PRAMS Perspectives

A Pregnancy Risk Assessment Monitoring System Report – January 2021

Maternal Mental Health in Utah

Background

More than a third of Utah residents who delivered a live infant in 2017-2019 reported depression, anxiety, or both before pregnancy, while pregnant or shortly after giving birth. Negative outcomes of depression and anxiety during the perinatal period include preterm birth, low birthweight, and shorter breastfeeding duration, to name a few.[1-3] Maternal mental health challenges often go unidentified and underdiagnosed; therefore, prevalence is believed to be underestimated.

The Pregnancy Risk Assessment Monitoring System (PRAMS) is one of the primary tools used by state public health departments in the United States to assess risk factors for adverse maternal and infant outcomes. It is one of a few sources of data for assessing the general status of maternal mental health in Utah. This report uses Utah PRAMS data collected during 2017-2019 to examine the characteristics and experiences of people with maternal mental health conditions *before*, *during*, and *after* pregnancy. It expands on a Utah Department of Health report published in 2017 that was limited to mental health experiences *before* and *after* pregnancy for the period of 2013-2015.

What is PRAMS?

PRAMS is an ongoing, population-based risk factor surveillance system designed to identify and monitor selected experiences that occur before, during and after pregnancy as well as early infancy experiences among people who had a live birth. Each month, a sample of approximately 200 people, two to four months postpartum is selected. The sample is stratified based upon race and birth weight so that inferences and comparisons about these groups can be made. The results are weighted for sample design and non-response.

The survey asks questions about healthcare experiences, physical and mental health status, breastfeeding, smoking and alcohol use, physical abuse, stressful life events, and early infant care. PRAMS is intended to help answer questions that birth certificate data alone cannot answer. Data are used to provide important information that can guide policy and other efforts to improve care and outcomes for parents and infants in Utah.

For more information on PRAMS, visit https://mihp.utah.gov/pregnancy-and-risk-assessment .

Methodology

Data Analysis

The PRAMS data in this report represent residents of Utah who delivered live infants in Utah, during 2017-2019. During this Utah PRAMS surveillance period, 7,189 people who gave birth to a live infant were sent a PRAMS survey and 4,414 responded for an unweighted response rate of 61.4%. PRAMS data were weighted for non-response so analyses could be generalized to the population of 143,603 Utah residents who gave birth to a live infant in the state of Utah during 2017-2019. The average weighted response rate for the surveillance period was 67.0%. Data weighting procedures and detailed methodology can be found at https://www.cdc.gov/prams/methodology.htm .

To account for the stratified and weighted sample, statistics were calculated using procedures for complex surveys in SAS version 9.4. Chi-square tests were used to identify differences between percentages at the $p < 0.05$ level.

Utah PRAMS data were used to examine factors associated with maternal mental health in Utah. To identify people with anxiety and/or depression before their most recent pregnancies, PRAMS participants are asked, "During the three months before you got pregnant with your new baby, did you have any of the following health conditions?" The question response options include anxiety and depression separately.

Anxiety and depression during pregnancy are identified by asking PRAMS participants, "During your most recent pregnancy, did you have any of the following health conditions?" The question response options include anxiety and depression separately.

To determine the extent to which people are screened for depression during the 12 months before pregnancy, during prenatal care visits, and during postpartum care visits, participants are asked, "Did a doctor, nurse, or other health care worker ask if you were feeling down or depressed?"

To identify people with postpartum depressive symptoms (PPDS), the following two questions are asked, 1) "Since your new baby was born, how often have you felt down, depressed, or hopeless?" and 2) "Since your new baby was born, how often have you had little interest or little pleasure in doing things?" Participants responding "always" or "often" to either question are classified as experiencing postpartum depressive symptoms. These questions are based on the Patient Health Questionnaire (PHQ-2).

The number of stressful life events are calculated by totaling the "yes" responses to a question that asks participants if they experienced any of 14 specific events related to finances, trauma, and close relationships during the 12 months before giving birth. The full list of stressful life events can be found on question 43 on the Phase VIII PRAMS survey at https://mihp.utah.gov//wp-content/uploads/UT_Eng_P8_Final.pdf .

