

# Perinatal Mental Health in Maine

January 2025

*A review of Maine's perinatal mental health data landscape.*

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## About This Report

Mental health conditions, including depression and anxiety, are common among pregnant and postpartum people. Mental health conditions can occur at any point in a person's life course, but the perinatal period is a time of heightened risk [1]. If left untreated, mental health conditions can have a profound impact on the overall health and wellbeing of an individual, her children, and her community. Mental health conditions are among the most common complications of childbirth experienced by birthing people in the US. They are also the leading cause of preventable pregnancy-related deaths in the US [1],[2]. Maine's Maternal, Fetal, and Infant Morality Review (MFIMR) panel determined that mental health challenges were contributing circumstances in 6 of the 9 pregnancy-associated deaths that occurred in 2021.

Addressing perinatal mental health conditions ensures better health outcomes for both birthing parents and children [3],[4],[5]. In Maine, several efforts are underway to raise awareness about perinatal mental health and expand resources for prevention, screening, and treatment. The following report brings together data from multiple sources, including reviews of pregnancy-associated deaths, to help health professionals, policy-makers, and the public understand the current landscape of perinatal mental health in Maine.

A note about language: While this report includes feminine terms and pronouns in reference to pregnant and postpartum people, the authors recognize and honor that pregnant and postpartum individuals have diverse gender identities.

# A Walk in Her Shoes: “Penny”

## An Illustrative Pregnancy-Related Mortality Journey Map

*This journey map is inspired by events in the lives of those with a pregnancy-associated death in Maine. The journey below draws on events from MFIMR case reviews and was developed in consultation with clinicians and community members to provide a representative and clinically accurate scenario. Details have been changed to protect privacy. In sharing this “journey,” we honor the lives of those who have died by giving voice to complex factors that impacted their pregnancy and postpartum experiences.*

**Penny** was a 31-year-old single mother to a three-year-old daughter who lived alone at the time of this unintended pregnancy. Penny’s mother lived nearby and cared for her granddaughter when available. Penny’s waitressing job did not provide insurance, so she applied for MaineCare during pregnancy. She struggled with PTSD, anxiety, and depression since her prior traumatic birth, which she managed with medication.

### 1. Prior Birth Trauma

Penny had PTSD following the difficult birth of her first child **three years prior**, which was complicated by pre-eclampsia (preE).

### 3. Restarted Antidepressants

**At 10 weeks** Penny had her first prenatal appointment. Her screening results indicated high anxiety, PTSD, and moderate depression. She also reported a history of intimate partner violence. Penny’s physician counseled her on the importance of continuing medication and prescribed new antidepressants known to be safe during pregnancy.

Penny’s doctor also suggested she begin mental health counseling due to her prior birth trauma.

### 4. Challenges Seeking Counseling

Penny called nine providers before finding a therapist that would accept MaineCare. They could not see her for four months.

### 2. Stopped Antidepressants

**At 6 weeks**, Penny tested positive on a home pregnancy test. She stopped taking antidepressants for fear of them harming her baby.

### 5. Managing PreE Risk

**At a 12-week** prenatal checkup, Penny was counseled by her doctor regarding her previous history of preE and discussed what gestational hypertension symptoms to call about. She was prescribed a baby aspirin to decrease risk of preE recurrence.

### Gestational hypertension

is defined as systolic blood pressure (BP) of 140 or higher and/or diastolic BP of 90 or higher at or beyond 20 weeks’ gestation among pregnant individuals with a previously normal BP. According to data from Maine birth certificates, 10.6% of resident births in 2022 occurred to a birthing person with gestational hypertension. Gestational hypertension can advance to Pre-eclampsia (preE).

### 7. Gestational Hypertension Diagnosis

**At her 32-week OB visit**, Penny had mildly elevated blood pressure (BP) readings and normal labs. She was diagnosed with gestational hypertension. Penny was counseled that she would need to be seen twice weekly until delivery.

Penny was scared that she would have another traumatic birth.

### 6. Positive Therapy Experience

Penny was finally able to see a mental health counselor **at 28 weeks**. Her therapist listened to her worries and helped her manage her anxiety about her upcoming birth.

## A Walk in Her Shoes

### An Illustrative Pregnancy-Related Mortality Journey Map, *continued*

#### 8. PreE with Severe Features Diagnosis

While at her **34 week appointment**, Penny was sent to the hospital for persistent severe range blood pressures. She was diagnosed with preE with severe features, and transferred to a hospital with a higher level of care 100 miles from home.

#### 9. Premature Delivery

Penny delivered a preterm baby, who was admitted to the NICU.

