



## **Mental Health and Substance Use Disorder in Maternal Health, Montana, 2020 - 2022**

### **Introduction:**

Maternal health is defined as women's health and well-being during pregnancy, childbirth, and postpartum (after childbirth).<sup>1</sup> The maternal health conditions that attribute to or complicate pregnancy and childbirth, and have a negative impact on the woman's well-being or functioning are also known as maternal morbidity.<sup>2</sup> While the true impact of maternal morbidity is unknown, several of these complications can be related to maternal mental health.

Two common maternal mental health complications include postpartum depression and anxiety, which impact 1 in 8 people.<sup>3</sup> Other maternal mental health complications include, but are not limited to, maternal/perinatal obsessive-compulsive disorder, bipolar disorders, postpartum psychosis, traumatic birth and childbirth, post-traumatic stress disorder, and substance use disorders (SUD).<sup>4</sup>

This report will focus on multiple areas of maternal mental health, including specific Montana trends, maternal mental health-related emergency department visits and hospitalizations, Medicaid claims, and mental health-related maternal deaths. It will cover findings from the years 2020 through 2022.

### **Demographics of Montana in Relation to Maternal Health:**

Montana is a large rural state with a relatively small population of just over 1.1 million as of 2023. Of the 1.1 million people, just over 200,000 are women of childbearing age (between 15 and 44 years old), according to the 2023 American Community Survey. Of those 200,000 women of childbearing age, an estimated 10,000 are pregnant now in the state of Montana.<sup>5</sup>

The people living in Montana's rural areas have increased difficulties accessing mental health care. About 44% of Montana's population lives in rural areas.<sup>6</sup> Living in rural areas can cause difficulties seeking mental health care. Of the 20 counties/combined counties with a Health Professional Shortage Area (HPSA) score for mental health service providers, seven had a score of 18 or more, indicating high need. These areas include Ravalli, Sanders, Lincoln, Butte-Silver Bow, and Big Horn County, as well as areas

### **Fast Facts**

- **Almost 20%** of Montana Mothers report experiencing depression during pregnancy
- Substance use disorder contributes to **41%** of maternal mental health hospital stays
- **Anxiety, phobias, adjustment disorder and PTSD** were the most common types of maternal mental health visits for Montana Medicaid



in Eastern Montana and North-Central Montana, which were combined areas to meet the scoring criteria.<sup>7</sup>

Montana has a high rate of both mental health disorders and suicide. At 29 deaths per 100,000 people, Montana has the highest suicide rate in the entire United States as of 2022.<sup>8</sup> Additionally, more than one-third (34%) of adults in Montana reported symptoms of anxiety and/or depressive disorder.<sup>9</sup> Nearly 13% of women in the United States with a recent live birth have reported experiencing depressive symptoms consistent with postpartum depression. The high rates of mental health disorders and the unique access issues in rural areas warrant a closer look at mental health for pregnant and postpartum women in Montana.<sup>10</sup>

### Maternal Mental Health in Montana:

The Montana Pregnancy Risk Assessment Monitoring System (PRAMS) is a survey of recent mothers about their experiences and behaviors before, during, and shortly after pregnancy. PRAMS aims to improve the health of Montana mothers and infants by collecting high-quality data that is representative of the Montana population. PRAMS asks respondents about their mental health and substance use during and after pregnancy as well as their interactions with health care professionals at different time periods. A total of 2,313 Montana mothers responded to PRAMS from 2020 to 2022, with an average weighted response rate of 54%.

<b>PRAMS RESPONDENTS WHO REPORTED DEPRESSION, 2020-2022</b>				
<b>Mental Health Condition</b>	<b>Montana % (95% CI)*</b>			<b>National Data** % (95% CI)*</b>
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2022</b>
<b>Depression Before Pregnancy<sup>a</sup></b>	23.0% (19.7-26.6)	23.1% (20.5-25.9)	21.8% (18.9-25.0)	17.0% (16.4 17.7)
<b>Depression During Pregnancy<sup>a</sup></b>	19.5% (16.5-23.0)	19.6% (17.3-22.2)	19.3% (16.6-22.4)	16.8% (16.1 17.4)
<b>Postpartum Depression<sup>b</sup></b>	14.9% (12.3-18.0)	13.2% (11.3-15.5)	12.5% (10.3-15.1)	12.6% (12.0 13.2)

\*Weighted percent (95% Confidence Interval). Weighted Percent is the estimated percent representing a population based on only a sample of the population. The weighted percent considers sampling, nonresponse, and noncoverage to calculate the estimate. Confidence Interval is a range of values that is likely to include the population value with a degree (i.e., 95%) of confidence.