People with chronic diseases are defined as having asthma, thyroid problems, high blood pressure, or type 1 or type 2 diabetes (not gestational diabetes).

Past physical abuse is identified by asking adult participants the question, "In the 12 months before you got pregnant with your new baby, did any of the following people push, hit, slap, kick, choke, or physically hurt you in any other way?" (Response options: my husband or partner, my ex-husband or ex-partner, or someone else).

Pregnancy intention is determined by asking the question, "Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant?" Responses of "I wanted to be pregnant later" and "I didn't want to be pregnant then or at any time in the future" are counted as unintended pregnancies. Responses of "I wasn't sure what I wanted" are counted as ambivalent.

Lack of partner support is identified by the response "My husband or partner said they didn't want me to be pregnant" when asked about things that might have happened during the 12 months before pregnancy.

Limitations

- Although the spectrum of mental health conditions that can affect people around the time of pregnancy is broad, PRAMS data are limited to information about depression and anxiety before and during pregnancy and postpartum depressive symptoms.
- The PRAMS survey asks if the participant asked for help for anxiety during and after pregnancy, however, the survey does not actually ask if the participant *had* anxiety since the baby was born, therefore there are no comparable data for anxiety after pregnancy. This limitation will be addressed in the next phase of the survey by the addition of a question that asks if the participant had postpartum anxiety.

- Understanding the extent of screening for maternal mental health conditions is limited to depression as there are no PRAMS survey questions related to screening for anxiety. This limitation will be addressed in the next phase of the survey by the addition of a question that asks the participant if a healthcare worker asked about anxiety.
- The pre-existing anxiety and depression questions ask if the respondent *had* anxiety or depression before pregnancy without regard to standardized testing and clinical diagnoses. Consequently, the results in this report might overestimate the prevalence of anxiety or depression in terms of a clinically diagnosed mental disorder.
- The questions used to assess the prevalence of postpartum depressive symptoms do not represent a clinical diagnosis of postpartum depression. In one study, the PHQ-2 questions with categorization schemes similar to the PRAMS algorithm had a sensitivity of 58% and specificity of 85% when compared with clinical assessments of major depressive episodes[4]. Therefore, the results in this report might underestimate the true prevalence of postpartum depression.

Results

During 2017-2019, 42.8% of Utah residents with a recent live birth in Utah were affected by depression or anxiety. Of those, 18.4% had depression before pregnancy, 26.7% had anxiety before pregnancy, 18.4% had depression during pregnancy, 25.9% had anxiety during pregnancy, and 14.8% reported symptoms of postpartum depression.

Of the people with a history of anxiety or depression before or during pregnancy, 25.8% went on to experience symptoms of postpartum depression compared with 8.3% of participants without a history of mental health conditions.

Maternal Characteristics

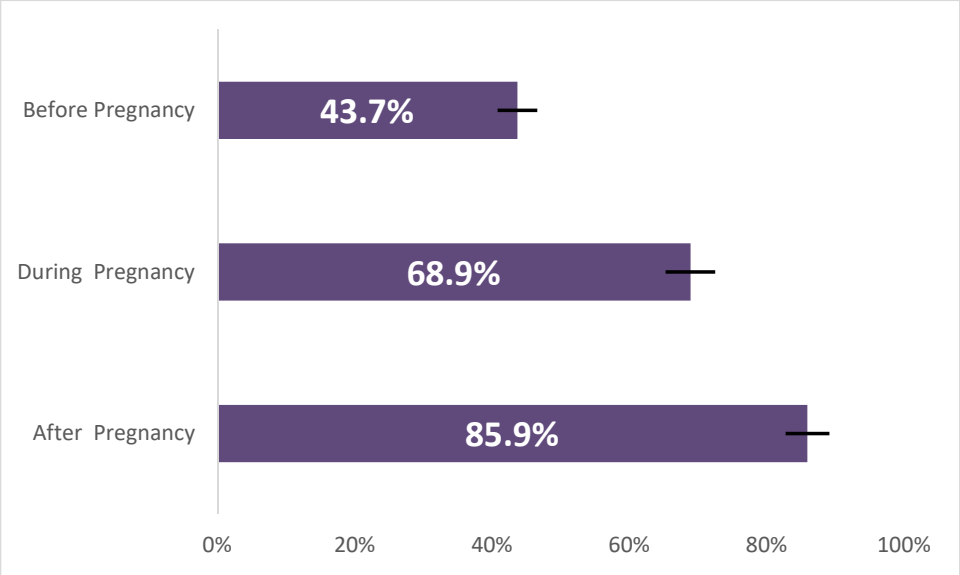
Appendices 1-5 show higher rates of maternal mental health conditions among people with the following characteristics:

