support specialist certifications and reimbursement procedures or adapt existing procedures to serve birthing population.	• Perinatal Outreach & Encouragement for Moms (POEM) (OH).[61] • Health Care Authority of Washington's Peer Support Program (WA).[62] • New York's Certified Peer Specialist programs (NY).[63]
Incentivize perinatal mental health certification for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) counselors, home visitors, and community health workers through use of available online training modules.	• Perinatal Mental Health Learning Pathways (CA).[64] • Mass PPD Fund (MA).[65] • Certifications offered by Postpartum Support International (all states).[66]

STRATEGY	WHAT STATES ARE DOING
Register underserved areas as National Health Services Corps (NHSC) Health Professional Shortage Areas (HPSA) to be able to offer providers in those areas, eligibility for loan repayment programs.	• Health Resources and Services Administration (HRSA) NHSC Loan Repayment Program.[67] • NHSC Substance Use Disorder Workforce Loan Repayment Program.[68] • NHSC Rural Community Loan Repayment Program.[69]
Implement state-administered loan repayment programs that prioritize recruitment of maternity care and maternal mental health care providers.	• Hawaii State Loan Repayment Program.[70]
Procure funding for educational institutions through the HRSA Behavioral Health Workforce Education and Training (BHWET) Program.	• Most recently awarded to MD, MI, MS, NC, NE, NH, NJ, NM, OH, PA, SC, SD, and TN.[71,72]

In order to build a healthcare workforce that is responsive to the needs of birthing people in New York, greater awareness of perinatal mental health challenges is needed among providers. Project TEACH, New York's pediatric and perinatal psychiatry access program, is a useful resource in this regard. Project TEACH provides a broad range of on-demand and live accredited training courses on maternal and child behavioral health topics, access to screening tools, referral linkage assistance, and a real-time consultation line. The consultation line connects primary care providers with behavioral health clinicians who can provide guidance on treatment of mental health challenges about which primary care physicians may not have expertise, including medication management for perinatal people. Providers who have utilized Project TEACH education and consultation resources have reported increased confidence and capacity to screen for, diagnose, and treat mental health challenges in their patients.[73] In addition to specific clinical knowledge, Project TEACH also emphasizes the importance of cultural humility and recognizing implicit bias, which is critical in providing care to diverse populations.

3.4.4 National Initiatives

Organizations like the American College of Obstetricians and Gynecologists (ACOG) and the Substance Abuse and Mental Health Services Administration (SAMHSA) support public awareness campaigns that aim to reduce stigma around maternal mental health and substance use disorders, promote early screening, and encourage help-seeking behavior.

Described in Table 3 are national initiatives and public awareness campaigns that support maternal health.

TABLE 3-NATIONAL INITIATIVES

INITIATIVE	DESCRIPTION
Mothers and Offspring Mortality and Morbidity Awareness (MOMMA) Act	A federal initiative aimed at improving maternal health by extending Medicaid postpartum coverage to one year nationwide and promoting mental health and substance use screenings as part of standard maternity care.[74]
SUPPORT Act	Federal legislation that seeks to address opioid use disorders among perinatal and postpartum individuals by improving access to treatment services and increasing funding for programs that integrate substance use treatment with maternal and infant health care.[75]
The Hear Her Campaign	A public awareness campaign addressing mental health-related maternal mortality, mental health warning signs, and strategies to support perinatal persons with mental health and substance use challenges, including print material, videos, and testimonials of persons with lived experience. Also includes materials and resources specifically addressing mental health challenges for American Indian and Alaska Native Populations.[76] Pursuant to the recommendation of the New York State Maternal Mortality Review Board, New York has run the Hear Her Campaign twice, in September-October 2021 and July-August 2022.[77]
BlueDotProject	Raises awareness of available resources and programs, advocates for perinatal mental health supportive policy, and provides printed and digital materials for public health information campaigns. The BlueDotProject also maintains a national directory of mental health supportive programs specifically for BIPOC birthing persons.[78]

4. Workgroup Findings

The Maternal Mental Health Workgroup engaged in guided discussions to assess the field of maternal mental health and birthing people with lived experience. These discussions identified factors that contribute to disparities in health outcomes for underrepresented people across NYS, and the risk factors that impact maternal mental health.

4.1 Underrepresented Populations and Risk Factors

The Maternal Mental Health Workgroup identified underrepresented populations vulnerable to maternal mental health and/or substance use challenges in NYS (see Table 4). They also identified the complex collection of barriers and risk factors that contribute to a birthing person's risk for maternal mental health and substance use challenges, particularly among birthing people of color.

TABLE 4-UNDERREPRESENTED AND VULNERABLE POPULATIONS IDENTIFIED BY THE WORKGROUP

- BIPOC Birthing Persons
- Low-income Birthing Persons
- Undocumented Birthing Persons
- LGBTQIA+ Birthing Persons
- HIV Positive Birthing Persons
- Military Birthing Persons
- Adolescent Birthing Persons
- Rural Birthing Persons

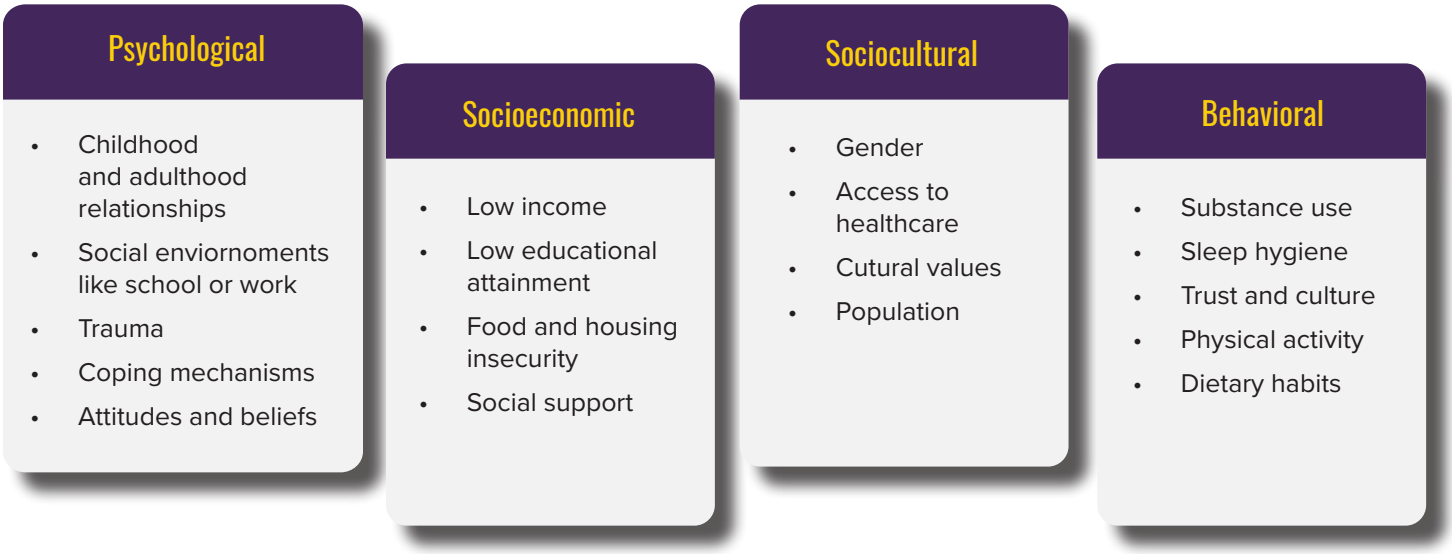
"When I think of the most vulnerable population, I think about young Black birthing persons that are low income. I was one of those people that gave birth to my son at 21 and was treated unfairly in the hospital system period. I wasn't checked on after giving birth. I was treated as if I wasn't even human. I even remember getting an epidural done to me twice, which is something that they're not supposed to do. There were a lot of traumatic experiences in the hospital itself, and to be honest, there was no check-in or follow-up after that. You had a follow-up/check-in after giving birth, but there was no follow-up of, 'let me look at this person as a human being that had a whole entire child' and 'let me just check in on her well-being after leaving this hospital."

– Maternal Mental Health Workgroup Member

4.1.1 Risk Factors

The Maternal Mental Health Workgroup looked at the psychological, socioeconomic, sociocultural and behavioral risk factors that can present in birthing people and be a prediction of perinatal mental health and substance use challenges (see Figure 4).

FIGURE 4-RISK FACTORS THAT IMPACT PMADS IDENTIFIED BY THE WORKGROUP



4.1.1.1 Psychological Factors

Psychological risk factors identified by the Maternal Mental Health Workgroup included a history of preexisting mental illness, substance use challenges and a history of trauma, including adverse childhood experiences and intimate partner violence, acknowledging that these factors go hand in hand with mental health challenges.

A history of preexisting mental illness, both individually and in one's family is a significant risk factor for the development of a PMAD. Family history of psychiatric illness doubles the risk of developing a PMAD.[79] Over half of birthing people who experience perinatal/peripartum depression (PPD) have a family history of psychiatric illness.[80]

> *"So, I think when we talk about maternal mental health, I think number one is mental health symptoms prior to pregnancy that are not addressed, then going into pregnancy, having a kid, and they get worse. I think that is a huge concern for not knowing that symptoms are related to mental health after childbirth."*
>
> *– Maternal Mental Health Workgroup Member*

Traumatic experiences significantly increase the risk of suffering mental health challenges and substance use, and a history of mental illness independently increases risk of substance use challenges. An estimated 5% of birthing people struggle with perinatal substance use disorder (SUD) nationally, with the most common used substances being alcohol, cannabis, and tobacco. Perinatal substance use generally peaks in the first trimester and tapers by the third trimester of pregnancy.[81]

> *"Another gap is when people already have mental health diagnoses. Sometimes, you might mistake what's going on currently with a diagnosis you already have. In my lived experience, I already had PTSD (post-traumatic stress disorder), so you couldn't tell me that [what I was feeling] wasn't the symptoms from [PTSD], but later, I figured out that 'woah, I'm really depressed.'"*
>
> *– Maternal Mental Health Workgroup Member*

Birthing people who have experienced pregnancy loss or given birth preterm are at an increased risk for poor postpartum health. Research reveals that pregnancy loss is a risk factor for postpartum psychiatric treatment.[82] Specifically, over 40% of individuals who give birth preterm experience depression, over 30% develop an acute stress disorder within 3 to 5 days of their infant being admitted into the neonatal intensive care unit (NICU), and 15% develop PTSD within one month of admission.[83]

A history of trauma from adverse childhood experiences, intimate partner violence, and military service all contribute to elevated risk of mental health challenges during the perinatal period, poor pregnancy and birthing outcomes, and difficulty in establishing the parent-child bond.[84,85,86] Childhood maltreatment has been associated with various adverse outcomes including perinatal and postpartum mental illness. Research has indicated a link between childhood maltreatment with PTSD and major depressive disorder in adulthood. Similarly, experiences of intimate partner violence during pregnancy are associated with depression, anxiety, and PTSD symptoms among birthing persons.[87] PTSD among military birthing people is related to both increased risk of developing a PMAD as well as poor pregnancy and birth outcomes, such as gestational diabetes and low birth weight.[88]

> *"The trauma piece has to be addressed, and we need more trauma therapists collaborating with peers that could really get in and support maternal mental health because if we don't start there, we're losing regardless because generational trauma is real. How can I be the best parent I can be if I didn't grow up in the right and safe environment to even have confidence in myself that I'm going to be a great mother? "I don't know what to do. My mother wasn't there for me. How do I know how to be a mom?" And you end up being stuck."*
>
> *– Maternal Mental Health Workgroup Member*

While birthing people who experienced childhood maltreatment are at heightened risk for poor maternal mental health, for some individuals, previous adversity operates as a protective factor and opportunity for resilience during these periods (perinatal and postpartum) and safeguards their mental health.[89] Thus screening for previous trauma and resilience prior to childbirth could help identify birthing people that are at a higher risk for postpartum PTSD and major depressive disorder.

4.1.1.2 Socioeconomic and Sociocultural Factors

Socioeconomic factors elevate the risk for maternal morbidity and mortality and perinatal mental health disorders, independent of ethnicity. For instance, birthing people who live in rural areas are more likely to live in transit and maternity care deserts and experience higher rates of perinatal/peripartum depression (PPD).[90] LGBTQIA+ birthing people are vulnerable to special challenges like finding respectful, culturally humble health care. Immigrants, refugees, and undocumented birthing people face language barriers and fear associated with their immigration status, in addition to socioeconomic factors like housing instability, food insecurity, lack of insurance, and limited access to Medicaid.[91]

Discrimination is a factor in almost half of pregnancy-related deaths.[92] All BIPOC birthing people experience a greater risk of maternal mortality than White birthing people, with Non-Hispanic Black birthing people facing the most disproportionate burden. In NYS, this disparity is even wider – Black birthing people are more than three times as likely to suffer pregnancy-related death as their White peers. Importantly, these health disparities persist for people of color when accounting for socioeconomic factors like income and educational attainment.[93]

Therefore, when considering risk factors for maternal mental health and substance use challenges, sociocultural factors must be considered, as the perinatal and mothering experiences differ from culture to culture. For example, Black birthing people are more likely to experience symptoms of depression, anxiety, and emotional distress related to greater social and economic adversities, e.g., lower socioeconomic status, poverty, unemployment, higher stress, and racism.[94] In many Latin cultures, it is the norm that mothers are the primary caregivers of the family's children, and that is often associated with a de-prioritization of their own mental health needs.[95] Among Asian Americans, mental health is heavily stigmatized and often considered a private matter. While sharing mental health symptoms is acceptable within families or close social relationships, seeking care from a professional is not.[96]

Maternal Mental Health Workgroup members expressed that sociocultural attitudes and expectations about parenting and mental health significantly affected self-image and health seeking behaviors. Romanticized expectations of parenthood and welcoming a child as a joyful, overwhelmingly positive experience minimizes the challenges birthing people can experience during the perinatal period.

> *"Going to the roots of just the expectation and the narrative around motherhood and realizing what a kind of romanticized experience that it's portrayed and presented as, and how many mothers enter this phase in their life and birthing people expecting this to be a beautiful and blissful experience as it's meant to be, and how little psychological education and awareness is available prior to conception around maternal mental health and normalizing the fact that motherhood is both. There are beautiful moments, and there are also a lot of really hard ones, and until we find a successful way to normalize the journey and make it safe to talk about the hard parts, it doesn't matter how much treatment we have to offer these women and birthing people."*
>
> *– Maternal Mental Health Workgroup Member*

Maternal Mental Health Workgroup members with lived experience of mental health challenges expressed that these expectations exacerbated internalized stigmas regarding mental health and prevented them from seeking care. Maternal Mental Health Workgroup members shared the following experiences:

"I remember the little comments. It made me feel so uncomfortable because it's bad enough that for a lot of Black women growing up in a household, it's like you gotta be strong. You are not supposed to cry. You are not supposed to show anything like we're just supposed to be the provider, make sure our children are good and keep it moving, and that's how I grew up. So, to me, it was like, "what do I do next?" ...I had to really navigate everything that I went through by myself, and did it make me resilient? Absolutely. But at the same time, it should never be like that. I should have had so many different people speaking to me, even in that hospital setting, as a 21-year-old mom, first time mom."

– Maternal Mental Health Workgroup Member

"That is a game changer – to set up a new mom, especially a Black woman. Because Black women, in my opinion, are thought to be so strong, and we can never show our emotions, we have to just tough it out. In my opinion, we don't get much grace, and we don't get the ability to just say "I can't do it." We're looked at to do it all the time"

– Maternal Mental Health Workgroup Member

"One of the barriers for me seeking out help was really that stigma as a Black woman. I am not one of the people that can get on here and tell you a story about seeking out help. I did not seek out help. I had to cry in my room. These are my strategies, right? I had to seek out self-help for myself. I had to tell myself that I'm a good mother and that I'm ok because I started to feel like I wasn't a good mother because of my mental health."

– Maternal Mental Health Workgroup Member

"I experienced shame and embarrassment that I had depression and anxiety, so that was a barrier for me because I didn't know how to ask for help. Now, when I did ask for help, I didn't have quality treatment, and that lasted for three months until I was referred over to The Motherhood Center."

– Maternal Mental Health Workgroup Member

4.1.1.3 Behavioral Factors

A number of behavioral factors, including health seeking behaviors, sleep, and mindfulness affect the risk for developing a PMAD.

Sleep has been identified as a significant factor affecting the incidence of PMAD-related symptoms. In the general population, inadequate sleep quality, insufficient sleep duration, and disruptions to circadian rhythms have all been linked to a greater risk of depressive disorders. Although sleep disturbances are a ubiquitous part of the postpartum period, circadian rhythm irregularities manifest in only a subset of postpartum individuals and are associated with both depression and anxiety. Birthing people who experience postpartum depression tend to report shorter sleep periods and more frequent awakenings in their infants. Sleep disruptions are also one of the most common symptoms of depressive disorders.[97]

Existing observations regarding behavioral factors contributing to PMAD risk, like health seeking behaviors and quality of sleep, suggest that behavioral interventions can help in reducing PMAD symptoms. Among birthing persons, accessible wellness approaches like yoga and mindfulness can reduce stress and symptoms of anxiety and depression.[98]

4.1.2 Social Support

Social support is the psychological benefit from engaging in interpersonal relationships, as well as tangible support, such as assistance with food and interacting with other birthing persons. Lack of social support, often related to stigma, contributes to increased risk of poor perinatal mental health outcomes. Low levels of social support are associated with significantly elevated risk of perinatal mental health challenges, poor health outcomes in general, and a decrease in an individual's ability to cope with stress.[99]

Without support and proper coping strategies many experience depression, anxiety, PTSD, which for perinatal individuals can lead to adverse physical health outcomes, including preeclampsia and/or preterm birth.[100] Given the disproportionate experiences of preeclampsia and pre-term births among minoritized women causing increased morbidity and mortality, it is essential that cultural and structural factors underlying these conditions are highlighted and addressed with respect to experiences of trauma and mental illness exacerbated by trauma.

> *"What really helped was peer spaces, being in parents' spaces, we're more open to talk about our lived experience. I think what helped me was a lot of family advocates being around me."*
>
> *– Maternal Mental Health Workgroup Member*

4.1.3 Social Determinants of Health

To understand the complex relationship between mental health challenges, substance use, and the risk factors discussed above, it must be viewed through the lens of social determinants of health (SDOH), the non-medical factors that affect people's lives and access to opportunity (see Figure 5).

FIGURE 5-SOCIAL DETERMINANTS OF HEALTH[101]

Current research estimates that social determinants account for 30-55% of health outcomes and drive health inequities.[102] The most needed social support services among birthing New Yorkers are basic infant needs (e.g., diapers, formula), and assistance with food, housing, transportation and basic utilities (e.g., internet connectivity),[103] which underscores the burden marginalized communities carry and the work needed to address health inequities in our state.

Assistance programs like the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) help to reduce food insecurity and racial/ethnic disparities in food insecurity,[104,105] these programs do not adequately mitigate social conditions that drive food insecurity, such as relative high cost of healthier foods, lack of access to quality grocery stores, lack of transportation, and lack of time and resources needed to prepare meals.[106,107] Further, these assistance programs do not alleviate the cost burden of basic household products, like cleaning or hygiene products, including diapers.[108] As discussed in the literature review, some assistance programs, such as Temporary Assistance for Needy Families (TANF), can even exacerbate financial hardship and contribute to increased stress.[109]

Maternal Mental Health Workgroup members identified material needs such as housing, food, infant supplies, and transportation, as significant stressors for birthing persons. In the words of one Maternal Mental Health Workgroup member:

"In the best possible world, let's say we had fabulous prenatal care and fabulous pregnancy care, and we didn't have one unnecessary c-section, and every birth was a healthy birth, and there was postpartum depression screening for everybody. That would not help the women or the families who were living in substandard housing, who had lived in an environmentally unjust community, so their babies and themselves were impacted by unhealthy air or unhealthy water. It certainly wouldn't help the families that are really struggling with poverty or trying to put food on the table."

– Maternal Mental Health Workgroup Member

Material need impedes birthing persons' ability to focus on their own well-being. Between the cost of food, frequent medical appointments, childcare, and the need for basic infant supplies, this significantly increases a household's financial burden. Even for those who have employer-paid leave benefits, this period is financially difficult. One Maternal Mental Health Workgroup member shared:

> *"I think that for maternal mental health, we need, first and foremost, we need paid maternal leave. 100% paid. Not 66.67%. We need 100%, and then a stipend even to assist with obtaining whatever needs that parent or the parents would need because there are a lot of people living in poverty, or there are a lot of women and children – I know there's WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) and all of that stuff – but even for women that don't fall on the poverty line, cause that was me, it was still difficult on 66.67% of my salary to live and pay bills. I'm still behind on bills. I was out for a year, and I went back not feeling ready, but I knew I had to go back because we needed the money, you know."*
>
> *– Maternal Mental Health Workgroup Member*

4.1.4 Lived Experience of Birthing Persons

Maternal Mental Health Workgroup members with lived experience identified the following factors that contributed to mental health, substance use, and well-being challenges during the perinatal period:

- Poor treatment and dehumanizing experiences in health care settings.
- Fear of punitive action, including child removal, as a barrier to self-disclosure.
- Sociocultural attitudes regarding mental health and substance use, as well as expectations surrounding pregnancy and parenthood:
    - Social stigma regarding mental health and substance use challenges.
    - Feelings of isolation.
    - Feelings of shame for not meeting societal and internalized expectations regarding parenting.
    - Sociocultural narratives that romanticize the experience of parenthood and minimize the challenging aspects of parenthood and the perinatal period.
    - Prioritization of infant health over the well-being of birthing persons.
    - Lack of dyadic view of maternal and child health.
- Lack of public and personal awareness of PMADs.
- Lack of health care provider awareness of PMADs and perinatal mental health.
- Lack of responsive care, especially for more acute symptoms.

- Inadequate workplace benefits, including leave policies.
- Lack of education and social support services, especially for:
    - New parents and adolescent parents.
    - Developing self-efficacy as a parent.

Maternal Mental Health Workgroup members shared:

"As I reflect on my own experience, I think about what wasn't there. And listening, believing, hearing, particularly as a Black woman, you know, it's difficult. Person-centered [care] – really gets into the root, to the heart of what that is and what that means."

– Maternal Mental Health Workgroup Member

"'I'm exhausted.' 'That's your child – you're a mother now.' I wasn't even talked to in a respectful way, and I know that for a young person when this is their first child, this experience happening is common. When you think about maternal mental health and the way that I was treated – I don't ever want to go back to a professional now. My experience was so horrible and even how [providers and staff] spoke to me, I don't even want to tell [them] that I'm having postpartum depression."

– Maternal Mental Health Workgroup Member

"I wanted help, and no one seemed to be able to say, "this is what you're experiencing." It was simply that I was dealing with postpartum depression."

– Maternal Mental Health Workgroup Member

"I remember being in The Motherhood Center and being very upset that we don't even know what a PMAD is at discharge. That's something that shouldn't be spoken about, and it should be spoken about when we're pregnant. It shouldn't just be focused on the [baby]. Of course it has to be focused on the baby, but like [Workgroup member] said, you have to make sure that the caregiver is cared for so that she can care for the child."

– Maternal Mental Health Workgroup Member

"There was a lot of things that happened to me during the hospital experience and then after that caused a lot of my anxiety, my trauma, me feeling like I didn't have anybody I can go to."

– Maternal Mental Health Workgroup Member

"When I gave birth to my son, I would actually label it as my worst experience in the hospital. It actually traumatized me to [about] go[ing] to the hospital to this day. I was treated unfairly. I was treated as if things weren't an emergency. I was in labor for a day and a half. I had an epidural given to me twice in the hospital and wasn't really educated on the epidural. I wasn't even really checked on in the hospital. I didn't have people communicating with me, and on top of that, my son wasn't cleaned properly."

– Maternal Mental Health Workgroup Member

Maternal Mental Health Workgroup members identified the following factors that helped alleviate mental health, substance use, and well-being challenges during the perinatal period:

- Partial hospitalization programs (PHP) and intensive outpatient programs (IOP), such as the Day Program at The Motherhood Center.
- Peer support programs, such as those provided by the Postpartum Resource Center of New York.
- Home visiting programs, such as Healthy Families or the Nurse Family Partnership.
- Dyadic care with supports for both parent and child, such as the care provided by the HealthySteps program.
- Community-based health care, education, and social support services, including services provided in non-traditional settings such as beauty salons.
- Multi-disciplinary care, including care provided by OB-GYNs, pediatricians, doulas, nurses, and peer support specialists.
- Care and patient advocacy provided by doulas.
- Access to providers who are of the same race, ethnicity, and/or cultural background.

"I feel like the collaboration between a provider and having a peer on staff that's able to support a person that just gave birth to a child is necessary because a lot of times, the lived experience component is very important. If you cannot place yourself in my shoes, I just don't feel comfortable in any way. Regardless of the environment, no matter what, how you speak and the language that you're saying, I'm not really even processing that because I'm in crisis right now. I just gave birth to a child, and I don't feel that comfortability. When you are in those situations, you don't want ACS (Administration for Children's Services) involved, so having a peer that's like, 'hey, I'm not trying to do anything but support you,' and being real about it is very important cause a lot of times, when people are looking for services, they just want someone that feels like it's real, like it's a human experience, and a lot of times, unfortunately, we do not feel like that when we're in those types of environments..."

– Maternal Mental Health Workgroup Member

4.1.5 Epidemiology of Maternal Substance Use

While having a child can be an exciting, meaningful experience, it can also be physically and emotionally demanding — especially for those birthing people who have maternal mental health and substance use challenges. Yet, many people are not aware of the risks of pregnancy and do not have the tools or support necessary to deal with the challenges that pregnancy, childbirth, and the postpartum period may present.

Substance use among birthing people is a growing public health issue. Between 2010 and 2017, the number of opioid-related diagnoses among birth persons upon delivery in hospitals increased by 131%.[110] During the same period, rates of cannabis use during pregnancy doubled.[111]

Recent data from the 2020 National Survey on Drug Use and Health reveals approximately 11% of pregnant individuals in the U.S. reported using illicit drugs, tobacco, or alcohol in the month leading up to the survey.[112] Between 2017 and 2020, there was an alarming 80% increase in fatal drug overdoses among pregnant and postpartum individuals.[113] This rise is significantly greater than that observed in many non-pregnant women of reproductive age during the same time period.[114]

"Talking about substance use more will help destigmatize it. I think even beyond the prenatal period, we should be talking about it with all people of childbearing age, so that it's part of adult health more broadly, especially for people who may become pregnant or are trying to become pregnant."

– Maternal Mental Health Workgroup Member

Adolescent birthing people carry an even higher risk of experiencing substance use challenges as compared to both adult birthing people and adolescents who have not experienced pregnancy.[115,116] Adolescent substance use is also associated with risky sexual behaviors that put teens at risk of exposure to sexually transmitted infections and unplanned pregnancy.[117]

"The patients who die, are dying by suicide and by overdose. When you look at the diagnoses of those patients who commit suicide or overdose, it's often due to severe psychiatric illness, and it's in those patients with known history of severe psychiatric illness…often the patients who die from their illness, we often knew that…they were at high risk for postpartum psychosis and/or filicide, and suicide, that they had a history of an un-optimally treated substance use disorder, especially during the peripartum period, where the stigma is amplified."

– Maternal Mental Health Workgroup Member

Prior substance use challenges, particularly analgesic opioid use, increase the risk of perinatal substance use, including into the second and third trimester, by threefold.[118] Birthing people with substance use issues are particularly vulnerable and reluctant to seek care due to the stigma attached to substance use. For birthing people of color, the real, founded fear of child removal and other punitive action makes them even more reluctant to disclose substance use or seek the care they need.[119]

4.1.6 The Realistic Fear of Child Removal

Approximately 50% of Black children in the U.S. are subject to child welfare investigations. Black birthing people are ten times more likely to have punitive action taken against them for substance use issues compared to their White counterparts. Even an "innocuous" conversation with a provider, or admission of an honest mistake as a new parent can trigger a call to child protective services for persons of color.[120] This fear heavily influences Black parents' medical decision-making, both in seeking care for themselves and for their children, including attendance to routine postpartum visits.[121] For Black birthing people and other marginalized populations, keeping interactions with medical providers and social service providers to a minimum is an act of self and family preservation.[122,123] Therefore, many do not share important details regarding mental health, substance use, or social needs with their providers, and so do not receive the care they need. In fact, due to the fear of collaboration between the health care and child welfare systems, Black birthing people are less likely to attend postpartum visits.[124]

"Disclosing of the substance use: [people] might disclose because they're looking for help, and what ends up happening is their children are taken away and get put into the system. They give birth, the child is placed into the system, so there is a real fear – it's not a made up fear – a real fear, and I think that it's a barrier to getting help that's needed for fear of disclosure."

– Maternal Mental Health Workgroup Member

Seventeen states define substance use during pregnancy to be child abuse under child welfare statutes and prosecute accordingly. Contrary to the belief behind such laws, prosecution of birthing people with substance use and mental health challenges not only does not deter substance use, it further traumatizes vulnerable people and leads to more negative health outcomes.[125] Although New York is not among these states, the fear of punitive action remains a significant barrier to care.

4.2 Understanding Strategies to Improve Screening, Referrals, Prevention, and Treatment of Maternal Health Issues

The Maternal Mental Health Workgroup discussed drivers of inequities in care and mental health outcomes from a broad range of perspectives and proposed strategies to address these inequities. They defined quality care as having the following characteristics:

- Compassionate, empathetic, safe, timely, efficient, equitable, evidence-based, person-centered, and trauma-informed.
- Addresses the mental and physical health of the birthing person and the entire family.
- Promotes overall wellbeing and optimal health.
- Is a continuum of care that includes access to education, support programs, and resources for meeting SDOH needs for prevention through recovery.
- Is delivered with humility and without judgment.
- Is not used as an opportunity to stigmatize, alienate, or punish birthing people with substance use issues, but rather an opportunity to destigmatize care with those presenting issues.

While New York continues to make substantial efforts toward increasing access to quality, responsive, and culturally humble care, ample opportunity for growth remains. Maternal Mental Health Workgroup members shared the following barriers in Figure 6 preventing widespread implementation of universal screening and driving disparate maternal mental health and substance use outcomes.

FIGURE 6-BARRIERS TO IMPLEMENTATION OF UNIVERSAL PMAD SCREENING

PATIENT FACTORS

- Stigma around mental health conditions.
- Concealing mental health symptoms as an act of self-preservation borne of fear of punitive action.
- Fear associated with a diagnosis of PMADs and the increased risk of the repercussions that may occur due to this diagnosis, especially for those who have had a history of substance use.

PROVIDER FACTORS

- Lack of time and feelings of being overburdened with excessive patient load are frequently cited as reasons for inadequate implementation of screenings.
- Insufficient training in mental health care for obstetric providers, leading to discomfort in diagnosing and treating mental health issues.
- Obstetric providers avoid screening due to lack of comfort in providing care and being adequately trained, including in cultural and structural humility, therefore not providing the highest standard or equitable care.
- Lack of cultural and structural humility, thereby undermining the delivery of high-quality equitable care.

SYSTEM FACTORS

- Significant disconnect between the screening process and access to referral network of appropriate mental health services.
- Lack of clear protocols and pathways for providers on institutional and systemic levels.
- Significant challenges in accessing affordable mental health care for individuals seeking help.
- Limited number of mental health providers specializing in perinatal mental health who accept various insurance plans including public insurance.
- Lack of culturally relevant services and tools for addressing the diverse backgrounds and experiences of patients.
- Inconsistent screening policies across healthcare settings contributing to low screening rates.

"We have a healthcare system, particularly around maternity care, mental health care that is underfunded and undervalued...We can't make some of these efforts sustainable without appropriate funding."

– Maternal Mental Health Workgroup Member

"Another barrier was how little resources for postpartum mothers [there were] in Rochester, and I had to jump through so many hoops and call so many places before I even connected to the Postpartum Resource Center of New York. If these resources had been readily available, I would have gotten better much sooner. I wouldn't have had been so exhausted trying to inform and educate providers on what I was experiencing while I was trying to just get help and feel better."

– Maternal Mental Health Workgroup Member

"Across the span of clinicians, we just don't have enough training on how to work with the behavioral health needs of birthing individuals."

– Maternal Mental Health Workgroup Member

"I think one of the gaps [in maternal mental health care] is we don't have enough people of color in the system providing care."

– Maternal Mental Health Workgroup Member

"We know what the barriers are. If we can start addressing those [barriers], and I think some are reimbursement, and the 15-minute visit, the clinical load that primary care physicians are burdened with that they're not able to really provide that quality care with their patients, and it pains them not to be able to do so it. It's ludicrous if we're to delude ourselves to thinking that we can really provide quality care in a matter of a few minutes."

– Maternal Mental Health Workgroup Member

"Pathways and access to care. I think one of the biggest problems is people screen, but they don't know what to do when they find [a need for care]. We need to make sure that we create viable pathways for people to get the supports that they need, including the continuum of everything that people talked about today."

– Maternal Mental Health Workgroup Member

"I think we have to talk to residents and medical students and their proctors and directors and really hit on the issue [that] what we've created is an institution that disrespects the people it's supposed to serve, and it's not just BIPOC (Black, Indigenous and other persons of color) people. It's any people that don't look like the people that are providing the service, and we need to be honest about that."