\*\*National Data are estimates that include PRAMS sites that meet or exceed the CDC response rate threshold for the survey year.

a. Mothers who reported “yes” to experiencing depression before and during

b. Mothers who reported feeling down, depressed, or hopeless or having little interest or little pleasure in doing things usually enjoyed since birth

During that time, 19.5% of mothers reported they had depression during pregnancy and 13.5% reported they had depression postpartum which is higher than national



estimates. However, fewer mothers were screened for depression during their prenatal visit (87.8%) compared to those screened during their postpartum visit (93.9%). In addition, 96.5% of expectant mothers were screened for alcohol use during their prenatal visits but only 20.2% were screened for illicit drug use. Of those who were screened, 9.4% reported alcohol use during pregnancy, and 11.7% respondents reported illicit drug use.

<b>PRAMS RESPONDENTS WHO REPORTED SUBSTANCE USE, 2020-2022</b>						
<b>Substance Use</b>	<b>Montana % (95% CI)*</b>					
	<b>2020</b>		<b>2021</b>		<b>2022</b>	
	<b>Count</b>	<b>Weighted %</b>	<b>Count</b>	<b>Weighted %</b>	<b>Count</b>	<b>Weighted %</b>
<b>Alcohol Use During Pregnancy</b>	75	11.6% (9.2-14.5)	96	8.9% (7.3-10.9)	68	7.8% (6.1-10.0)
<b>Illicit Drug Use During Pregnancy</b>	108	12.7% (10.2- 15.7)	131	11.6% (9.6- 13.8)	124	11.0% (8.9- 13.6)

\*Weighted percent (95% Confidence Interval). Weighted Percent is the estimated percent representing a population based on only a sample of the population. The weighted percent considers sampling, nonresponse, and noncoverage to calculate the estimate. Confidence Interval is a range of values that is likely to include the population value with a degree (i.e., 95%) of confidence.

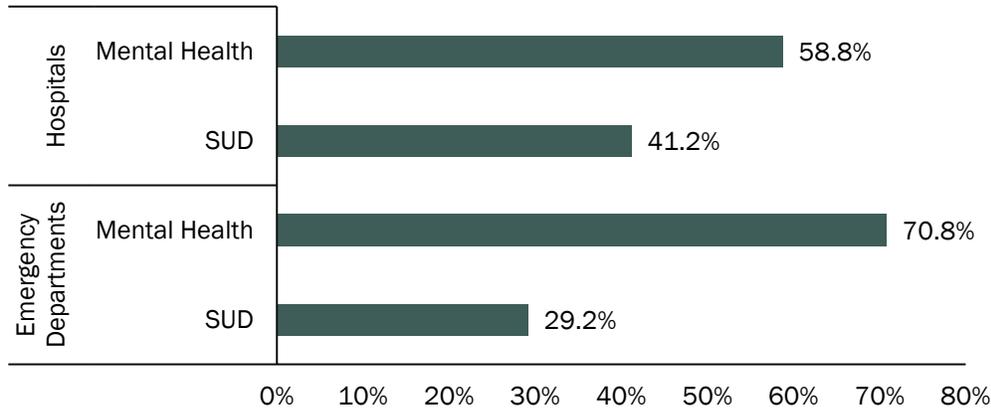
\*\*Illicit drug use during pregnancy is any use of marijuana or hash, synthetic marijuana, heroin, amphetamines, or cocaine during pregnancy

### **Maternal Mental Health ED/Hospital Visits:**

Maternal mental health visits accounted for a low percentage of overall emergency department visits and hospital stays in Montana. Maternal mental health visits were only 250 of the 273,000 total emergency department visits (0.1%) and 1,085 of the 63,000 total hospital stays (1.7%) for women of reproductive age. However, women of reproductive age did make up a larger percentage of exclusively mental health-related hospital stays at 12.7% of the recorded visits. In contrast, maternal mental health visits were only 1.3% of the mental health-related emergency department visits.