**On discharge**, Penny screened high for postpartum depression and received a new prescription for antidepressants.

#### 10. Temporary Housing

**After her discharge**, Penny wanted to stay close to her newborn while he was in the NICU. A social worker identified temporary housing for her.

#### 12. CradleMe Referral

Penny was referred to CradleME to access Maine's free home visiting programs. They called Penny to follow up but were unable to connect. They also sent a letter to her home, which she didn't receive.

#### 13. Missed Opportunities for Care

While juggling care for her newborn in the NICU, Penny missed her hypertension follow-up appointment **4 days after the delivery**, and a previously scheduled appointment with her mental health counselor.

She was also unable to get to a new pharmacy to pick up her updated antidepressant prescription.

#### 11. Lack of Support Systems

Penny's mom was able to watch her 3-year-old **while she was in temporary housing**. Penny felt sadness and guilt being away from her daughter, stress about the loss of income, and loneliness from being away from her support systems at home.

#### 14. Post Birth Warning Signs

**While her baby was in the NICU**, Penny struggled with persistent headaches and anxiety. She assumed her headaches were because she was tired and stressed. Because of her focus on her baby's health and lack of local support systems, Penny didn't seek treatment for herself.

#### 15. Postpartum PreE Event

**At 4 weeks postpartum**, while still living in temporary housing, Penny called her mom to complain about a painful headache. Penny became non-coherent over the phone. Her mom called 911.

#### 16. Death

**When EMTs arrived**, they found Penny dead. Official cause of death was cerebral hemorrhage as a consequence of severe postpartum preE.

#### Pre-eclampsia (PreE)

is a life-threatening condition that develops in pregnant and postpartum people. Pregnant people who experience PreE have elevated BPs and many have protein in their urine. Other symptoms include headaches, swelling of the extremities, and/or blurred vision. PreE can lead to organ damage, seizures, and stroke, as well as preterm birth and placental abruption.

# A Walk in Her Shoes: “Penny”

## MFIMR Considerations



The Maternal, Fetal, and Infant Mortality Review (MFIMR) Panel considers many factors during case reviews, like Penny's. Below are some of the questions discussed during review meetings.

### What do you think?



**Was Penny's death preventable?**

**Was there a chance to alter the outcome?**

**Did mental health conditions contribute to Penny's death?**

**If yes, which mental health-related factors contributed to Penny's death?**

**If there was at least some chance that Penny's death could have been averted, what were the specific and feasible actions that, if implemented or altered, might have changed the course of events?**

The following page describes mental health-related recommendations the MFIMR panel developed in response to reviewing maternal, fetal, and infant deaths.

# Recommendations to Prevent Maternal Deaths

## Based on MFIMR panel proceedings

*The following mental-health related recommendations from Maine's MFIMR panel highlight system-level changes that may prevent similar deaths in the future.*



**MH-1 Universal mental health screening** should be part of comprehensive OB care done at the first prenatal visit, towards the end of pregnancy, and postpartum by the prenatal care provider, using a validated tool.



**MH-2** Prenatal care providers and primary care providers to create a **mental health safety plan for high-risk patients** including a "warm handoff" to an integrated mental health clinician, external mental health clinician, or telehealth partner. Safety plan may also include involvement of trusted support people.



**MH-3** Policymakers to support increasing **culturally and linguistically appropriate integrated mental health services** across perinatal and primary care settings, as well as infrastructure that supports better and more expedient access to mental health services including increasing access to telehealth and immediately or urgently available providers in case of emergency.



**MH-4** Statewide organizations to assess ability to implement a **maternal health psychiatric assessment line**.



**MH-5** Statewide organizations to **assess current Maine helplines for postpartum mental health support** and analyze results of pilot projects in this space.



**MH-6** Public health campaign to **promote national maternal mental health hotlines**.



**MH-7** Psychiatric, prenatal care, and primary care providers who care for women of childbearing age who take medications to treat mental health should **talk with patients about safety of mental health medications and risk/benefit ratios in the event of pregnancy**. Enhanced education for these providers about prescribing psychiatric medications in pregnancy, particularly as it pertains to SUD.



**MH-8** Community level providers to **promote suicidality awareness and prevention**, especially among pregnant and recently pregnant people (e.g. Mental Health First Aid).