– Maternal Mental Health Workgroup Member

"Everybody who touches the lives of pregnant persons should be mental health informed…I think everybody really needs to know and to understand the kind of signs and symptoms of mental health distress, wherever they are on the continuum, and we need to create pathways for support, whether it be prevention, support or intervention."

– Maternal Mental Health Workgroup Member

4.2.1 Screening Guidelines & Venues

Implementation of universal screening helps to reduce racial disparities in maternal mental health treatment and outcomes. Universal screening has been identified as a key strategy for identification and management of PMADs. Professional organizations, such as the American College of Obstetricians and Gynecologists (ACOG) publish guidance surrounding screening methods, frequency, and timing, but OB-GYN and pediatric providers are not widely aware of such guidelines and procedures.[126,127] This leads to variable screening practices by which the most vulnerable populations are consistently less likely to be screened than birthing people of higher socioeconomic status and Non-Hispanic White birthing people.

One strategy that was highlighted by the Maternal Mental Health Workgroup to combat patient reluctance with providers is to implement screening in non-traditional venues. PMAD screening should be performed at all pregnancy or parenthood-related settings visited by pregnant and postpartum people. This includes appointments with traditional providers, like OB-GYNs, pediatricians, and psychologists, but it also includes screening being done in non-traditional settings such as day care centers and by peer support mentors. Birthing persons, especially those from marginalized communities, may be more comfortable sharing sensitive personal information with non-traditional providers, especially non-traditional providers who belong to the same communities.

"Look at ABC Head Start programs and see how potentially screens could be done there, even if it's brief screens and connections, similar to some of the high blood pressure and glucose testing in barbershops and beauty salons, but take that same model and use it with [mental health] screens...also see if daycare providers would be willing to do those brief screens and make connections because people have to work, and if they're dropping off their family members, this meet[s] them where they're at."

– Maternal Mental Health Workgroup Member

"The concern about punitive implications of getting care, I think it speaks to thinking about how we can embed care in places that are already trusted, places where people have trusting relationships to start to chip away at some of that that concern. That goes from screening on down to various treatment options."

– Maternal Mental Health Workgroup Member

4.2.2 Cultural Humility & Implicit Bias in Screening

Screening throughout pregnancy and the postpartum period is crucial to improving mental health and substance use outcomes for both birthing people and their families. However, recent research indicates that 58% of obstetric providers do not utilize a validated screening tool for perinatal substance use. When asked about the reasons for this lack of adherence to validated screening measures, providers pointed to insufficient training and the absence of standardized tools as significant barriers.[128] A survey of maternal mortality in New York State found that 20.2% of mental health related deaths were attributed to provider factors, including lack of training.[129] In the words of a Maternal Mental Health Workgroup member:

"A lot more education would be needed for obstetrical providers in order to feel comfortable to do some of that screening because that's not just their level of expertise."

– Maternal Mental Health Workgroup Member

The experience of structural racism, both in health care and in all other institutional settings, delivers the double blow of both adversely affecting the health and wellbeing of people of color, and preventing them from seeking care. While birthing people of color are less likely to be screened for mental health and substance use challenges than their White counterparts, people of color who screen positively for substance use challenges are much more likely to be reported to a child welfare agency.[140] Black birthing people consistently report traumatizing medical experiences, feeling dehumanized and unheard by medical providers, and the fear that interaction with the medical system will lead to having their children taken away.[141] Maternal Mental Health Workgroup members shared:

"When it comes to the voices of New York State birthing person, moms…a very important part is what we hear – those people who have had horrible experiences, discrimination, they're saying they never want to follow up with therapy again."

– Maternal Mental Health Workgroup Member

In addition to increasing specialized knowledge and awareness of implicit bias among providers, it is important to recognize the shortcomings of existing screening tools. For example, the commonly used Edinburgh Postnatal Depression Survey (EDPS) and Patient Health Questionnaire (PHQ-9) identify depression, but not anxiety or suicidality. These tools are also not validated across all races and ethnicities represented in New York's population, and the language used in these surveys can sometimes be perceived as confusing or judgmental.[132,133] In the words of a Maternal Mental Health Workgroup Member:

"We know that the screening is often not picking up the rates we'd expect it to pick up for many reasons, including that tools haven't been validated for different groups and fear of answering questions in a way that could have repercussions. I think that's critical."

– Maternal Mental Health Workgroup Member

To capture the entire spectrum of potential mental health and substance use challenges during the perinatal period, a bundle of screening tools, including the EDPS and PHQ-9 should be used. To address the shortcomings of these tools, providers should communicate the meaning and intent of the survey questions to patients as they administer screenings and maintain awareness of circumstances that may affect administration of a screening tool, like tone of voice and body language:

"Spend that quality time with the patient to explain the [mental health] conditions…potentially go through the questionnaire and the assessment with the patient to explain the questions in real time in the event that they don't make sense."

– Maternal Mental Health Workgroup Member

"I've found that screenings are treated more as a check in the box than an actual screening. When asking these questions on the screening we should be watching things like body language to make sure we're alert to things that may indicate someone is struggling. As a nurse, I think that education surrounding that [body language and how to screen] would be helpful."

– Maternal Mental Health Workgroup Member

4.2.3 Referral Process

Proper screening and early detection of potential PMADs is paramount to the care of birthing persons. However, when screening identifies a need for further care, connecting birthing people to appropriate specialized care can be challenging. A review of maternal mortality in NYS found that 16.7% mental health related deaths occurring between 2018-2020 were attributable to continuity of care factors, including lack of follow-up on referrals.[135] Racial and ethnic disparities in referral and treatment are consistent with those seen in screening. In the same review, racial and class discrimination in decision-making regarding referral and treatment was found to have contributed to 27.7% of mental health related maternal deaths.[136]

For the referral process to be improved, there must be appropriate capacity in the health care workforce to treat referred patients. Perinatal mental health is a niche field, and few health care providers receive specific training on the treatment of birthing people or how to provide culturally humble, respectful care to the most vulnerable New Yorkers. The providers who do have the expertise are few and far between compared to patient needs. Providers have expressed a reluctance to perform screenings if they have nowhere to refer patients, as doing so would undermine trust between provider and patient.

Maternal Mental Health Workgroup Members shared that the lack of a robust referral network for perinatal behavioral healthcare was a significant barrier to implementation of universal screening.

"We find that providers don't screen well if they don't know where to send [patients] if they screen positive."

– Maternal Mental Health Workgroup Member

"I started having depression screening done before people are discharged from the hospital. Well, what I didn't realize is that I had no resources, so I'm screening for something where I can't refer patients. On top of that, we started a postpartum wellness visit, which is one week after discharge, and then again comparing those two scores. And again, I have the same problem where I don't have mental health specialists or reproductive psychiatrists or psychologists [to refer patients to], or they don't accept their insurance, they don't accept Medicaid, or they only take cash, or they're not accepting new patients, or there's a language barrier."

– Maternal Mental Health Workgroup Member

The referral process is a critical juncture in prenatal and postpartum mental health care. Maternal Mental Health Workgroup members shared several suggestions for improving referral networks:

- Use of multi-disciplinary care teams and integrated care models.
- Utilization of warm hand-offs, a practice where a provider making a referral directly introduces the patient to another provider.

"An area of success we're seeing is...the universal light touch home visitation model, [which is] not the same as Nurse-Family Partnership, it's not the same as some of the other programs. But without a universal program that assesses right after birth where people are, I think folks fall through the cracks very quickly. [Postpartum people] may not receive the care, the same connection to care they had in the prenatal space, or they may go unidentified. And so we have a model that we're doing in the space and I think it covers a lot of things, but I think the secret sauce is going to be what we're doing in the maternal or postpartum mental health space where we have a behavioral health specialist that can take a warm handoff immediately if an Edinburgh Postnatal Depression Scale screening is showing rising risk or if it's positive."

– Maternal Mental Health Workgroup Member

"I think having more diverse members of an interdisciplinary team like peers, like community health workers, care management trained or health educators that are working collaboratively with a licensed provider can be really impactful along with the use of technology, frankly, to just engage more patients, provide more outreach...one of the strengths of collaborative care is not every patient does need psychotherapy or talk therapy. There are a lot of folks that can really benefit, and may otherwise just be getting a prescription medication from their provider, from some additional behavioral support, some goal setting, some follow up, like, 'hey, how's it going?', 'Did you fill your prescription?', 'Are you taking your prescription?' Really kind of straightforward, grassroots solutions."

– Maternal Mental Health Workgroup Member

"I'm a pediatrician...and we feel very strongly in following the guidelines for pediatricians and family physicians that screening for PPD (postpartum depression) is very important since we are seeing the moms throughout [the postpartum period]. I also recognize that the uptake is variable, and the ability to then connect the birthing parent or the family members to services can be complicated, so one of the things that we are piloting right now in our area is a universal newborn tele-home visitation model with a focus on family supports. It's an interprofessional model that has a clinical component linked to an RN with the team that's doing some of the screening and clinical assessment, but we have an immediate warm handoff now to a behavioral health provider, so if there is a birthing parent that screens positive or even at risk on an Edinburgh [Postnatal Depression Scale], then we're able to hand that patient off immediately to the behavioral health provider who can do more assessment...We're definitely seeing in the practices that are piloting it that their ability to screen for and then act on those screeners has been really enhanced in this model."

– Maternal Mental Health Workgroup Member

4.2.4 Prevention

The U.S. Preventive Services Task Force (USPSTF) strongly recommends provision of preventive services, such as counseling, to birthing people at high risk of developing perinatal mental health and substance use disorders.[136] Preventive services can be provided by clinicians, doulas, community health workers, and peers through community-based initiatives like support groups and home visitation programs.

Doula coverage has gained momentum since 2022.[137] There are 43 states that either provide Medicaid coverage for doulas, or have taken steps toward doing so, including New York. New York, California, Maryland, New Jersey, Oklahoma, and Washington D.C. provide the most robust services, including eight or more doula visits spanning pregnancy to one year postpartum.[138] The NYS Health Commissioner issued a statewide standing order that all New Yorkers who are pregnant, birthing, or postpartum would benefit from receiving doula services.

Community based programs play a vital role in improving maternal mental health by increasing awareness, offering support, and facilitation of access to care.[139] Community engagement is important in advancing discourse and raising public awareness about stigmatized health issues, like mental health. Community led approaches have much greater success than standard approaches to public awareness campaigns.[140,141] This is because information is tailored to the target audience by their peers and disseminated by trusted voices and leaders. Information, resources, and programs delivered and endorsed by peers and community leaders are perceived as more credible, and as a result, are more successful.[142,143] Support groups and peer networks provide a safe environment where birthing individuals can share their experiences and receive emotional support, helping to normalize and address mental health concerns.[144] Community-based health workers, who are also often peers, can help to bridge gaps in formal healthcare services by delivering culturally sensitive social support care and strengthening community trust in available services and treatments.[145]

"For me, when I had my first child, I was a teenager, and guess where I went for my care – to the community center that was imbedded in my community that multiple family members, multiple community members that I knew told me to go to this program because they trust this program."

– Maternal Mental Health Workgroup Member

"I learned a lot about pregnancy – my cousins, my family members, people in the community – we learned a lot of it, guess where – in beauty salons and barbershops. So somehow, I know those may not be best practices or evidence-based, but those are best practices for a culture that doesn't trust the system as it is. Let's go to where they are."

– Maternal Mental Health Workgroup Member

"One thing that comes to mind is the idea of services also being flexible and low threshold in order to be quality. What I mean by that is that they're very easy to access, and that they may be accessed and accessible in non-traditional ways or non-traditional locations. In community care, going to people where they are at, not just in the sense of home visiting, but that "boots on the ground" community outreach, and actually being in the community to work with these families and to find them and to bring them to the care that they need."

– Maternal Mental Health Workgroup Member

"We know that the 100 days following the birth of a child are very, very crucial in preventing a lot of physical health conditions, and the same could definitely be said for mental [health conditions] and, you know, the standard six week [visit] after a person gives birth, that would be the first time they see their doctor. That could be too late or cause people to miss out on opportunities for screening and treatment. I think home visiting would definitely cut a lot of that, if there was somebody going to the person in their natural environment."

– Maternal Mental Health Workgroup Member

4.2.5 Treatment

Pregnancy and the postpartum period bring with them a complex set of health needs that cannot be adequately managed by a single provider. This is true for mental health challenges experienced by birthing people, which are often affected by both physical and social factors.

"Treatment works, and with the right treatment, once we connect a birthing person to the right treatment, everybody can get better, and I think that's the greatest hope in all of this."

– Maternal Mental Health Workgroup Member

Collaborative care is a model of behavioral health treatment characterized by interdisciplinary cooperation between primary care and behavioral health care providers. Communication between providers is facilitated by a dedicated care manager, and the providers and care manager jointly develop and administer a care plan tailored to the individual needs of the patient. To utilize this model to its fullest potential, providers must be willing to treat the case manager as an equal part of the care team and must be knowledgeable about, and willing to provide referrals to, services available to the patient. This person-centered interdisciplinary approach improves access to behavioral health, normalizes receipt of behavioral and physical health care in the same setting, and is highly adaptable to special populations. Health care organizations that have implemented collaborative care models have reported both improved patient outcomes and higher satisfaction among both providers and patients.[146,147]

"We're seeing some nice success with a collaborative care model, behavioral healthcare management embedded within the OB (obstetric) practices. [Collaborative care] has demonstrated impact on earlier identification of mental health needs and many more pregnant people getting into remission and doing better in pregnancy and then follow through into the postpartum space."

– Maternal Mental Health Workgroup Member

Peer support is an integral part of a birthing person's care team. Though peers can be separate members of the care team, peer support mentors are well poised to assume the position of care manager, as birthing people, especially from vulnerable populations, tend to form more intimate, trusting relationships with peers rather than with providers.[148,149]

"We are finding — and you would not be surprised about this — there's many times in a clinical setting where a family is not ready to share or not comfortable sharing about how they're doing. We're finding that their relationship with the community health navigator and actually the relationship with the nurse is different, and so the things that are not coming forward in a clinical visit with a pediatrician or a nurse practitioner are then coming out in those other spaces, and then there's trust that's being built because of that relationship."

– Maternal Mental Health Workgroup Member

Both use of the collaborative care model and integration of peer support have been shown to increase treatment retention and improve postpartum mental health outcomes, with potential for synergy in combining the two practices.[150,151,152] Serving as care managers would empower peers to serve as equal members of the care team and would also create potential career pathways that lift up people with lived experience who are natural supporters of other birthing people. This would be especially powerful for people of color and other vulnerable populations who are not well-represented in the health care field.

While use of the collaborative care model and peer support may be effective for many maternal mental health and substance use challenges, there is also a need for clear triage pathways for birthing people who require a higher level of care. Once a birthing person begins to experience psychiatric symptoms, a rapid response, referral to treatment, and follow through on that referral is critical in preventing adverse outcomes, including suicide. Many cases of PMADs are treatable through outpatient intervention, but an estimated one to two per 1000 postpartum persons experience severe psychiatric symptoms that require inpatient care.[153]

"You can't peer support your way out of a high acuity situation."

– Maternal Mental Health Workgroup Members

A significant percentage of birthing persons, including 15% of reproductive-aged women, take antidepressants, or other psychotropic medications and must make an informed decision along with their providers regarding use of such medications during pregnancy.[154] The Maternal Mental Health Workgroup shared that awareness and knowledge on this topic among both OB-GYN and psychiatric providers varies widely and out of caution, either by the birthing person or provider, psychiatric drugs are often automatically discontinued once someone finds out that they are pregnant. Professional medical associations, including ACOG,[155] the American Psychiatric Association (APA),[156] and the British Association for Psychopharmacology (BAP)[157] recommend against discontinuing medication due to pregnancy status alone, as it is associated with an elevated risk of poor health outcomes for both the parent and the child. Individuals who discontinue medication during pregnancy are 60% more likely to experience a recurrence of psychiatric symptoms, and 25% more likely to experience psychiatric emergencies.[158,159]

"We see a lot of the same around medications for opioid use disorder, specifically where American College of Obstetricians and Gynecologists (ACOG) and most other medical organizations have said that medically managed withdrawal is not the preferred or not the standard treatment and that maintaining birthing persons or pregnant persons on their medication is far safer and far preferable. But folks will still say no, you need to come off of this medication or worse, end up referring them to child welfare because its substance use, or substance use related. Having education around best practices for medication, I think would be an amazing thing for this field."

– Maternal Mental Health Workgroup Member

"One of the risk factors is that because so many providers that come in contact with new and expecting mothers that are currently on psychiatric medications, because they don't understand the interaction of those medications with a gestating fetus or a breastfeeding mother or birthing person, so often, the first line of defense is to counsel someone to go off their meds, and this is an enormous risk factor for somebody who has a history of mental illness, particularly women and birthing people with bipolar disorder, and that is when we see some of these tragedies transpire."

– Maternal Mental Health Workgroup Member

"If a birthing person is having a difficult time caring for themselves and/or their babies, then that typically warrants the need for a higher level of care. If somebody cannot take care of themselves or their babies or their families, they need more help, they need a higher level of intervention and support. If those [mental health] symptoms are getting in the way of being able to complete daily tasks and again, most importantly, care for themselves or their babies, it warrants more support."

– Maternal Mental Health Workgroup Member

Separating a postpartum birthing person in need of psychiatric treatment and their newborn child can be traumatic and harmful to the parent-child relationship.[160] The parent in need of treatment may also not have access to alternate childcare and may avoid seeking treatment due to their fear of involvement of child welfare organizations. To address this, hospitals can adopt broader systemic approaches and care guidelines for birthing people experiencing mental health and substance use challenges. New York currently has one perinatal inpatient psychiatric program, at Zucker Hillside Hospital, that specializes in treatment of PMADs with a family-centered, holistic approach.[161] Zucker Hillside Hospital's flexible family visitation policies, individualized treatment plans, and array of services ranging from traditional psychotherapy to art and mindfulness therapy, can serve as an example to other hospitals in creating supportive environments for birthing people in crisis and their families. In addition to revising hospitals' approach to inpatient perinatal mental health care, the shortage of perinatal-focused partial hospitalization programs (PHPs) and intensive outpatient programs (IOPs) should be addressed. PHPs and IOPs are common treatment approaches for individuals experiencing acute psychiatric and substance use-related challenges who do not necessarily require admission to inpatient/residential treatment programs.

"As we continue to move forward on the ladder of acuity, one of the biggest holes that we have in behavioral healthcare is being able to treat perinatal people that have more acute symptoms. And so, we have outpatient care, and then we have inpatient care. This is an area where, you know, we could do a lot of really good work with higher levels of intervention and care. Models like intensive outpatient programs, partial hospital programs — this is where birthing people are participating in higher levels of care. They're there three days a week, five days a week, they're participating in groups, they have individual treatment, and then all the way up to hospitalization. We can't peer support or support group the psychotic symptoms out of the patient. There are clinical psychiatric interventions that need to take place when people are experiencing high acuity, in particular suicidality and bipolar disorder and psychotic symptoms. These are patients that need and require hospitalization to keep them safe and to get them better."

– Maternal Mental Health Workgroup Member

"I was very fortunate to be able to be a part of The Motherhood Center, and I always say that I thank God I was able to be a part of it because it really saved my life. You don't even know what type of hole you're in until you get the support that you actually need. It was really hard for me. I had a PMAD (perinatal mood & anxiety disorder) for four months before I actually got that type of assistance. I was working with a social worker who was from the clinic that I was in, and she was supposed to be knowledgeable on PMADs, and she should have been able to assist me or refer me earlier, right? I had to wait about four months when it was like close to me going back to work for her to say, "oh, you know what, you really do need to be inpatient or a partial hospitalization." So, I think quality care is something that we're lacking in New York, and then even when you do have the quality care, there are deserts of care too."

– Maternal Mental Health Workgroup Member

New York currently has several PHP/IOP programs throughout the state that treat a broad range of psychiatric and substance use challenges in adults. However, perinatal behavioral health issues require specifically tailored care approaches. There are a handful of perinatal PHP/IOP programs in the greater New York City Area and Long Island, such as the program offered by The Motherhood Center, but there are no perinatal PHPs/IOPs in upstate New York.

"I will be the first to say these higher levels of care are incredibly hard to come by. We [The Motherhood Center] are one program…we have a capacity to serve 20 people. When you think of the hundreds of thousands of birthing people that experience PMADs (perinatal mood & anxiety disorders) in the State of New York, it's a drop in the bucket. And so, looking at investments in more comprehensive programs like this that are perinatally focused is really what this group can help to do, along with so many other things."

– Maternal Mental Health Workgroup Member

4.3 Evidence-Based Best Practices for Healthcare Providers & Public Health Systems

"Family resource centers [that use] evidence-based practices...provide parenting classes and provide peer-to-peer support would be so essential to a person that's pregnant and after birth."

– Maternal Mental Health Workgroup Member

Evidence-based practice is the foundation of both state and federal strategies for addressing perinatal mental health and substance use challenges. The U.S. Department of Health and Human Services (DHHS) maintains a database for maternal and child health that contains over 500 evidence-based practices recommended for use in state initiatives funded through the Health Resources and Health Administration's Title V grant program.[162] The database stratifies practices by quality of evidence, including whether effectiveness has been researched in multiple population groups, and provides technical assistance resources for implementation. The database provides evidence-based practices that address maternal mental health and substance use challenges including integrated and Collaborative Care models, training and support programs for health care providers, trauma-informed care approaches, and holistic community-based initiatives.

New York has invested over $24 million in 2024 into the expansion of HealthySteps, an evidence-based model for pediatric practices, which includes strategies for improved screening and referral follow-up for maternal depression.[163,164] HealthySteps pairs pediatricians with behavioral health providers to address the social and emotional well-being of both children and their families through behavioral health care and assessment of needs related to social determinants of health and linkage to appropriate support services.[165]

Both the National Task Force on Maternal Mental Health and the Maternal Mental Health Workgroup identified a lack of defined triage pathways and hospital care guidelines for high-risk birthing people as a critical gap in care.

Recent efforts to promote health equity have placed an increased emphasis on evidence-based practices where efficacy and safety are supported by scientific data collected through biomedical studies. As a result, evidence-based practices are often prioritized in funding and programmatic decisions due to an increased likelihood of promoting positive health outcomes based on empirical evidence. However, few studies that establish the body of evidence upon which these practices are built include minoritized and marginalized populations.[166,167] Through the lens of cultural humility, evidence-informed and promising practices – practices that data suggest are successful but have not been tested with the academic rigor required to designate them as evidence-based – may offer health promotion strategies that are better suited for marginalized, minoritized, and under-studied populations.[168]

4.4 Potential Private and Public Funding Models

All birthing New Yorkers, regardless of financial status, are entitled to quality mental health and substance use support. As one Maternal Mental Health Workgroup member said:

"The price tag of untreated PMADs is $14.2 billion a year - and this is a gross underestimate. Think about the cost savings for these insurers if perinatal people had access to affordable maternal mental health treatment."

– Maternal Mental Health Workgroup Member

4.4.1 Federal Funding

The NYHER Medicaid 1115 Waiver, approved in January 2024, allocates $6 billion of federal funding and an additional $1.5 billion of state funding to reduce health disparities by strengthening the health care workforce and investing in population health for underserved areas. This includes creation of social care networks across the state. Through care navigators, social care networks will screen Medicaid enrollees for health-related social needs. Upon identification of health-related social needs, care navigators will link individuals with appropriate social support services and will continue to monitor individuals' health needs. The NYHER Medicaid 1115 Waiver prioritizes that birthing people from pregnancy to one year postpartum receive these enhanced services, including case management, and enhanced housing, transportation, and expanded nutrition support.[169]

New York also receives money from the federal government annually through a variety of programs to address maternal mental health and substance use challenges. The Health Resources & Services Administration (HRSA) provides funding to New York through the Title V Block Grant, the Quality Improvement Fund, the Healthy Start program, and the Maternal, Infant, and Early Childhood Home Visiting program to improve maternal and child health outcomes.[170,171,172] The Title V Block Grant administered by HRSA provides funding to all U.S. states and territories on an annual basis for investment in improving maternal and child health outcomes. New York receives $38.9 million annually through the Title V Block Grant. New York's most recent five-year plan for utilization of Title V Block Grant funding identifies reduction of the prevalence of postpartum depression symptoms as a key objective for birthing people and maternal health.[173] The HRSA Quality Improvement Fund supports quality improvement in maternal health outcomes for high-risk patients at three sites in New York, and the Healthy Start program supports improvement of maternal and infant health outcomes at six sites in New York.[174,175]

In addition to this, New York receives funding through the HRSA Rural Health Grant to increase access to quality health care in rural areas.[176] The New York State Perinatal Quality Collaborative, which participates in Title V Block Grant activities, is also partially funded by the Centers for Disease Control and Prevention (CDC).[177] New York also receives funding for the advancement of culturally humble mental health services responsive to the diverse population of New York through the SAMHSA Community Mental Health Services, Substance Use Prevention and Treatment, and the Protection and Advocacy for Individuals with Mental Illness grants.[178]

4.4.2 Medicaid Reforms

The implementation of Medicaid reforms for immediate postpartum long-acting reversible contraception (IPP LARC) highlights how targeted policy measures can enhance maternal mental health by expanding access to effective birth control. The reforms aim to improve reproductive health outcomes for low-income mothers by providing contraception right after childbirth, enabling better family planning and positively influencing bother maternal and infant health.[179]

In NYS, the adoption of Medicaid IPP LARC reforms in 2014[180] led to a notable decrease in reports of poor mental health among low-income mothers, with reductions ranging from 5.7% to 11.5% in the likelihood of experiencing mental health challenges. The benefits were particularly significant for mothers with multiple children under 18, indicating that the reforms may be especially supportive of larger families facing greater economic and psychological stress.[181]

In 2015, New York was the first state in the nation to implement a Collaborative Care Medicaid Program and many other states have since followed. The Collaborative Care model integrates behavioral health and healthcare navigation services into primary care by creating a care team comprised of a primary care provider, a behavioral care manager, and a psychiatric consultant. The NYS Collaborative Care Medicaid Program, administered by the NYS OMH, has shown that use of this model builds primary care providers' capacity to treat behavioral health issues, and is adaptable to different levels of acuity in behavioral health symptoms.[182]

As a result, use of Collaborative Care produces better health outcomes than traditional behavioral health care models and does so more efficiently and cost-effectively.[183] Studies show that Collaborative Care is more effective and efficient in treating mental health symptoms among public insurance enrollees. More data is needed to support the effectiveness of Collaborative Care among minoritized populations, but existing evidence suggests that the model can be successful in racial and ethnic minority populations, and that implementation is more successful when the model is culturally adapted to the population it is meant to serve.[184]

Currently, there are 24 OB-GYN practices enrolled in the NYS Collaborative Care Medicaid Program. The NYS OMH provides technical implementation assistance and training to practices who wish to enroll in the program, including education specific to perinatal health needs. Additional implementation guides are available through the University of Washington AIMS Center,[185] the Agency for Healthcare Research and Quality,[186] and the Denver Health Integrated Behavioral Academy.[187]

4.4.2.1 Reimbursement

Provider buy-in for the Collaborative Care model depends as much on the presence of sustainable financial practices as it does on training and capacity building. New York's Collaborative Care Medicaid Program faces challenges in retaining existing enrollees and recruiting additional practices due to Medicaid reimbursement rates, which have not kept pace with inflation over the past decade.

The Maternal Mental Health Workgroup reported that reimbursement rates are a major barrier to implementation and is critical for promoting expansion of the Collaborative Care model. Maternal Mental Health Workgroup members stated that Medicaid reimbursement rates for behavioral health services are not sustainable, that some services are not consistently reimbursed, and that Medicaid simply does not cover the cost of behavioral health care. Because of this shortfall, the number of in-network mental health and substance use providers available and accessible to Medicaid enrollees is decreasing, creating additional barriers for vulnerable birthing populations in New York.

Currently, private insurance coverage for behavioral health-related services in New York is a patchwork that can inadvertently enable disparities and inequities in coverage and access to services. Timothy's Law mandates that private health plans in New York cover at least 30 days of inpatient care and 20 outpatient visits for diagnoses and treatment of mental health disorders by hospitals, mental health facilities, and provider offices. Health plans must also provide coverage for 60 days of inpatient treatment and 20 outpatient visits for substance use care, including peer support, through OASAS certified facilities.[188,189,190] Additionally, private health plans in New York must provide coverage for depression screening in pregnant and postpartum persons as a preventive service. However, without clearer guidance on how often, when, and by whom the screening should be administered, the frequency of screening covered varies by plan and disparities and inequities persist.[191]

Beginning in 2025, private plans overseen by New York State will have to match or exceed Medicaid reimbursement rates for ambulatory behavioral health services. Other states have either passed or are considering legislation requiring private plans to provide coverage for doulas, including Rhode Island, California, and Massachusetts.[192]

4.4.2.2 Expanding Coverage and Access

The expansion of Medicaid coverage for birthing people through one year postpartum and newly expanded coverage for health-related social needs recognizes the need for wraparound services for optimal health outcomes such as doula care, which is a critical step in patient advocacy, especially for minoritized populations.

Improved maternity leave policies are crucial for giving parents enough time to recover and access mental health care. Extending Medicaid coverage to cover the entire first year after childbirth is necessary to ensure ongoing access to mental health services, especially for vulnerable, low-income parents. Increasing funding for mental health

care, integrating these services with maternal and infant care, and eliminating access barriers are essential steps for comprehensive support. Implementing family-focused policies that promote economic stability, like affordable child-care, can help reduce stress and enhance mental health outcomes.[193]

Expanding Medicaid access to postpartum contraception offers benefits beyond reproductive choice. Combining these reforms into a unified holistic strategy is needed to boost mental health and overall well-being.[194]

5. Closing Statement, Contributions & Acknowledgements

5.1 Closing Statement

This report details recommendations identified by the Maternal Mental Health Workgroup as promising strategies for improving mental health outcomes for birthing persons. The Maternal Mental Health Workgroup's core principles describe multi-faceted, equity-centered approaches and considerations for use in planning and implementing the recommendations.

5.2 Contributions

Major contributions were made to this report by the members of the Maternal Mental Health Workgroup and the Nathan Kline Institute. A full roster of Maternal Mental Health Workgroup members can be found in Appendix 1.

5.3 Acknowledgements

This report was made possible through thorough discussion and interdisciplinary cooperation of all members of the NYS OMH Maternal Mental Health Workgroup and Advisory Group. The NYS OMH thanks the members of the Maternal Mental Health Workgroup for their passion, dedication, insight, commitment to interdisciplinary cooperation, and their time. We thank the Maternal Mental Health Workgroup co-chairs, Dr. Audrey Erazo-Trivino and Dr. Christopher W. Smith, Maternal Mental Health Workgroup co-leads Dr. Nancy Hollander and Dana Cohen, MPA, and the NYS OMH Maternal Mental Health Advisory Group for their support and leadership. We thank Governor Kathy Hochul, the Office of the Governor, and Senator Samra G. Brouk for their continued support and for advancing the legislation that convened the Maternal Mental Health Workgroup. We acknowledge the New York State Department of Health, the Office of Children and Family Services, Office of Addiction Services and Supports, and the New York City Administration of Children's Services for their collaboration and commitment to implementing the recommendations developed herein. We would like to thank the Nathan Kline Institute for the literature review. We would also like to thank the subject matter experts who dedicated their time and shared their expertise with the Maternal Mental Health Workgroup and reviewed this report. Finally, we would like to thank the health care providers, advocates, activists, community leaders, and persons with lived experience for their tireless advocacy, invaluable insights, and staunch dedication to creating a healthier, brighter future for birthing people in the State of New York.

6. Appendix

6.1 Appendix 1: Maternal Mental Health Workgroup Methodology

TABLE 5-MATERNAL MENTAL HEALTH WORKGROUP METHODS AND MEMBERS

MATERNAL MENTAL HEALTH WORKGROUP METHODS AND MEMBERS

Maternal Mental Health Workgroup Methods:

The Maternal Mental Health Workgroup is co-chaired by Dr. Audrey Erazo-Trivino and Dr. Christopher Smith, the respective Associate Commissioners of the Office of Prevention and Health Initiatives and the Division of Adult Community Care. Drs. Erazo-Trivino and Smith's respective co-leads are Dana Cohen and Dr. Nancy Hollander. An internal NYS OMH advisory group was convened to collaborate with the Maternal Mental Health Maternal Mental Health and consult on their findings and recommendations. More than 20 Maternal Mental Health Workgroup members from diverse backgrounds were identified by NYS OMH co-chairs and co-leads and sent invitation letters, including designees of the Commissioners of state agencies with purviews that include mental health, maternal and child health, substance use services, and social services, community-based health care, child welfare, advocacy, health insurance, surveillance and data collection, and academic research, including the following:

- NYS Office of Mental Health,
- NYS Department of Health,
- NYS Office of Children and Family Services, and
- NYS Office of Addiction Services and Support.

Additional members included representatives of the following organizations and entities:

- Representatives of statewide mental health organizations, maternal health care provider organizations, health care provider organizations, and the health insurance industry,
- Representatives of communities disproportionally affected by the underdiagnosis of maternal mental health challenges,
- Leaders, practitioners, and experts in the fields of obstetrics and gynecology, reproductive psychiatry, maternal and child health, pediatrics, community-based health and outreach, mental health advocacy, maternal health advocacy, and policy development, and
- Individuals with lived experience of maternal mental health and substance use challenges.