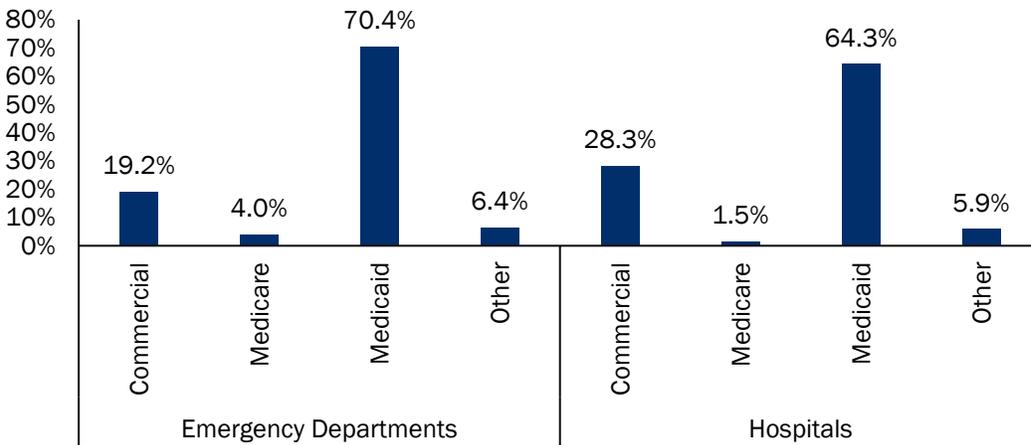
These visits for both the maternal mental health emergency department visits and hospital stays can be divided into Mental Health (for example, a postpartum depression medication fill) or SUD (methadone prescription, as an example) visits. Mental health visits were a higher percentage in emergency department visits at 70.8% compared to 58.8% of the hospital stays.

### TYPE OF MATERNAL MENTAL HEALTH EMERGENCY DEPARTMENT VISIT AND HOSPITAL STAY, MONTANA MHDD, 2020 - 2022



Medicaid was the primary payor for both emergency department visits (70.4%) and hospital stays (64.3%). Commercial/private insurance was also common for hospital stays as the primary payor for 28% of the visits.

### PRIMARY PAYOR OF MATERNAL MENTAL HEALTH EMERGENCY DEPARTMENT VISITS AND HOSPITAL STAYS, MONTANA MHDD, 2020 - 2022



While the length of stay for a maternal mental health visit was almost identical when compared to another mental health-related visit for a woman of reproductive age (6 hours and 7 hours, respectively), the length of stay for a maternal visit was significantly shorter for hospital stays. A maternal mental health visit length of stay averaged just over 2 days, while a mental health visit for women of reproductive age not associated with maternity was 6.5 days.



This difference in length of stay also impacts the charge of hospitalizations. Maternal mental health visits, while still expensive, are cheaper than non-maternal visits at \$12,000 compared to \$17,000. Emergency department visits are similar, with \$1,900 for a maternal visit and \$2,000 for a non-maternal visit.

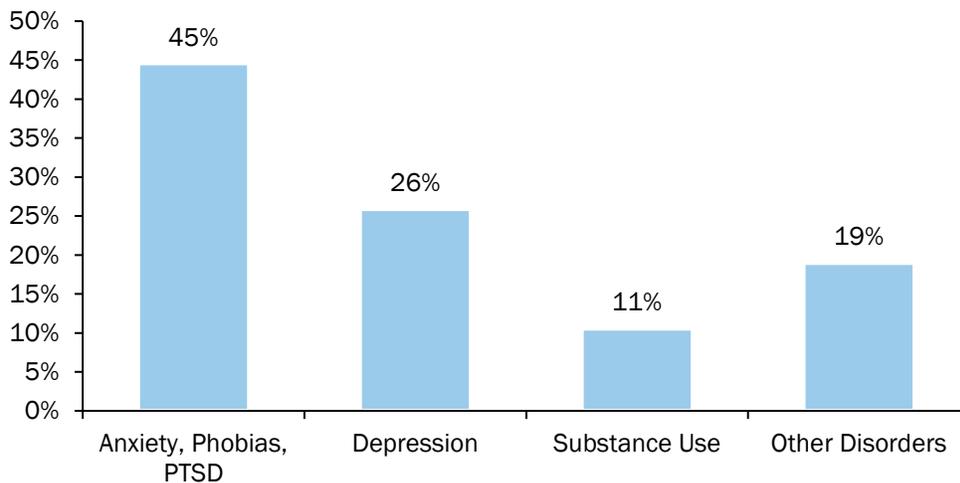
Demographic information related to race is unavailable due to the high amount of missing data in the variable. However, age-related information is available. The average age for both emergency department visits and hospital stays is 26 years old.