- younger than 20 years of age
- unmarried
- living at or below 100% of the Federal Poverty Level
- enrolled in Medicaid
- no college education
- received WIC services during pregnancy
- unintended pregnancy
- pregnancy ambivalence

Screening for Depression around the Time of Pregnancy

The proportion of people screened for depression during the 12 months before pregnancy was 43.7% compared with 68.9% during a prenatal care visit and 85.9% during a postpartum health care visit.

Figure 1: Proportion of people screened for depression before, during, and after pregnancy, Utah PRAMS 2017-2019



Risk Factors

People with multiple life stressors, chronic diseases, and past physical abuse reported higher rates of depression and anxiety during pregnancy.

Figure 2: Proportion of people with depression during pregnancy by risk factors, Utah PRAMS 2017-2019

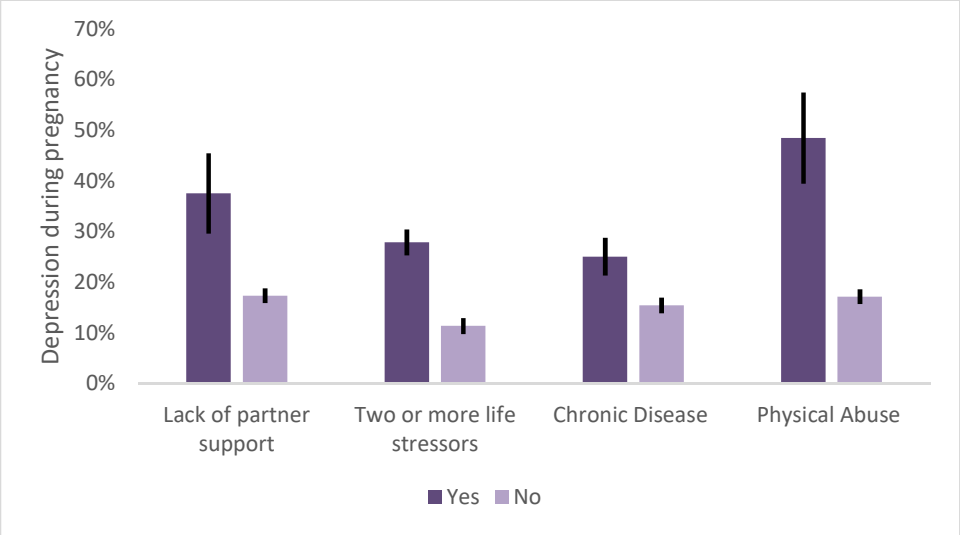
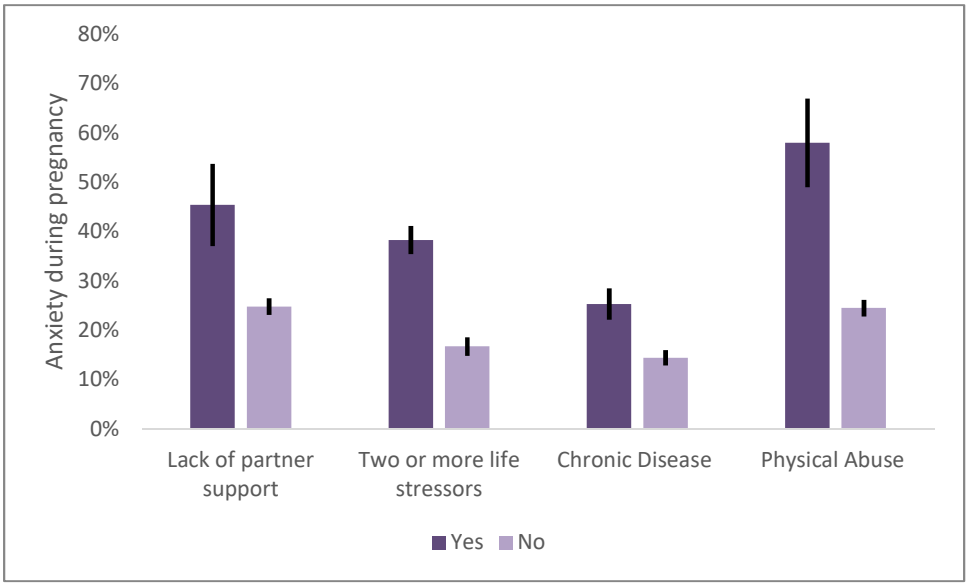