The Maternal Mental Health Workgroup convened for six sessions between November 2023 and September 2024, for two hours each time, to discuss topics aligned with legislative priorities and then put forth the recommendations in this report. Maternal Mental Health Workgroup meetings included

MATERNAL MENTAL HEALTH WORKGROUP METHODS AND MEMBERS

presentations from the Nathan Kline Institute, small group discussions, and question and answer (Q&A) sessions with subject matter experts and persons with lived experience. Maternal Mental Health Workgroup members also attended one of four small group discussions to further discuss topics addressed during Maternal Mental Health Workgroup meetings from the specific perspective of experts in different subject matter areas. The groups for the small group discussions were organized by subject matter expertise by health care providers, advocates, representatives of regional health care organizations, and representatives of state agencies. The Maternal Mental Health Workgroup leadership met on a biweekly basis from October 2023 through September 2024. Maternal Mental Health Workgroup members provided ongoing feedback regarding the content and progress of the Maternal Mental Health Workgroup to the Maternal Mental Health Workgroup leadership for the duration of this initiative through feedback forms. Maternal Mental Health Workgroup members reviewed the draft report and provided feedback between August and September 2023.

Maternal Mental Health Workgroup Leadership:

Dana Cohen, MPA, Director of Community Programs & Evaluation Initiatives, Office of Prevention & Health Initiatives, NYS OMH (co-lead)

Audrey Erazo-Trivino, PsyD, Associate Commissioner, Office of Prevention & Health Initiatives, NYS OMH (co-chair)

Nancy Hollander, PsyD, Assistant Commissioner, Division of Adult Community Care Group, NYS OMH (co-lead)

Christopher W. Smith, PhD, Associate Commissioner, Adult Community Care Group, Division of Adult Services, NYS OMH (co-chair)

Maternal Mental Health Workgroup Members:

Janet Awobode, M.D., MPH, Research Fellow, NYS Office of Children and Family Services (OCFS) (alternative for Candi Griffin-Jenkins)

April Aycock, Ed.D., LMHC, Master-CASAC, Director, Monroe County Office of Mental Health

Paige Bellenbaum, LCSW, Founding Director & Chief External Relations Officer, The Motherhood Center

Lauren Biggs, Empire Fellow, NYS OCFS, (alternative for Candi Griffin-Jenkins)

Chloe Blaise, MPH, Community Relations Liaison and Breastfeeding Peer Counselor, St. Peter's Health Partners

Evelyn J. Blanck, LCSW, Executive Director, New York Center for Child Development

Christa R. Christakis, MPP, Executive Director, ACOG District II, American College of Obstetricians and Gynecologists (ACOG)

MATERNAL MENTAL HEALTH WORKGROUP METHODS AND MEMBERS

Camille Clare, M.D., MPH, CPE, FACOG, Chair, Department of Obstetrics & Gynecology, College of Medicine, Downstate Health Sciences University

Marnie Davidoff, Assistant Commissioner, NYC Dept of Health & Mental Hygiene (DOHMH), Bureau of Children, Youth, and Families

Kristina Deligiannidis, M.D., Medical Director, Reproductive Psychiatry, Project TEACH NY, Northwell Health

Emily DeLorenzo, MSW, Ph.D., Associate Division Director, NYSDOH, Division of Family Health, Center for Community Health

Amy Ehntholt, ScD, Research Scientist, Office of the Chief Medical Officer

Candi Griffin-Jenkins, LMSW, MA, Director, NYS OCFS, Bureau of Social Determinants of Health, Child Welfare and Community Services

April Hamilton, Deputy Director, NYS Department of Health, Office of Health Insurance Programs

Myla Harrison, M.D., Medical Director, NYS Department of Health, Office of Health Insurance Programs (alternative for April Hamilton)

Brigette Hartman-Decenzo, LCSW, Director, NYS OASAS, Bureau of Treatment Services (alternative for Maria Morris attending)

Christine M. Herde, M.D., FACOG, Chair, Department of OB-GYN/CareMount Division, Optum

Liz Isakson, M.D., FAAP, Executive Director, Docs for Tots

Shannon Johns, CD(DONA), CLC, CEO, Calming Nature Doula Service & Center

Janelle Jones, RN, Maternal Mental Health Advocate

Marilyn Kacica, M.D., MPH, Medical Director, NYS Department of Health, Division of Family Health, Center for Community Health

Cathy S. Kent, Regional Advocacy Specialist, NYS OMH, NYC Field Office

Amy Molloy, MSW, Consultant and Zero Suicide subject matter expert (SME), Mental Health Association in New York State (MHANYS)

Maria Morris, Director, NYS OASAS, Adolescent, Birthing persons, and Children's Services, Division of Addiction Treatment and Support

Sonia Murdock, PMH-C, Executive Director & Co-Founder, Postpartum Resource Center of New York

Matthew B. Perkins, M.D., Medical Director, Division of Integrated Community Services for Children & Families

Esther Piper, M.A. Education, IMH-E, Program Director, Healthy Families North Country

MATERNAL MENTAL HEALTH WORKGROUP METHODS AND MEMBERS

Chanel L. Porchia -Albert CD, CLC, CHHC, Founder & Executive Director, Ancient Song Doula Services

Ashanda Saint-Jean, M.D., FACOG, Associate Professor, OB-GYN, New York Medical College

Katie Seaward, MSW, Addiction Program Specialist, NYS OASAS (alternative for Maria Morris)

Laura "LJ" Shipley, M.D., Vice Chair of Pediatrics, University of Rochester/Golisano Children's Hospital, Medical Director for Maternal and Child Health, Accountable Health Partners

Kari Siddiqui, Project Director, Schuyler Center for Analysis and Advocacy

Sebrena Tate, B.S., Research Coordinator, NYS OMH, Division of Social Solutions & Services Research, Nathan Kline Institute

Nicole Tychostup, BSN, R.N., Nurse Coach, Maternal Health Outreach & Care Management, CDPHP®

Elie Ward, MSW, Policy Consultant, ESW Group

New York State Office of Mental Health Maternal Mental Health Workgroup Advisory Group:

Denise Balzer, Director, Crisis Services, Crisis Bureau

Patricia Bowes, MSW, Director, Intergovernmental Relations

Bonnie Catlin, LCSW, Director, Strategic Clinical Solutions, Office of Prevention and Health Initiatives

Marcella DeAngelis, Project Coordinator

Joseph Erdman, Legislative Coordinator

Stacey Hale, Director, Bureau of Rehabilitation Services, Treatment, and Care Coordination

Isabella Hou, MPH, Project Coordinator, Office of Prevention & Health Initiatives

Amy Jones, Director, Primary Care Behavioral Health Integration

Marcia Rice, Mental Health Program Specialist

Loretta (Lora) Santilli, MPH, Director of Operations, Office of the Chief Medical Officer

Nichelle Strickland, Mental Health Program Specialist

Charles Vaas, Legislative Coordinator

Kerry White, Primary Care and Early Childhood Initiatives Program Specialist/Project TEACH lead (Mental Health Program Specialist II)

David Wollner, Legislative Coordinator

TABLE 6-MATERNAL MENTAL HEALTH WORKGROUP MEETING SUMMARIES

Meeting	Summary
11/28/2023 - Maternal Mental Health Workgroup Meeting #1	The Maternal Mental Health Workgroup was welcomed by NYS OMH Commissioner Ann Marie Sullivan, M.D. and discussed priority issues in maternal mental health in birthing communities throughout New York State.
1/12/2024 - PMAD Training	The Maternal Mental Health Workgroup met to attend a PMAD training session presented by Workgroup members Paige Bellenbaum, LCSW of The Motherhood Center and Sonia Murdock, PMH-C of The Postpartum Resource Center of New York.
1/17/2024 - Maternal Mental Health Workgroup Meeting #2	The Maternal Mental Health Workgroup met to discuss underrepresented and vulnerable populations in New York State (NYS) and risk factors for maternal mental health disorders that may occur during pregnancy and through the first postpartum year. NYS OMH leadership and the Nathan Kline Institute representatives presented data on maternal health, mental health, and mortality disproportionately impacting persons of color to begin the discussion of how to confront the racial disparities in maternal health to formulate equity-informed recommendations. Maternal Mental Health Workgroup members identified a robust list of underrepresented and vulnerable populations in New York State and their risk factors for maternal mental health disorders, including Black communities, military families, teen parents, and individuals with a history of behavioral health disorders. Maternal Mental Health Workgroup members also discussed barriers that birthing people face to appropriate mental health identification and treatment. Finally, the Maternal Mental Health Workgroup members shared both their personal, lived experiences as well as their expertise in current maternal mental health programs as they started to think through equity-informed recommendations.
3/20/2024 - Maternal Mental Health Workgroup Meeting #3	The Maternal Mental Health Workgroup met to discuss effective, culturally humble and responsive, and accessible screening and identification, prevention, and treatment strategies as they worked on formulating equity-informed recommendations for the final report. The Nathan Kline Institute representatives presented: Shifting from Cultural Competence to Cultural Humility and the Multilevel Care model to frame the discussion on identifying successful, transformative, and/or sustainable strategies in addressing maternal mental health and maternal substance use needs as well as barriers to access. Maternal Mental Health Workgroup members recommended strategies including integrating peer support and community services, expanding professional trainings, increasing the workforce and care facilities, and scaling existing programs (examples include

TABLE 6-MATERNAL MENTAL HEALTH WORKGROUP MEETING SUMMARIES

Meeting	Summary
	Project TEACH, visiting nurse programs, tele-home visits, and Collaborative Care models). The Maternal Mental Health Workgroup also discussed barriers to access including provider capacity, reimbursement structure, and the realistic fears of child removal and of the medical system.
4/30/2024 – Small Group Discussion	Members of the Maternal Mental Health Workgroup who represent advocacy organizations met to discuss gaps in existing services and strategies to increase public awareness of perinatal mental health and substance use challenges. Further, the Maternal Mental Health Workgroup discussed how to integrate peer support into the birthing experience to address perinatal mental health and substance use challenges. Maternal Mental Health Workgroup members also recommended innovative ideas and existing successful programs and policies that can be implemented more broadly to address perinatal mental health and substance use challenges.
5/6/2024 – Small Group Discussion	Members of the Maternal Mental Health Workgroup who represent state agencies met to discuss gaps in existing services, underrepresented and vulnerable populations, Medicaid funding policies, the New York State postpartum doula program, and strategies to address fear of child removal as a barrier to seeking care. Maternal Mental Health Workgroup members also recommended innovative ideas and existing successful programs and policies that can be implemented more broadly to address perinatal mental health and substance use challenges.
5/7/2024 - Small Group Discussion	Members of the Maternal Mental Health Workgroup who represent regional agencies and regional and statewide health care organizations met to discuss gaps in existing services, underrepresented and vulnerable populations in New York State, and strategies for integrating peer support into perinatal mental health care, and increasing public awareness regarding perinatal mental health and substance use challenges. Maternal Mental Health Workgroup members also recommended innovative ideas and existing successful programs and policies that can be implemented more broadly to address perinatal mental health and substance use challenges.

TABLE 6-MATERNAL MENTAL HEALTH WORKGROUP MEETING SUMMARIES

Meeting	Summary
5/10/2024 - Small Group Discussion	Members of the Maternal Mental Health Workgroup who are health care providers met to discuss coordinated care models, funding policies, professional development, and culturally responsive capacity building in the health care workforce, and strategies to address fear of medical institutions as barriers to care. Maternal Mental Health Workgroup members also recommended innovative ideas and existing successful programs and policies that can be implemented more broadly to address perinatal mental health and substance use challenges.
5/15/2024 - Maternal Mental Health Workgroup Meeting #4	The Maternal Mental Health Workgroup met to discuss successful postpartum and perinatal mental health initiatives in other states and programs, tools, strategies, and funding sources to implement similar initiatives in NYS. Maternal Mental Health Workgroup members were briefed on recent statewide efforts to improve maternal and infant health including paid leave for prenatal care, Medicaid coverage for doulas, the elimination of out-of-pocket medical costs for pregnancy-related expenses, and new funding for maternal mental health initiatives. Elie Ward, MSW, maternal mental health advocate and subject matter expert, participated in a Q&A session to review the path to eliminating maternal mental health disparities in NYS, including the critical need to engender trust with underserved communities so birthing people feel confident that they will be respected when accessing care. Members were asked to share programs and policies that promote positive behavioral health outcomes among birthing persons, as well as priority areas and populations. Recommendations included integrated services for mental health and substance use challenges, universal home visiting, cultural humility trainings for providers, addressing staffing shortages through novel workforce initiatives, and a population focus on Black birthing communities that leverages anti-stigma strategies. The meeting was preceded by small group discussions convened in early May as the Maternal Mental Health Workgroup continues to formulate culturally responsive and equity-informed recommendations for the final report.

TABLE 6-MATERNAL MENTAL HEALTH WORKGROUP MEETING SUMMARIES

Meeting	Summary
7/17/2024- Maternal Mental Health Workgroup Meeting #5	The Maternal Mental Health Workgroup met to discuss promising evidence-based practices for healthcare providers and public health systems, including private and public funding models. Paige Bellenbaum, LCSW, subject matter expert and founding director of The Motherhood Center participated in a Q&A session to review clinical treatment practices for PMADs of varying severity. Amy Jones-Renaud, MPH, director of Primary Care Behavioral Health Integration at the NYS OMH presented data and best practices with respect to Collaborative Care models. Janelle Jones, RN shared her experience attending the 2nd annual Black Maternal Health Summit: Keeping Hope Alive! in Washington, D.C. in April 2024.
9/18/2024 - Maternal Mental Health Workgroup Meeting #6	The Maternal Mental Health Workgroup met to review the draft report and discuss feedback submitted regarding the draft report by both Maternal Mental Health Workgroup members and NYS OMH leadership. The Maternal Mental Health Workgroup heard from those with a lived experience.

6.2 Appendix 2: NKI – OMH Maternal Mental Health Workgroup Systematic Literature Review

OMH Maternal Mental Health Workgroup Systematic Literature Review

Crystal Fuller Lewis, PhD, Helen-Maria Lekas, PhD, Kerstin Pahl, PhD
Denzel Edwards, MPH (candidate), Joelle Floyd, MPH,
Vanessa Kamandali, MPH (candidate), and Karis McGreggor

Nathan S. Kline Institute for Psychiatric Research
Division of Social Solutions & Services Research (SSSR)
Center for Research on Cultural and Structural Equity in Behavioral Health (CCASE)

August 27, 2024

Executive Summary

Purpose

This systematic review addresses maternal mental health by integrating social and clinical risk factors, systemic discrimination, and culturally relevant interventions. The goal is to provide public health practitioners with evidence-based strategies to enhance maternal and family well-being through a comprehensive review of white and gray literature.

Methods

A comprehensive search of OVID databases for peer-reviewed and grey literature published from January 2014 to June 2024 was conducted. Using broad and inclusive search terms such as 'maternal', 'pre/peri/postnatal', 'postpartum', 'mental health', 'pregnancy outcome', 'mental health services', and 'mental disorders', the search was framed around four key concepts: maternal, mental health, perinatal, and postpartum. Free text terms and subject headings were utilized to capture relevant records regardless of specific words used in titles, abstracts, or keywords. The search was restricted to human populations and English-language records. Additionally, the search for articles was expanded to include grey literature produced by government agencies, academic institutions, and the for-profit sector, including reports, proceedings, dissertations and theses, registered trials, white papers, newsletters, and patents. This approach provided a broader scope of the birthing person experience, particularly for minoritized communities. Reference lists of relevant reviews and included studies were also examined.

The inclusion criteria included: (1) studies focused at least partially on maternal mental health during the prenatal, perinatal, and postpartum periods, including outcomes, causes, treatments/screenings, frameworks, and policies; (2) studies focused on the prenatal, perinatal, or postpartum periods; and (3) studies from the U.S. or other high-income countries that include the U.S. The exclusion criteria included: (1) studies with a primary biological focus (e.g., neurotransmitters and hormones) on maternal mental health; (2) studies focused on COVID-19; and (3) studies that exclusively addressed child development or well-being outcomes. The final set of articles selected (n=108) were categorized within 6 pillars *(Risk Factors, Screening, Framework, Equity Focus, Policies, and Interventions)*, summarized, interpreted based on the extant literature, and synthesized to arrive at the most salient findings. Provided below is a succinct summary of each pillar derived from this scientific review,

Results

Risk Factors: Racialized and low-income birthing individuals face heightened risks due to cultural and structural determinants. Multiple adversities, including social and economic factors, exacerbate these risks. Access to health services and economic resources significantly influence mental health outcomes.

Screening: Increased screening for perinatal mood and anxiety disorders is needed and should be integrated into routine prenatal and postnatal care using standardized tools. Barriers such as experiences of stigma, untrustworthiness of systems of care, and inadequate follow-up hinder effective implementation and engagement. Consistent application of these tools, coupled with robust follow-up mechanisms, is essential for timely and effective intervention, however, is not sufficient to achieve equity unless barriers are fully addressed.

Framework: A comprehensive framework for maternal mental health must encompass early identification, continuous monitoring, and a multidisciplinary approach. While missing from area of research, frameworks

designed to address the multifaceted nature of perinatal mental health, ensuring that care is both holistic and responsive to evolving needs are available.

Equity Focus: Addressing disparities in maternal mental health care requires a purposeful equity-centered approach. Emphasizing culturally relevant care and reducing barriers for minoritized populations is critical to improving outcomes and ensuring that all individuals have equitable access to culturally and structurally relevant mental health resources.

Policies: Policy improvements are necessary to enhance access to mental health services and support systems. Key areas for policy development include addressing economic barriers, workforce training in cultural and structural determinants that translate into practice transformation, advocating for culturally relevant care, and expanding and extending care and support mechanisms to promote sustained maternal healing and wellness.

Interventions: Integrating mental health services into routine care and using tools like PHQ-9 and EPDS is crucial but not sufficient. Community-based programs, provider training, and culturally relevant approaches are crucial for advancing maternal mental health care. Implementing these strategies effectively addresses specific challenges faced by vulnerable populations and promotes more equitable and comprehensive care. Systemic racism underlying and reproducing stigmatizing experiences associated with mental illness and substance use, fear of one's child(ren) being take away, and experiences with providers who lack culturally humility in their attitudes and practices must be addressed to increase impact and reach of screening efforts.

Strategies

1. **Culturally Relevant Care:** Ensure that all birthing individuals, especially those from underrepresented groups—including Indigenous, LGBTQIA, carceral, substance use- dependent persons, Native American/Alaskan Native (NA/AN) populations, and adolescents—receive culturally appropriate care to address structural inequities. This includes addressing the unique mental health needs of perinatal persons living with HIV and adolescent parents, who face elevated risks for perinatal mood and anxiety disorders (PMADs).
2. **Financial Resources:** Incorporate financial support mechanisms into maternal mental health strategies that reduce stress, particularly for minoritized populations and minoritized populations that are typically overlooked in research and practice (i.e., NA/AN individuals, and adolescents) to mitigate economic barriers to accessing maternal mental health care and resources.
3. **Enhanced Screening:** Improve screening practices to ensure early identification and intervention for PMADs, with a focus on culturally and structurally relevant follow-up care strategies. For minoritized populations, and particularly NA/AN populations, this includes validating or developing culturally specific screening tools, as existing scales like the EPDS and PHQ-9 may not be fully applicable and lack culturally relevant items. For adolescents, it is critical to ensure that screening tools are validated and appropriately reflect their unique experiences.
4. **Integration and Collaboration:** Use diverse care settings to inform policy development and integrate complementary and accessible approaches, such as yoga and mindfulness, into care plans. This is essential for minoritized, particularly NA/AN individuals and adolescents, who may benefit from culturally specific interventions. Additionally, improving provider-patient discourse on culturally relevant and sensitive feeding options for postpartum individuals living with HIV and addressing the specific challenges faced by adolescent parents is crucial.
5. **Intersectional Approach:** Apply an intersectional framework to develop culturally relevant and effective strategies for diverse groups, particularly those facing compounded risks due to race, ethnicity, economic

status, age, and gender identity statuses. Non-gendered language should be prioritized to inclusively represent all gender identities, and further research is needed to understand the unique cultural factors influencing mental health among NA/AN populations.

6. **Addressing Gaps in Research:** There is a significant lack of research on perinatal mental health among NA/AN individuals and adolescents. This includes understanding the rates, risk factors, and protective factors specific to these populations. A glaringly overlooked research area also includes perinatal and post-partum substance use that produces and/or informs a more destigmatizing, non-punitive, and supportive agenda so that equitable access to all behavioral health services can be realized. Finally, the absence of U.S.-based longitudinal studies focused on perinatal and post-partum mental health further highlights the need for ongoing quantitative and qualitative research that tracks mental health outcomes and related cultural and structural determinants among birthing individuals. Such data tracking will support the design, implementation, and improvement of timely, innovative prevention and treatment strategies, over time.

Action Steps for Consideration

1. **Adopt Cultural and Structural Humility:** Implement equity-centered training for stakeholders to ensure that maternal mental health strategies are both culturally and structurally relevant. This includes addressing the specific needs of birthing persons with substance use problems, NA/AN populations, and adolescents, and using non-gendered language to respect the diverse identities of birthing individuals.

2. **Enhance Screening Practices:** Increase access to and integration of culturally relevant screening tools, ensuring that they are validated for use among all minoritized populations, and particularly, NA/AN and adolescent populations. Develop specialized protocols for perinatal persons living with HIV and adolescent parents to improve early detection and management of mental health issues.

3. **Promote Inclusive Research Practices:** Encourage the standardization of non- gendered language in maternal mental health research, and advocate for more research focused on under-researched populations such as NA/AN individuals, adolescents, and birthing persons with substance use disorder. This includes a call for more U.S.-based longitudinal studies to better understand and address the mental health needs of these populations.

4. **Assess and address structural racism:** Immediate, comprehensive action is required to identify (e.g., legal epidemiology) and remove structural racism embedded in policies and regimes of practice that directly impact maternal mental health, particularly those that stigmatize, disenfranchise, and accompanied by punitive actions for perinatal and post-partum persons.

Introduction

Maternal mental health is a public health issue, encompassing a range of mental health disorders that can affect women during pregnancy and the postpartum period. These disorders, including depression, anxiety, and psychosis, have profound implications not only for mothers but also for their children and families. Addressing maternal mental health effectively requires an understanding of the multifaceted risk and protective factors including the role of social determinants of health, and of the comprehensive, multicomponent, and culturally relevant interventions that either exist and require scale-up or do not exist and are warranted. Below, a brief overview of the state of maternal mental health is provided to support the design, and methodology of this systematic review.

Epidemiology of Maternal Mental Health

Across the literature, estimates of the prevalence of perinatal mood and anxiety disorders (PMADs) vary widely.[1,2] Studies suggest that between 8% and 25% of pregnant and postpartum individuals experience a PMAD.[1] This variation stems from multiple factors including the diagnostic criteria, sampling procedures, and specific screening tools utilized.[1] Further breaking down the category of PMADs it is estimated between 6.5% and 12.9% of individuals in the postpartum period experience symptoms of depression and between 8.6% and 9.9% experience symptoms of anxiety.[3] These numbers are also likely underestimates of the true rate as the literature also suggests that individuals often underreport symptoms due to fear and concerns of stigma.[4] Beyond overall prevalence rates of PMADs variations also occur by race and ethnicity, however, studies addressing these differences remain limited. The limited research that has been conducted reports higher prevalence rates of PMADs among non- Hispanic Black individuals as compared to all other racial/ethnic groups.[2,5] Despite the ubiquitous nature of perinatal mood and anxiety disorders research addressing the prevalence of these conditions remains understudied.[6] Additional research should continue to address the prevalence of these conditions as well as address potential factors influencing the risk of developing a perinatal mood and anxiety disorder.

Discrimination and Pregnancy-Related Deaths

Discrimination plays a significant role in maternal health disparities, contributing to nearly half of pregnancy-related deaths.[7] This issue operates on multiple levels beyond the individual, including systemic, community, and provider levels.[8,9] Structural racism and implicit biases within healthcare systems exacerbate the vulnerability of minoritized women, leading to inadequate care and poorer health outcomes.[10] For instance, Black women in the United States (U.S.) are disproportionately affected by pregnancy-related complications and mortality[7,11,12] with mental health conditions[13,14] as the leading cause for these disparities. When perinatal mood disorders are identified, Black women are less likely to receive treatment for a myriad of reasons rooted in structural racism, including fear of stigma, unnecessary involvement with child protective services and/or having their child(ren) taken, and economic stressors.[15–18] Addressing the complete social conditions that influence the lives of Black birthing persons demands using an intersectional lens, i.e., a lens that reveals the interplay among racism, genderism, and other forms of systemic exclusion19 that are based on the social determinants of their health.

Social Risk Factors for Perinatal Mental Health Disorders

Social determinants of health significantly influence perinatal mental health outcomes. Factors such as socioeconomic status, education, employment, housing stability, food security, and social support are critical determinants. Women facing financial insecurity, housing instability, food insecurity, or lack of social support are at higher risk for developing perinatal mental health disorders. Additionally, experiences of trauma, intimate partner violence, and social isolation further exacerbate these risks. Understanding and identifying how race and racism intersect with other forms of discrimination and underpin each of these social determinants has been ignored in the extant literature and is long overdue.[20]

Clinical Risk Factors for Perinatal Mental Health Disorders

Clinical risk factors also play a crucial role in perinatal mental health. A history of mental health disorders, lack of prenatal care, and complications during pregnancy and childbirth are significant predictors. Women with pre-existing conditions such as depression, anxiety, or other psychiatric disorders are at a higher risk of experiencing perinatal mental health issues.[21] While identifying and managing these clinical risk factors through early screening and intervention is vital for preventing and mitigating PMADs, there is a growing body of literature that suggests

PMAD screening tools may not always identify mental illness. Namely, the cultural bias that is inherent in validated tools likely contributes to greater potential for Black women to be underdiagnosed, misdiagnosed, and therefore, results in under-treatment[22–25] or missed opportunities for treatment.

Examples of Initiatives and Programs

Several initiatives and programs in New York State aim to improve maternal and child health through training, education, and support services. *The Training and Education for the Advancement of Children's Health (TEACH)* program focuses on enhancing healthcare providers' skills in identifying and addressing maternal mental health issues. *HealthySteps* integrates mental health services into pediatric primary care, providing comprehensive support for families from the prenatal period through early childhood. The *Doula Pilot Program* offers continuous support to women during pregnancy, childbirth, and the postpartum period, promoting positive birth experiences and better mental health outcomes. These programs highlight the importance of a multi-faceted approach to maternal mental health, combining education, support, and healthcare services to address the diverse needs of mothers and their families. The conduct and dissemination of robust evaluations of these programs and initiatives is essential and critically needed to ensure equity is fully realized and systematized.

Importance of Grey Literature

In conducting a systematic review of maternal mental health, the inclusion of grey literature is crucial. Grey literature includes information produced by government agencies, academic institutions, and the for-profit sector that is not typically available through commercial publishers. This encompasses reports, proceedings, dissertations, theses, registered trials, newsletters, and patents. Including grey literature ensures a comprehensive understanding of the maternal mental health landscape, capturing insights from diverse sources and addressing potential publication biases. It also provides a broader scope of the birthing person's experience, particularly for minoritized communities who have been traditionally underrepresented in peer-reviewed literature. By integrating grey literature, researchers, practitioners, and policy makers can develop more nuanced and effective public health strategies to improve maternal mental health outcomes.

In summary, addressing maternal mental health requires a multi-dimensional approach that considers social and clinical risk factors, combats systemic discrimination, and implements comprehensive, culturally sensitive interventions. By leveraging both peer-reviewed and grey literature, a key feature of this systematic review, public health practitioners can develop robust, evidence-based strategies to support maternal mental health and promote overall well-being for mothers and their families.

The Use of Non-Gendered Language

Pregnant, birthing, and postpartum people have a range of identities, and do not always identify as "women" or "mothers." To be inclusive of all gender identities, this systematic literature review prioritizes the use of non-gendered language when possible. When discussing a study that uses gender-specific language, such as "pregnant women" or "postpartum mothers", this literature review will use the same language as to not alter the study's findings. Ultimately, to ensure that the mental well- being of all people is being prioritized, non-gendered language should be made the standard in research concerning the mental health of birthing people.

Methodology

We conducted a comprehensive search of OVID databases for peer-reviewed and grey literature published from January 2014 to June 2024. Using broad and inclusive search terms such as 'maternal', 'pre/peri/postnatal', 'postpartum', 'mental health', 'pregnancy outcome', 'mental health services', and 'mental disorders', the search was framed around four key concepts: maternal, mental health, perinatal, and postpartum. Free text terms and subject headings were utilized to capture relevant records regardless of specific words used in titles, abstracts, or keywords. The search was restricted to human populations and English-language records. Additionally, the search for articles was expanded to include grey literature produced by government agencies, academic institutions, and the for-profit sector, including reports, proceedings, dissertations and theses, registered trials, newsletters, and patents.

This approach provided a broader scope of the birthing person experience, particularly for minoritized communities. Reference lists of relevant reviews and included studies were also examined.

Selection Criteria

Inclusion Criteria:

1. Studies focused at least partially on maternal mental health during the prenatal, perinatal, and postpartum periods, including outcomes, causes, treatments/screenings, frameworks, and policies.
2. Studies focused on the prenatal, perinatal, or postpartum periods.
3. Studies from the U.S. or other high-income countries that include the U.S.

Exclusion Criteria:

1. Studies with a primary biological focus (e.g., neurotransmitters and hormones) on maternal mental health.
2. Studies focused on COVID-19.
3. Studies that exclusively addressed child development or well-being outcomes.

The search yielded 314 studies. After removing duplicates, the titles and abstracts of the remaining studies were preliminarily assessed. Three independent reviewers screened the studies for relevance and adherence to the inclusion/exclusion criteria. Discrepancies were resolved through discussions with the wider research team, leading to either acceptance or rejection as appropriate.

The final set of eligible studies selected for the systematic review (n=108) were categorized into six predefined pillars: *(1) Risk Factors, (2) Screening, (3) Framework, (4) Policy, (5) Policies, and (6) Intervention.* (Pillars topics were decided and based upon research team consensus after review of 3 seminal maternal mental health reviews and/or landmark articles).[26] Among the studies added to the final report, 20 focused on equity, 12 on policies related to maternal mental health, 9 on frameworks, 23 on screening of birthing persons, 19 on interventions, and 27 on risk factors associated with maternal mental health. Some articles overlapped across these pillars, hence the total number of articles in each pillar exceeds the total number included in the review. The methodology of this systematic review is illustrated in **Figure 1.** and **Figure 2.**

Peer-Reviewed Articles and Grey Literature

Peer-reviewed articles and grey literature underwent the same review process. Once the literature met the inclusion criteria and were divided into relevant pillars, no differentiation was made between peer-reviewed articles and grey literature. Due to the novelty of maternal mental health research in the United States, grey literature provides comparable insights to peer- reviewed papers and can inform future directions for further research.

The Absence of Longitudinal Studies

Longitudinal studies aid in understanding the relationship between risk factors and the development of disease, as well as the effectiveness of interventions, as they follow participants over an extensive period. This systematic literature review does not discuss many longitudinal studies as most of the longitudinal studies concerning maternal mental health have been conducted outside of the United States. Furthermore, those that were conducted in the U.S. often shift their focus from the birthing person's mental health to the mental health of their offspring (e.g., examining how a birthing person's perinatal mental health impacts their child in early childhood). These kinds of longitudinal studies inadvertently prioritize childhood mental wellbeing and not birthing people's mental wellbeing. The absence of longitudinal studies that meet this literature review's inclusion criteria highlights the current need to increase focus on perinatal mental health in the U.S.