### Maternal Mental Health Medicaid Claims:

Medicaid data works on a medical claims basis. However, each doctor’s appointment or visit can have multiple claims. Therefore, the data was condensed to one claim per person per day to define “visit”. The data on visits were analyzed by the number of individual people receiving the claim. Each person can be in multiple categories (such as having both a depression-related visit and a substance use disorder-related visit), but this method shows how many people are receiving each type of care. This eliminates outliers, such as a daily claim for methadone prescriptions.

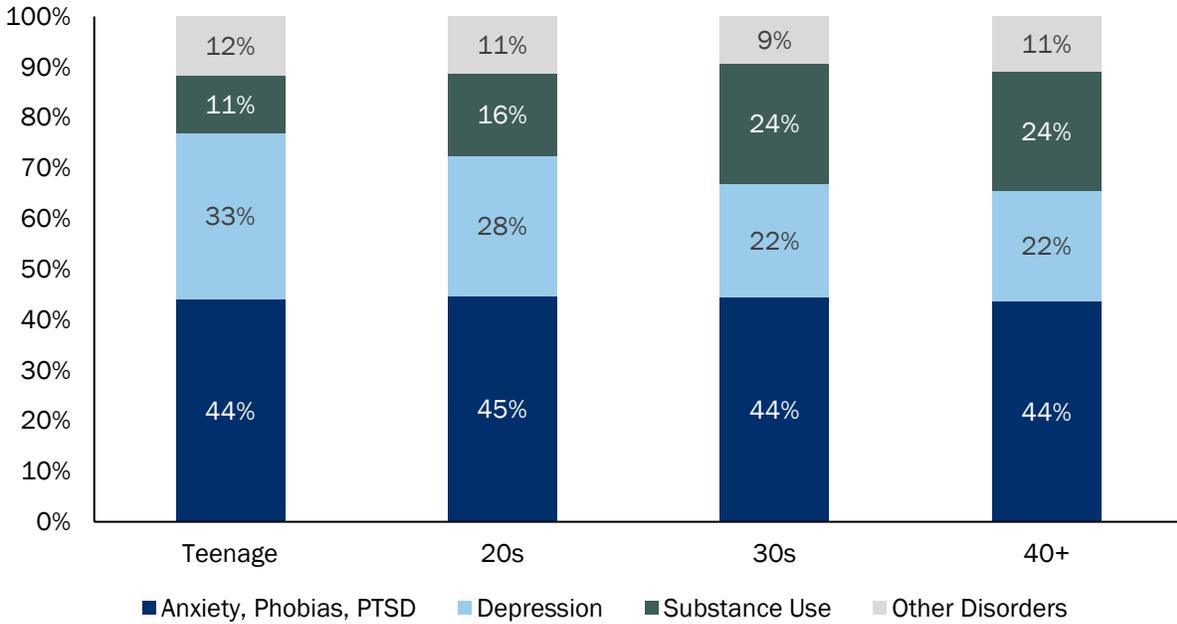
The most common type of maternal mental health claim was for anxiety, phobias, PTSD, or adjustment disorder at 2,405 people or 45% of the total. The next most common was depression affecting 1,396 people (26% of the total), SUD affected 569 people (11%), and other mental health disorders affected 1,023 (19%).