Figure 3: Proportion of people with anxiety during pregnancy by risk factors, Utah PRAMS 2017-2019



Pregnancy Intention and Maternal Mental Health before Pregnancy

Rates of depression and anxiety during pregnancy were higher among people whose pregnancies were unintended or who were not sure if they wanted to be pregnant when compared to rates among people whose pregnancies were intended.

Figure 4: Proportion of people with depression during pregnancy by intention, Utah PRAMS 2017-2019

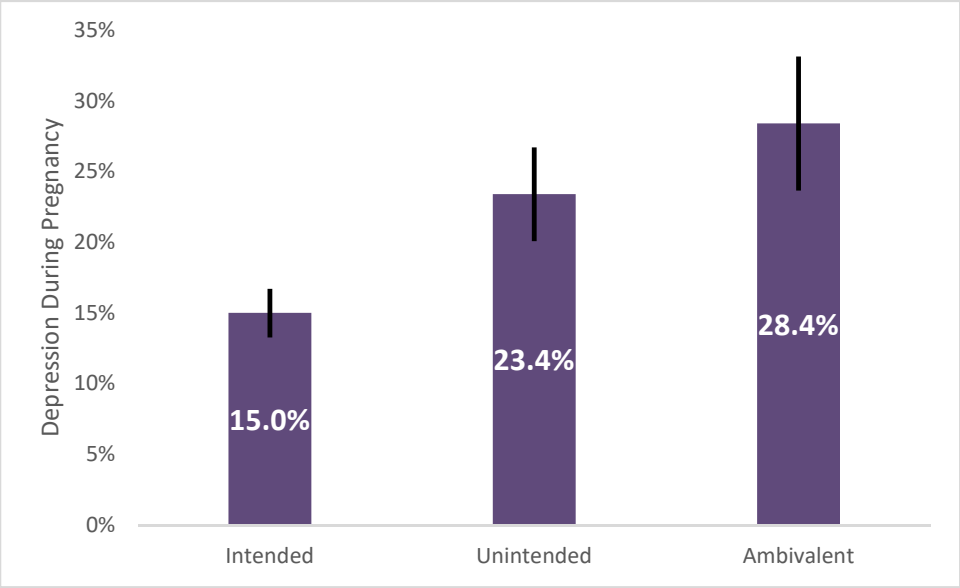
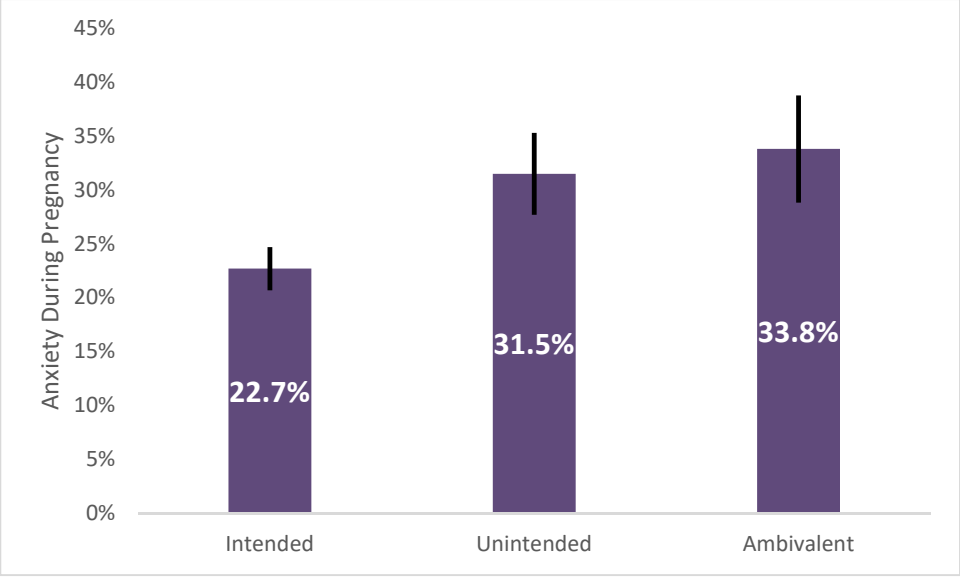