Figure 1.-PRISMA Flowchart Illustrating the Search Strategy, Study Selection, and Inclusion Process

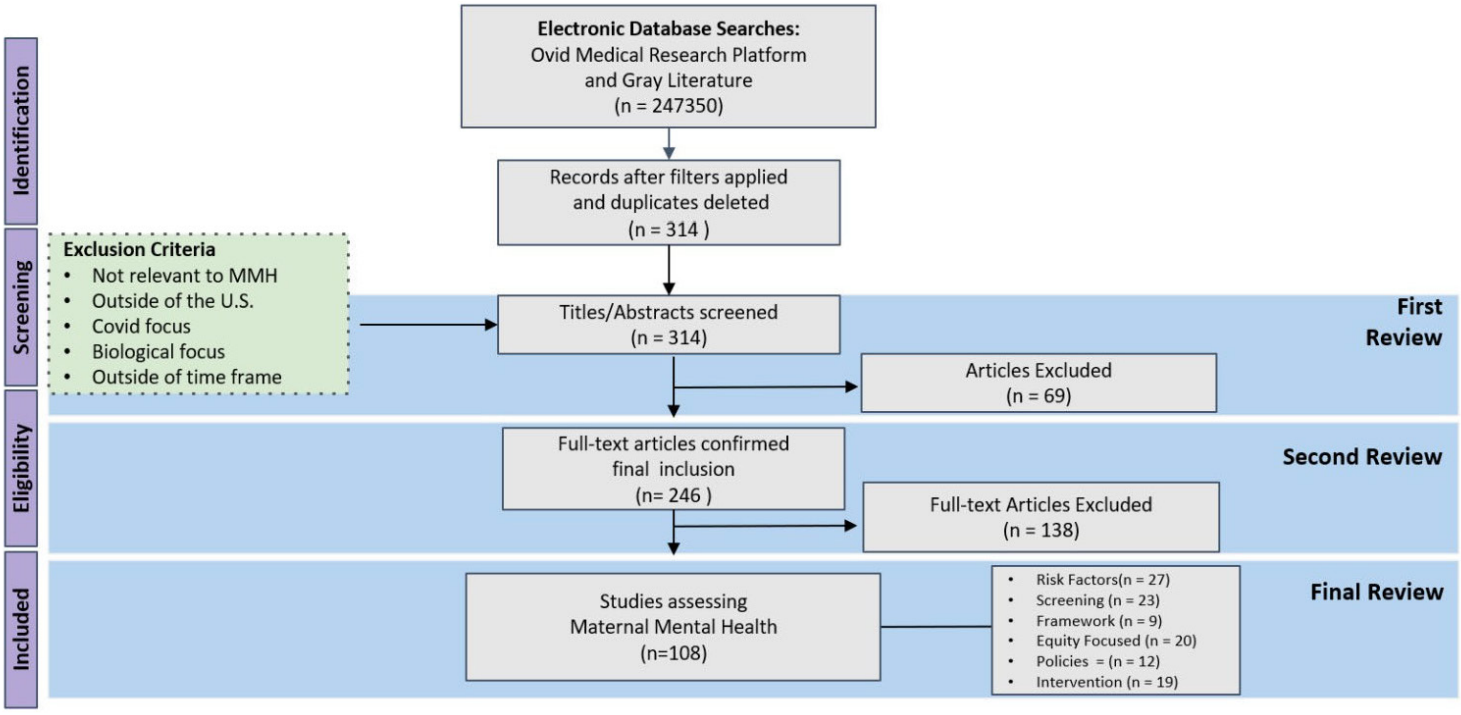
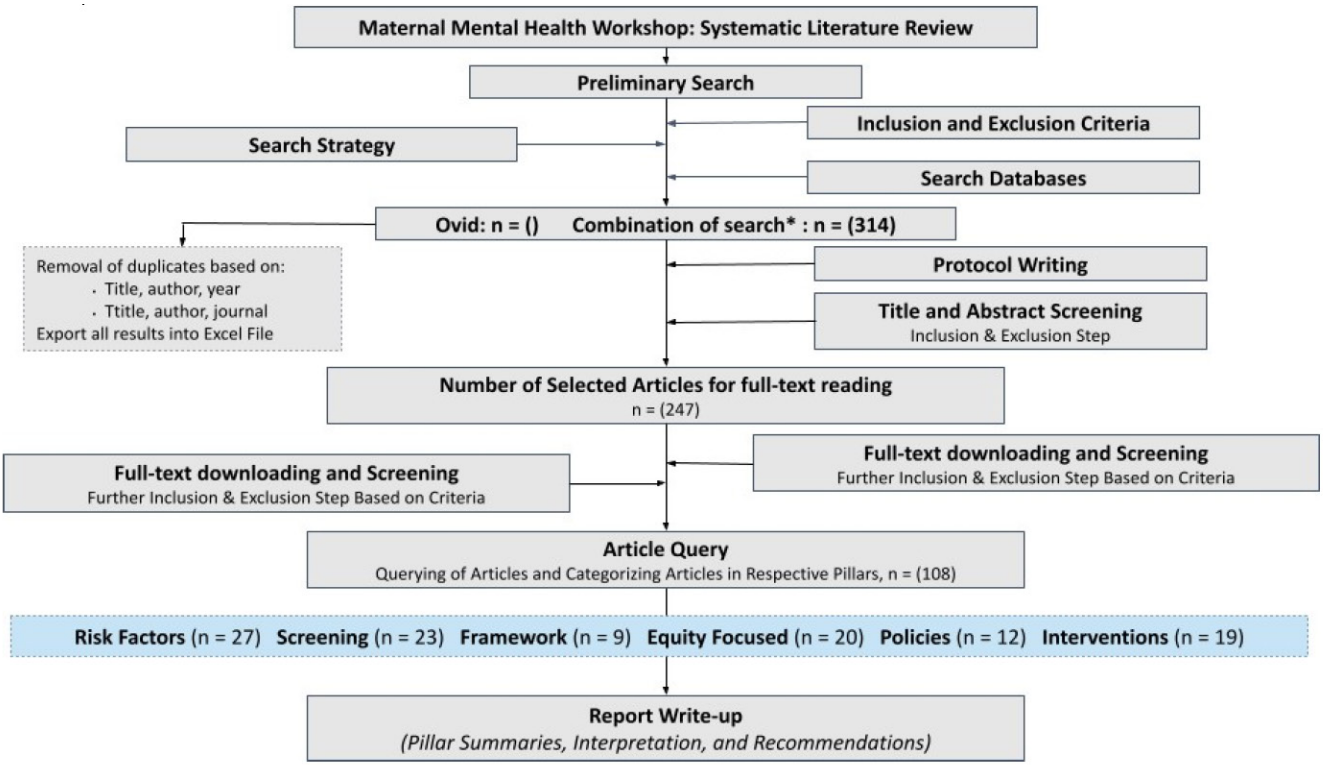


Figure 2-Schematic of Methodology Steps for Systematic Review, Outlining Search Strategy, and Selection Criteria.



Pillar Article Summary

In an effort to provide a broad scientifically supported account of the status of maternal mental health in the U.S., the final set of eligible articles systematically selected for this report have been organized across six salient pillars (risk factors, screening, framework, equity focus, policies, and interventions) with summaries and concluding 'next steps' for each pillar.

Risk Factors

For the purposes of this report, we are employing a lay definition of 'risk' factor which is defined as any characteristic that has demonstrated either a significant risk or significant correlation with a particular maternal mental health outcome and does not require known temporality (i.e., derived from a prospective, concurrent or cohort study).

Minoritized Birthing Persons

Racialized birthing persons disproportionately experience poorer mental health due to racial inequities and sociocultural factors. Additionally, a changing sociopolitical climate can increase the risk of poor maternal mental health for targeted minorities. For instance, during the 2016 U.S. presidential election, in which Latinx people

faced an increase in discrimination and hate crimes, perinatal Latinas living in border cities faced increases in depression, anxiety, and perceived stress along with reductions in protective factors.[27]

Black birthing persons also have racialized experiences contributing to increased mental illness morbidity. Risks such as increased depressive symptoms, anxiety symptoms, and distress, are related to experiencing greater social and economic adversities, e.g., lower socioeconomic status, poverty, unemployment, higher stress, and racism.[28] When examining Black maternal mental health, a cultural emphasis is necessary, and a suggested approach is the application of an Afrocentric perspective which focuses on the historical, political, social, and cultural contexts that shape the Black experience.[28] This component article review suggests an underlying stigmatizing narrative that links Black mothers' poorer maternal mental health with negative consequences on children and evokes the notion of problematic parenting.[28] Adopting an Afrocentric perspective, allows for a recognition of strengths and capacities to resist oppression among Black birthing persons which enables them to identify the sociocultural risk factors and processes that undermine their maternal mental health and contribute to inequities.

Sociocultural factors have a significant impact on birthing persons' mental health. For instance, in many Latin cultures, it is the norm that mothers are the primary caregivers of the family's children, and that is often associated with a de-prioritization of their own mental health needs. Literature examining Latina mothers' mental health in relation to parenting and material resources has found that Latina mothers with higher levels of parental stress and perception of low material resources are at an increased risk for poor maternal mental health outcomes.[29] Similarly, a 2019 study seeking to understand the perspective of postpartum depression (PPD) and health-seeking behaviors among Chinese American women found culture-specific factors that impact the mental wellbeing of postpartum Chinese birthing persons.[30] Specifically, mental illness is often stigmatized in Chinese culture and this intense stigma emerged in the reports of the study participants, some of whom insisted that PPD does not exist in Chinese culture. Although the majority of participants felt they could share depressive symptoms with their spouse or close friends, when asked about seeking professional mental health services, half of the participants still felt that due to cultural reasons, depression is a private matter.

Thus, when considering risk factors for maternal mental health, sociocultural factors must be considered, as the perinatal and mothering experiences differ from culture to culture.

Low-Income Birthing Persons

Low-income birthing persons have an increased risk of poor maternal mental health, due to additional stressors. When low-income birthing persons are afforded more resources, economic status becomes a weaker predictor of mental health outcomes. For example, state adoption of Medicaid immediate postpartum long-acting reversible contraception (IPP LARC) reforms was associated with significant reductions (between 5.7% and 11.5%) in the "days of not good mental health" among mothers with low income.[31] Similarly, several studies examining the impact of COVID-19 regulations (e.g., such as staying home unless one is an essential worker) on postpartum low-income birthing persons found that being able to stay home improved self-reported mental health.[32,33] This has been attributed to the fact that common stressors that low-income new mothers experience such as low- paying jobs with long hours, were likely alleviated during stay-at-home orders, and this improved maternal mental health.

A longitudinal retrospective analysis using the Nationwide Emergency Department Sample to assess national estimates of emergency department visits by women ages 15–49 with primary diagnosis of a postpartum mood disorder between 2006 and 2016 found that 30% of emergency room visitors were low income.[34] This large percentage of women seek treatment for postpartum mood disorders in emergency departments because they only have public insurance and thus receive episodic, fragmented care, reveals another association between low income and the risk of poor maternal mental health.[34] However, the related literature offers varying alternative

interpretations and also suggests that having low income may be a predictor of increased stress symptomatology and not a predictor of mood disorders in postpartum individuals.[35] It is important to note here, as well, that this suggestion made by these authors assumes mental health screening scales are valid and culturally relevant which is not a safe assumption, particularly with respect to social factors that are impacted by racism.[22–25]

Previous Trauma

A history of trauma can impact the mental health of perinatal individuals. Birthing persons who have experienced pregnancy loss or given birth preterm are at an increased risk for poor postpartum health. Research reveals that pregnancy loss is a risk factor for postpartum psychiatric treatment (PPT).[36] Specifically, depression is experienced by over 40% of individuals who gave birth preterm, over 30% of birthing persons develop an acute stress disorder within 3 to 5 days of their infant being admitted into the neonatal intensive care unit (NICU), and 15% have developed PTSD within one month of admission.[37]

Childhood maltreatment has been associated with various adverse outcomes including prenatal and postpartum mental illness. Research has indicated a link between childhood maltreatment with post-traumatic stress disorder (PTSD) and major depressive disorder (MDD) in adulthood.[38] While birthing persons who experienced childhood maltreatment are at heightened risk for poor maternal mental health, for some individuals previous adversity operates as a protective factor and opportunity for resilience during these periods (prenatal and postpartum) and safeguards their mental health.[38] Thus implementing assessments of history of childhood maltreatment and of resilience prior to childbirth could help identify birthing persons that are at a higher risk for postpartum PTSD and MDD.

Birthing persons are one of the most vulnerable populations after community disasters occur, whether natural disasters, man-made disasters, or pandemics (such as COVID-19). Resources such as social support usually help people who have lived through disasters to cope effectively. However, severity of disaster exposure, a lack of social support, a lowered socioeconomic status, and being a woman have been identified as risks with worse mental health post-disasters, hence the vulnerability of birthing persons. Without support and proper coping strategies many experience depression, anxiety, PTSD, which for perinatal individuals can lead to adverse physical outcomes, including preeclampsia and/or preterm birth.[39] Given the disproportionate experiences of preeclampsia and pre-term births among minoritized women causing increased morbidity and mortality, it is essential that cultural and structural factors underlying these conditions are highlighted and addressed with respect to experiences of trauma and mental illness exacerbated by trauma.

Access to and Utilization of Health Services and Resources

There exist various kinds of health services for prenatal and postpartum persons. These services can have a protective impact on maternal mental health, however the utilization and access to such services varies. Ensuring universal access to perinatal care could decrease the chances of undiagnosed and untreated mental health disorders. For instance, prenatal depression is one of the greatest risk factors for postpartum depression, and therefore mental health disorders during pregnancy must be accurately and adequately treated to prevent compounded adverse outcomes during the postpartum period.[40]

Negative affect and positive affect after birth are predictive of depressive symptoms throughout the postpartum period.[41] Immediate mood assessments post-birth in the hospital, birthing facility, or by midwives could aid in determining risk of postpartum mood disorders. Retrospective cohort studies have evaluated emergency department use and psychiatric admissions among postpartum women with or without pre-existing mental health disorders and found that postpartum women with pre-existing mental health disorders use the emergency

department for psychiatric and obstetrical reasons and/or get admitted for psychiatric care more than postpartum women without mental health disorders.[42,43] Considering this, additional support should be provided to perinatal persons with mental health disorders, who are at higher risk of visiting the emergency department postpartum.

The neonatal intensive care unit (NICU) could serve as a suitable setting of mental health support for postpartum birthing persons as the risk of developing mental health disorders is much higher amongst individuals who have infants in the NICU.[44] Research on support groups for birthing persons with postpartum depression has found that participants feel that their feelings are normalized due to shared experiences and gain a sense of community during a critical time that can otherwise be very isolating.[45] The NICU may also provide appropriate support for parents of multiples, who are also at a higher risk of having mental health disorders due to the multiplied distress.

Behavioral Factors

An individual's behavior can impact their risk of developing a perinatal mood and anxiety disorder (PMAD). Across the literature, interpreting the relationship between behavioral factors and PMADs proves complicated as many of the studies conducted are cross-sectional, and therefore, the directionality of the association cannot be assessed. This is further complicated by the fact that many of the factors studied are likely both causes and symptoms of perinatal mental health conditions. Two salient factors that arose from this pillar of articles are, seeking gestational diabetes mellitus-related care and sleep.

Previous research has found associations between gestational diabetes mellitus (GDM) care- seeking behavior and PMADs. Specifically, receiving no or insufficient treatment for GDM is associated with an increased risk of the development of perinatal mood and anxiety disorders.[46] Additionally, increased body mass index (BMI) has a known association with the risk of developing symptoms related to perinatal mental health disorders.[46] However, findings have also suggested individuals that individuals with major depressive disorder and bipolar depression have an increased risk of developing GDM.[46] These results at least partially stem from the fact that increases in BMI are one of the most common side effects of many psychiatric medications. [46] This also possibly leads to a positive feedback loop where those with major depressive disorder or bipolar depression are less likely to seek treatment for GDM which likely leads to increases in PMAD symptoms.

Sleep has been observed to impact rates of PMAD-related symptoms. In non-perinatal populations, poor sleep quality[47] insufficient sleep,[47] and circadian rhythm disruptions[48] have all been associated with an increased risk of depression. Across the literature selected for this review, there has been a consistent association between sleep disturbances and postpartum depression.[49] Despite the ubiquitous nature of sleep disturbances in the postpartum period, circadian rhythm disturbances only occur in a portion of postpartum individuals.[48] Furthermore, these disturbances in circadian rhythm have been seen to be associated with depression as well as anxiety.[47,48] These circadian rhythm disturbances have also been found to lead to greater feelings of fatigue. [48] Furthermore, individuals in the postpartum period who report higher levels of fatigue report more symptoms of depression.[8] These relationships are complicated by the bidirectional effects with infants of mothers with postpartum depression reporting shorter nighttime sleep duration and more night awakenings.[49] Additionally, disturbed sleep is one of the most common symptoms of depression leading to greater complications in interpreting the results of the literature.[47] Overall further research is needed to understand the connection between sleep and perinatal mood and anxiety disorders, and how this association may be qualitatively different across different minoritized populations.

Protective Factors

The literature has also identified factors that are protective against the development of perinatal mood and anxiety disorders. Interventions have aimed to strengthen and assess the impact of each of these factors independently, and in combination. For instance, social support,[50] sleep,[51] and mindfulness-based interventions[52] have all been evaluated both independently as well and in combination with regard to their impact on perinatal mood and anxiety disorders.

Among non-perinatal populations, social support improves life satisfaction across the lifecourse.[50] More specifically in the postpartum period social support has been directly linked to reductions in symptoms of depression.[50] Research has suggested the association between stress and symptoms of depression as a potential explanation for this connection.[50] This is further elucidated by the well-known increase in stress that occurs in the postpartum period.[50] Social support may potentially modify the association between stress and symptoms of depression at least partially explaining the association seen between social support and symptoms of depression in the postpartum period. Although much of the research conducted addressed the role of positive social support, negative social interactions similarly have been found to have negative associations with well-being.[51] While some studies have examined lack of sleep and/or low-quality sleep as risk factors for perinatal mood and anxiety disorders, other research has focused on quality sleep's protective potential for perinatal mental health. Studies have identified that increased quality of sleep result in improvements in perinatal mood and anxiety disorders.[51] Beyond the individual effect of sleep, interactions between social support and sleep have also been assessed. Quality of sleep has been seen to modify the association between negative social interactions and symptoms of mood and anxiety disorders in the postpartum period.[51] More specifically higher quality sleep allows individuals to better cope with negative social interactions resulting in a lesser impact on their mental health.[51]

Mindfulness-based interventions have also been found to be effective in protecting perinatal mental health. In non-perinatal populations, these interventions have been implemented and proven successful as a potential treatment for multiple mental health conditions.[52] These interventions prove especially beneficial due to the low barrier to entry and low cost of many mindfulness tools.[52] Although data remains limited, preliminary research on the utilization of mindfulness in the perinatal period has demonstrated reductions in symptoms of anxiety and depression.[52] Additionally, in this period mindfulness has known associations with reductions in stress.[52] Further research on mindfulness interventions and their potential to reduce stress and thus protect perinatal mental health are needed.

Next Steps

This summary of risk factors represents the largest number of articles (n=60) suggesting the overwhelming attention given to this area of maternal mental health research. While salient and amenable factors have been discussed including cultural, structural, clinical, and behavioral factors, the incorporation of cultural and structural determinants as primary risk factors is either lacking or only included in articles that specifically focus on this topic and thus, much of the empirical articles on risk are devoid of the sociocultural context of birthing persons' lives. Racial trauma in relation to mental health is acknowledged within the literature.[28] However very little exists about the impact of racial trauma on perinatal persons mental health (i.e., a potential for increased risk of poor mental health).

These efforts are imperative to more efficiently move science and intervention strategies forward with greater public health significance and impact.

Screening

Across the perinatal period, patients and providers report a lack of adequate screening for perinatal mood and anxiety disorders (PMADs) which stems from barriers to screening both at the level of the patient as well as the provider.[53,54] Additionally, screening alone is not enough, and protocols regarding follow-up to a positive result must be implemented. Despite high rates of PMADs, rates of screening in both inpatient as well as outpatient settings remain low.[53,55] The American Academy of Obstetrics and Gynecology recommends that routine screening for PMADs be a component of standardized pre-and postnatal care.[56] Despite this, no requirement for standardized screening procedures exists. Many providers express frustration due to a lack of clear protocols at either the institutional or systematic level.[56] This absence of clear guidance results in significant heterogeneity regarding the protocols and tools utilized for the screening for PMADs. Beyond just challenges regarding screening protocols, providers also report a lack of clarity regarding effectively connecting patients with appropriate mental health services following a positive result.[4]

Need For Increases in Screening

Overall, across all perinatal settings, the need for an increase in the rate of screening for PMADs is apparent. In obstetric settings, screening remains inconsistent, and there remains great variation in the screening tools utilized.[57] Despite the obstetric setting presenting as the most obvious location for increases in screening the pediatric setting provides an additional venue for implementation.[1,58–60] This setting provides especially significant benefits since parents have extensive and routine contact with their pediatric providers over the course of the first year postpartum. Due to these benefits, the American Academy of Pediatrics recommends the implementation of PMAD screening in the pediatric outpatient setting.[57] Despite the potential benefits of assessment in the pediatric setting as well as the American Academy of Pediatrics recommendations, a 2013 survey conducted among pediatric providers found that less than half of respondents are truly implementing these procedures.[55] Overall, this suggests that screening procedures across settings are inconsistent in occurrence as well as in the screening tools utilized.[27]

Screening for Substance Use Disorder

To identify the occurrence of substance use in the perinatal period universal screening is critical.[61] Recent data from the 2020 National Survey on Drug Use and Health report that between 8% and 11% of pregnant individuals in the United States have used illicit drugs, tobacco, or alcohol in month prior to the survey.[62] Additionally between 2017 and 2020 fatal drug overdoses among pregnant and postpartum individuals increased 80%.[63] This represents a significantly greater increase than among non-pregnant women of reproductive age over the same time period.[63] Screening early in the pregnancy period proves especially important as early identification and treatment of perinatal SUDs can improve both parental and child outcomes.[61] Despite this, recent studies have found that 58% of obstetric providers do not use a validated screening tool for perinatal substance use.[61] When probed on reasons underlying this lack of utilization of validated screening measures providers cited lack a of training and lack of standardization of tools.[61] In order to increase screening both of these concerns of providers must be addressed.

The implementation of universal screening also helps to reduce the racial disparities that currently exist in both screening and reporting processes. One study found that in Connecticut twice as many reports of substance use were made for Black as compared to White mothers which likely stemmed from racially motivated selective screening procedures.[64] By removing this selection process providers' implicit biases will no longer impact who is selected for substance use screening. Beyond racial disparities in screening another study found that following

screening procedures Black women were 10 times more likely to be reported to authorities following a positive urine screen as compared to White women.[65] These results suggest both procedures as well as additional training is needed to address the racial disparities in screening and reporting that occur. Specifically, beyond universal screening providers' implicit biases regarding substance use in pregnancy must be addressed in order to improve perinatal care for all pregnant and postpartum individuals.

Barriers to Screening

Both patients and providers agree on the importance of screening for PMADs, however, both identify barriers that prevent the implementation of such procedures. The first and most identified barrier is the stigma that surrounds mental health conditions.[4,66,67] This concern regarding stigma is expressed by both patients and providers alike. More specifically, individuals feel they will be judged and treated differently following diagnosis of a PMAD (i.e., they experience anticipatory stigma), and therefore, even if they are experiencing symptoms they tend to opt out of screening protocols.[4,66,67] Additionally, providers worry about stigmatizing their patients and therefore at times do not provide screening to avoid this stigmatization.[55] The stigma that exists surrounding mental health tends to be internalized by many postpartum individuals and as a result, they deny the need for mental health screening and conceal PMAD-associated symptoms.[4] Increased education on PMADs during the prenatal period and even earlier could help to both reject stigma and promote accepting assistance regarding any mental health challenges they may experience during pregnancy or in the postpartum period. However, education is insufficient in that it does not contend with varying cultural and social conditions experienced by minoritized birthing persons or address providers' implicit bias. Namely, a key barrier is an individual's fear associated with a potential diagnosis of PMADs and the increased risk of the repercussions that may occur due to this diagnosis,[66] especially for those who have had a history of substance use involvement.[68] Postpartum individuals especially express being fearful that their children will be removed from their care due to a mental health diagnosis.[69,70]

In addition to patient-level factors, providers also report barriers to implementing PMAD screenings in their practice. Across provider specialties, lack of time and feelings of being overworked are repeatedly the most cited reasons for the lack of screening implementation.[53,71] Additionally, providers identify a lack of training in mental health care and therefore a lack of comfort regarding the diagnosis and subsequent treatment of mental health conditions.[11] A PMAD diagnosis in any setting should result in a referral to a mental health provider, however many birthing persons who experience mental health challenges in the perinatal period report receiving mental health care only from their obstetric provider.[66] This reality results in obstetric providers avoiding screening due to a lack of comfort in providing care. Additionally, even those obstetric providers who do offer mental health care often are not adequately trained, including training in cultural and structural humility[72–76], and therefore are not providing the highest standard of equitable care.[66]

Lastly, above the level of both patients and providers there also exist system-level barriers that prevent the successful implementation of PMAD screening protocols in obstetric and primary care settings. These largely stem from a siloing of services in the healthcare fields resulting in a lack of clear channels of communication between different provider types.[67] Patients and providers alike report this as leading to unclear steps for follow-up on a positive PMAD screen and at times preventing the implementation of any screening protocols.

Barriers to Screening Follow-up

Although increases in screening itself prove an important first step, additional barriers to treatment following a positive PMAD screen must also be addressed. Specifically, there remains a significant disconnect between screening and the subsequent connection to appropriate mental health services.[4,53] Although this lack of follow-up care may be perceived to be a problem among those who do not seek mental health services, recent research demonstrates challenges in finding affordable mental health care are observed among those actively seeking

help.[4] This challenge stems from an insufficient number of mental health providers available to address issues related to perinatal mental health who accept any insurance, a problem that is compounded when considering individuals with public forms of insurance.[4] Both effective communication among providers and the number of providers must be addressed to ensure adequate mental health care for individuals diagnosed with PMADs.

Next Steps

Providers and patients alike support increased PMAD screening in all medical settings that birthing persons have contact with in the perinatal period.[60] Stemming from this, we can identify potential next steps that can be taken to both increase the number of screenings and improve the process following a positive result.[4] The first major step that will improve the numbers and quality of PMAD screening should come from the removal of barriers to screening identified by both patients and providers.

Previous research has suggested the routinization of screening protocols greatly increases the number of individuals screened.[5] Therefore, implementing policies related to screening at all levels will help improve PMAD screening rates. Routinizing screening also normalizes engagement in screening which can help reduce the stigma associated with receiving a mental health diagnosis.[77] Further, when a positive screen occurs, connection to services significantly increases, and therefore, screening opportunities should be scaled up[5] however, not without recognition that simply increasing screening opportunities will continue to fall short in solving core issues associated with lack of access to socioculturally-appropriate mental health care and the gap between screening and linkage to treatment. PMAD screenings are likely missing an unknown proportion of minoritized women who (1) refuse screening due to stigmatizing experiences and untrustworthiness of medical institutions, and/or (2) the inherent cultural bias of screening tools that are validated among non-representative populations, and tools that exclude cultural relevant items. Critical next steps must contend with these social barriers to fully realize equity systems and programs of care.

Frameworks

Across the literature, frameworks, some explicitly identified and others implicitly, are utilized to address the critical issue of perinatal mood and anxiety disorders (PMADs). Many of these frameworks tackle multiple levels including addressing individual as well as structural level factors influencing perinatal mental health. Certain factors repeatedly appear across frameworks addressing perinatal mental health, including the importance of community engagement in research and policy and the significance of social and cultural factors.

Importance of Community Engagement

Much of recent research addressing the impact of PMADs on both birthing persons and the larger community has addressed the importance of incorporating the community into the research process. Community-based participatory research relies upon those embedded in the community to inform the research team of the priorities of the individuals and community participating in the project. One major aspect of this framework utilizes community health workers (CHW) in tested interventions.[78] Specifically, centering the insights of CHWs, who are members of the community, allows for a deeper understanding of the sociocultural context.[78] Additionally, the research participants from the community tend to trust the CHW and likely feel comfortable when interacting in the context of the research, and this supports research study participation and retention, and importantly, the reliability of the data. The Social Energy Exchange theory for postpartum depression (SEED) specifically addresses the significance of the role of the community in impacting perinatal depression.[79] Specifically, this framework identifies the fact that individuals who are members of the community often are best positioned to support individuals with perinatal mental health conditions to engage and stay in treatment. Involving those in the community in

the research process and provided that the research team is culturally and structurally humble, also allows for a more comprehensive understanding of the community's needs, and contributes to greater equity in the research process.[78,80] Specifically, learning from individuals in the community regarding perinatal mental health helps identify existing needs and best practices and strategies for addressing those needs. Establishing an equitable partnership with the community and allowing the community's voice to be heard promotes equity in research and policy development and implementation.[80]

Impact of Sociocultural Factors

Beyond the importance of including the community in the research process to inform practice and policy, multiple frameworks emphasize the significance of understanding the influence of sociocultural factors on perinatal mental health.[80–84] Two such frameworks are the socioecological cultural framework and The Social Energy Exchange theory for postpartum depression (SEED).[79] Both frameworks emphasize the importance of placing the individual in the context in which they live.[80] Specifically, the frameworks address both how people in the perinatal period are influenced by and also how they influence the different social spaces in which they belong, including family, community and larger society.[80] Without a comprehensive understanding of the social and cultural factors that shape the lives of birthing persons, practices, and policies aiming to improve perinatal mental health remain insufficient or worse are misguided. For instance, lack of recognition of the socioeconomic pressures low-income birthing persons face that contribute to a quick return to the workforce following birth and of the different associated stressors and challenges that threaten their mental health will prevent their participation in programs and practices and therefore not address their mental health needs.[79] Considering sociocultural factors operating at all different levels of the socioecological framework (i.e., individual, interpersonal/family, community and larger society) has the potential to increase the impact of policies, programs and interventions. For instance, barriers on the societal level (e.g., systematic exclusion from well-paid employment opportunities due to racism and sexism) that prevent access to quality perinatal mental health care cannot be addressed with individual-level interventions. Alternatively, if the barrier exists at the interpersonal level (i.e., provider-birthing person level) for instance, provider stigmatizing attitude and beliefs towards Black or Latinx birthing persons, structural approaches will not succeed in improving the provider and birthing person relationship that prevents continuity of treatment. Both frameworks emphasize the focus on barriers and facilitators beyond the individual and highlight the importance of contextualizing the lives and experiences of birthing persons that can hinder or motivate their engagement in mental health care.

Intersectionality

Across the literature on perinatal mental health, the intersectionality framework is also often applied. Research on perinatal mental health care utilization reports that Black and Latina women are less likely than White women to initiate, be retained in mental health treatment, and refill psychiatric medication.[83] In order to accurately interpret such findings, we must consider the effects of multiple interlocking social hierarchies and their impact on intersecting minoritized identities. Specifically, it is critical to recognize that the effect of multiple minoritized identities is intersectional and not simply additive, and therefore, research must assess and interventions must consider the positionality of birthing persons and how it influences their experience with programs and mental health services.

As the discussion above suggests, the research, intervention, and practice field of perinatal mental health remains largely atheoretical. Community engagement and intersectionality are approaches to research and practice, and although they can and should inform efforts to enhance equitable access to quality mental health care for birthing people, they are not sociocultural theories that can sufficiently explain or predict health-related beliefs and behavior. The socioecological model does qualify as a theory, and we recognize its utility and value in guiding research, practice, and policy tailored to birthing persons' contextualized lives. However, one of the primary

limitations of the socioecological model that is that the majority of researchers using the model do not specify the processes or mechanisms through which the different levels and social spaces (from the individual to the societal) interface and shape contextualized behavior; this greatly diminishes its interpretative potential. We would like to humbly suggest that one of the models that includes these processes is the CCASE Re-HeaL Model which is based on the theoretical concept of health habitus (i.e., health-related dispositions) and bridges individual level behavior and lifestyle to cultural and structural factors while also attending to intersectionality.[76,85] We conclude this pillar by inviting fellow researchers, practitioners, and policy makers to develop new and identify additional frameworks to tackle the sociocultural factors identified by the current empirical literature that foster long-standing inequities in perinatal and post-partum mental health outcomes.

Equity Focus

Racial and Socioeconomic Determinants of Perinatal Mental Health

Previous research has found that pregnant and postpartum individuals of color have higher rates of perinatal depression. [5,28,83,86] Black pregnant and postpartum individuals, in particular, report higher rates of perinatal depression as compared to all other racial-ethnic groups.[5] Results of research specifically addressing the rates of depression and other perinatal mental conditions among Latina pregnant and postpartum individuals have been mixed with some finding higher rates of PMADs in this population while others have found these rates to be lower.[87] Various explanations have been offered to explain these mixed results including vast diversity in the ethnic category that is Latina especially regarding the difference between first-generation individuals and those of second or even more distant generations.[87] Another proposed explanation for these mixed results is the Hispanic Paradox.[87] The Hispanic Paradox refers to the fact that Hispanic individuals in the United States tend to have superior health outcomes despite greater levels of socioeconomic disadvantage and reduced access to healthcare.[88] In addition to this, there remains the possibility of underdiagnosis of PMADs in this population as it has been suggested that Hispanic populations have a greater tolerance for variety in mental health behavior and therefore this population seeks both screening and treatment less frequently.[87] Beyond rates of PMADs, research has also addressed the differences in rates of treatment utilization and retention. Research has found that both Black and Latina pregnant and postpartum individuals are significantly less likely to receive perinatal mental health treatment.[58,68] Additionally, individuals in these groups who actively seek treatment report encountering more challenges in accessing services.[5]

Beyond race, socioeconomic status has also been seen to be impactful regarding rates of PMADs. Low-income pregnant and postpartum individuals are found to have rates of depression twice that of non-low-income individuals.[35,87] Food insecurity has also been seen to have significant positive associations with depression among pregnant and postpartum individuals.[80,89] Regarding treatment access and utilization rates, research has found that individuals on Medicaid also have significantly more difficulty accessing mental health services.[83] This suggests that the lower observed rates of mental healthcare utilization among low-income individuals stem not from a lack of attempts to access services alone but largely from barriers to access to care.