TYPE OF MATERNAL MENTAL HEALTH VISITS, MONTANA MEDICAID, 2020 - 2022



Anxiety, phobia, PTSD, and adjustment disorders were the most common group of diagnoses across different age demographics, comprising about 45% of all the cases. However, people under 30 had higher percentages of depression (33% for teenagers and 28% for 20-year-olds), while those 30 and older had higher percentages of substance use (24% for 30s and 40s).

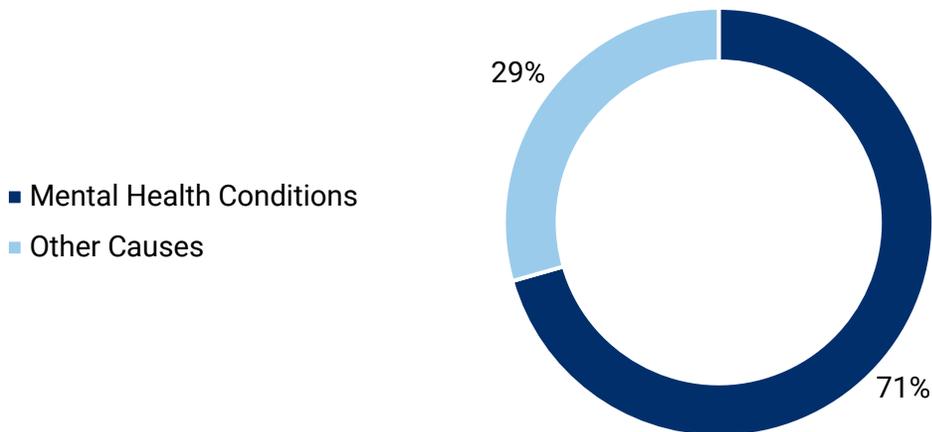
### TYPE OF MATERNAL MENTAL HEALTH VISITS BY AGE, MONTANA MEDICAID, 2020 - 2022



#### Maternal Mental Health-Related Mortality:

From 2020 through 2022, there were sixteen pregnancy-related deaths in Montana. Of those deaths, more than 70% were due to mental health conditions, including SUD.

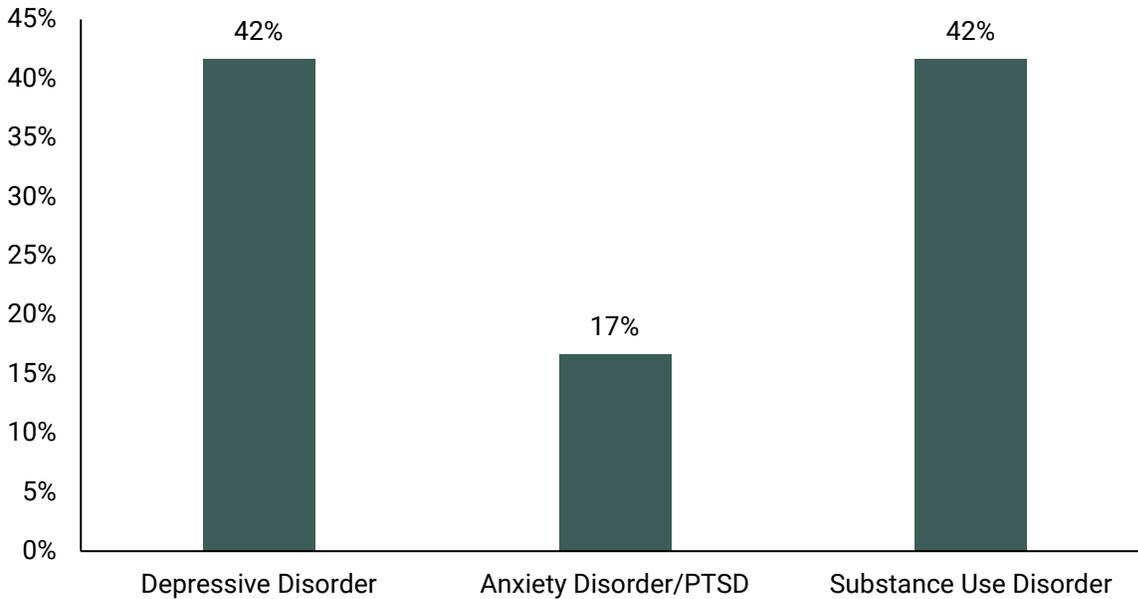
### UNDERLYING CAUSES OF PREGNANCY-RELATED DEATHS IN MONTANA, MMRIA, 2020- 2022



Both depressive disorder and SUD had more than 40% of mental health-related deaths. The remaining 17% were due to anxiety disorder or PTSD.