# Maternal Mortality & Mental Health Challenges

## Experiences of Mainers with a pregnancy-associated death in 2021

Mental health issues were identified as contributing circumstances in 6 of the 9 pregnancy-associated deaths among Mainers in 2021. These individuals all experienced mental health related challenges prior to, during, and after their pregnancies. Here are some of their stories\*:

### Prior traumatic experiences



**Prior trauma from childbirth, or ongoing grief from a miscarriage, may exacerbate mental health struggles and coping mechanisms during subsequent pregnancies.**

**Sarah** developed PTSD following her first birth.

**Joann** was grieving a miscarriage before her subsequent pregnancy.

### Pre-pregnancy mental health challenges



**Mental health issues prior to pregnancy are common.**

**Mary** was hospitalized twice for suicide attempts during her teens.

Prior to pregnancy, **Jane** had a PHQ-9 score of 17 and a GAD-7 score of 17, showing moderately severe depression and severe anxiety.

### Mental Healthcare during pregnancy



**Managing mental health diagnoses during pregnancy requires careful attention to avoid exacerbating mental health issues.**

**Lisa** was diagnosed with bipolar disorder during her pregnancy.

### Need for on-going support



**Persistent mental health challenges require ongoing support and intervention.**

**Susan** reported feeling overwhelmed and anxious during much of her pregnancy.

At her 6-week postpartum visit, **Maxine** expressed anxiety about her schedule, was short-tempered with family, and showed signs of postpartum anxiety and depression.

\*Data source: Maine's MFIMR panel. Stories and names have been altered to preserve confidentiality, however all are based on Maine decedents from 2021.



# Maternal Mortality & Mental Health Treatment

## Experiences of Mainers with a pregnancy-associated death in 2021

Mental health treatment-seeking behaviors varied among Mainers who experienced a pregnancy-associated death in 2021. Here are some of their stories\*:

### Uncertain mental health diagnosis



**Uncertainty about a diagnosis can delay effective treatment, and prolong mental health struggles.**

**Stephanie** wondered if she might have bipolar disorder. She wanted a clear diagnosis so she could receive appropriate treatment.

**June** was not given SSRIs until her diagnosis could be clarified by a therapist.

### Medication concerns or avoidance



**Avoiding medication due to concerns about potential risks to the baby can lead to untreated mental health conditions, which may adversely affect both maternal and fetal health. Balanced risk assessments and alternative treatment options are needed.**

**Nancy** did not want to take any medication for her mental health condition for fear that it could pose a risk to her infant.

### Benefits of treatment



**Regular therapy and effective medication can lead to significant improvements in mental health symptoms.**

**Heidi** talked to a therapist weekly.

**Bridget's** PHQ-9 score improved after she started on her medication.

### Discontinuing medication



**Discontinuing certain medications based on pregnancy-related guidelines can be essential for fetal safety but may also lead to withdrawal symptoms or exacerbation of a mental health condition.**

**Tricia's** OB told her to stop taking clonazepam during her 3rd trimester.

\*Data source: Maine's MFIMR panel. Stories and names have been altered to preserve confidentiality, however all are based on Maine decedents from 2021.

# Learning from Lived Experience

Perinatal mental health needs among **New Mainer** birthing people  
*Findings from Maine's Perinatal Needs Assessment*

In 2022, Maine DHHS contracted with **Market Decisions Research (MDR)** to conduct a perinatal needs assessment. The needs assessment process included focus groups and interviews held with pregnant and parenting people living in **rural** areas of Maine or who are **new to the United States (New Mainers)**. Perinatal mental health was one of many topics addressed. Participants were asked “How was your mental health/anxiety/mood during your pregnancy?” in focus groups and interviews. Key findings and representative quotes are included below. The full report is available via the QR code on page 15.

## New Mainers experience unique stressors during pregnancy and postpartum.

**MDR Finding:** “The term ‘mental health’ was not well received by many focus group participants. Participants instead shared stories related to their overall mood during their prenatal journey. Religion was also very important for some participants when it came to their mental Wellbeing.” (p.24)



*“As a first-time mother, it was hard for me to understand why is the baby crying, is it hungry? It was just very exhausting...for the Africans, you always have your mom and your sister with you, you have a support system. Here, I had no support system. It was just me and my husband, and he would get home and tired and he needed to rest, and it was very hard for me.” - MDR New Mainer focus group participant*

## Social and professional support is critical for New Mainer pregnant and parenting people.

*“At first I had full access to that due to the insurance because after the baby is born, you can keep the full MaineCare for about a year... I think I was referred to [REDACTED] for mental health and I did so until [REDACTED] turned one...After that I lost some of my insurance. I'm only keeping the emergency services insurance. I haven't been able to follow up with that due to the cost.” - MDR New Mainer focus group participant*



**MDR Finding:** “Some participants, those with strong familial support, didn't feel the need for mental health services. Others found positive outcomes with prescribed medication and professional assistance during pregnancy. A few participants faced challenges accessing services due to insurance limitations and costs after the baby's first year.” (p.25)



### MFIMR Recommendation MH-3: Access to Mental Healthcare

Policymakers to support increasing culturally and linguistically appropriate integrated mental health services across perinatal and primary care settings, as well as infrastructure that supports better and more expedient access to mental health services including increasing access to telehealth and immediately or urgently available providers in case of emergency.