Figure 5: Proportion of people with anxiety during pregnancy by intention, Utah PRAMS 2017-2019



Maternal Mental Health by Age

Higher rates of depression and anxiety during the perinatal period were reported among younger people.

Figure 6: Proportion of people with depression before and/or during pregnancy by age group, Utah PRAMS 2017-2019

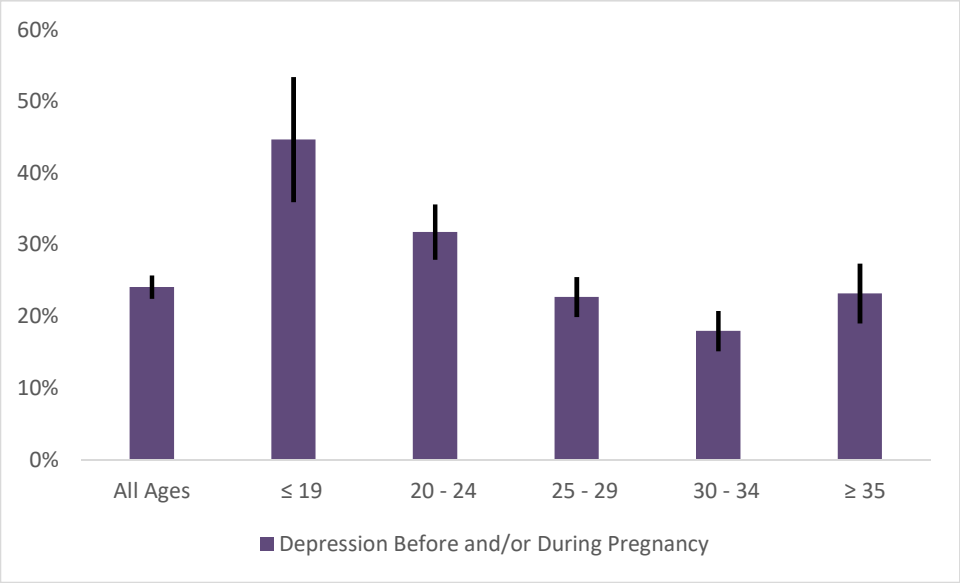


Figure 7: Proportion of people with postpartum depressive symptoms by age group, Utah PRAMS 2017-2019