Many factors lead to the inequities that occur regarding rates of PMADs as well as rates of treatment. Overall, these differences occur due to higher rates of various factors that are known to increase the rates of mental illness in these populations.[4] More specifically both non-White individuals as well as low-income individuals report higher rates of lifetime adverse experiences which lead to increased rates of mood and anxiety disorders.[28] Despite these rates presented above, overall minimal research has been conducted on perinatal mental health specifically in minoritized populations. More research should be conducted to better understand both the rates of PMADs as well as potential barriers to treatment in these populations. Many factors lead to the inequities that occur regarding rates of PMADs as well as rates of treatment. Overall, these differences occur due to higher rates of various factors that are known to increase the rates of mental illness in these populations.[4] More specifically

both non-White individuals as well as low-income individuals report higher rates of lifetime adverse experiences which lead to increased rates of mood and anxiety disorders.[24] Despite these inequities, overall minimal research has been conducted on perinatal mental health specifically among minoritized populations. More research is warranted to better understand both the rates of PMADs as well as potential barriers to treatment among minoritized populations with the next two sections providing research priority areas

Impact of Structural Racism

The racial differences observed in rates of perinatal and post-partum mental health conditions and treatment accessibility cannot be understood without addressing the impact of structural racism. Specifically among certain populations, structural racism leads to fear and mistrust of 'officialdom' including those in the medical profession leading to lower rates of mental health care utilization among pregnant and postpartum individuals of color.[28] Understanding the impact of structural racism generally and its impact on perinatal mental health care utilization is critical to reducing disparities in rates of perinatal mental health conditions as well as increasing utilization of mental healthcare resources. To increase access to care, there needs to be a dismantling of the power disparities that exist between disadvantaged women and many medical professionals.[83] This is especially important because previous research has shown that the establishment of mental health treatment relationships proves especially beneficial for mental health treatment outcomes in the perinatal period.[83] These relationships will only form if the perceived power imbalances between patient and provider are neutralized by establishing a true therapeutic alliance that is based on a culturally and structurally humble approach.[72–76]

Utilization of Non-traditional Care Settings

To help contend with care-seeking inequities, it also is important to understand the utilization of care outside of the traditional medical settings.[28] The most commonly referenced type of informal support is community support which is most often found in neighborhood settings and in faith based settings.[28] Based on fears of the medical setting and medical personnel by minoritized populations these non-traditional care settings may better address the needs of certain populations. Research addressing just this issue finds that within populations of Black women informal support such as that provided by family, friends, and the larger community is commonly cited as being the preferred method of perinatal mental health care.[28] If research only addresses rates of care utilization in traditional settings, reported rates may underestimate the amount of care being used by populations whose preferred care method lies outside the traditional medical setting. By understanding the specific needs of different groups, informal spaces such as religious settings and hair salons likely will appear as important locations regarding the treatment of perinatal mental health. Interventions in these spaces will help to reach populations traditionally overlooked by the medical field and help to reduce disparities in perinatal mental health. It remains important for researchers and policymakers alike to not discount the significance of these informal spaces when considering perinatal mental health and healthcare but instead accept and embrace these informal mental healthcare venues.

Under researched Populations: Native Americans/Alaskan Natives

Overall, there is a paucity of research addressing perinatal mood and anxiety disorders (PMAD) in Native American/Alaskan Native (NA/AN) populations.[90,91] The limited existing literature consistently reports higher rates of PMADs among NA/AN perinatal individuals as compared to all other racial/ethnic groups.[90,92–95] Despite finding consistently higher rates of PMADs among NA/AN individuals, studies have found vast variety in the rates themselves.[91] Additionally, in the general population of perinatal individuals suicide is the leading cause of death in the first year postpartum.[96] This is of particular relevance as studies report the suicide rate within the whole NA/AN population as over three times greater than across all racial/ethnic groups.[96] Specific work addressing the suicide rate among postpartum NA/AN individuals is needed to truly understand the nature of this crisis in this population.

Overall further research is needed to better understand the scope of the problem, potential risk factors, as well as potential intervention points for addressing PMADs among NA/AN perinatal individuals.

Beyond the importance of understanding rates of PMADs among NA/AN people, screening for PMADs in this population remains of crucial importance. Despite the understanding of the importance of screening, minimal research has been conducted on this topic within this population.[90] More specifically the most commonly utilized screening tools such as the EPDS and the PHQ-9 have not been validated in NA/AN populations.[91] In a research context, this presents a possible explanation for the variation seen across studies in the rates of PMADs within this population. Validating these scales in populations of NA/AN perinatal individuals is critical for both research and clinical practice. It also remains possible that culturally specific scales may need to be created. This need could stem from a difference in the conceptualization of depression[94] or other possible cultural differences that need to be further elucidated through additional research.

Across all populations cultural factors greatly impact the occurrence of perinatal mood and anxiety disorders however minimal research has addressed cultural impacts specific to NA/AN people.[92] Certain constructs have been associated with PMADs in the general population and exist at elevated rates among NA/AN individuals which may suggest these factors contribute to the elevated rates of PMADs in this population. In the general population, poverty has been identified as a predictor of the development of perinatal mood and anxiety disorders.[95] This is especially significant as NA/AN women have the lowest median income of any racial/ethnic group.[95] Additionally, social isolation has been identified as a risk factor for developing a PMAD which is significant as the majority of NA/AN individuals live in rural locations leading to higher levels of social isolation.[95] Regarding both of these issues understanding the experiences of historical oppression and colonialism is critical to better understanding the impact of both poverty and social isolation.[93] Specifically, previously discriminatory policies such as forced relocation directly impact rates of poverty and rural living conditions among NA/AN individuals. It is critical to further understand the impact of these oppressive policies on perinatal mental health outcomes.

Overall, there is a need for significantly more research addressing the rates and risk factors for PMADs among NA/AN perinatal individuals. Research should address culturally specific factors that may act as protective against perinatal mood and anxiety disorders. Additionally, it is important to address the vast diversity within the racial/ethnic category of Native American and further understand how these differences may affect both rates and treatment strategies for perinatal mood and anxiety disorders. By addressing rates, risk factors, and protective factors we can begin to move toward developing interventions to address the elevated rates of perinatal mood and anxiety disorders observed in populations of Native American and Alaskan Native individuals and begin to address the effects of centuries of oppression and colonialism.

Under researched Populations: Adolescent Perinatal Mental Health

Despite reductions in recent years, rates of teenage pregnancy in the United States remain higher than in other developed countries.[97,98] Additionally intersecting with age is race and ethnicity. Among individuals between the ages of 15 and 19, Latinas have the highest birthrate,[99] and among Black adolescents, the pregnancy rate is almost two times that of non- Hispanic White adolescents.[97] Despite these elevated rates minimal literature has addressed the perinatal mental health challenges within these populations.[99] In addition to these high rates of teenage pregnancy, rates of perinatal mood and anxiety disorders have repeatedly been found to be elevated among these populations.[98–106] Rates of substance abuse have also been found to be higher among perinatal adolescents as compared to non-pregnant and postpartum adolescents[101,107] likely stemming from the impact of substance usage on the initiation of risky sexual behavior increasing pregnancy risk.[107]

Perinatal adolescents face many of the same underlying risk factors for the development of perinatal mood and anxiety disorders as adults. They additionally face unique risk factors.

Sociocultural factors prove impactful regarding rates of PMADs among both adolescents and adult perinatal populations. Socioeconomic status is both associated with becoming pregnant as well as with increases in rates of perinatal mental health conditions.[103,108,109] Additionally, racism has been seen to both increase the risk of teen pregnancy as well as increase the risk for adverse mental health outcomes.[108] Specifically higher rates of trauma are reported among perinatal adolescents as compared to non-pregnant adolescents.[104,106] This coupled with the fact that trauma has been associated with increases in the risk of the development of perinatal mood and anxiety disorders[104,106] introduces an additional risk factor in this population. Perinatal adolescent individuals also fear stigma regarding their pregnancy as well as regarding their mental illness which prevents them from seeking appropriate services. [108,109]

In contrast to risk factors, protective factors have also been identified. Similarly to older pregnant and postpartum individuals, social support proves invaluable in improving well- being[99,109] and preventing adverse mental health outcomes.[102,103,110] Specifically, the mothers of the pregnant and postpartum adolescents have been seen to be critical in the adjustment to parenthood.[103] Partner support has also been identified as greatly protective against perinatal mood and anxiety disorders.[103] Building upon these findings interventions addressing improving social support can be beneficial in improving mental health among perinatal adolescents.[110]

Despite these higher rates of perinatal mood and anxiety disorders among pregnant and postpartum adolescents, care utilization in this population remains low.[100,104] Multiple reasons underlie this including a lack of knowledge regarding where to find services[100] as well as financial barriers.[97,100] Among Black and other ethnically minoritized populations of perinatal adolescents the rates of unmet mental healthcare needs are even higher.[111] Black and other ethnically minoritized individuals additionally identify a lack of trust in official medical personnel as a reason for not accessing mental health services. In conjunction with service utilization, screening for PMADs among this population remains critical. When working with perinatal adolescents the importance of understanding the specifics of the language used to describe the symptoms of PMADs is paramount.[104] This includes confirming that the scales utilized are validated for use in this population, as often the language used,[111] and even the manifestation of symptoms[102] differ from those of adult pregnant and postpartum individuals.

Overall, despite the public health significance of the high rates of adolescent pregnancy minimal research has been conducted addressing adolescent perinatal mental health. Much of the existing literature addressed the rates of perinatal mood and anxiety disorders within this population. Additionally, some work has addressed existing risk factors affecting these rates.

Future work must continue to address potential risk factors associated with adolescent PMADs and also begin to test interventions to address this public health crisis

Under Researched Populations: Undocumented mothers

Undocumented mothers are more likely to experience adverse pregnancy outcomes, such as excessive bleeding, fetal distress, unplanned cesarean sections, and afterward, postpartum depression.[112] In the United States, many immigrants face xenophobia and racism, and other barriers, such as a lack of access to affordable health care. While only 9% of citizens are unable to afford health care, 50% of undocumented immigrants and 25% of documented immigrants are uninsured and cannot afford care.[112] Undocumented people are only able get emergency Medicaid (covered until stabilization) and no other government-funded health care and even for documented immigrants, many states require a five-year waiting period to be eligible for Medicaid. Thus, further research should be conducted on the perinatal mental health of recent immigrants (including undocumented immigrants), proper interventions to provide equitable care should be prioritized, along with policy changes to be able to support this population during the prenatal and postpartum periods.[112]

Next Steps

The most significant factor that must be addressed regarding perinatal mental health is the need for more relevant equity-centered research and policy. Overall minimal research has been conducted regarding issues of equity and PMAD diagnosis and treatment. To accurately implement interventions and policies, the root cause of inequity must be recognized and better understood and begins with society's falsely constructed hierarchical prioritization of "whiteness", in the U.S., and globally.

Additionally, this research and subsequent interventions and policies should aim to better understand the already existing community and spaces of informal support as this is repeatedly shown to already be a significantly utilized perinatal mental healthcare resource in communities where inequities have had a stronghold. It also is crucial to closely work minoritized communities in respectful, dignified and humble ways such that their needs are addressed as well as their voice being valued when expressing what they observe to be significant factors influencing perinatal mental health.[113]

Policies

Cultural Relevance and Inclusivity

Black mothers with young children face unique challenges related to race, gender, and maternal experiences. A recent review emphasizes that to effectively address the needs, issues of access, and interventions for black maternal health, studies prioritize Black mothers and explore their mental health support preferences in various contexts.[28] The field of infant mental health has sometimes perpetuated racial marginalization and cultural oppression, contributing to systemic inequities in the care provided to Black mothers and their children. The author called for an Afrocentrentric perspective as an antidote to prevent further harm. Professionals must enhance their awareness of the historical and present-day contexts that affect these families and commit to addressing racism both individually and collectively.[28] Focusing solely on the disorders, risks, and stressors among Black mothers, without acknowledging their strengths and culturally appropriate support systems, reinforces negative stereotypes and negative Black narratives. It is imperative to counter these biases intentionally by emphasizing strengths and practicing cultural humility. Furthermore, the review suggests that culturally relevant policy decisions should utilize individuals' power and privilege to advocate for policies that support Black families and challenge those that do not.[28] Through improving access to and quality of care, and offering preferred options and delivery methods, such as Medicaid Expansion and the Maternal Infant Child Home Visiting Program, are vital for promoting maternal, infant, and child well-being. Additionally, increasing racial diversity in decision-making, redistributing power and resources, and ensuring accountability for anti-racism actions are essential steps to advance the interests of Black mothers.[28] These studies emphasize the necessity of culturally sensitive mental health interventions through health policies for marginalized groups, especially Black mothers, to combat systemic racism and negative stereotypes.

Systemic Barriers to Care

The accessibility and quality of care for PMADs are often hindered by systemic barriers, including inadequate referral systems and limited insurance coverage.[32,71] Despite standards for PMAD screening, implementation is inconsistent.[71] For individuals with PMADs, it is crucial to improve social support structures through targeted policy reforms.[32,71] Enhanced maternity leave policies are vital for providing parents with adequate time to recover and seek mental health care. Expanding Medicaid coverage to include the entire first year postpartum is essential for ensuring continuous access to mental health services, particularly for high-risk, low-income parents.[32,71]

Additionally, increasing funding for mental health services, integrating these services with maternal and infant care, and removing barriers to access are key to providing comprehensive support.[32,71] Implementing family-centered policies that promote economic stability, such as affordable childcare, can further reduce stressors and improve mental health outcomes.[32,71] Additionally, a recent report emphasized the need for contemporary federal policies to prioritize expanded postpartum insurance coverage to bridge gaps that restrict access to mental health and essential health services.[32] This focus is crucial for providing better maternal care, especially for low-income and racially minoritized communities. Together, these policy improvements create a supportive environment that addresses the diverse needs of maternal mental health and mitigates the impact of PMADs.

Economic and Reform Influences

Studies have highlighted the significant impact of economic and reform factors on maternal health outcomes.[32,71] Utilization of Medicaid immediate postpartum long-acting reversible contraception (IPP LARC) reforms can demonstrate how targeted policy changes can positively influence maternal mental health by providing access to effective contraception. IPP LARC are designed to improve reproductive health outcomes among mothers with low income.[71] By increasing access to effective contraception immediately after childbirth, these reforms aimed to enhance maternal and infant health by allowing mothers to better plan subsequent pregnancies. Thus, improving maternal mental health. The study found that state adoption of Medicaid IPP LARC reforms was associated with a significant reduction in the likelihood of reporting poor mental health among mothers with low income. Specifically, the reforms were linked to a 5.7% to 11.5% decrease in the probability of reporting "not good" mental health days.[71] Moreover, the results revealed that the positive effects were particularly pronounced among respondents with multiple children under 18 years of age, suggesting that IPP LARC reforms may be especially beneficial for mothers with larger families who face higher economic and psychological pressures. These findings suggest that expanding access to postpartum contraception through Medicaid can have broader benefits beyond reproductive autonomy.[53] The integration of these reforms into a comprehensive strategy is necessary to improve mental health and overall well-being.

Conversely, Temporary Assistance for Needy Families (TANF) requirements illustrate how certain policies can exacerbate material hardship and mental health challenges for mothers with low income.[32] Survey-weighted regression models, conducted by Walker et al., revealed that the imposition of various TANF requirements was associated with several adverse outcomes. The results demonstrated that the presence of any requirements was correlated with increased material hardship. Moreover, the work requirements were linked to heightened material hardship. The results also showed that the requirement to name the father of the child was associated with increased depression. And it was found that benefit cuts were related to greater parental aggravation and material hardship. These findings underscore the need for policies that alleviate financial strain, improve access to essential services, and support the well-being of vulnerable populations to enhance maternal health.

Vulnerable Populations

Mothers of NICU infants are especially vulnerable due to the intense psychological stress related to their infants' critical conditions.[52] A report highlighted the need for policies that integrate mental health services into NICU care, including regular screenings, immediate psychological support, and access to counseling. The authors emphasized the importance of training NICU staff to recognize and address maternal distress, which can enhance the management of mental health issues. Policies should also focus on family-centered care that supports both the mother and infant, and include long- term follow-up programs to monitor and support maternal mental health beyond the NICU stay.

Policies Impacting Perinatal Individuals with Substance Use Disorder

Another population that is vulnerable and overlooked in the maternal mental health arena is perinatal persons with substance use disorder (SUD). Mandated reporting policies often make pregnant individuals with SUDs less likely to initiate treatment or at least delay treatment initiation.[114] One pathway explaining this association stems from a mothers' fear of having their children taken away.[115–119] This concern is stronger among Black mothers which is justified by the fact that Black mothers have disproportionately higher rates of Child Protective Services (CPS) involvement for perinatal SUD than White mothers who actually have higher rates of SUD.[15–18,116] In addition to the negative impact these policies have in reducing care utilization, there is little evidence that these policies are effective in reducing substance use in pregnancy.[121] Due to these statistics, The American Public Health Association, American College of Obstetricians and Gynecologists, and American Academy of Pediatrics have made recommendations against both child abuse and mandated reporting policies.[114] Despite these recommendations 23 states and the District of Columbia have child abuse policies and 26 states and the District of Columbia have mandated reporting policies.[114] Overall, there is a need for a drastic change in how society treats pregnant and parenting individuals with SUD. Even the language utilized such as referring to their children as victims places these parents in a stigmatizing, villainous light contributing to exacerbated, racialized trauma by perinatal individuals with SUD.[118] There is a need for patient-centered care that will take into consideration the impact of social determinants of health in order to reshape how we both think of and treat pregnant individuals with SUD in order to improve both maternal and offspring outcomes.[121]

Role of Pediatric Primary Care

There is a crucial role that pediatric primary care can play in addressing maternal mental health through targeted policies.[59,67] Policies that mandate the integration of mental health screenings, provide training and resources for pediatricians, and improve access to mental health services are essential.[59] Additionally, fostering interdisciplinary collaboration, supporting community-based initiatives, and leveraging technology are critical to advancing maternal mental health care.[67] By implementing these policies, pediatric primary care can significantly enhance the management of maternal mental health and support the overall well-being of both mothers and their children.

Community Engagement and Service Accessibility

Black and other minoritized mothers are often forced to contend with untrustworthy institutions providing maternal health services reflecting cultural insensitivity and systemic racial biases.[100] This untrustworthiness can lead to underutilization of available services and contribute to poorer mental health outcomes.[100] Community engagement and service accessibility can play a critical role in improving maternal mental health, particularly for Black and other minoritized mothers.

Next Steps

A call to recognize policies that are directly harmful to birthing persons, particularly persons from minoritized backgrounds is urgent. TANF requirements are a clear example of cultural violence and major cause of economic distress. While this is a federal policy, local government should have the fiscal flexibility to find ways to supplement and/or neutralize such policy harms. To this end, the use of legal epidemiology to formally examine policies for unjust harm is an ideal and practical approach and should be conducted.[122] Recognizing the impact of financial burden and distress, policies providing birthing women with financial security should be implemented as such programs have shown to have a significant impact.[123,124] Finally, a practical and essential next step is to address

the need for training and support to providers in all spaces of contact with birthing persons and with an emphasis on working with minoritized communities. Health policies must address the need for trainings in cultural and structural humility and recognize the shortcomings of trainings in cultural "competency".[72–76] Providers, practices and programs infused with the values of cultural and structural humility have the potential to enhance awareness, access and treatment through, for instance, the provision of culturally-relevant family-focused services, or establishing partnerships with community members to design and implement culturally-relevant and trustworthy services. Additionally, policies to ensure long-term support and follow-up are quintessential to maintaining maternal mental health. By addressing these areas, policies can significantly enhance the effectiveness and accessibility of maternal mental health services for the minoritized communities that carry the burden of inequitable and disparate maternal mental health outcomes.

Interventions

Optimizing Screening and Diagnostic Practices

Early identification of perinatal mental health disorders, such as postpartum depression (PPD) and anxiety, is crucial for timely and effective intervention.[1,29,59,78,125–128] Screening serves as a vital gateway to treatment, enabling healthcare providers to detect symptoms that might otherwise go unnoticed, particularly due to stigma and misunderstandings surrounding maternal mental health. Several standardized screening tools are widely used to assess perinatal mental health disorders. The Patient Health Questionnaire (PHQ-9) is commonly employed to evaluate depression severity, including during the perinatal period. The Edinburgh Postnatal Depression Scale (EPDS), recognized for its reliability and validity, is specifically designed to identify PPD. Kurtz et al. emphasize the importance of utilizing these tools in pediatric primary care settings, advocating for regular screening at predetermined intervals. This approach is critical as pediatricians often have more frequent interactions with mothers during the postpartum period than other healthcare providers.[1]

Integrating mental health screening into routine prenatal and postnatal care ensures comprehensive evaluation, regardless of symptom presentation.[1,83] Stevens et al. demonstrated high treatment engagement and effectiveness in their coordinated perinatal mental health care model, which included care coordination, a socio-cultural focus, a therapeutic alliance, and a trauma focus, leading to significant improvements in depressive symptoms.[83] This underscores the need for mental health assessments to be a standard component of prenatal visits. Additionally, understanding the intersections between race and poverty can improve treatment outcomes by enabling tailored interventions based on each patient's socio-demographic context, thus ensuring equitable and effective care.

Despite the availability of effective screening tools, several barriers hinder their widespread use.[127] Inconsistent screening policies across healthcare settings contribute to low screening rates.[67] Additionally, stigma and cultural factors can discourage women from seeking help or disclosing symptoms, further complicated by a lack of culturally relevant screening tools. Limited access to trained professionals and follow-up care can also diminish the effectiveness of screening initiatives.[1,82]

Effective screening is only the first step; it must be closely linked to interventions to be truly beneficial.[127] Programs like the Massachusetts Child Psychiatry Access Program (MCPAP) for Moms ensure timely mental health care by providing immediate consultation and referral services following a positive screen.[127] Interdisciplinary approaches that integrate primary care, mental health services, and community resources facilitate a seamless transition from screening to treatment, addressing both medical and psychosocial needs.[127] Ongoing assessment and follow-up are essential for adjusting treatment plans as needed and ensuring long-term mental health support. Pediatric primary care providers play a crucial role in monitoring maternal mental health, given their frequent contact with families.[59]

Holistic Training Strategies and Interdisciplinary Approaches

Interventions focused on community and provider training play a critical role in enhancing maternal mental health care by expanding awareness, improving skills, and fostering a supportive environment for both healthcare providers and patients. These interventions can be divided into two main categories: community-based programs and healthcare provider training.[1,40,67,78,127,129]

Community-based programs are pivotal in enhancing maternal mental health by raising awareness, providing support, and facilitating access to care. Education and awareness campaigns are often implemented to inform expectant and new mothers, their families, and the broader community about perinatal mental health disorders, aiming to reduce stigma and promote early help-seeking behaviors.[37,67] Support groups and peer support networks provide a safe space for women to share their experiences and receive emotional support, helping to normalize and address mental health issues.[37,67] Additionally, community health worker programs train local individuals to recognize symptoms of perinatal mental health disorders and offer basic support and referrals, can bridge gaps in formal healthcare systems by ensuring culturally-appropriate care and bolstering community trust in services and treatment.[67]

Healthcare provider training is crucial for improving the detection and management of perinatal mental health disorders. Specialized training programs equip healthcare providers, including obstetricians, pediatricians, nurses, and general practitioners, with the skills to use screening tools and manage common perinatal mental health conditions. Integrated care models, such as the Massachusetts Child Psychiatry Access Program (MCPAP) for Moms, enhanced the coordination between primary care and mental health services, ensuring comprehensive and timely care.[127] This, in turn, improves maternal mental health. Cultural humility training is also emphasized, teaching providers to understand and respect diverse cultural beliefs and practices related to childbirth and mental health.[67] Interdisciplinary collaboration is encouraged, fostering teamwork among healthcare professionals to address the multifaceted needs of women during the perinatal period.[67,129] These training initiatives collectively lead to improved patient outcomes and a more supportive healthcare environment.[67]

Addressing the complexity of maternal mental health care requires embedding mental health services within primary care settings, implementing universal screening, training clinicians, and incorporating consultation into case conference meetings. This integrated approach facilitates mental health care in environments that minimize stigma, enhance patient compliance, and ensure continuity of care. By addressing the multifaceted nature of perinatal mental health disorders—often intertwined with socioeconomic, cultural, and systemic factors— this strategy provides a comprehensive framework for improving overall maternal mental health outcomes.

Cultural Relevance and Barriers to Care

Culturally relevant services in maternal mental health care are essential for addressing the diverse backgrounds and experiences of patients. It involves understanding and integrating cultural factors that affect mental health perceptions and treatment preferences. By recognizing these factors, healthcare providers can offer more effective and personalized care, fostering trust and improving patient engagement. This approach aligns with existing which highlight the significance of cultural relevance in improving mental health care for diverse populations.[129,130]

Park et al shed light on the cultural dimensions of perinatal mental health, particularly among Vietnamese American mothers. Asian-American mothers often underutilize mental health services compared to White mothers, despite having similar or higher rates of depression or postpartum depression.[130] This reluctance to seek professional help, particularly from mental health providers, is influenced by cultural beliefs that operate as barriers. In this study,

the approach of teaching Vietnamese mothers and the Vietnamese community to recognize the signs of depression but not to label it as depression (counteracting the attached stigma) was used. This approach was shown to be more fruitful for the participants to seek care. Ultimately, the researchers recommended that mental health professionals collaborate with the Vietnamese American community to (1) better understand the cultural influences on the maternal mental health and help-seeking behaviors of Vietnamese American mothers and to (2) develop services that are culturally appropriate.

Standardized tools may not adequately capture cultural differences in symptom expression or mental health perceptions, leading to gaps in effective care.[131] Collaborating with cultural experts and community leaders to develop and review mental health resources and practices ensures that they are culturally sensitive and effective. This approach can help in designing interventions that are respectful of and tailored to the cultural nuances of different communities.[129] Consequently, employing community health workers who understand the cultural contexts of the populations they serve is an effective strategy for promoting access and use of care and hence, equity.[78,132] These workers provide culturally sensitive support, help interpret symptoms, and enhance communication between patients and healthcare providers, thereby improving the effectiveness and reach of mental health interventions.

Broadening Treatment and Access: Women Living with HIV

In addressing maternal mental health, integrating alternative and complementary treatments alongside conventional approaches can enhance overall care. Practices such as yoga and mindfulness, as explored in studies by Sheffield et al. offer promising benefits in alleviating perinatal anxiety and depression by promoting relaxation and improving mood.[133] Nevertheless, significant barriers persist, including inconsistent screening practices, stigma, and insufficient culturally relevant resources. These challenges, particularly affecting marginalized groups, hinder effective interventions.[37,78,82,126] Specific populations, such as HIV-positive pregnant women and those experiencing preterm birth, face unique obstacles. HIV-positive women often deal with additional mental health vulnerabilities impacting treatment adherence, and intersecting stigma, while preterm birth can exacerbate mental health issues and affect mother-infant interactions.[37,74] In 2019, women aged 25 to 34 (an age bracket that coincides with peak reproductive years) had the highest number of new HIV diagnoses compared to other age groups.[134] The (limited) literature regarding the mental health of perinatal persons living with HIV in the United States calls for prenatal provider interventions to promote better mental health outcomes for people living with HIV. A 2014 literature comprehensive review literature review examining the mental health of HIV-seropositive women during pregnancy and postpartum, highlighted this population's mental health outcomes in the U.S.[129] Earlier cross-sectional studies reported that pregnant women living with HIV (WLWH) had higher depression and anxiety scores than pregnant women living without HIV.[129] Other cross-sectional studies have found that among women living with HIV the rates of perinatal depression ranged from 30.8% over 10 years to 53% positive depression screenings over two years.[129] Depression was the most studied mood disorder, and the findings suggested a need for screening protocols to identify perinatal persons living with HIV struggling with depression and/or to closely monitor perinatal persons living with HIV who are at a higher risk of developing perinatal depression.[129] Most of the suggestions involved incorporating interventions into prenatal and postpartum OB/GYN visits.[129] Up until January 2023, the guidelines for postpartum individuals living with HIV were to exclusively formula feed their infants and to not breastfeed. Since then, the guidelines have shifted to incorporating breastfeeding as an option for individuals living with HIV who remain virally suppressed.[135] Since US studies have found that breastfeeding for a shorter duration or not breastfeeding entirely correlates with a higher risk of postpartum depression, postpartum individuals living with HIV in the U.S. should be made aware of the more recent guidelines. A 2023 data analysis examining the mental health effects and experiences of breastfeeding decision-making among postpartum women living with HIV suggested improved provider-patient discourse on feeding options for WLWH to increase awareness of breastfeeding options and to promote informed

and autonomous breastfeeding choices among WLWH.[135] Addressing these challenges requires a multifaceted approach that improves access to diverse treatment options, enhances culturally sensitive care, and tailors interventions to the unique needs of specific populations.[37,78,82,126]

Next Steps

Interventions gleaned from this review largely contend with removing screening barriers through the use of screening tools, and use of these tools in a variety of settings. Some were community-based while others focused on healthcare provider training, including how to manage a positive screen and provider collaboration. Building upon these efforts, there are several issues to consider so that equity in maternal health outcomes can be realized. First, many interventions are short-lived and expensive to implement. Therefore, to sustain the impact of interventions that have shown to be effective, program planners must consider the value of involvement of community stakeholders, such as community leaders, peers, and community healthcare workers to build intervention capacity and infrastructure which can contribute to sustainability and long-term improvement in maternal mental health. Although provider trainings in cultural humility are becoming more frequent, most intervention and professional training funding agencies still support the provision of trainings in cultural competence that do not promote health equity, as evidenced by extensive research spanning three decades.[76] Finally, while interventions based on community-based and/or non-traditionally medical approaches, such as yoga or mindfulness, have yielded positive results, they are rarely funded or supported in research or direct service delivery at a level similar to that of other interventions (e.g., medication-based treatment, screening practices, etc.), and hence, they do not have the opportunity to become "evidence based" practices. Given this, lack of "evidence-based" status from the research community should not prevent scale-up of services that have shown success in community settings. More intentional efforts to identify and implement non-medication-based, wellness-focused interventions that show promise in community settings including high interest and buy-in, particularly among minoritized birthing persons, are needed

Conclusion

The systematic review of maternal mental health underscores the complex interplay of various factors and the necessity of a multifaceted approach to improve maternal mental health outcomes. The findings, categorized into six key pillars—Risk Factors, Screening, Framework, Equity Focus, Policies, and Interventions—reveal the profound impact of cultural and structural determinants on perinatal mental health outcomes. Structural racism, utilization of non- traditional care settings, and overlooked populations such as NA/AN, adolescents, LGBTQIA, birthing persons with substance use disorder, and birthing persons with carceral involvement emerged as missing from the literature, and highly warranted perinatal mental health research areas to help achieve equitable outcomes. Thus, the following **overarching strategies** are:

- All birthing persons, regardless of cultural, social and/or economic background, should receive culturally relevant and effective care and support to address inequities rooted in structural racism.
- Access to financial resources should be a key component of a comprehensive maternal mental health strategy due to the heightened risks experienced by both minoritized birthing persons, and birthing persons with low income.

This review highlights the urgent need for increased screening for perinatal mental health disorders. Despite the availability of effective screening tools, barriers such as stigma and lack of follow-up hinder their widespread use. Developing policies and programs focused on the most vulnerable populations and promoting community

engagement can enhance service accessibility and improve care delivery. Thus, the following **specific action steps for consideration** are:

- Improve screening practices for early identification and intervention to enhance maternal and child health outcomes, and devise a timely follow-up care strategy that is culturally and structurally relevant.
- Devise effective policies that emphasize cultural relevance, and inclusivity, and address structural and systemic barriers to care.
- Leverage pediatric care, primary care, and urgent care/emergency departments in collaboration with the community to help shape more effective maternal mental health policies, including policies specific to carceral settings.

Integrating conventional and complementary approaches shows promise in enhancing maternal mental health care. Engaging communities and integrating sociocultural factors into mental health programs can lead to more effective and culturally relevant interventions. Given this, the following **specific action steps for consideration** are:

- Integrate access to yoga, mindfulness, virtual and in-person social support that is culturally relevant into care plans that are accessible and meaningful to minoritized populations.
- Address mental health care accessibility challenges and unique cultural and structural conditions of overlooked populations, such as carceral populations and women with substance use involvement that is supportive, affirming and not punitive.
- Use an intersectional framework that considers various identity dimensions, including LGBTQIA populations, to devise a specific maternal mental health strategy that is culturally and structurally relevant and effective.

To operationalize these strategies, **2 concrete steps have been identified**:

1. **First**, policy makers, clinical providers, and youth and family peers and advocates must adopt culturally and structurally humble approaches (i.e., training in cultural and structural humility) to ensure strategies and implementation of strategies are equity centered.
2. **Second**, enhance screening practices by (a) increasing access across all systems, and (b) use of more culturally relevant scales such as, and not limited to, Racial Trauma Scale (RTS)136.

The stakes are high, and immediate action is imperative — by adopting these strategies and committing to a comprehensive, inclusive approach that addresses structural racism with intention and purpose, we can advance toward a future where every birthing person receives equitable support and where maternal mental health disparities are not merely addressed but decisively eliminated.