# Learning from Lived Experience

## Perinatal mental health needs among **rural** birthing people

Findings from Maine's Perinatal Needs Assessment

**High quality care is crucial, regardless of when in the perinatal period mental health challenges present.**

**MDR Finding:** “Rural ‘participants’ mood and mental health varied on a personal level. Some already had a history of mental health struggles, and others felt their mood was stable. Many participants felt concern about their upcoming delivery during the height of the COVID-19 pandemic. Above all, participants reported their biggest struggles during the postpartum period.” (p. 53)



*The first time I wanted to get pregnant, which was three years before I actually did, I was like “Okay, I’m ready to do this.” And I went off all of my medications and I had what my husband calls my quarter life crisis, and I just completely spun out and I was like, “I can’t.” I had convinced myself that I can’t be a mom because I’m not mentally able to do it. I’m not physically built to be able to do it, which was really crappy to feel like that (...) “If you can’t be off of antidepressants for nine months, then you shouldn’t be a parent,” kind of thing. That’s what it felt like to me. Once I got the right care team and I had people who were up on research and were listening, that was a lot nicer.*

**Access to professionals with expertise in perinatal mental health is challenging in rural areas.**

*It wasn’t a cognitive behavioral thing that was going on. It was lack of sleep and not having support. I called probably 20 different psychologist offices across the entire state. I was willing to drive up north. I was willing to drive two hours to [REDACTED] if I had to. And I got to the point where I ended up utilizing the...Your insurance companies have the online telehealth and psychology is one of them. And that’s what they told me that I could utilize if I really needed help now. And those physicians were not able to prescribe the level of medication that was needed in my case because it’s a telehealth.*



**MDR finding:** “Overall, participants struggled to access appropriate mental health resources that addressed the root causes of their problems (e.g. lack of sleep and social support). Participants reported experiencing long wait times and navigating barriers to accessing proper medication.” (p. 54)



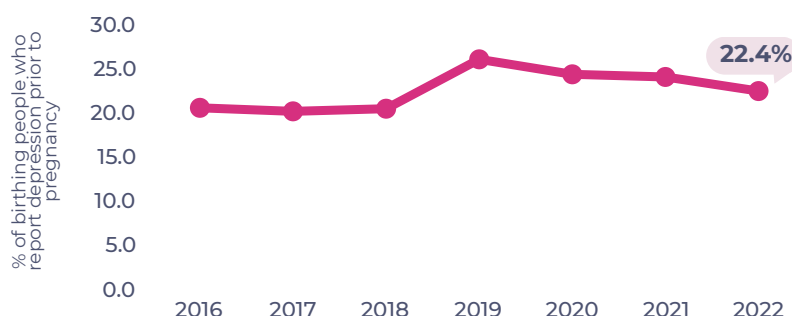
### **MFIMR Recommendation MH-8: Raising Awareness of Perinatal Mental Health**

MH-8 Community level providers to promote suicidality awareness and prevention, especially among pregnant and recently pregnant people (e.g. Mental Health First Aid).

# Perinatal Mental Health: Statewide Prevalence and Trends

**Depression and anxiety** are common in the perinatal period, and the prevalence appears to be increasing. Left untreated, these conditions and others can contribute to adverse health outcomes for the birthing person as well as their infants and other family members [5],[6]. Experiencing depression prior to pregnancy is a strong risk factor for postpartum depression [7]. Mental health conditions are a leading cause of preventable pregnancy-related mortality [2].

**More than 1 in 5** (22.4%) people with a recent live birth report they experienced symptoms of **depression** in the **3 months prior to pregnancy**. (PRAMS)



**Mental health conditions** were determined to be **contributing circumstances** in **6** of Maine's **9** **pregnancy-associated deaths** in 2021.