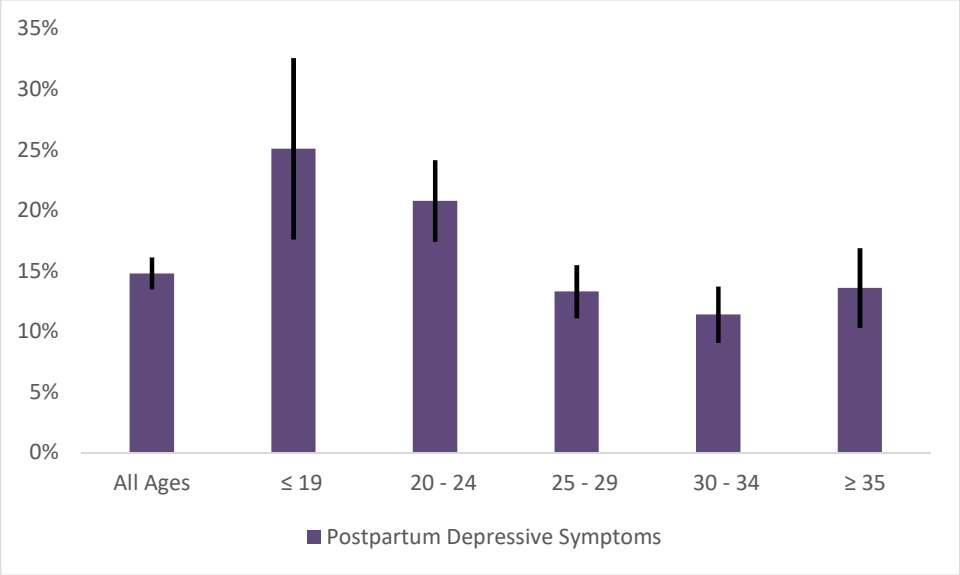
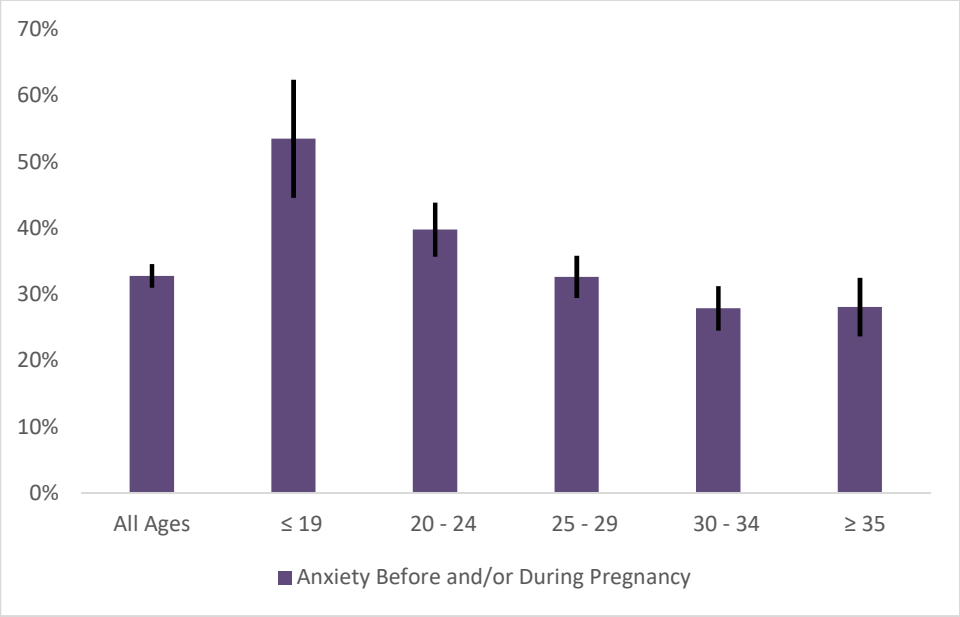