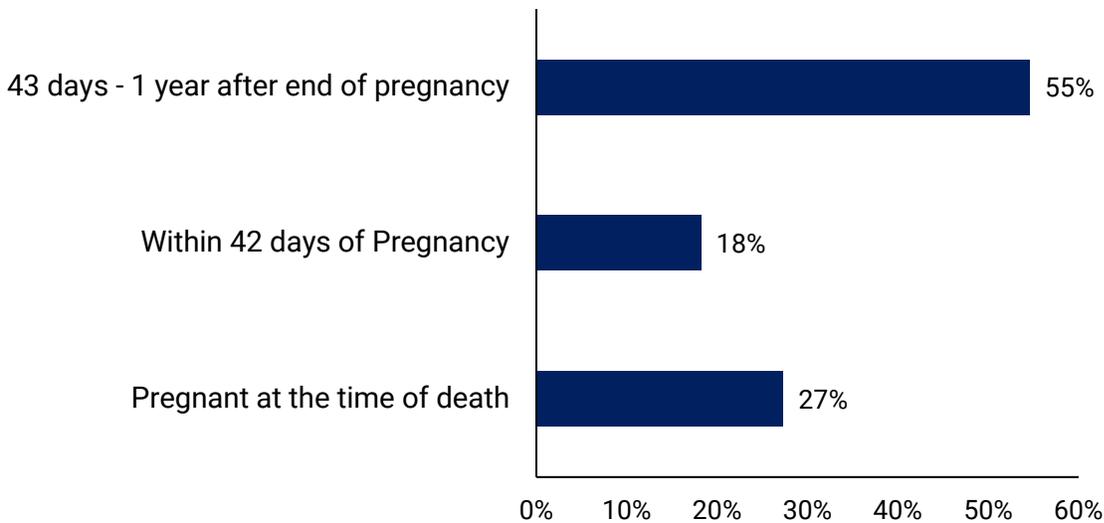


### CAUSE OF DEATH FOR MENTAL HEALTH PREGNANCY-RELATED DEATHS IN MONTANA, MMRIA, 2020 - 2022



The majority (73%) of pregnancy-related mental health deaths occurred in the postpartum period, with more than half of those (55%) happening greater than six weeks postpartum. The remaining 27% of pregnancy-related deaths occurred during pregnancy.

### TIMING OF MENTAL HEALTH PREGNANCY-RELATED DEATHS IN MONTANA, MMRIA, 2020 - 2022





## **Moving Forward:**

Maternal mental health is an ongoing issue in the state of Montana. Further analysis over a longer period will need to be done to determine if there is any significant increase or decrease in trends. Furthermore, since this analysis was done using data from the years of the COVID-19 pandemic (2020 – 2022), this may impact the results due to changes in healthcare-seeking behavior at the time and changes in social interactions. While SUD made up just over 10% of maternal mental health Medicaid claims, it resulted in 41% of hospitalizations, 29% of emergency department visits, and 42% of mental health-related deaths. While the statistics are not directly comparable since the groups of people are not identical, it does show that SUD is a large portion of visits in serious health emergencies, such as hospital stays or deaths.

Montana had higher percentages of depression compared to the rest of the USA in all periods related to pregnancy, before, during, and after. Medicaid claims also show that over a quarter of maternal mental health-related claims are for depression and one-third of teenage mothers had a depression-related claim. Despite screening rates of around 90% and Medicaid claims indicating treatment, depression is related to nearly half of all Montana maternal mental health deaths.

In conclusion, mental health-related complications of pregnancy are an incredibly common outcome for mothers in Montana. These crises can have emotional (having to separate from the new baby to seek treatment), financial (the high cost of treatment), and physical consequences. Best practices should be used to help support the mothers during a crucial and fragile time in their mental health.



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