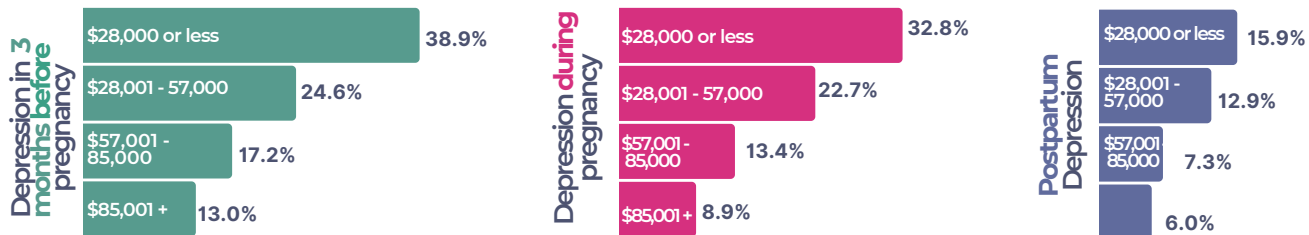
Indicator	Maine current	US current	Compare	Data source
% of birthing persons who report <b>depression</b> symptoms in the <b>three months prior</b> to pregnancy	<b>22.4%</b> (18.8-26.5) <b>2022</b>	<b>16.6%</b> (16.0-17.2) <b>2021</b>	⚠️	Pregnancy Risk Assessment & Monitoring System (PRAMS)
% of birthing persons who report <b>depression</b> symptoms <b>during</b> their most recent <b>pregnancy</b>	<b>16.3%</b> (13.2-20.0) <b>2022</b>	<b>16.5%</b> (15.8-17.1) <b>2021</b>	=	PRAMS
% of birthing persons who report <b>postpartum depression</b> symptoms following their most recent birth	<b>9.4%</b> (7.2-12.3) <b>2022</b>	<b>12.7%</b> (12.2-13.3) <b>2021</b>	=	PRAMS
% of birthing persons who report <b>postpartum anxiety</b> symptoms following their most recent birth	<b>18.1%</b> (14.8 - 22.1) <b>2022</b>	<b>N/A</b>	<b>N/A</b>	PRAMS ( 2022 SDOH supplement)
% of in-hospital deliveries occurring to birthing persons with a <b>perinatal mental health diagnosis</b>	<b>28.0%</b> (27.2-28.9) <b>2021</b>	<b>N/A</b>	<b>N/A</b>	Maine Health Data Organization's Inpatient Encounters
% of <b>young adult women (18-24)</b> who report they have <b>ever</b> been told they have a <b>depressive disorder</b> by a medical professional	<b>48.5%</b> (39.5 - 57.5) <b>2022</b>	<b>34.2%</b> (32.7 - 35.6) <b>2022</b>	⚠️	Behavior Risk Factor Surveillance System (BRFSS)
% of <b>adult women (25-44)</b> who report they have <b>ever</b> been told they have a <b>depressive disorder</b> by a medical professional	<b>42.4%</b> (38.1-46.8) <b>2022</b>	<b>28.9%</b> (28.2 - 29.6) <b>2022</b>	⚠️	Behavior Risk Factor Surveillance System (BRFSS)
Rate of <b>suicide deaths</b> among <b>females age 15-44</b> per 100,000 population	<b>10.0</b> (6.6-15.1) <b>2021</b>	<b>7.0</b> (6.9-7.1) <b>2021</b>	=	Maine CDC DRVS/ US CDC NVSS 10

# Perinatal Mental Health: Inequities in Perinatal Depression Prevalence



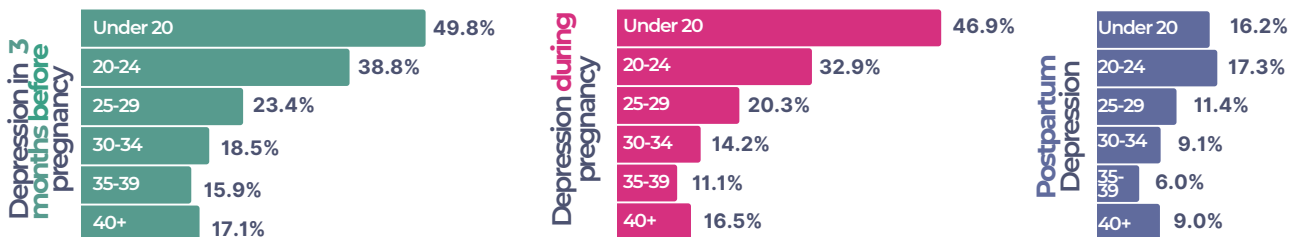
## INCOME

Birthing people **with lower incomes** experience significantly higher levels of depression **before, during** and **after** pregnancy compared to those with higher incomes. (PRAMS, 2018-2022).