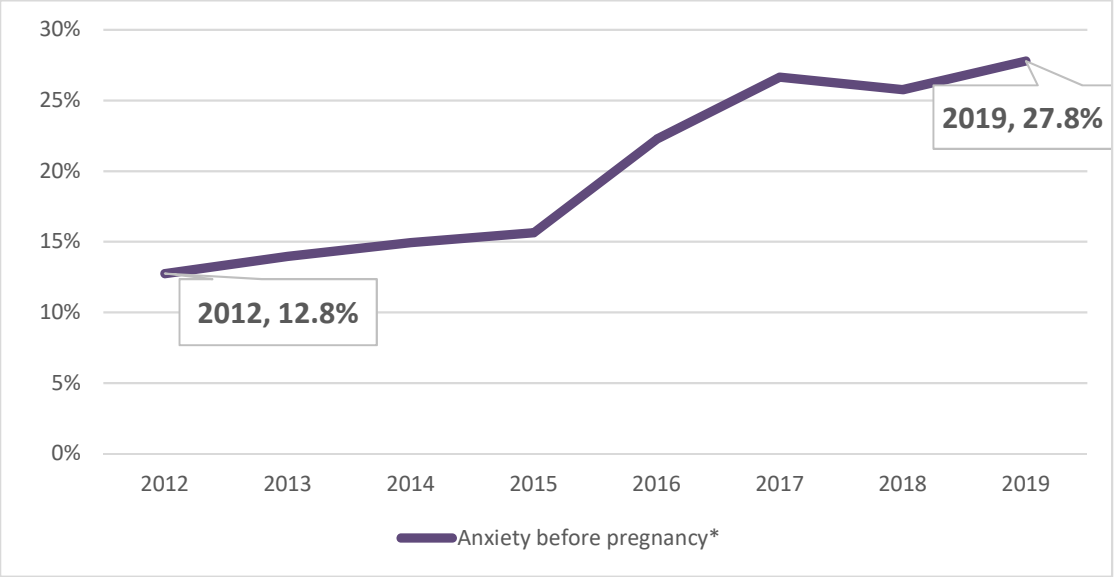
Figure 8: Proportion of people with anxiety before and/or during pregnancy by age group, Utah PRAMS 2017-2019



Trends in Maternal Mental Health

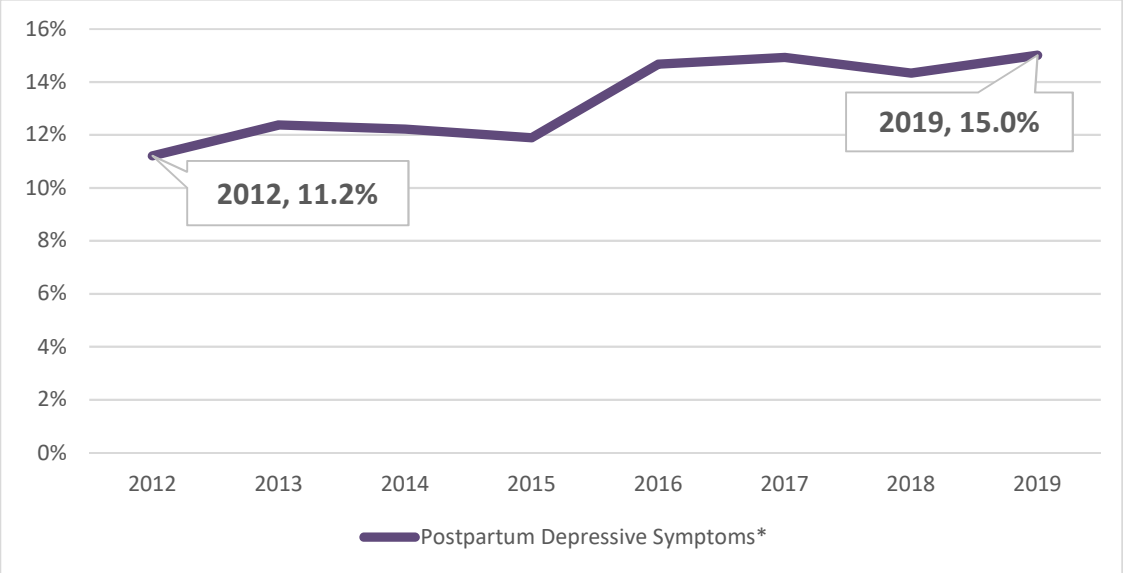
The frequency of people reporting anxiety before pregnancy significantly increased from 12.8% in 2012 to 27.8% in 2019 and the frequency of reported postpartum depressive symptoms significantly increased from 11.2 % in 2012 to 15.0% in 2019. Due to a change in question wording, data collected prior to 2016 for depression before pregnancy is not comparable to later data. Additionally, data for depression and anxiety *during* pregnancy were not collected prior to 2016.