References

1. Kurtz S, Levine J, Safyer M. Ask the Question: Screening for Postpartum Mood and Anxiety Disorders in Pediatric Primary Care. *Curr Probl Pediatr Adolesc Health Care*. 2017;47(10):241-253. doi:10.1016/J.CPPEDS.2017.08.002

2. Martinez SA. Diversity and PMADS: Examining the Impact of Motherhood and Perinatal Mood and Anxiety Disorders in Mothers of Color. Psy.D. *Alliant International University;* 2021. Accessed August 4, 2024. https://www.proquest.com/openview/3a85fd4deae024a02f3e4f25e38ba14c/1.pdf?pq-origsite=gscholar&cbl=18750&diss=y

3. Feinberg E, Declercq E, Lee A, Belanoff C. The Relationship between Social Support and Postnatal Anxiety and Depression: Results from the Listening to Mothers in California Survey. *Women's Health Issues*. 2022;32(3):251-260. doi:10.1016/J.WHI.2022.01.005

4. Morain SR, Fowler LR, Boyd JW. A Pregnant Pause: System-Level Barriers to Perinatal Mental Health Care. 2022;24(5):804-807. doi:10.1177/15248399221101373

5. Declercq E, Feinberg E, Belanoff C. Racial inequities in the course of treating perinatal mental health challenges: Results from listening to mothers in California. *Birth*. 2022;49(1):132-140. doi:10.1111/BIRT.12584

6. McKee K, Admon LK, Winkelman TNA, et al. Perinatal mood and anxiety disorders, serious mental illness, and delivery-related health outcomes, United States, 2006–2015. *BMC Womens Health*. 2020;20(1). doi:10.1186/S12905-020-00996-6

7. Howell EA. Reducing Disparities in Severe Maternal Morbidity and Mortality. *Clin Obstet Gynecol*. 2018;61(2):387. doi:10.1097/GRF.0000000000000349

8. Williams DR, Mohammed SA. Racism and Health I: Pathways and Scientific Evidence. *Am Behav Sci*. 2013;57(8):1152-1173. doi:10.1177/0002764213487340

9. Williams DR, Etkins OS. Racism and mental health. *World Psychiatry*. 2021;20(2):194-195. doi:10.1002/WPS.20845

10. Hailu EM, Maddali SR, Snowden JM, Carmichael SL, Mujahid MS. Structural racism and adverse maternal health outcomes: A systematic review. *Health Place*. 2022;78. doi:10.1016/J.HEALTHPLACE.2022.102923

11. Joseph KS, Boutin A, Lisonkova S, et al. Maternal Mortality in the United States: Recent Trends, Current Status, and Future Considerations. *Obstetrics and gynecology.* 2021;137(5):763-771. doi:10.1097/AOG.0000000000004361

12. Lister RL, Drake W, Scott BH, Graves C. Black Maternal Mortality-The Elephant in the Room. *World J Gynecol Womens Health*. 2019;3(1). doi:10.33552/WJGWH.2019.03.000555

13. Zaharatos J, St Pierre A, Cornell A, Pasalic E, Goodman D. Building U.S. Capacity to Review and Prevent Maternal Deaths. *J Womens Health (Larchmt).* 2018;27(1):1-5. doi:10.1089/jwh.2017.6800

14. Luca D, Garlow N, Staatz C, Margiotta C, Zivin K. Societal Costs of Untreated Perinatal Mood and Anxiety Disorders in the United States. *Mathematica Policy Research* . Published online 2019.

15. Feldman N, Pattani A. Black Mothers Get Less Treatment For Postpartum Depression Than Other Moms - KFF Health News. KFF Health News. December 6, 2019. Accessed August 15, 2024. https://kffhealthnews.org/news/black-mothers-get-less-treatment-for- postpartum-depression-than-other-moms/

16. Kozhimannil KB, Trinacty CM, Busch AB, Huskamp HA, Adams AS. Racial and Ethnic Disparities in Postpartum Depression Care Among Low-Income Women. *Psychiatr Serv.* 2011;62(6):619. doi:10.1176/APPI.PS.62.6.619

17. Roberts SCM, Nuru-Jeter A. Universal screening for alcohol and drug use and racial disparities in child protective services reporting. *J Behav Health Serv Res*. 2012;39(1):3-doi:10.1007/S11414-011-9247-X

18. Neuspiel DR, Zingman TM, Templeton VH, DiStabile P, Drucker E. Custody of cocaine- exposed newborns: determinants of discharge decisions. *Am J Public Health*. 1993;83(12):1726. doi:10.2105/AJPH.83.12.1726

19. Crenshaw K. Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Policies. *University of Chicago Legal Forum*. 1989;1989(1).

20. Dayo E, Christy K, Habte R. Health in colour: black women, racism, and maternal health. *Lancet regional health Americas*. 2023;17. doi:10.1016/J.LANA.2022.100408

21. Runkle JD, Risley K, Roy M, Sugg MM. Association Between Perinatal Mental Health and Pregnancy and Neonatal Complications: A Retrospective Birth Cohort Study. *Womens Health Issues*. 2023;33(3):289-299. doi:10.1016/J.WHI.2022.12.001

22. Sohail Z, Bailey RK, Richie WD. Misconceptions of Depression in African Americans. *Front Psychiatry*. 2014;5(JUN). doi:10.3389/FPSYT.2014.00065

23. Parkerson HA, Thibodeau MA, Brandt CP, Zvolensky MJ, Asmundson GJG. Cultural- based biases of the GAD-7. *J Anxiety Disord*. 2015;31:38-42. doi:10.1016/J.JANXDIS.2015.01.005

24. Himle JA, Baser RE, Taylor RJ, Campbell RD, Jackson JS. Anxiety disorders among African Americans, blacks of Caribbean descent, and non-Hispanic whites in the United States. *J Anxiety Disord*. 2009;23(5):578. doi:10.1016/J.JANXDIS.2009.01.002

25. Hoffman KM, Trawalter S, Axt JR, Oliver MN. Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proc Natl Acad Sci U S A*. 2016;113(16):4296-4301. doi:10.1073/PNAS.1516047113

26. Task Force on Maternal Mental Health, SAMHSA. Report to Congress and National Strategy to Improve Maternal Health Care: Task Force on Maternal Mental Health. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/infant-mortality/meetings/acimm-june-2024-report-to-congress.pdf

27. Non AL, Clausing ES, D'Anna Hernandez KL. Changes in sociocultural stressors, protective factors, and mental health for US Latina mothers in a shifting political climate. *PLoS One*. 2022;17(8). doi:10.1371/JOURNAL.PONE.0273548

28. Parker A. Reframing the narrative: Black maternal mental health and culturally meaningful support for wellness. *Infant Ment Health J*. 2021;42(4):502-516. doi:10.1002/IMHJ.21910

29. Galvan T, Hurwich-Reiss E, Watamura SE. Latina mothers' mental health: An examination of its relation to parenting and material resources. *Fam Process*. 2022;61(4):1646-1662. doi:10.1111/FAMP.12737

30. Ta Park VM, Goyal D, Suen J, Win N, Tsoh JY. Chinese American Women's Experiences with Postpartum Depressive Symptoms and Mental Health Help-Seeking Behaviors. *MCN Am J Matern Child Nurs*. 2019;44(3):144-149. doi:10.1097/NMC.0000000000000518

31. Marthey D, Rochford H, Andreyeva E. Examining the impact of Medicaid payments for immediate postpartum long-acting reversible contraception on the mental health of low- income mothers. *Health Serv Res.* 2024;59(3):e14281. doi:10.1111/1475-6773.14281

32. Premo EM, Magnuson KA, Lorenzo NE, Fox NA, Noble KG. Mental health and sleep quality of low-income mothers of one-year-olds during the COVID-19 pandemic. *Infant Ment Health J*. 2023;44(4):572. doi:10.1002/IMHJ.22074

33. Silverman ME, Burgos L, Rodriguez ZI, et al. Postpartum mood among universally screened high and low socioeconomic status patients during COVID-19 social restrictions in New York City. *Sci Rep*. 2020;10(1). doi:10.1038/S41598-020-79564-9

34. Batchelor JL, Townsel CD, Jiang L, et al. Disparities in Emergency Department Utilization Among Women with Postpartum Mood Disorders (2006-2016). *Matern Child Health J*. 2023;27(1):158-167. doi:10.1007/S10995-022-03544-W

35. Adynski H, Zimmer C, Thorp J, Santos HP. Predictors of Psychological Distress in Low- income Mothers over the First Postpartum Year. *Res Nurs Health*. 2019;42(3):205. doi:10.1002/NUR.21943

36. Reardon DC, Craver C. Effects of Pregnancy Loss on Subsequent Postpartum Mental Health: A Prospective Longitudinal Cohort Study. *Int J Environ Res Public Health*. 2021;18(4):1-11. doi:10.3390/IJERPH18042179

37. Anderson C, Cacola P. Implications of Preterm Birth for Maternal Mental Health and Infant Development. *MCN Am J Matern Child Nurs*. 2017;42(2):108-114. doi:10.1097/NMC.0000000000000311

38. Sexton MB, Hamilton L, McGinnis EW, Rosenblum KL, Muzik M. The roles of resilience and childhood trauma history: main and moderating effects on postpartum maternal mental health and functioning. *J Affect Disord*. 2015;174:562-568. doi:10.1016/J.JAD.2014.12.036

39. Giarratano G, Bernard ML, Orlando S. Psychological First Aid: A Model for Disaster Psychosocial Support for the Perinatal Population. *J Perinat Neonatal Nurs*. 2019;33(3):219-228. doi:10.1097/JPN.0000000000000419

40. Meltzer-Brody S, Jones I. Optimizing the treatment of mood disorders in the perinatal period. *Dialogues Clin Neurosci*. 2015;17(2):207. doi:10.31887/DCNS.2015.17.2/SMELTZERBRODY

41. Miller ML, Kroska EB, Grekin R. Immediate Postpartum Mood Assessment and Postpartum Depressive Symptoms. *J Affect Disord*. 2017;207:69. doi:10.1016/J.JAD.2016.09.023

42. Pluym ID, Holliman K, Afshar Y, et al. Emergency department use among postpartum women with mental health disorders. *Am J Obstet Gynecol MFM*. 2021;3(1):100269. doi:10.1016/J.AJOGMF.2020.100269

43. Wen T, Fein AW, Wright JD, et al. Postpartum Psychiatric Admissions in the United States. *Am J Perinatol*. 2021;38(2):115-121. doi:10.1055/S-0039-1694759

44. Toly VB, Blanchette JE, Liu W, et al. Maternal Stress and Mental Health Prior to Their Technology-Dependent Infant's Discharge Home From the NICU. *J Perinat Neonatal Nurs*. 2019;33(2):149-159. doi:10.1097/JPN.0000000000000409

45. Cook C, Goyal D, Allen M. Experiences of Women with Postpartum Depression Participating in a Support Group Led by Mental Health Providers. *MCN Am J Matern Child Nurs*. 2019;44(4):228-233. doi:10.1097/NMC.0000000000000533

46. Sit D, Luther J, Dills JLJ, Eng H, Wisniewski S, Wisner KL. Abnormal screening for gestational diabetes, maternal mood disorder, and preterm birth. *Bipolar Disord*. 2014;16(3):308-317. doi:10.1111/BDI.12129

47. Lawson A, Murphy KE, Sloan E, Uleryk E, Dalfen A. The relationship between sleep and postpartum mental disorders: A systematic review. *J Affect Disord*. 2015;176:65-77. doi:10.1016/J.JAD.2015.01.017

48. McBean AL, Montgomery-Downs HE. Diurnal fatigue patterns, sleep timing, and mental health outcomes among healthy postpartum women. *Biol Res Nurs*. 2015;17(1):29-39. doi:10.1177/1099800414528278

49. Sharkey KM, Iko IN, Machan JT, Thompson-Westra J, Pearlstein TB. Infant sleep and feeding patterns are associated with maternal sleep, stress, and depressed mood in women with a history of major depressive disorder (MDD). *Arch Womens Ment Health*. 2016;19(2):209-218. doi:10.1007/S00737-015-0557-5

50. Schwab-Reese LM, Schafer EJ, Ashida S. Associations of social support and stress with postpartum maternal mental health symptoms: Main effects, moderation, and mediation. *Women Health*. 2017;57(6):723-740. doi:10.1080/03630242.2016.1181140

51. Lillis TA, Hamilton NA, Pressman SD, et al. Sleep quality buffers the effects of negative social interactions on maternal mood in the 3–6 month postpartum period: a daily diary study. *J Behav Med*. 2018;41(5):733. doi:10.1007/S10865-018-9967-Y

52. Ouyang JX, Mayer JLW, Battle CL, Chambers JE, Inanc Salih ZN. Historical Perspectives: Unsilencing Suffering: Promoting Maternal Mental Health in Neonatal Intensive Care Units. *Neoreviews*. 2020;21(11):e708-e715. doi:10.1542/NEO.21-11-E708

53. Bayrampour H, Hapsari AP, Pavlovic J. Barriers to addressing perinatal mental health issues in midwifery settings. *Midwifery*. 2018;59:47-58. doi:10.1016/J.MIDW.2017.12.020

54. Prevatt BS, Desmarais SL. Facilitators and Barriers to Disclosure of Postpartum Mood Disorder Symptoms to a Healthcare Provider. *Matern Child Health J*. 2018;22(1):120-129. doi:10.1007/S10995-017-2361-5

55. Barkin JL, Van Cleve S. Screening for Maternal Mental Health in the Pediatric Setting: Situational Stressors and Supports. *J Pediatr Health Care.* 2020;34(5):405-406. doi:10.1016/J.PEDHC.2020.04.001

56. Kroll-Desrosiers AR, Crawford SL, Moore Simas TA, Clark MA, Mattocks KM. Bridging the Gap for Perinatal Veterans: Care by Mental Health Providers at the Veterans Health Administration. *Womens Health Issues*. 2019;29(3):274-282. doi:10.1016/J.WHI.2019.02.005

57. Long MM, Cramer RJ, Jenkins J, Bennington L, Paulson JF. A systematic review of interventions for healthcare professionals to improve screening and referral for perinatal mood and anxiety disorders. *Arch Womens Ment Health*. 2019;22(1):25-36. doi:10.1007/S00737-018-0876-4

58. Young CA, Burnett H, Ballinger A, et al. Embedded Maternal Mental Health Care in a Pediatric Primary Care Clinic: A Qualitative Exploration of Mothers' Experiences. *Acad Pediatr*. 2019;19(8):934-941. doi:10.1016/J.ACAP.2019.08.004

59. Umylny P, German M, Lantiere A. Treating postpartum mood and anxiety disorders in primary care pediatrics. *Curr Probl Pediatr Adolesc Health Care*. 2017;47(10):254-266. doi:10.1016/J.CPPEDS.2017.08.003

60. Kallem S, Matone M, Boyd RC, Guevara JP. Mothers' Mental Health Care Use After Screening for Postpartum Depression at Well-Child Visits. *Acad Pediatr.* 2019;19(6):652- 658. doi:10.1016/J.ACAP.2018.11.013

61. DiCarlo K, Whiffen L. Implementation of a Perinatal Substance Use Screening Protocol in the Outpatient Setting. *Nurs Womens Health*. 2024;28(2):101-108. doi:10.1016/J.NWH.2023.09.009

62. Substance Abuse and Mental Health Services Administration. 2020 National Survey on Drug Use and Health: Women.; 2022. https://www.samhsa.gov/data/sites/default/files/reports/rpt37925/2020NSDUHWomenSlides072522.pdf

63. Bechtol AC, Ramage M, Krulikas LJ, Futrell K, Caron O. Naloxone access in perinatal substance use disorder. *Journal of the American Pharmacists Association*. 2024;64(3). doi:10.1016/j.japh.2024.01.022

64. Sieger ML, Morin JC, Budris LM, et al. A Comparison of Two Statewide Datasets to Understand Population Prevalence of Substance Use in Pregnancy: Findings and Considerations for Policy & Research. *Matern Child Health J*. 2024;28(6):1121-1131. doi:10.1007/S10995-024-03914-6/TABLES/3

65. Choi S, Rosenbloom D, Stein MD, Raifman J, Clark JA. Differential gateways, facilitators, and barriers to Substance Use Disorder treatment for pregnant women and mothers: a scoping systematic review. *J Addict Med*. 2022;16(3):e185. doi:10.1097/ADM.0000000000000909

66. Byatt N, Cox L, Moore Simas TA, et al. How Obstetric Settings Can Help Address Gaps in Psychiatric Care for Pregnant and Postpartum Women with Bipolar Disorder. *Arch Womens Ment Health*. 2018;21(5):543. doi:10.1007/S00737-018-0825-2

67. Selix N, Henshaw E, Barrera A, Botcheva L, Huie E, Kaufman G. Interdisciplinary Collaboration in Maternal Mental Health. *MCN Am J Matern Child Nurs*. 2017;42(4):226-231. doi:10.1097/NMC.0000000000000343

68. Puspitasari AJ, Heredia D, Weber E, et al. Perinatal Mood and Anxiety Disorder Management in Multicenter Community Practices: Clinicians' Training, Current Practices and Perceived Strategies to Improve Future Implementation. *J Prim Care Community Health*. 2021;12. doi:10.1177/2150132721996888

69. Bayrampour H, McNeil DA, Benzies K, Salmon C, Gelb K, Tough S. A qualitative inquiry on pregnant women's preferences for mental health screening. *BMC Pregnancy Childbirth*. 2017;17(1). doi:10.1186/S12884-017-1512-4

70. Mule V, Reilly NM, Schmied V, Kingston D, Austin MP V. Why do some pregnant women not fully disclose at comprehensive psychosocial assessment with their midwife? *Women Birth*. 2022;35(1):80-86. doi:10.1016/J.WOMBI.2021.03.001

71. Perazzo SI, Hoge MK, Shaw RJ, Gillispie-Bell V, Soghier L. Improving parental mental health in the perinatal period: A review and analysis of quality improvement initiatives. *Semin Perinatol*. 2024;48(3). doi:10.1016/J.SEMPERI.2024.151906

72. Kirmayer LJ. Rethinking cultural competence. *Transcult Psychiatry*. 2012;49(2):149-164. doi:10.1177/1363461512444673

73. Tervalon M, Murray-García J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved*. 1998;9(2):117-125. doi:10.1353/HPU.2010.0233

74. Hook JN, Davis DE, Owen J, Worthington EL, Utsey SO. Cultural humility: measuring openness to culturally diverse clients. *J Couns Psychol*. 2013;60(3):353-366. doi:10.1037/A0032595

75. Botelho MJ, Lima CA. From Cultural Competence to Cultural Respect: A Critical Review of Six Models. J Nurs Educ. 2020;59(6):311-318. doi:10.3928/01484834-20200520-03

76. Lekas HM, Pahl K, Fuller Lewis C. Rethinking Cultural Competence: Shifting to Cultural Humility. *Health Serv Insights*. 2020;13. doi:10.1177/1178632920970580

77. Johnson A, Stevenson E, Moeller L, McMillian-Bohler J. Systematic Screening for Perinatal Mood and Anxiety Disorders to Promote Onsite Mental Health Consultations: A Quality Improvement Report. *J Midwifery Womens Health*. 2021;66(4):534-539. doi:10.1111/JMWH.13215

78. Smith M V., Kruse-Austin A. A gender-informed model to train community health workers in maternal mental health. *Eval Program Plann*. 2015;51:59-62. doi:10.1016/J.EVALPROGPLAN.2014.12.008

79. Geller PA, Posmontier B, Horowitz JA, Bonacquisti A, Chiarello LA. Introducing Mother Baby Connections: a model of intensive perinatal mental health outpatient programming. *J Behav Med.* 2018;41(5):600-613. doi:10.1007/S10865-018-9974-Z

80. Letiecq BL, Mehta S, Vesely CK, Goodman RD, Marquez M, Moron LP. Central American Immigrant Mothers' Mental Health in the Context of Illegality: Structural Stress, Parental Concern, and Trauma. *Fam Community Health*. 2019;42(4):271-282. doi:10.1097/FCH.0000000000000233

81. Curci SG, Luecken LJ, Perez M, White RMB. Prenatal Neighborhood Ethnocultural Context and the Mental Health of Mothers and Children in Low-Income Mexican American Families. *Child Dev*. 2021;92(5):1785-1800. doi:10.1111/CDEV.13570

82. Moyer SW, Kinser PA. A Comprehensive Conceptual Framework to Guide Clinical Practice and Research About Mental Health During the Perinatal Period. *J Perinat Neonatal Nurs*. 2021;35(1):46-56. doi:10.1097/JPN.0000000000000535

83. Stevens NR, Heath NM, Lillis TA, McMinn K, Tirone V, Sha'ini M. Examining the effectiveness of a coordinated perinatal mental health care model using an intersectional- feminist perspective. *J Behav Med*. 2018;41(5):627-640. doi:10.1007/S10865-018-9973-0

84. Obiakor GC, Banta JE, Sinclair RG, Baba Djara M, Mataya R, Wiafe S. The Impact of Social Determinants of Maternal Mental Health in Marginalized Mothers. *J Womens Health (Larchmt)*. 2024;33(5):650-661. doi:10.1089/JWH.2022.0137

85. Lekas HM, Lewis C, Lunden S, Olender SA, Rosen-Metsch L. Single Room Occupancy Residence: Processes Linking Housing to Not Engaging in HIV Outpatient Care. *AIDS Behav*. 2021;25(8):2644-2656. doi:10.1007/S10461-021-03225-9

86. Linares DE, Azuine RE, Singh GK. Social Determinants of Health Associated with Mental Health Among U.S. Mothers with Children Aged 0–5 Years. 2020;29(8):1039-1051. doi:10.1089/JWH.2019.8111

87. Seplowitz R, Miller H, Ostermeyer B, Sangi-Haghpeykar H, Silver E, Kunik ME. Utilization of psychiatric services by postpartum women in a predominantly minority, low-socioeconomic-status, urban population. *Community Ment Health J*. 2015;51(3):275-280. doi:10.1007/S10597-014-9808-6

88. Ruiz JM, Steffen P, Smith TB. Hispanic Mortality Paradox: A Systematic Review and Meta-Analysis of the Longitudinal Literature. *Am J Public Health*. 2013;103(3):e52. doi:10.2105/AJPH.2012.301103

89. Zekeri AA. Food Insecurity and Maternal Mental Health among African American Single Mothers Living with HIV/AIDS in the Alabama Black Belt. *J Health Care Poor Underserved*. 2019;30(4S):151-159. doi:10.1353/HPU.2019.0124

90. Baker L, Cross S, Greaver L, Wei G, Lewis R. Prevalence of postpartum depression in a native American population. *Matern Child Health J*. 2005;9(1):21-25. doi:10.1007/S10995-005-2448-2

91. Heck JL. Screening for Postpartum Depression in American Indian/Alaska Native Women: A Comparison of Two Instruments. *Am Indian Alsk Native Ment Health Res*. 2018;25(2):74-102. doi:10.5820/AIAN.2502.2018.74

92. Heck JL. Postpartum Depression in American Indian/Alaska Native Women: A Scoping Review. *MCN The American Journal of Maternal/Child Nursing*. 2021;46(1):6-13. doi:10.1097/NMC.0000000000000671

93. Maxwell D, Leat SR. A review of the empirical measures on becoming a mother and their relevance to the American Indian/Native Alaskan mother: implications for research and policy. *J Ethn Cult Divers Soc Work*. 2022;31(2):63-83. doi:10.1080/15313204.2022.2041520

94. Coser AD, Kominsky TK, Garrett BA. Postpartum Depression in a Community Sample of American Indian Mothers. *J Clin Psychol Med Settings*. 2023;30(2):310-317. doi:10.1007/S10880-022-09912-6

95. Maxwell D, Thomas J. Land allotment, transportation access, and indigenous maternal mental health. *J Transp Health*. 2023;33. doi:10.1016/J.JTH.2023.101721

96. Maxwell D, Mauldin R, Thomas J, Holland V. American Indian Motherhood and Historical Trauma: Keetoowah Experiences of Becoming Mothers. *Int J Environ Res Public Health*. 2022;19(12). doi:10.3390/IJERPH19127088

97. Lieberman K, Le HN, Perry DF, Julian M. Cultural Adaptation and a Pilot Study of the Mothers and Babies Course for Perinatal African American Adolescents. *J Child Fam Stud*. 2024;33(2):473-486. doi:10.1007/S10826-023-02588-Y

98. Brouwer AM, Foster RH, Jalensky A. An Alternative School Model for Pregnant and Parenting Teens: A Qualitative Analysis. *Child and Adolescent Social Work Journal*. 2019;36(5):471-484. doi:10.1007/S10560-018-0575-Z

99. Zeiders KH, Umanã-Taylor AJ, Updegraff KA, Jahromi LB. Acculturative and enculturative stress, depressive symptoms, and maternal warmth: Examining within- person relations among Mexican-origin adolescent mothers. *Dev Psychopathol*. 2015;27(1):293-308. doi:10.1017/S0954579414000637

100. Muzik M, Kirk R, Alfafara E, Jonika J, Waddell R. Teenage mothers of black and minority ethnic origin want access to a range of mental and physical health support: a participatory research approach. *Health Expect*. 2016;19(2):403. doi:10.1111/HEX.12364

101. Hodgkinson S, Beers L, Southammakosane C, Lewin A. Addressing the Mental Health Needs of Pregnant and Parenting Adolescents. *Pediatrics*. 2014;133(1):114-122. doi:10.1542/PEDS.2013-0927

102. Hughes LP, Austin-Ketch T, Volpe EM, Campbell-Heider N. Identification and treatment of adolescents with perinatal anxiety and depression. *J Psychosoc Nurs Ment Health Serv*. 2017;55(6):23-29. doi:10.3928/02793695-20170519-03

103. Pires R, Araújo-Pedrosa A, Canavarro MC. Examining the links between perceived impact of pregnancy, depressive symptoms, and quality of life during adolescent pregnancy: The buffering role of social support. *Matern Child Health J*. 2014;18(4):789- 800. doi:10.1007/S10995-013-1303-0/METRICS

104. Bledsoe SE, Rizo CF, Wike TL, et al. Pregnant adolescent women's perceptions of depression and psychiatric services in the United States. *Women and Birth*. 2017;30(5):e248-e257. doi:10.1016/J.WOMBI.2017.02.006

105. Sangsawang B, Wacharasin C, Sangsawang N. Interventions for the prevention of postpartum depression in adolescent mothers: a systematic review. *Arch Womens Ment Health*. 2019;22(2):215-228. doi:10.1007/S00737-018-0901-7/METRICS

106. Killian-Farrell C, Rizo CF, Lombardi BM, Meltzer-Brody S, Bledsoe SE. Traumatic Experience, Polytraumatization, and Perinatal Depression in a Diverse Sample of Adolescent Mothers. https://doi.org/101177/0886260517726410. 2017;35(23-24):6017- 6040. doi:10.1177/0886260517726410

107. Salas-Wright CP, Vaughn MG, Ugalde J, Todic J. Substance use and teen pregnancy in the United States: Evidence from the NSDUH 2002–2012. *Addictive Behaviors*. 2015;45:218-225. doi:10.1016/J.ADDBEH.2015.01.039

108. Tebb KP, Brindis CD. Understanding the Psychological Impacts of Teenage Pregnancy through a Socio-ecological Framework and Life Course Approach. *Semin Reprod Med*. 2022;40(102):107-115. doi:10.1055/S-0041-1741518

109. Lucas G, Olander EK, Ayers S, Salmon D. No straight lines - Young women's perceptions of their mental health and wellbeing during and after pregnancy: A systematic review and meta-ethnography. *BMC Womens Health*. 2019;19(1). doi:10.1186/S12905-019-0848-5

110. Sangsawang B, Deoisres W, Hengudomsub P, Sangsawang N. Effectiveness of psychosocial support provided by midwives and family on preventing postpartum depression among first-time adolescent mothers at 3-month follow-up: A randomised controlled trial. *J Clin Nurs*. 2022;31(5-6):689-702. doi:10.1111/JOCN.15928

111. Freed P, SmithBattle L. Promoting Teen Mothers' Mental Health. *MCN-Am J Matern-Child Nurs.* 2016;41(2):84-89. doi:10.1097/NMC.0000000000000216

112. A Systemic Failure: Immigrant Moms and Babies Are Being Denied Health Care. National Partnership for Women & Families. Accessed October 20, 2025. https://nationalpartnership.org/report/immigrant-moms-and-babies-denied/

113. Hernandez ND, Dorsey J, Glass DM, et al. Community-Engaged Approaches to Address the Ethical Concerns of Maternal Mental Health Disparities Research. *Journal of health care for the poor and underserved.* 2019;30(4 Suppl):12-12. doi:10.1353/HPU.2019.0110

114. Austin AE, Naumann RB, Simmons E. Association of State Child Abuse Policies and Mandated Reporting Policies With Prenatal and Postpartum Care Among Women Who Engaged in Substance Use During Pregnancy. *JAMA Pediatr.* 2022;176(11):1123-1130. doi:10.1001/jamapediatrics.2022.3396

115. Goodman D. Self-fulfilling Prophecy: Does Structural and Interpersonal Bias Against Pregnant and Postpartum People With Substance Use Disorders Undermine Parenting Identity? *J Addict Med.* 2024;18(1):6-8. doi:10.1097/ADM.0000000000001241

116. Schiff DM, Li WZM, Work EC, et al. Multiple marginalized identities: A qualitative exploration of intersectional perinatal experiences of birthing people of color with substance use disorder in Massachusetts. *J Subst Use Addict Treat.* 2024;163:209346. doi:10.1016/j.josat.2024.209346

117. Thomas KA, Struble CA, Stenersen MR, Moore K. The Association Between State-Level Prenatal Substance Use Policies and Rates of Maternal Mortality in the United States: A Legal Epidemiology Study. *J Law Med Ethics.* 2024;52(S1):75-80. doi:10.1017/jme.2024.67

118. Herriott AL. "I just want the best for him." Pregnancy in the context of substance use disorders: Perspectives of postpartum women. *Birth.* 2024;51(1):81-88. doi:10.1111/birt.12761

119. Foti TR, Cragun D, Mackie J, Agu N, Bell M, Marshall J. Personas of pregnant and parenting women with substance use and their barriers and pathways to system engagement. *Birth*. 2023;50(1):99-108. doi:10.1111/BIRT.12703

120. Berglas NF, Subbaraman MS, Thomas S, Roberts SCM. Pregnancy-specific alcohol policies and admissions to substance use disorder treatment for pregnant people in the USA. *Alcohol Alcohol*. 2023;58(6):645-652. doi:10.1093/alcalc/agad056

121. Raffi ER, Gray J, Conteh N, Kane M, Cohen LS, Schiff DM. Low barrier perinatal psychiatric care for patients with substance use disorder: meeting patients across the perinatal continuum where they are. *Int Rev Psychiatry.* 2021;33(6):543-552. doi:10.1080/09540261.2021.1898351

122. Burris S, Ashe M, Levin D, Penn M, Larkin M. A Transdisciplinary Approach to Public Health Law: The Emerging Practice of Legal Epidemiology. *Annu Rev Public Health.* 2016;37:135-148. doi:10.1146/annurev-publhealth-032315-021841

123. Lisa A. Gennetian, Katherine Magnuson. *Three Reasons Why Providing Cash to Families With Children Is a Sound Policy Investment.*; 2022.