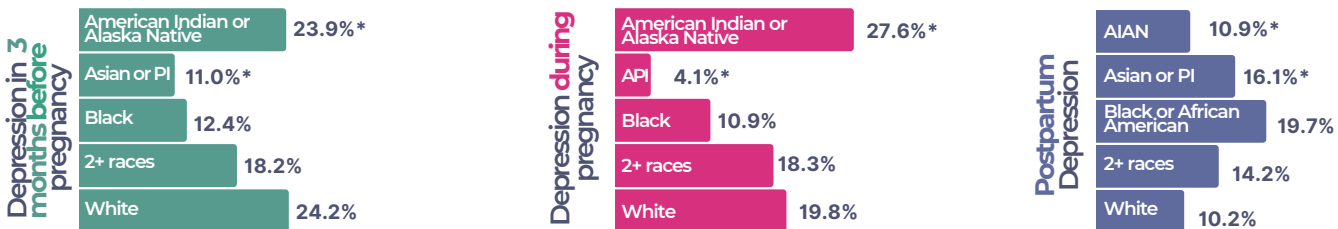
## AGE

Birthing people **under 25 years old** experience significantly higher levels of depression **before, during** and **after** pregnancy compared to older birthing people. Nearly **half** of birthing people **under 20 years old** report **depression in the 3 months prior to pregnancy** (PRAMS, 2018-2022).



## RACE

**White** birthing people in Maine experience significantly higher rates of depression **before** and **during** pregnancy; **Black or African-American** birthing people experienced significantly higher rates of **postpartum depression** (PRAMS, 2018-2022).



\*Please interpret with caution; the small sample size indicates statistical unreliability.

### How Disparities in SDOH Drive Inequities in Perinatal Mental Health

Disparities in perinatal mental health are, at least in part, driven by inequities in the social/structural determinants of health (SDOH). For example, neighborhood disadvantage, which includes unsafe built environments; lack of access to high-quality food; and limited access to healthcare, education, and employment, is associated with a higher prevalence of postpartum depression (PPD) in the US. Differences in the SDOH may help explain inequities in PPD among white vs. black birthing people. SDOH, such as neighborhood disadvantage, are driven by systemic forces, including economic policies, social policies, and political systems, all of which are impacted by factors such as structural racism. [8] 11

# Perinatal Mental Health: Social Determinates and Access to Care

**Social Determinants of Health (SDOH)** are conditions within the environments in which people are born, live, work, learn, and age, such as economic stability; neighborhood safety; and access to high-quality food resources, educational opportunities, and healthcare services, including **mental health services**. SDOH affect the physical health, **mental health**, and quality of life of individuals, families and communities. SDOH are shaped by many systemic forces, including economic policies, social policies, and political systems. Structural racism and other forms of systemic discrimination underlie inequities in the SDOH.

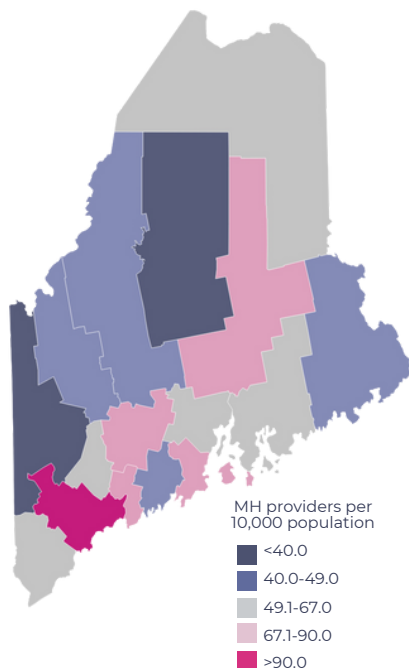


Maine birthing persons who experienced **food insecurity** in the 12 months prior the pregnancy were **3 times more likely** to experience **depression during pregnancy**. (PRAMS, 2018-2022)



Maine birthing persons who experienced **4 or more stressful life events**, such as housing insecurity, difficulty paying bills, or intimate partner relational stress in the year before pregnancy were **3 times more likely** to experience **depression during pregnancy**. (PRAMS, 2018-2022)

Mental Healthcare resources are not equitably distributed across Maine, and **rural areas** are particularly challenged. In 2023, there were **92 licensed mental Healthcare providers** per 10,000 people in **Cumberland County**, vs **31** in **Piscataquis County**.



Data source: Maine Department of Professional & Financial Regulation, 2023

In 2022, **1 in 4** Maine birthing people who needed mental Healthcare experienced one or more **barriers accessing care**. Barriers included lack of time, uncertainty about resources, and stigma. (PRAMS, 2022)

	<b>No time</b> to access care	<b>40.4%</b> (27.2 - 55.2)
	Did not know <b>where</b> to access care	<b>28.7%</b> (17.7 - 43.0)
	Concerned might have to take <b>medication</b>	<b>24.7%</b> (13.3 - 41.4)
	Did not want <b>people to find out</b> getting care	<b>16.8%</b> (8.2 - 31.4)
	Could not <b>afford</b> care	<b>16.3%</b> (8.3 - 29.5)
	No <b>transportation</b> , care was too far away, or service had inconvenient hours	<b>12.3%</b> (4.6 - 28.9)

Data Source: Maine PRAMS



## MFIMR Recommendation MH-3: Access to Mental Healthcare

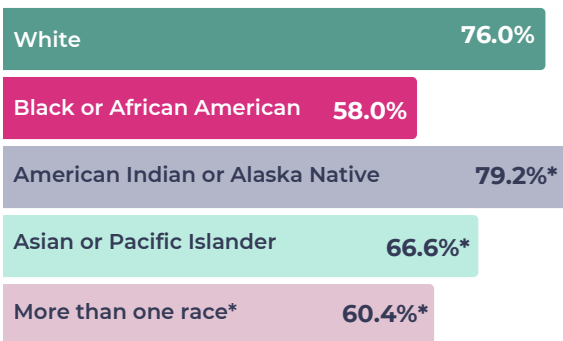
Policymakers to support increasing culturally and linguistically appropriate integrated mental health services across perinatal and primary care settings, as well as infrastructure that supports better and more expedient access to mental health services including increasing access to telehealth and immediately or urgently available providers in case of emergency.

# Perinatal Mental Health: Screening and Treatment

## Why Screen?

The U.S. Preventive Service Task Force recommends screening for both **depression** and **anxiety** among *all adults*, including pregnant and postpartum people. Screening is a crucial step in connecting individuals who are interested in becoming pregnant, currently pregnant, or postpartum to treatment. Nationally, less than 15% of women receive treatment for depression. [9] Untreated psychological distress in pregnant and birthing people can have long-term adverse effects on the person's life course, and on development and Wellbeing of their children [6].

**Black or African-American** birthing people are **screened for depression in the 12 months prior to pregnancy significantly less often** than **White** birthing parents (PRAMS, 2018-2022).



\*Please interpret with caution; the small sample size indicates statistical unreliability.

## Indicator

Maine  
2022

% of birthing persons report they were **screened for depression** at a healthcare visit in the **12 months prior to pregnancy**.

**77.8%**  
(73.4-81.6)

% of birthing persons who report they were **screened for depression** during their **prenatal care**

**91.6%**  
(89.0-93.7)

% of birthing persons who report they were **screened for depression** during a **postpartum checkup**

**94.5%**  
(69.6-78.0)

% of birthing persons who report they **needed mental healthcare** in the **postpartum period**

**33.0%**  
(28.8 - 37.5)

% of birthing people who report they were **able to access mental health services**, among those who needed them.

**73.5%**  
(65.9 - 79.9)

Data Source: Maine PRAMS



birthing people in Maine who **experience depression before pregnancy later develop postpartum depression** (PRAMS, 2018-2022). Screening prior to pregnancy can help connect individuals to appropriate support before becoming pregnant, which in turn may help improve mental health during and after pregnancy.



## MFIMR Recommendation MH-4: Access to Specialist Consultation

Statewide organizations to assess ability to implement a maternal health psychiatric assessment line.

## Maternal, Fetal, and Infant Mortality Review (MFIMR)

**Description:** The Maine CDC Maternal, Fetal, and Infant Mortality Review (MFIMR) Panel is a multidisciplinary group of Healthcare and social service providers, public health officials, and community members with lived experience in maternal, fetal, and infant health and wellbeing who review de-identified maternal, fetal, and infant death cases in Maine. For the purposes of this report, “maternal deaths” include all deaths occurring among individuals who were pregnant at the time of death or who died within 1 year of giving birth or experiencing a pregnancy loss. The Panel reviews information on maternal deaths obtained from vital records, healthcare records, and informant interviews. Their mission is to identify factors that contribute to maternal, fetal, and infant mortality; to identify the strengths and weaknesses of the current perinatal care delivery system; and to make recommendations aimed at preventing similar deaths. All data gathered and produced in the review process are housed in the Maternal Mortality Review Information Application (MMRIA), a data system designed by US CDC and partners to facilitate maternal mortality review functions.