124. Tumaini Rucker Coker, Gootman, Jennifer Appleton, Emily P. Backes. *Addressing the Long-Term Effects of the COVID-19 Pandemic on Children and Families.* doi:10.17226/26809

125. Dossett EC, Benitez C, Garcia N. Perinatal Mental Health in Community Psychiatry: A Reproductive Psychiatry eConsult Pilot Project. *Psychiatr Serv.* 2019;70(11):1075-1076. doi:10.1176/appi.ps.201900316

126. Lindensmith R. Interventions to Improve Maternal-Infant Relationships in Mothers With Postpartum Mood Disorders. *MCN Am J Matern Child Nurs.* 2018;43(6):334-340. doi:10.1097/NMC.0000000000000471

127. Gold Award: Building the Capacity of Frontline Providers to Treat Mental and Substance Use Disorders Among Pregnant and Postpartum Women. *Psychiatric services (Washington, DC).* 2017;68(10). doi:10.1176/APPI.PS.681001

128. Holman L, McKeever R. The Andrea Yates Effect: Priming Mental Illness Stereotypes Through Exemplification of Postpartum Disorders. *Health Commun.* 2017;32(10):1284-1296. doi:10.1080/10410236.2016.1219929

129. Kapetanovic S, Dass-Brailsford P, Nora D, Talisman N. Mental health of HIV-seropositive women during pregnancy and postpartum period: a comprehensive literature review. *AIDS and behavior.* 2014;18(6):1152-1173. doi:10.1007/S10461-014-0728-9

130. Ta Park VM, Goyal D, Nguyen T, Lien H, Rosidi D. Postpartum Traditions, Mental Health, and Help-Seeking Considerations Among Vietnamese American Women: a Mixed-Methods Pilot Study. *The journal of behavioral health services & research.* 2017;44(3):428-441. doi:10.1007/S11414-015-9476-5

131. Ashford MT, Olander EK, Ayers S. Computer- or web-based interventions for perinatal mental health: A systematic review. *J Affect Disord.* 2016;197:134-146. doi:10.1016/j.jad.2016.02.057

132. Javanparast S, Windle A, Freeman T, Baum F. Community Health Worker Programs to Improve Healthcare Access and Equity: Are They Only Relevant to Low- and Middle-Income Countries? *Int J Health Policy Manag.* 2018;7(10):943-954. doi:10.15171/ijhpm.2018.53

133. Sheffield KM, Woods-Giscombé CL. Efficacy, Feasibility, and Acceptability of Perinatal Yoga on Women's Mental Health and Well-Being: *A Systematic Literature Review. J Holist Nurs.* 2016;34(1):64-79. doi:10.1177/0898010115577976

134. Centers for Disease Control and Prevention. *HIV Surveillance Report : Diagnoses of HIV Infection in the United States and Dependent Areas,* 2019.; 2021. https://stacks.cdc.gov/view/cdc/149071

135. Harris LR, Lee DH, Mareuil JW, Rakhmanina NY, Koay WLA. The Mental Health Effects and Experiences of Breastfeeding Decision-Making Among Postpartum Women Living with HIV. *AIDS Behav*. 2024;28(4):1186-1196. doi:10.1007/S10461-023-04142-9

136. Williams MT, Osman M, Gallo J, et al. A clinical scale for the assessment of racial trauma. *Practice Innovations*. 2022;7(3):223-240. doi:10.1037/PRI0000178

6.3 Appendix 3: Programs, Policies, and Initiatives

6.3.1 Programs, Policies, and Initiatives Referenced in Report

TABLE 7-PROGRAMS, POLICIES, AND INITIATIVES

Alliance of Innovation on Maternal Health (AIM) Patient Safety Bundles	Massachusetts Child Psychiatry Access Program (MCPAP) for Moms
BlueDotProject, The	Mental Health News Education
Breakthrough Parenting	Motherhood Center of New York, The
CDC Hear Her Campaign	Mothers and Babies Program
Child Center of NY, Macari, The	Northwell Health
Circle of Security	Nurse-Family Partnership
Colorado Perinatal Care Quality Collaborative (CPQC)	NY Health Equity Reform (NYHER) 1115 Waiver Amendment
Community Health Access and Navigation in Tennessee (CHANT)	NYS Collaborative Care Medicaid Program
OMH Community Mental Health Promotion & Support (COMHPS)	NYS OASAS Community Coalitions
DC Safe Babies, Safe Moms	NYS OASAS Harm Reduction Services
Family First Prevention Services Act	NYS OASAS Paid Prevention Internship Opportunity
Health Resources and Services Administration Title V Block Grant	NYS OMH Anti-Stigma Fund
Healthy Families NY	NYS OMH Community Mental Health Loan Repayment Program
Healthy New Moms (Maryland)	NYS OMH Connecting Youth to Mental Health – Suicide Prevention
HealthySteps	NYS OMH Psychiatric Services and Clinical Knowledge Enhancement System (PSYCKES)
Hushabye Nursery (Arizona)	
Non-Demand Caring Contacts	

TABLE 7-PROGRAMS, POLICIES, AND INITIATIVES

NYS Perinatal Quality Collaborative (NYSPQC)	Rhode Island Maternal Psychiatry Resource Network (RI MomsPRN)
Postpartum Resource Center of New York, The	ROSE (Reach Out, Stay Strong, Essentials for mothers of newborns) Program
Postpartum Resource Center of New York: Project 62	SAMHSA Adapting Evidence-Based Practices for Under-Resourced Populations
Postpartum Support International	Utah Birthing Persons & Newborns Quality Collaborative (UWNQC)
PREPP: Practical Resources for Effective Postpartum Parenting	Washington State Perinatal Collaborative (WSPC)
Project TEACH/NYS Perinatal and Child/Adolescent Psychiatry Access Program	Zero Suicide Framework
Psychiatric Education, Equity and Referral (PROSPER) Program (Colorado)	

6.3.2 Initiatives from Other States

The Maternal Mental Health Workgroup identified successful initiatives that have been implemented in other states, including prioritizing maternal mental health in Perinatal Quality Collaboratives (PQC), promoting better perinatal behavioral outcomes, ensuring Medicaid members receive quality care, launching a public education campaign, and implementing an integrated care system.

6.3.2.1 Addressing Maternal Mental Health Through Program Implementation

The Policy Center for Maternal Mental Health's (Policy Center) identified New York's strengths in maternal mental health included the existence of an inpatient maternal mental health program, an intensive or partial hospitalization maternal mental health program, a state- sanctioned task force (the Maternal Mental Health Workgroup), adequate maternal mental health prescribers, community-based organizations providing maternal mental health services, and the expansion of Medicaid coverage to one year postpartum.[195]

Thirteen states have identified maternal mental health and substance use as areas of focus for their PQCs. Some states, including New York, have passed legislation to address maternal mental health and substance use. New York, like Illinois,[196] Nevada,[197] and Washington,[198] have also enacted legislation pertaining to the funding of screenings for these conditions. California, Washington, Utah, and Pennsylvania, prioritize maternal mental health in state PQCs.[199] Other quality collaborative initiatives include:

- The Colorado Perinatal Care Quality Collaborative (CPQC) has implemented programs addressing screening and connection to care, wraparound care and care navigation, an overdose prevention program, an online mental health and wellbeing platform for new and expecting parents, and a program to include those with lived experience in the work of the collaborative.[200]

- The Utah Women & Newborns Quality Collaborative (UWNQC) developed a maternal mental health provider toolkit and is currently evaluating the dissemination of this toolkit to clinical settings across the state, identifying maternal mental health needs and barriers in Utah, and identifying ways to understand third-party reimbursement for mental health services.[201]
- The Washington State Perinatal Collaborative (WSPC) created The Perinatal Substance Use Learning Collaborative,[202] an initiative that promotes best practices of care outcomes for birthing people with substance use disorders, including the substance use disorder (SUD) package that outlines step-by-step instructions on how to improve care for birthing people with SUD[203] and the Center of Excellence for Perinatal Substance Use Certification for hospitals.[204]

Tennessee, New Jersey, and the District of Columbia have implemented integrated care and care coordination programs to improve screening, prevention and connection to appropriate services.

In Washington, D.C., *the DC Safe Babies, Safe Moms* is a city-wide initiative committed to improving maternal and infant outcomes in Washington, D.C. that is funded by the A. James & Alice B. Clark Foundation. To accomplish the goals of this initiative, the MedStar Health System has integrated behavioral health support services into its healthcare system for birthing people and children through three years old. MedStar has integrated prevention programs, screenings for maternal mental health and substance use disorders, and direct referral to onsite or community based behavioral health clinicians into standard maternal care. Medstar Health System also works with community-based organizations to provide social support, including job placement.[205]

Tennessee and New Jersey operate state-wide care coordination that is administered at a local level. In Tennessee, the Community Health Access and Navigation in Tennessee (CHANT) program is an integrated model of care coordination for birthing people and children up to age 18 administered by all local health departments in the state. Each member of a family unit referred to this program is screened for several criteria, including social services needs and mental and/or behavioral health risk. Based on screening results, families receive assistance with care coordination and connection to appropriate medical, behavioral health, and social services.[206]

In New Jersey, there are three regional non-profit Maternal and Child Health Consortia that are licensed and regulated by the state as central service facilities to provide prevention, education, and support, including care coordination for perinatal mood disorders.[207]

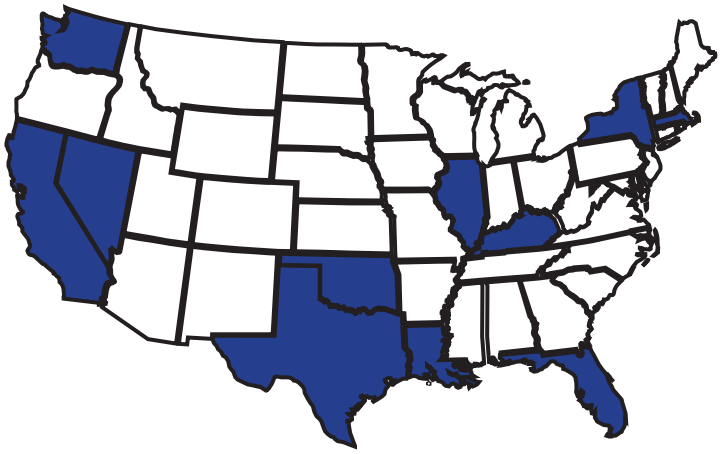
6.3.2.2 Addressing Maternal Mental Health Through Legislation

States have worked to improve mental health outcomes for birthing people by raising public and provider awareness of perinatal mental health conditions and improving systems of care through legislative action (see Figure 7).

- Texas[208] and Kentucky have mandated that maternal mental health information be posted on their websites.[209]
- Illinois,[210] California,[211] Oklahoma, and New York have required providers to educate birthing people about perinatal mental health disorders.[212]
- California and Louisiana have both passed legislation that encourages providers to attend continuing education courses about maternal mental health.[213,214] California has also required hospitals to train their maternity and newborn staff in maternal mental health.
- Nevada passed legislation that requires the Department of Corrections to address maternal mental health by providing trauma informed care and unlimited treatment for postpartum depression.[215]
- Washington is the first and only state that has appropriated specific funding for peer support, resources, and referrals for birthing people who are at risk of maternal mental health issues.[216]

- Massachusetts is the first and only state that has appropriated specific funds for substance use disorder resources specifically for birthing persons.[217]
- California has enacted legislation requiring state managed health plans to establish maternal mental health programs with quality assurance mechanisms that encourage screening, treatment, and referral practices consistent with clinical best practices.[218] California is one of only two states (the other being Louisiana) that requires health plans to develop a maternal mental health quality assurance plan.[219]

FIGURE 7-STATES RAISING AWARENESS STRATEGIES FOR THE PUBLIC & PROVIDERS



Across all of our systems, including in the health system, there are very valid reasons why people don't trust and don't want to access services. And so, I think we have a lot of work to do to partner with communities to help improve the way we present, and the honesty that we bring in terms of things that have happened in the past and being transparent about how we're helping to improve."

– Maternal Mental Health Workgroup Member

Some states have leveraged their ability to implement state-wide comprehensive public education programs. *The Healthy New Moms* (HNM) in Maryland focuses on educating the public and providers about perinatal depression and is administered by the Mental Health Association of Maryland with financial support from the Behavioral Health Administration of the Maryland Department of Health and HRSA.[220] In its first six years of operation (2005-2011), HNM reached over one million persons through dissemination of literature, media outreach, and web-based health information campaigns. It consistently receives positive feedback from participants citing excellent quality of resources and increased understanding of perinatal mental health challenges.[221]

The Colorado Behavioral Health Administration and Colorado Maternal Mental Health Collaborative Framework developed the Tough as a Mother public awareness and education campaign available in both English and Spanish that is focused on perinatal substance use challenges. For providers, this campaign includes guidance on best practices and trainings on culturally humble, responsive treatment for vulnerable populations, including the LGBTQIA+ community, victims of intimate partner violence, and adolescent birthing persons. For the public, Tough as a Mother provides educational materials, a social media toolkit, a portal linking to community-based resources, and a weekly virtual peer support group for birthing people with substance use challenges.[222]

6.4 Appendix 4: Other Maternal Mental Health Related Reports

Below is a list of other reports referenced herein that evaluate and make recommendations relating to maternal mental health care:

- New York State Report on Pregnancy-Associated Deaths in 2018 (Published by the New York State Department of Health)
- *Postpartum Depression Screening Protocols and Tools: A Review of Evidence on Adequacy and Equity*
  (Published by the New York State Department of Health and New York State Office of Mental Health)
- The Task Force on Maternal Mental Health's National Strategy to Improve Maternal Mental Health Care
  (Published by the Substance Abuse and Mental Health Services Administration)

6.5 Appendix 5: Bill Language

S. 4007--C 184 A. 3007--C

PART PP

Section 1. Subject to available appropriation, the commissioner of mental health shall establish a maternal mental health workgroup (referred to in this section as the "workgroup") within the office of mental health. The workgroup shall consist of, at the minimum, the commissioner of mental health or their designee, the commissioner of the office of children and family services or their designee; the comissioner of the department of health or their designee; and representatives from statewide mental health organizations, maternal health care provider organizations, health care provider organizations, the health insurance industry, and communities that are disproportionately impacted by the underdiagnoses of maternal mental health disorders; and any additional stakeholders that the commissioners deem necessary.

§ 2. Workgroup members shall receive no compensation for their services as members of the workgroup, but shall be reimbursed for actual expenses incurred in the performance of their duties on the work group. To allow members who represent communities disproportionately impacted by the underdiagnoses of maternal mental health disorder to wholly participate in the performance of their duties on the workgroup, their reimbursement may include, but not limited to, childcare, travel, meals and lodging.

§ 3. It shall be the duty of the workgroup to study and issue recommendations related to maternal mental health and perinatal and postpartum mood and anxiety disorders. The workgroup shall:

a. identify underrepresented and vulnerable populations and risk factors in the state for maternal mental health disorders that may occur during pregnancy and through the first postpartum year;

b. identify and recommend effective, culturally competent, and accessible screening and identification, and prevention and treatment strategies, including public education and workplace awareness, provider education and training, and social support services;

c. identify successful postpartum and perinatal mental health initiatives in other states and recommend programs, tools, strategies, and funding sources that are needed to implement similar initiatives in the state;

d. identify and recommend evidence-based practices for health care providers and public health systems;

e. identify and recommend private and public funding models;

f. make recommendations on legislation, policy initiatives, funding requirements and budgetary priorities to address maternal mental health needs in the state;

g. any other relevant issues identified by the workgroup; and

h. submit a final report containing all findings and recommendations to the governor, the temporary president of the senate, the speaker of the assembly, the commissioner of mental health, the commissioner of the office of children and family services, the commissioner of the department of health, the minority leader of the senate and the minority leader of the assembly on or before December 31, 2024.

§ 4. This act shall take effect immediately and shall expire two years after such effective date when upon such date the provisions of this act shall be deemed repealed.

§ 2. Severability clause. If any clause, sentence, paragraph, subdivision, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined in

1. its operation to the clause, sentence, paragraph, subdivision, section
2. or part thereof directly involved in the controversy in which such judg-
3. ment shall have been rendered. It is hereby declared to be the intent of
4. the legislature that this act would have been enacted even if such
5. Invalid provisions had not been included herein.
6. § 3. This act shall take effect immediately provider, however, that
7. the applicable effective date of Part A through PP of this act shall be
8. As specifically set forth in the last section of such Parts.

6.6 Appendix 6: Works Cited[2]

[1]American Psychiatric Association. (2023) Perinatal Mental and Substance Use Disorders. Retrieved October 17, 2024, from https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf.

[2]American Psychiatric Association. (2023). Perinatal Mental and Substance Use Disorders. Retrieved October 17, 2024, from https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf.

[3]NYS Office of Mental Health & NYS Department of Health. (2023, November 1). Postpartum Depression Screening Protocols and Tools: A Review of Evidence Adequacy and Equity. Retrieved October 17, 2024, from https://omh.ny.gov/omhweb/statistics/postpartum-depression-screening-report.pdf.

[4]Carlson, K., Mughal, S., Azhar, Y., Siddiqui, W. (2024). Postpartum Depression. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Accessed on August 23, 2024, from https://www.ncbi.nlm.nih.gov/books/NBK519070/.

[5]National Institute of Mental Health. (2023). Perinatal Depression. Retrieved September 30, 2025 from https://www.nimh.nih.gov/sites/default/files/documents/perinatal-depression.pdf.

[6]American Psychiatric Association. (2023) Perinatal Mental and Substance Use Disorders.. Retrieved October 17, 2024, from https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf.

[7]NYS Office of Mental Health & NYS Department of Health. (2023, November 1). Postpartum Depression Screening Protocols and Tools: A Review of Evidence Adequacy and Equity. Retrieved October 17, 2024, from https://omh.ny.gov/omhweb/statistics/postpartum-depression-screening-report.pdf.

[8]Bhat, A., Cerimele, J. M., & Byatt, N. (2018). Pregnant and Postpartum Women With Bipolar Disorder: Taking the Care to Where They Are. Psychiatric services (Washington, D.C.),69(12), 1207–1209. Retrieved October 17, 2024, from https://doi.org/10.1176/appi.ps.201800133.

[9]New York State Office of Mental Health. (n.d.). Certified Community Behavioral Health Clinics. https://omh.ny.gov/omhweb/bho/ccbhc.html.

[10]U.S. Center for Disease Control and Prevention (CDC). (2024, May 15). Embracing Cultural Humility and Community Engagement. Retrieved October 17, 2024, from https://restoredcdc.org/www.cdc.gov/global-health-equity/php/publications/cultural-humility.html.

[11]Lekas, H. M., Pahl, K., & Fuller Lewis, C. (2020). Rethinking Cultural Competence: Shifting to Cultural Humility. Health services insights, 13, 1178632920970580. Retrieved October 17, 20204, from https://doi.org/10.1177/1178632920970580.

[12]Tervalon, M., & Murray-García, J. (1998). Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. Journal of health care for the poor and underserved, 9(2), 117–125. Retrieved October 17, 2024, from https://doi.org/10.1353/hpu.2010.0233.

[13]Strategy to Improve Maternal Health Care. Retrieved September 30, 2025 from https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/infant-mortality/meetings/acimm-june-2024-report-to-congress.pdf.

[2]The citation style used is constructed to promote ease of navigation and readability of this report.

[14]Prenatal-to-3 Policy Center. (2022) Group Prenatal Care. Retrieved October 17, 2024, from https://pn3policy.org/pn-3-state-policy-roadmap-2022/us/group-prenatal-care/.

[15]Prenatal-to-3 Policy Center. (2022) Group Prenatal Care. Retrieved October 17, 2024, from https://pn3policy.org/pn-3-state-policy-roadmap-2022/us/group-prenatal-care/.

[16]Hanson, S. J., & Lee, K. (2023). Group Prenatal Care. Obstetrics and gynecology clinics of North America, 50(3), 457–472. Retrieved October 17, 2024, from https://doi.org/10.1016/j.ogc.2023.03.003.

[17]Centers for Medicare & Medicaid Services, Center for Medicaid & CHIP Services. (November 16, 2023). Coverage of Services and Supports to Address Health-Related Social Needs in Medicaid and the Children's Health Insurance Program. Retrieved October 17, 2024, from https://www.medicaid.gov/federal-policy-guidance/downloads/cib11162023.pdf.

[18]Shah, H.S. & Bohlen J. (2023, March 4). Implicit Bias. In: StatPearls [Internet]. Retrieved October 17, 2024, from https://www.statpearls.com/point-of-care/150323.

[19]American Psychological Association. (2013). Integrated Health Care. Collaboration Between Health Professionals to provide Complete Treatment to Patients and Improve Overall Well-being. Retrieved October 17, 2024, from https://www.apa.org/health/integrated-health-care.

[20]Charlie Health Editorial Team, Gaparini, D. (2024, June 13). PHP vs IOP: What Are the Differences? Retrieved October 17, 2024, from https://www.charliehealth.com/post/php-vs-iop.

[21]U.S. Center for Substance Abuse Treatment. (2006). Substance Abuse: Clinical Issues in Intensive Outpatient Treatment. Chapter 3. Intensive Outpatient Treatment and the Continuum of Care. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2006. (Treatment Improvement Protocol (TIP) Series, No. 47.) Retrieved October 17, 2024, from https://www.ncbi.nlm.nih.gov/books/NBK64088/.

[22]Bauer, G.R., Churchill, S.M., Mahendran, M., Walwyn, C., Lizotte, D., & Villa-Rueda, A.A. (2021). Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods. SSM - population health, 14, 100798. Retrieved October 17, 2024, from https://doi.org/10.1016/j.ssmph.2021.100798.

[23]1115 Medicaid Redesign Team. (2024, February 16). New York Health Equity Reform (NYHER) 1115 Amendment Overview [Webinar] Retrieved October 17, 2024, from https://www.health.ny.gov/health_care/medicaid/redesign/med_waiver_1115/docs/2024-02-16_nyher_overview_slides.

[24]Charlie Health Editorial Team, Gaparini, D. (2024, June 13). PHP vs IOP: What Are the Differences? Retrieved October 17, 2024, from https://www.charliehealth.com/post/php-vs-iop.

[25]Charlie Health Editorial Team, Gaparini, D. (2024, June 13). PHP vs IOP: What Are the Differences? Retrieved October 17, 2024, from https://www.charliehealth.com/post/php-vs-iop.

[26]CMS Medicare Coverage Database. (n.d.). Partial Hospitalization Programs. Retrieved October 17, 2024, from https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?LCDId=37633.

[27]Garcia, E.R. & Yim, I.S. (2017). A systematic review of concepts related to women's empowerment in the perinatal period and their associations with perinatal depressive symptoms and premature birth. BMC Pregnancy Childbirth 17(Suppl 2), 347. https://doi.org/10.1186/s12884-017-1495-1.

[28]Bauman, B.L., Ko, J.Y., Cox, S., D'Angelo, D.V., Warner, L., Folger, S., Tevendale, H.D., Coy, K.C., Harrison, L., & Barfield, W.D. (2018). Vital Signs: Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression — United States, 2018. MMWR Morb Mortal Wkly Rep 2020. 69, 575–581. Retrieved October 17, 2024, from https://doi. org/10.15585/mmwr.mm6919a2.

[29]National Institute of Mental Health. (n.d.). Postpartum Depression. Retrieved October 17, 2024, from https://www.nimh.nih.gov/research/research-conducted-at-nimh/research-areas/clinics-and-labs/sbe/participate-in-research/postpartum-depression.

[30]Balaram K, & Marwaha R. (2023, March 6). Postpartum Blues. In: StatPearls [Internet]. https://www.ncbi.nlm.nih.gov/books/NBK554546/.

[31]National Institute of Mental Health. (n.d.). Postpartum Depression. Retrieved October 17, 2024, from https://www.nimh.nih.gov/research/research-conducted-at-nimh/research-areas/clinics-and-labs/sbe/participate-in-research/postpartum-depression.

[32]Earls 2019. Earls, M. F., Yogman, M. W., Mattson, G., Rafferty, J., & Committee on Psychosocial Aspects of Child and Family Health (2019). Incorporating Recognition and Management of Perinatal Depression Into Pediatric Practice. Pediatrics, 143(1), e20183259. Retrieved October 17, 2024, from https://doi.org/10.1542/peds.2018-3259.

[33]Postpartum Support International. (n.d.). Perinatal Mental Health: Signs, Symptoms and Treatment. Retrieved October 17, 2024, from https://postpartum.net/perinatal-mental-health/.

[34] National Institute of Mental Health. (2023). Perinatal Depression. Retrieved September 30, 2025 from www.nimh.nih.gov/health/publications/perinatal-depression.

[35]Gale, S., & Harlow, B. L. (2003). Postpartum mood disorders: a review of clinical and epidemiological factors. Journal of psychosomatic obstetrics and gynaecology,24(4), 257–266. Retrieved October 17, 2024, from https://doi.org/10.3109/01674820309074690.

[36]World Health Organization. (2024). Social Determinants of Health. Retrieved October 17, 2024, from https://www.who.int/health-topics/social-determinants-of-health.

[37]U.S. Department of Health and Human Services. (n.d.). Healthy People 2030: Social Determinants of Health. Retrieved October 17, 2024, from https://health.gov/healthypeople/priority-areas/social-determinants-health.

[38]U.S. Department of Health and Human Services. (n.d.). Healthy People 2030: Social Determinants of Health. https://health.gov/healthypeople/priority-areas/social-determinants-health.

[39]Gee, G. C., & Ford, C. L. (2011). Structural Racism and Health Inequities: Old Issues, New Directions. Du Bois review: social science research on race, 8(1), 115–132. Retrieved October 17, 2024, from https://doi.org/10.1017/S1742058X11000130.

[40]U.S. Congress. (2022, December 29) Public Law 117-328 117th Congress. Retrieved October 17, 2024, from https://www.congress.gov/117/plaws/publ328/PLAW-117publ328.pdf.

[41]Task Force on Maternal Mental Health. (2024). Report to Congress and National Strategy to Improve Maternal Health Care. This source was retrieved September 30, 2025, but link is no longer active as of October 2025

[42]NYS Division of Budget. (2024, January 16). Mental Health, Office of. Retrieved October 17, 2024, from https://www.budget.ny.gov/pubs/archive/fy25/ex/agencies/appropdata/MentalHealthOfficeof.html.

[43]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[44]Werner, E.A., Gustafsson, H.C., Lee, S., Feng, T., Jiang, N., Desai, P., & Monk, C. (2016). PREPP: Postpartum Depression prevention through the mother-infant dyad. Archives of Birthing persons' Mental Health. 19(2), 229–242. Retrieved October 17, 2024, from https://doi.org/10.1007/s00737-015-0549-5.

[45]NYS Department of Health. (March 2024). New York State Report on Pregnancy-Associated Deaths in 2018-2020. https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[46]NYS Department of Health. (March 2024). New York State Report on Pregnancy-Associated Deaths in 2018-2020. https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[47]NYS Office of Mental Health & NYS Department of Health. (2023, November 1). Postpartum Depression Screening Protocols and Tools: A Review of Evidence Adequacy and Equity. Retrieved October 17, 2024, from https://omh.ny.gov/omhweb/statistics/postpartum-depression-screening-report.pdf

[48]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[49](2023, December) New York State Medicaid Update. 39(17). https://www.health.ny.gov/health_care/medicaid/program/update/.

[50]Gault, B., Hartmann, H., Hegewisch, A., Milli, J., & Reichlin, L. (2014). Paid parental leave in the United States: what the data tell us about access, usage, and economic and health benefits. Institute for Women's Policy Research. https://iwpr.org/wp-content/uploads/2020/09/B334-Paid-Parental-Leave-in-the-United-States.pdf.

[51]Heshmati, A., Honkaniemi, H., & Juarez, S.P. (2023). The effect of parental leave on parents' mental health: a systematic review. The Lancet. 8(1), E57-E75. Retrieved October 17, 2024, from https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(22)00311-5/fulltext.

[52](2024) Benefits Schedule. Paid Family Leave. New York State. Retrieved October 17, 2024, from https://paidfamilyleave.ny.gov/benefits.

[53](2024) Benefits Schedule. Paid Family Leave. New York State. Retrieved October 17, 2024, from https://paidfamilyleave.ny.gov/benefits.

[54]Association of Maternal & Child Health Programs. (2021, July 31). Recruiting, Funding, and Training an Effective and Innovative Maternal Behavioral Health Workforce. Retrieved October 17, 2024, from https://policycentermmh.org/app/uploads/2024/05/SupportingtheMaternalBehavioralHealthWorkforceWebinar-slides.pdf.

[55]Brigham and Women's Hospital. (n.d.). Women's Mental Health Fellowship. Retrieved October 17, 2024, from https://www.brighamandwomens.org/psychiatry/fellowships/womens-mental-health-fellowship.

[56]UNC School of Medicine Department of Psychiatry. (n.d.) Fellowships. Center for Women's Mood Disorders. Retrieved October 17, 2024, from https://www.med.unc.edu/psych/wmd/fellowships/.

[57]NYU Grossman School of Medicine. (n.d.). Women's Mental Health Fellowship. Retrieved October 17, 2024, from https://med.nyu.edu/departments-institutes/psychiatry/education/fellowships/womens-mental-health.

[58]Weill Cornell Medicine Psychiatry. (n.d.). Sackler Perinatal and Infant Psychiatry Fellowship. Retrieved October 17, 2024, from https://psychiatry.weill.cornell.edu/sites/default/files/perinatal_and_infant_psychiatry_fellowship_flyer_2024.pdf.

[59]Columbia University Department of Psychiatry. (n.d.). Women's and Reproductive Mental Health Fellowship. Retrieved October 17, 2024, from https://www.columbiapsychiatry.org/education-and-training/clinical-fellowships/womens-mental-health-fellowship.

[60]Northwell Health. (n.d.). Graduate Medical Education: Fellowship in Consultation-Liaison Psychiatry at Zucker Hillside Hospital, Northwell Health. Retrieved October 17, 2024, from https://physicians.northwell.edu/education/graduate-medical-education/fellowship-consultation-liaison-psychosomatic-medicine-northwell-health/womens-behavioral-health-track.

[61]Mental Health America of Ohio. (n.d.). POEM for Moms and Birthing Persons. Retrieved October 17, 2024, from https://mhaohio.org/poem/.

[62]Washington State Healthcare Authority. (n.d.). Peer Support. Retrieved October 17, 2024, from https://www.hca.wa.gov/billers-providers-partners/program-information-providers/peer-support.

[63]New York Peer Specialist Certification Board. (n.d.). Retrieved October 17, 2024, from https://nypscb.org/.

[64]California Health Care Foundation. (2023, December 15). Perinatal Mental Health Learning Pathways. Retrieved October 17, 2024, from https://www.chcf.org/project/perinatal-mental-health-learning-pathways/.

[65]Mass PPD Fund. (n.d.). Expanding the Circle of Support in the Perinatal Period. Retrieved October 17, 2024, from https://massppdfund.org/training.

[66]Postpartum Support International. (n.d.). Certification in Perinatal Mental Health. Retrieved October 17, 2024, from https://www.postpartum.net/professionals/certification/.

[67]NHSC Loan Repayment Program. Retrieved October 17, 2024 from https://nhsc.hrsa.gov/loan-repayment/nhsc-loan-repayment-program.

[68] NHSC Substance Use Disorder Workforce Loan Repayment Program. Retrieved October 17, 2024, from https://nhsc.hrsa.gov/loan-repayment/nhsc-sud-workforce-loan-repayment-program.

[69]The National Health Service Corps (NHSC) Rural Community Loan Repayment Program. Retrieved October 17, 2024, from https://nhsc.hrsa.gov/loan-repayment/nhsc-rural-community-loan-repayment-program.

[70]John A. Burns School of Medicine. (n.d.). Hawaii State Loan Repayment Program. Retrieved October 17, 2024, from https://ahec.hawaii.edu/ahecsite-forhealthcareprofessionals/ahecsite-loanrepayment/ahecsite-loanrepayment1.html.

[71]Child First. (2024). Retrieved October 31, 2025, from https://changent.org/what-we-do/child-first/.

[72]Nurse-Family Partnership. (2024). Retrieved October 17, 2024, from https://www.nursefamilypartnership.org/.

[73]Khoury, N. M., Cogswell, A., Arthur, M., Ryan, M., MacMaster, E., & Kaye, D. (2023). Towards practice change: a qualitative study examining the impact of a Child Psychiatric Access Program (Project TEACH) on Primary Care Provider practices in New York State during pandemic times. BMC health services research, 23(1), 985. Retrieved October 17, 2024, from https://doi.org/10.1186/s12913-023-09999-z.

[74]H.R.3407 — 117th Congress (2021-2022). Retrieved October 17, 2024, from https://www.congress.gov/bill/117th-congress/house-bill/3407/text.

[75]Centers for Medicare & Medicaid Services, Center for Medicaid & CHIP Services. SHO# 20-002 Access to Mental Health and Substance Use Disorder Services for Children and Pregnant Women in the Children's Health Insurance Program. Retrieved October 17, 2024, from https://www.medicaid.gov/federal-policy-guidance/downloads/sho20001.pdf.

[76]U.S. Centers for Disease Control and Prevention. HEAR HER Campaign. Retrieved October 31, 2025 from https://archive.cdc.gov/#/details?q=hear%20her&start=0&rows=10&url=https://www.cdc.gov/hearher/campaign-resources/social-media.html.

[77]Maternal Mortality Media Campaign #HearHer. (November 2022). Retrieved October 17, 2024, from https://www.health.ny.gov/community/adults/women/maternal_mortality/campaign.

[78]The Blue Dot Project. (2024). Retrieved October 17, 2024, from https://www.thebluedotproject.org/.

[79]Zacher Kjeldsen, M.M., Bricca, A., Liu, X., Frokjaer, V.G., Madsen, K.B., Munk-Olsen, T. (2022) Family History of Psychiatric Disorders as a Risk Factor for Maternal Postpartum Depression: A Systematic Review and Meta-analysis. JAMA Psychiatry. 79(10), 1004-1013. Retrieved October 17, 2024, from https://doi.org/10.1001/jamapsychiatry.2022.2400.

[80]American Psychiatric Association. (2023). Perinatal Mental and Substance Use Disorders. Retrieved October 17, 2024, from https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf.

[81]Wendell A. D. (2013). Overview and epidemiology of substance abuse in pregnancy. Clinical obstetrics and gynecology, 56(1), 91–96. Retrieved October 30, 2024, from https://doi.org/10.1097/GRF.0b013e31827feeb9.

[82]Hoffman, K.M., Trawalter, S., Axt, J.R., & Oliver, M.N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. Proc Natl Acad Sci U S A. 113(16), 4296-4301. Retrieved October 17, 2024, from https://doi.org/10.1073/pnas.1516047113.

[83]Anderson C, Cacola P. (2017). Implications of Preterm Birth for Maternal Mental Health and Infant Development. MCN Am J Matern Child Nurs. 42(2), 108-114. https://doi.org/10.1097/NMC.0000000000000311.

[84]Perera, E., Chou, S., Cousins, N.et al.(2023). Women's experiences of trauma, the psychosocial impact and health service needs during the perinatal period. BMC Pregnancy Childbirth 23, 197. Retrieved October 17, 2024, from https://doi.org/10.1186/s12884-023-05509-5.

[85]Isobel, S. (2024). Trauma in the lives of parents experiencing severe perinatal mental illness. Frontiers in psychiatry, 15, 1380146. Retrieved October 17, 2024, from https://doi.org/10.3389/fpsyt.2024.1380146.

[86]Manzo, L.L., Dindinger, R.A., Batten, J., Combellick, J.L., & Basile-Ibrahim, B. (2024). The Impact of Military Trauma Exposures on Servicewomen's Pregnancy Outcomes: A Scoping Review. Journal of midwifery & women's health, 69(5), 634–646. Retrieved October 17, 2024, from https://doi.org/10.1111/jmwh.13620.

[87]Agarwal, S., Prasad, R., Mantri, S., Chandrakar, R., Gupta, S., Babhulkar, V., Srivastav, S., Jaiswal, A., & Wanjari, M. B. (2023). A Comprehensive Review of Intimate Partner Violence During Pregnancy and Its Adverse Effects on Maternal and Fetal Health. Cureus, 15(5), e39262. Retrieved October 17, 2024, from https://doi.org/10.7759/cureus.39262.

[88]Manzo, L. L., Dindinger, R. A., Batten, J., Combellick, J. L., & Basile-Ibrahim, B. (2024). The Impact of Military Trauma Exposures on Servicewomen's Pregnancy Outcomes: A Scoping Review. Journal of midwifery & women's health, 10.1111/jmwh.13620. Advance online publication. Retrieved October 17, 2024, from https://doi.org/10.1111/jmwh.13620.

[89]Sexton, M.B., Hamilton, L., McGinnis, E.W., Rosenblum, K.L., & Muzik, M. (2015). The roles of resilience and childhood trauma history: main and moderating effects on postpartum maternal mental health and functioning. J Affect Disord. 174(15), 562-568. Retrieved October 17, 2024, from https://doi.org/10.1016/j.jad.2014.12.036.

[90]NYS Department of Health. (2024, July). New York State Medicaid Doula Services Benefit. Retrieved October 17, 2024, from https://www.health.ny.gov/health_care/medicaid/program/doula/index.htm.

[91]Utilization of Maternal Health Care Among Immigrant Mothers in New York City, 2016-2018. (2021, November 22). Retrieved October 17, 2024, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8688674/.

[92]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. Retrieved October 17, 2024, from https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[93]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. Retrieved October 17, 2024, from https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[94]Parker, A. (2021). Reframing the narrative: Black maternal mental health and culturally meaningful support for wellness. Infant Mental Health Journal. 42(4), 502-516. Retrieved October 17, 2024, from https://doi.org/10.1002/IMHJ.21910.

[95]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[96]Ta Park VM, Goyal D, Suen J, Win N, Tsoh JY. (2019). Chinese American Women's Experiences with Postpartum Depressive Symptoms and Mental Health Help-Seeking Behaviors. MCN The American journal of maternal child nursing. 44(3),144-149. Retrieved October 17, 2024, from https://doi.org/10.1097/NMC.0000000000000518.

[97]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[98]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[99]McLeish, J, Redshaw, M. (2017). Mothers' Accounts of the Impact on Emotional Wellbeing of Organized Peer Support in Pregnancy and Early Parenthood: A Qualitative Study. BMC Pregnancy Childbirth. 17(28). Retrieved October 17, 2024, from https://doi.org/10.1186/s12884-017-1220-0.

[100]Giarratano, G., Bernard, M. L., & Orlando, S. (2019). Psychological First Aid: A Model for Disaster Psychosocial Support for the Perinatal Population. The Journal of perinatal & neonatal nursing, 33(3), 219–228. Retrieved October 17, 2024, from https://doi.org/10.1097/JPN.0000000000000419.

[101]U.S. Department of Health and Human Services. (n.d.). Healthy People 2030: Social Determinants of Health. Retrieved October 17, 2024, from https://health.gov/healthypeople/priority-areas/social-determinants-health.

[102]Nurse-Family Partnership. (2024). Retrieved October 17, 2024, from https://www.nursefamilypartnership.org/.

[103]Eakley, R., & Lyndon, A. (2022). Antidepressant use During Pregnancy: Knowledge, Attitudes, and Decision-Making of Patients and Providers. Journal of midwifery & women's health, 67(3), 332–353. Retrieved October 16, 2024, from https://doi.org/10.1111/jmwh.13366.

[104]Testa, A. & Jackson, D.B. (2021). Race, ethnicity, WIC participation, and infant health disparities in the United States. Annals of Epidemiology 58, 22-28. Retrieved October 17, 2024, from https://doi.org/10.1016/j.annepidem.2021.02.005.

[105]Samuel, L. J., Crews, D. C., Swenor, B. K., Zhu, J., Stuart, E. A., Szanton, S. L., Kim, B., Dwivedi, P., Li, Q., Reed, N. S., & Thorpe, R. J., Jr (2023). Supplemental Nutrition Assistance Program Access and Racial Disparities in Food Insecurity. JAMA network open, 6(6), e2320196. Retrieved October 17, 2024, from https://doi.org/10.1001/jamanetworkopen.2023.20196.

[106]U.S. Department of Agriculture (USDA). (2021, June 23). USDA Releases Study on Hurdles to Healthy Eating on SNAP. Retrieved October 17, 2024, from https://www.usda.gov/about-usda/news/press-releases/2021/06/23/usda-releases-study-hurdles-healthy-eating-snap.

[107]Pelto, D. J., Ocampo, A., Garduño-Ortega, O., Barraza López, C. T., Macaluso, F., Ramirez, J., González, J., & Gany, F. (2020). The Nutrition Benefits Participation Gap: Barriers to Uptake of SNAP and WIC Among Latinx American Immigrant Families. Journal of community health, 45(3), 488–491. Retrieved October 17, 2024, from https://doi.org/10.1007/s10900-019-00765-z.

[108]U.S. Department of Agriculture (USDA) Food and Nutrition Service. (2023, November 17). What can SNAP Buy? Retrieved October 17, 2024, from https://www.fns.usda.gov/snap/eligible-food-items.

[109]Walker, A., Spencer, R. A., Lemon, E., Woods-Jaeger, B., Komro, K. A., & Livingston, M. D. (2023). The Impact of Temporary Assistance for Needy Families Benefit Requirements and Sanctions on Maternal Material Hardship, Mental Health, and Parental Aggravation. Maternal and child health journal, 27(8), 1392–1400. Retrieved October 17, 2024, from https://doi.org/10.1007/s10995-023-03699-0.

[110]U.S. Centers for Disease Control and Prevention (CDC). (n.d.). Substance Use During Pregnancy. Retrieved October 17, 2024, from https://www.cdc.gov/maternal-infant-health/pregnancy-substance-abuse/index.html.

[111]National Institute on Drug Abuse. (2015, May). Substance Use in Women Research Report: Substance Use While Pregnant and Breastfeeding. Retrieved October 17, 2024, from https://nida.nih.gov/publications/research-reports/substance-use-in-women/substance-use-while-pregnant-breastfeeding.

[112]Substance Abuse and Mental Health Services Administration. (2022). 2020 National Survey on Drug Use and Health: Women. Retrieved October 17, 2024, from 2020 National Survey on Drug Use and Health (NSDUH) Releases https://www.samhsa.gov/data/release/2020-national-survey-drug-use-and-health-nsduh-releases.

[113]Bechtol, A. C., Ramage, M., Krulikas, L. J., Futrell, K., & Caron, O. (2024). Naloxone access in perinatal substance use disorder. Journal of the American Pharmacists Association: JAPhA,64(3), 102026. Retrieved October 17, 2024, from https://doi.org/10.1016/j.japh.2024.01.022.

[114]Bechtol, A. C., Ramage, M., Krulikas, L. J., Futrell, K., & Caron, O. (2024). Naloxone access in perinatal substance use disorder. Journal of the American Pharmacists Association : JAPhA, 64(3), 102026. Retrieved October 17, 2024, from https://doi.org/10.1016/j.japh.2024.01.022.

[115]Hodgkinson, S., Beers, L., Southammakosane, C., & Lewin, A. (2014). Addressing the mental health needs of pregnant and parenting adolescents. Pediatrics, 133(1), 114–122. Retrieved October 17, 2024, from https://doi.org/10.1542/peds.2013-0927.

[116]Salas-Wright, C. P., Vaughn, M. G., Ugalde, J., & Todic, J. (2015). Substance use and teen pregnancy in the United States: evidence from the NSDUH 2002-2012. Addictive behaviors, 45, 218–225. Retrieved October 17, 2024, from https://doi.org/10.1016/j.addbeh.2015.01.039.

[117]CDC. (2024, November 26). Reducing Health Risks Among Youth: Substance Use and Sexual Risk Behaviors. Retrieved September 30, 2025 from https://www.cdc.gov/youth-behavior/risk-behaviors/substance-use-sexual-risk-behaviors.html.

[118]CDC. (2024, November 26). Reducing Health Risks Among Youth: Substance Use and Sexual Risk Behaviors. Retrieved September 30, 2025 from https://www.cdc.gov/youth-behavior/risk-behaviors/substance-use-sexual-risk-behaviors.html.

[119]Stone, R. (2015). Pregnant women and substance use: fear, stigma, and barriers to care. Health & Justice 3, 2. Retrieved October 17, 2024, from https://healthandjusticejournal.biomedcentral.com/articles/10.1186/s40352-015-0015-5.

[120]Eakley, R., & Lyndon, A. (2022). Antidepressant use During Pregnancy: Knowledge, Attitudes, and Decision-Making of Patients and Providers. Journal of midwifery & women's health, 67(3), 332–353. Retrieved October 16, 2024, from https://doi.org/10.1111/jmwh.13366.

[121]Khoury, N. M., Cogswell, A., Arthur, M., Ryan, M., MacMaster, E., & Kaye, D. (2023). Towards practice change: a qualitative study examining the impact of a Child Psychiatric Access Program (Project TEACH) on Primary Care Provider practices in New York State during pandemic times. BMC health services research, 23(1), 985. Retrieved October 17, 2024, from https://doi.org/10.1186/s12913-023-09999-z.

[122]Trinh, N. T. H., Munk-Olsen, T., Wray, N. R., Bergink, V., Nordeng, H. M. E., Lupattelli, A., & Liu, X. (2023). Timing of Antidepressant Discontinuation During Pregnancy and Postpartum Psychiatric Outcomes in Denmark and Norway. JAMA psychiatry, 80(5), 441–450. Retrieved October 17, 2024, from https://doi.org/10.1001/jamapsychiatry.2023.0041.

[123]Vickery P. B. (2023). Concepts for selection and utilization of psychiatric medications in pregnancy. The mental health clinician, 13(6), 255–267. Retrieved October 17, 2024, from https://doi.org/10.9740/mhc.2023.12.255.

[124]Khoury, N. M., Cogswell, A., Arthur, M., Ryan, M., MacMaster, E., & Kaye, D. (2023). Towards practice change: a qualitative study examining the impact of a Child Psychiatric Access Program (Project TEACH) on Primary Care Provider practices in New York State during pandemic times. BMC health services research, 23(1), 985. Retrieved October 17, 2024, from https://doi.org/10.1186/s12913-023-09999-z.

[125]Stone, R. (2015). Pregnant women and substance use: fear, stigma, and barriers to care. Health Justice 3, 2. Retrieved October 17, 2024, from https://doi.org/10.1186/s40352-015-0015-5.

[126]The American College of Obstetricians and Gynecologists. (n.d.). Implementing Perinatal Mental Health Screening. Retrieved October 17, 2024, from https://www.acog.org/programs/perinatal-mental-health/implementing-perinatal-mental-health-screening.

[127]Ayala, N. K., Lewkowitz, A. K., Whelan, A. R., & Miller, E. S. (2023). Perinatal Mental Health Disorders: A Review of Lessons Learned from Obstetric Care Settings. Neuropsychiatric disease and treatment, 19, 427–432. Retrieved October 17, 2024, from https://doi.org/10.2147/NDT.S292734.

[128]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[129]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. Retrieved October 17, 2024, from https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[130]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[131]Hunte, R., Klawetter, S., & Paul, S. (2022). "Black Nurses in the Home is Working": Advocacy, Naming, and Processing Racism to Improve Black Maternal and Infant Health. Maternal and child health journal, 26(4), 933–940. Retrieved July 17, 2024, from https://doi.org/10.1007/s10995-021-03283-4.

[132]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[133]Moyer, S.W., Ameringer, S., Elswick, R.K.Jr., Nunziato, J.D., & Kinser, P.A. (2024). Exploration of the psychometric properties of the EPDS-US, a validation study. Journal of Affective Disorders 352(1), 193-198. Retrieved October 17, 2024, from https://www.sciencedirect.com/science/article/abs/pii/S0165032724003343.

[134]NYS Department of Health. (2024, March). New York State Report on Pregnancy-Associated Deaths in 2018-2020. https://www.health.ny.gov/community/adults/women/maternal_mortality/docs/maternal_mortality_review_2018-2020.pdf.

[135]NYS Office of Mental Health & NYS Department of Health. (2023, November 1). Postpartum Depression Screening Protocols and Tools: A Review of Evidence Adequacy and Equity. Retrieved October 17, 2024, from https://omh.ny.gov/omhweb/statistics/postpartum-depression-screening-report.pdf.

[136]NYS Office of the Governor. (2024, May 2). Governor Hochul Highlights Statewide Efforts to Improve Maternal and Infant Health. Retrieved October 17, 2024, from https://www.governor.ny.gov/news/governor-hochul-highlights-statewide-efforts-improve-maternal-and-infant-health.

[137]National Health Law Program. (2024, February 21). Doula Medicaid Project: February 2024 State Roundup. Retrieved October 17, 2024, from https://healthlaw.org/doula-medicaid-project-february-2024-state-roundup/.

[138]National Health Law Program. (February 21,2024,). Doula Medicaid Project: February 2024 State Roundup. Retrieved October 17, 2024, from https://healthlaw.org/doula-medicaid-project-february-2024-state-roundup/.

[139]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[140]Knifton, L., Gervais, M., Newbigging, K., Mirza, N., Quinn, N., Wilson, N., & Hunkins-Hutchison, E. (2010). Community conversation: addressing mental health stigma with ethnic minority communities. Soc Psychiat Epidemiol 45, 497–504. Retrieved October 17, 2024, from https://doi.org/10.1007/s00127-009-0095-4.

[141]141KFF. (2021, May 20). New Campaign from THE CONVERSATION / LA CONVERSACIÓN Responds to Information Needs about COVID-19 Vaccines Among Latinos and Spanish-speaking People in U.S. Retrieved September 30, 2025 from https://www.kff.org/health-information-trust/new-campaign-from-the-conversation-la-conversacionresponds-to-information-needs-about-covid-19-vaccines-among-latinos-and-spanish-speaking-people-in-u-s/.

[142]Knifton, L., Gervais, M., Newbigging, K., Mirza, N., Quinn, N., Wilson, N., & Hunkins-Hutchison, E. (2010). Community conversation: addressing mental health stigma with ethnic minority communities. Soc Psychiat Epidemiol 45, 497–504. Retrieved October 17, 2024, from https://doi.org/10.1007/s00127-009-0095-4.

[143]KFF. (2021, May 20). New Campaign from THE CONVERSATION / LA CONVERSACIÓN Responds to Information Needs about COVID-19 Vaccines Among Latinos and Spanish-speaking People in U.S. Retrieved September 30, 2025 from https://www.kff.org/health-information-trust/new-campaign-from-the-conversation-la-conversacionresponds-to-information-needs-about-covid-19-vaccines-among-latinos-and-spanish-speaking-people--in-u-s/.

[144]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[145]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024) OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[146]Reist, C., Petiwala, I., Latimer, J., Raffaelli, S. B., Chiang, M., Eisenberg, D., & Campbell, S. (2022). Collaborative mental health care: A narrative review. Medicine, 101(52), e32554. Retrieved October 16, 2024 from https://doi.org/10.1097/MD.0000000000032554.

[147]Klatter, C. K., van Ravesteyn, L. M., & Stekelenburg, J. (2022). Is collaborative care a key component for treating pregnant women with psychiatric symptoms (and additional psychosocial problems)? A systematic review. Archives of women's mental health, 25(6), 1029–1039. https://doi.org/10.1007/s00737-022-01251-7.

[148]McLeish, J. & Redshaw, M. (2017). Mothers' accounts of the impact on emotional wellbeing of organised peer support in pregnancy and early parenthood: a qualitative study. BMC Pregnancy and Childbirth 17, 28. Retrieved October 17, 2024, from https://doi.org/10.1186/s12884-017-1220-0.

[149]C4 Innovations. (2019, June). Issue Brief: Integrating Peer Support Workers in Interdisciplinary Care Teams. Retrieved October 17, 2024, from https://c4innovates.com/brsstacs/BRSS-TACS-Integrating-Peer-Support-Workers.pdf.

[150]C4 Innovations. (2019, June). Issue Brief: Integrating Peer Support Workers in Interdisciplinary Care Teams. Retrieved October 17, 2024, from https://c4innovates.com/brsstacs/BRSS-TACS-Integrating-Peer-Support-Workers.pdf.

[151]Klatter, C. K., van Ravesteyn, L. M., & Stekelenburg, J. (2022). Is collaborative care a key component for treating pregnant women with psychiatric symptoms (and additional psychosocial problems)? A systematic review. Archives of women's mental health, 25(6), 1029–1039. Retrieved October 17, 2024, from https://doi.org/10.1007/s00737-022-01251-7.

[152]Tachibana, Y., Koizumi, N., Akanuma, C., Tarui, H., Ishii, E., Hoshina, T., Suzuki, A., Asano, A., Sekino, S., & Ito, H. (2019). Integrated mental health care in a multidisciplinary maternal and child health service in the community: the findings from the Suzaka trial. BMC Pregnancy Childbirth 19, 58. Retrieved October 17, 2024, from https://doi.org/10.1186/s12884-019-2179-9.

[153]Branjerdporn, G., Hussain, B., Roberts, S., & Creedy, D. (2022). Uncovering the Model and Philosophy of Care of a Psychiatric Inpatient Mother-Baby Unit in a Qualitative Study with Staff. International journal of environmental research and public health, 19(15), 9717. Retrieved October 17, 2024, from https://doi.org/10.3390/ijerph19159717.

[154]American Psychiatric Association. (2023). Perinatal Mental and Substance Use Disorders. Retrieved October 17, 2024, from https://www.psychiatry.org/getmedia/344c26e2-cdf5-47df-a5d7-a2d444fc1923/APA-CDC-Perinatal-Mental-and-Substance-Use-Disorders-Whitepaper.pdf.

[155]The American College of Obstetricians and Gynecologists. (2024). Assessment and Treatment of Perinatal Mental Health Conditions. Retrieved October 17, 2024, from https://www.acog.org/programs/perinatal-mental-health/assessment-and-treatment-of-perinatal-mental-health-conditions.

[156]American Psychiatric Association. (2022, March 16). Caring for Pregnant Birthing persons: A Psychiatrist's Guide. Retrieved October 17, 2024, from https://www.psychiatry.org/news-room/apa-blogs/caring-for-pregnant-women-a-psychiatrists-guide.

[157]McAllister-Williams, R. H., Baldwin, D. S., Cantwell, R., Easter, A., Gilvarry, E., Glover, V., Green, L., Gregoire, A., Howard, L. M., Jones, I., Khalifeh, H., Lingford-Hughes, A., McDonald, E., Micali, N., Pariante, C. M., Peters, L., Roberts, A., Smith, N. C., Taylor, D., Wieck, A., ... endorsed by the British Association for Psychopharmacology (2017). British Association for Psychopharmacology consensus guidance on the use of psychotropic medication preconception, in pregnancy and postpartum 2017. Journal of psychopharmacology (Oxford, England), 31(5), 519–552. Retrieved October 17, 2024, from https://doi.org/10.1177/0269881117699361.

[158]Eakley, R., & Lyndon, A. (2022). Antidepressant use During Pregnancy: Knowledge, Attitudes, and Decision-Making of Patients and Providers. Journal of midwifery & women's health, 67(3), 332–353. Retrieved October 16, 2024, from https://doi.org/10.1111/jmwh.13366.

[159]Trinh, N. T. H., Munk-Olsen, T., Wray, N. R., Bergink, V., Nordeng, H. M. E., Lupattelli, A., & Liu, X. (2023). Timing of Antidepressant Discontinuation During Pregnancy and Postpartum Psychiatric Outcomes in Denmark and Norway. JAMA psychiatry, 80(5), 441–450. Retrieved October 17, 2024, from https://doi.org/10.1001/jamapsychiatry.2023.0041.

[160]Griffiths, J., Lever Taylor, B., Morant, N., Bick, D., Howard, L. M., Seneviratne, G., & Johnson, S. (2019). A qualitative comparison of experiences of specialist mother and baby units versus general psychiatric wards. BMC Psychiatry, 19(1), 401. Retrieved July 17, 2024, from https://doi.org/10.1186/s12888-019-2389-8.

[161]Zucker Hillside Hospital: Northwell Health. (2024). Women's behavioral health. Retrieved October 17, 2024, from https://zucker.northwell.edu/womens-behavioral-health.

[162]Georgetown University, National Center for Education in Maternal and Child Health. (n.d.). MCH Evidence. Retrieved July 17, 2024, from https://www.mchevidence.org/.

[163]NYS Office of the Governor. (2024, August 27). Governor Hochul Announces More Than $24 Million to Expand Mental and Physical Health Services for Young Children. Retrieved October 16, 2024, from https://www.governor.ny.gov/news/governor-hochul-announces-more-24-million-expand-mental-and-physical-health-services-young.

[164]HealthySteps. (n.d.). Maternal Depression: the Evidence Base. Retrieved October 16, 2024, from https://www.healthysteps.org/our-impact/the-evidence-base/maternal-depression/.

[165]HealthySteps. (n.d.). Retrieved October 16, 2024, from https://www.healthysteps.org/.

[166]Whitesell, N.R. (2017, November). Evidence and Equity: Challenges for Research Design. U.S. Department of Health & Human Services, Office of Planning, Research & Evaluation. OPRE Report 2017(76). Retrieved July 17, 2024, from https://www.acf.hhs.gov/sites/default/files/documents/opre/whitesell_opre_brief_clean_508.pdf.

[167]Lee, H., Fitzpatrick, J.J., Baik, S.Y. (2013). Why isn't evidence based practice improving health care for minorities in the United States?, Applied Nursing Research, 26(4), 263-268, https://doi.org/10.1016/j.apnr.2013.05.004.

[168]Whitesell, N.R. (2017, November). Evidence and Equity: Challenges for Research Design. U.S. Department of Health & Human Services, Office of Planning, Research & Evaluation. OPRE Report 2017(76). Retrieved July 17, 2024, from https://www.acf.hhs.gov/sites/default/files/documents/opre/whitesell_opre_brief_clean_508.pdf.

[169](2024, February 16) 1115 Medicaid Redesign Team Waiver Webinar: New York Health Equity Reform (NYER) 1115 Amendment Overview https://www.health.ny.gov/health_care/medicaid/redesign/med_waiver_1115/docs/2024-02-16_nyher_overview_slides.

[170]FY 2024 Healthy Start Awards. Health Resources & Services Administration (HRSA), Maternal and Child Health Bureau. MCHB. (April 2024). Retrieved July 17, 2024, from https://mchb.hrsa.gov/programs-impact/healthy-start/fy-2024-awards.

[171]FY23 Quality Improvement Fund: Maternal Health Awards. HRSA, Bureau of Primary Health Care. (2023, May). This source was retrieved July 17, 2024, but link is no longer active as of September 2025

[172]FY 2023 Maternal, Infant and Early Childhood Home Visiting Awards. HRSA, Maternal & Child Health Bureau. (September 2023). Retrieved July 17, 2024, from https://mchb.hrsa.gov/programs-impact/programs/home-visiting/fy-2023-miechv-awards.

[173]Maternal and Child Health Services Title V Block Grant. New York FY 2024 Application/ FY 2022 Annual Report. NYSDOH. (July 28, 2023). Retrieved July 17, 2024, from https://www.health.ny.gov/community/infants_children/maternal_and_child_health_services/docs/2024_application.pdf.

[174]FY 2024 Healthy Start Awards. Health Resources & Services Administration (HRSA), Maternal and Child Health Bureau. MCHB. (April 2024). Retrieved July 17, 2024, from https://mchb.hrsa.gov/programs-impact/healthy-start/fy-2024-awards.

[175]FY23 Quality Improvement Fund: Maternal Health Awards. HRSA, Bureau of Primary Health Care. (2023, May). This source was retrieved July 17, 2024, but link is no longer active as of September 2025

[176]FY2023: HRSA's Rural Health Grants: New York Fact Sheet. HRSA, Federal Office of Rural Health Policy (November 2023). Retrieved July 17, 2024, from https://www.hrsa.gov/sites/default/files/hrsa/rural-health/resources/fy-2023-new-york-fact-sheet.pdf.

[177]State Perinatal Quality Collaboratives. Maternal Infant Health. U.S. Centers for Disease Control and Prevention (CDC). (May 20, 2024). Retrieved July 17, 2024, from https://www.cdc.gov/maternal-infant-health/pqc/state-pqcs.html.

[178]Grants: New York Summaries FY 2023. Substance Abuse and Mental Health Services Administration (SAMHSA). (n.d.). Retrieved July 17, 2024, from https://www.samhsa.gov/grants-awards-by-state/NY/2023.

[179]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[180]New York State Department of Health. Medicaid Update. (2017, March). Medicaid Update. 33(3). Retrieved October 16, 2024, from health.ny.gov/health_care/medicaid/program/update/2017/2017-03.htm#familyplanning.

[181]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[182]Reist, C., Petiwala, I., Latimer, J., Raffaelli, S. B., Chiang, M., Eisenberg, D., & Campbell, S. (2022). Collaborative mental health care: A narrative review. Medicine, 101(52), e32554. Retrieved October 16, 2024, from https://doi.org/10.1097/MD.0000000000032554.

[183]Medicaid Enrollment by County: December 2015. NYS Department of Health (NYSDOH). (2015, December). Retrieved July 17, 2024, from https://www.health.ny.gov/health_care/medicaid/enrollment/docs/by_resident_co/2015/2015-12-01.pdf.

[184]Hu, J., Wu, T., Damodaran, S., Tabb, K.M., Bauer, A., Huang, H. (2020). The Effectiveness of Collaborative Care on Depression Outcomes for Racial/Ethnic Minority Populations in Primary Care: A Systematic Review,

[185]Psychosomatics, 61(6), 632-644. Retrieved October 16, 2024, from https://doi.org/10.1016/j.psym.2020.03.007.

[186]Pregnant and Postpartum Birthing persons and Behavioral Health Integration. (n.d.). U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality. Retrieved July 17, 2024, from https://integrationacademy.ahrq.gov/products/topic-briefs/pregnant-postpartum-women.

[187]Pregnant and Postpartum Birthing persons and Behavioral Health Integration. (n.d.). U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality. Retrieved July 17, 2024, from https://integrationacademy.ahrq.gov/products/topic-briefs/pregnant-postpartum-women.

[188]Integrated Behavioral Health Academy at Denver Health. (2024). Denver Health. Retrieved July 17, 2024, from https://www.denverhealth.org/for-professionals/clinical-specialties/behavioral-health/integrated-behavioral-health-academy.

[189]Mental Health Parity Laws. Office of the New York State Attorney General. (2024). Retrieved July 17, 2024, from https://ag.ny.gov/publications/mental-health-parity-laws.

[190]Mental Health and Substance Use Disorder Coverage. New York State Department of Financial Services (NYSDFS). (n.d.). Retrieved July 17, 2024, from https://www.dfs.ny.gov/consumers/health_insurance/new_york_health_insurance_policies__programs/mh_sud.

[191]Insurance Circular Letter No. 14 (2019). NYSDFS. (December 20, 2019). Retrieved July 17 2024, from https://www.dfs.ny.gov/industry_guidance/circular_letters/cl2019_14.

[192]Insurance Circular Letter No. 1 (2016). NYSDFS. (2016, April 25). Retrieved July 17, 2024, from https://www.dfs.ny.gov/industry_guidance/circular_letters/cl2016_01.

[193]Chen, A., & Rohde, K. (2023, March 14). Private Insurance Coverage of Doula Care: A Growing Movement to Expand Access. National Health Law Program. Retrieved July 17, 2024, from https://healthlaw.org/private-insurance-coverage-of-doula-care-a-growing-movement-to-expand-access-2/.

[194]Lewis, C.F., Lekas, H-M., Pahl, K., Edwards, D., Floyd, J. MPH, Kamandali, V., and McGreggor, K. (2024). OMH Maternal Mental Health Workgroup Systematic Literature Review - Nathan Kline Institute for Psychiatric Research (NKI).

[195]The Policy Center for Maternal Mental Health. (2024, May). Maternal Mental Health State Report Card (2024) https://www.policycentermmh.org/state-report-cards.

[196]The Policy Center for Maternal Mental Health. (2024). IL Policy. Retrieved October 16, 2024, from https://policycentermmh.org/il-policy/.

[197]The Policy Center for Maternal Mental Health. (2024). NV Policy. Retrieved October 16, 2024, from https://policycentermmh.org/nv-policy/.

[198]The Policy Center for Maternal Mental Health. (2024). WA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/wa-policy/.

[199]The Policy Center for Maternal Mental Health. (2024, May). Maternal Mental Health State Report Card (2024). https://www.policycentermmh.org/state-report-cards.

[200]CPCQC. What We Do. (2025). Retrieved September 30, 2025 from https://cpcqc.org/what-we-do/.

[201]Utah Department of Health and Human Services.(n.d.). Utah Women & Newborns Quality Collaborative: Maternal Mental Health. Retrieved October 17, 2024, from https://mihp.utah.gov/uwnqc/maternal-mental-health.

[202]Washington State Department of Health. (n.d.). Washington State Perinatl Collaborative (WSPC). Retrieved October 17, 2024, from https://doh.wa.gov/you-and-your-family/womens-health/washington-state-perinatal-collaborative-wspc.

[203]Washington State Hospital Association. (n.d.). Perinatal Substance Use Disorder Learning Collaborative. Retrieved October 17, 2024, from https://www.wsha.org/perinatal-substance-use-disorder-learning-collaborative/.

[204]Washington State Department of Health. (n.d.). Center of Excellence for Perinatal Substance Use Certification. Retrieved October 16, 2024, from https://doh.wa.gov/public-health-provider-resources/healthcare-professions-and-facilities/centers-excellence-perinatal-substance-use/certification.

[205]MedStar Health. (2024). D.C. Safe Babies Safe Moms Program. Retrieved October 16, 2024, from https://www.medstarhealth.org/services/dc-safe-babies-safe-moms.

[206]Tennessee Department of Health. (n.d.). CHANT: About Community Health Access and Navigation in Tennessee. Retrieved October 16, 2024, from https://www.tn.gov/health/health-program-areas/fhw/chant/about-chant.html.

[207]State of New Jersey Department of Health. (2024, July 17). Mental Health Concerns for New Parents. Retrieved October 16, 2024, from https://www.nj.gov/health/fhs/maternalchild/mentalhealth/.

[208]The Policy Center for Maternal Mental Health. (2024). TX Policy. Retrieved October 16, 2024, from https://policycentermmh.org/tx-policy/.

[209]The Policy Center for Maternal Mental Health. (2024). KY Policy. Retrieved October 16, 2024, from https://policycentermmh.org/ky-policy/.

[210]The Policy Center for Maternal Mental Health. (2024). IL Policy. Retrieved October 16, 2024, from https://policycentermmh.org/il-policy/.

[211]The Policy Center for Maternal Mental Health. (2024). CA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/ca-policy/.

[212]The Policy Center for Maternal Mental Health. (2024). OK Policy. Retrieved October 16, 2024, from https://policycentermmh.org/ok-policy/.

[213]The Policy Center for Maternal Mental Health. (2024). CA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/ca-policy/.

[214]The Policy Center for Maternal Mental Health. (2024). LA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/la-policy/.

[215]The Policy Center for Maternal Mental Health. (2024). NV Policy. Retrieved October 16, 2024, from https://policycentermmh.org/nv-policy/.

[216]The Policy Center for Maternal Mental Health. (2024). WA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/wa-policy/.

[217]The Policy Center for Maternal Mental Health. (2024). MA Policy. Retrieved October 16, 2024, from https://policycentermmh.org/ma-policy/.

[218]California Legislative Information. (2022, September 28). SB-1207 Health care coverage: maternal and pandemic-related mental health conditions. (2021-2022). Retrieved October 16, 2024, from https://leginfo.legislature.ca.gov/.

[219]The Policy Center for Maternal Mental Health. (2024, May). Retrieved October 16, 2024, from Maternal Mental Health State Report Card (2024) https://www.policycentermmh.org/state-report-cards.

[220]Healthy New Moms: Maryland's Maternal Mental Health Campaign. Mental Health Association of Maryland. (2024). https://www.mhamd.org/what-we-do/outreach-and-education/healthy-new-moms/.

[221]New Moms: Maryland's Maternal Mental Health Campaign. Mental Health Association of Maryland. (2016). Healthy New Moms Campaign Accomplishments. Healthy. Retrieved July 17, 2024, from https://www.mhamd.org/wp-content/uploads/2019/09/HNM-Accomplishments-2016-FINAL.pdf

[222]Tough as a Mother: Stronger than Addiction. (2024). Retrieved July 17, 2024, from https://www.toughasamother.org/.