**How we use the data:** MFIMR panel recommendations are included throughout the report to highlight potential action steps. This report also includes de-identified results of thematic analyses of case narratives created for Panel review, which were used to create a composite case described in the Journey Map, as well as thematic “stories”. Additional quantitative data detailing the results of case reviews are also presented in this report.

## Pregnancy Risk Assessment Monitoring System (PRAMS)

**Description:** PRAMS is a population health surveillance system administered jointly by the US CDC and Maine CDC Data, Research, and Vital Statistics (DRVS). Each month 100-130 Maine residents who recently gave birth are randomly selected from Maine’s birth certificate registry and are sent a confidential questionnaire that asks about their pregnancy and birth related experiences. Data collected by PRAMS are used by public health officials, researchers, and community organizations to help identify health disparities, identify public health priorities, and monitor the health of birthing people and infants. Maine PRAMS has a small sample size: about 1,300-1,500 people are selected to participate each year and about 50%-60% of those selected respond. The survey is currently available in English and Spanish only. The U.S. CDC weights PRAMS data to be representative of Maine’s overall birthing population; however, Maine’s small sample size can impact the reliability of data on rare events and/or when data are stratified by certain demographic characteristics, such as race and ethnicity. In 2022, Maine added a short-term supplemental survey to the standard PRAMS survey to collect data on the social determinants of health.

**How we use the data:** The PRAMS survey includes questions about depression before, during, and after pregnancy, among many others. PRAMS data helps us understand the experiences of Mainers during and after pregnancy. Because many of the same questions have been included on Maine’s survey for multiple years and are asked on other participating states’ surveys, we can also look at how experiences like postpartum depression change over time and how Maine compares to other states and the US overall.



## Maine Health Data Organization's Hospital Inpatient Data (MHDO-IP)

**Description:** The MHDO collects and maintains hospital inpatient encounter data. These data are submitted to MHDO by all Maine hospitals per the terms and conditions in 90 590 Chapter 241, Uniform Reporting System for Hospital Inpatient Data Sets and Hospital Outpatient Data Sets. Data elements include diagnoses, procedures performed, payer, hospital or clinic code, DRG, patient characteristics, and geographical data.

**How we use the data:** Inpatient hospital encounters data allows analysts to assess the prevalence of mental health diagnoses among individuals delivering in Maine hospitals. Because inpatient hospital encounters data are collected on an on-going basis, they can be used to track trends over time.

## Behavioral Risk Factor Surveillance System (BRFSS)

**Description:** The BRFSS is an on-going telephone health survey system, which tracks health conditions and risk behaviors throughout the United States and its territories. Since 1987, Maine BRFSS has provided state-specific information about health issues such as asthma, diabetes, Healthcare access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use, and mental health. Federal, state, and local health officials, and researchers use this information to track health risks, identify emerging programs, prevent disease, and improve treatment. Each year over 10,850 adult non-institutionalized residents of Maine are called to participate in the BRFSS.

**How we use the data:** BRFSS data help us understand the mental health-related experiences of all Mainers, some of whom have been, or may go on to become pregnant.

## Maine Perinatal Health Disparities Needs Assessment

**Description:** In 2022-2023, The Maine Center for Disease Control and Prevention contracted with Market Decisions Research to provide: A qualitative assessment that summarizes results of focus groups and interviews held with both rural and Black, Indigenous, and People of Color (BIPOC) Maine pregnant or parenting people; a Perinatal Health Indicators Quantitative Overview that compiles secondary data for various perinatal health indicators; a review of Workforce Capacity, which documents the landscape of the perinatal workforce in Maine; and an outline of the perinatal community resources across the state.

**How we use the data:** Key findings of the perinatal needs assessment report related to mental health are incorporated here. The full report may be accessed by scanning the code.



## Vital Records: Birth Certificate, Death Certificate, Fetal Death Certificate

**Description:** The Division of Data, Research, and Vital Statistics collects and maintains records of births, deaths, fetal deaths, abortions, miscarriages, acknowledgement of parentage, court determinations, and adoptions. The program also estimates the population of each town in the state. Maine death certificates contain information on decedent demographics, pregnancy status at death, cause of death, and manner of death (including if the death was due to suicide).

**How we use the data:** Pregnancy-associated deaths are identified by the Maine CDC using death certificate, birth certificate, and fetal death certificate data. Vital records data include information, such as cause of death, that assist in identifying deaths in which mental health may have been a contributing factor.

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## Endnotes

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