Figure 9. Anxiety before pregnancy, Utah PRAMS 2012-2019



*Percentage point difference between 2012 and 2019 was significant at the .05 level

Figure 10. Postpartum Depressive Symptoms, Utah PRAMS 2012-2019



*Percentage point difference between 2012 and 2019 was significant at the .05 level

Discussion and Recommendations

Screening

It is important to recognize signs and risk factors of maternal mental health conditions during preconception healthcare visits, routine prenatal care visits, and postpartum healthcare visits. However, we found only 44% of PRAMS participants reported being asked about depression *before* pregnancy (Figure 1). This is important because there is emerging evidence that some risk processes for preterm birth and small for gestational age begin before pregnancy with major consequences for health and development into later life[5]. In the absence of screening and treatment prior to pregnancy, people should be screened during their prenatal care visits. Nearly all (99%) of the people reported attending at least one prenatal care visit, yet only 69% said their healthcare provider asked about depression *during* pregnancy. Our findings show higher rates of perinatal depression and anxiety among people receiving Women, Infant, and Children (WIC) services (appendices 1-5). Although WIC clinics provide an ideal setting for maternal mental health screening[6], Utah WIC clinic staff do not routinely receive training on standardized mental health screening methods. Similarly, postpartum office visits and pediatric well-baby visits provide an opportunity for routine postpartum depression screening. Our analysis found most people reported attending a postpartum visit; however, it is not known if validated mental health screenings were conducted during those office visits. According to one study, fewer than 20% of participants with diagnosed perinatal depression self-report their symptoms[7], thus, routine screening is especially important.

In 2018, the American College of Obstetricians and Gynecologists (ACOG) issued the following updated mental health screening recommendations for perinatal caregivers:

- Screen patients at least once during the perinatal period using a standardized, validated tool.
- Closely monitor patients with current depression or anxiety, or risk factors for perinatal mood disorders.
- Couple screening with appropriate follow-up and treatment. Clinical staff should be prepared to initiate medical therapy or refer patients for mental or behavioral health resources when indicated.
- Systems should be in place to ensure follow-up for diagnosis and treatment.

In 2019, the American Academy of Pediatrics (AAP) issued the following statement, "On the basis of knowledge regarding peak occurrence times for PPD, routine screening in which a validated screening tool is used should occur at well-infant visits at 1, 2, 4, and 6 months." [8]

Access to care

Of concern are the higher rates of perinatal mental health conditions reported by people eligible for Medicaid to pay for their prenatal care. In Utah, pregnant people with incomes below 139% of the federal poverty level are eligible for Medicaid during their pregnancy and delivery. This program covers women 60 days after delivery. In the past, many people who qualified for Medicaid during pregnancy became ineligible for Medicaid after the babies were born because of their incomes. Fortunately, in January 2020, full Medicaid expansion took effect in Utah, allowing qualifying individuals with incomes below 139% of the poverty level to be eligible for Medicaid. This is important because it allows additional time (beyond 60 days) for people to receive postpartum care including screening and treatment for postpartum depression, anxiety, and other maternal mental health conditions through their postpartum obstetric care visits, well-baby pediatrician visits, and WIC clinic appointments.

Risk factors

Our analysis found higher rates of depression and anxiety during the perinatal period among people with lack of partner support, multiple life stressors, chronic disease, history of physical abuse, unintended pregnancies, pregnancy ambivalence, and younger age when compared to people without these risk factors (Figures 2-8).

Evidence has shown that in the general population, mental health disorders, most often depression, are strongly associated with serious chronic disease, including diabetes, hypertension, and heart disease[9]. Yet, there is little information in the literature about how pregnancy affects mental health among pregnant people with chronic diseases. The strong relationship between depression *before* pregnancy and multiple life stressors was documented in the March 2018 edition of PRAMS Perspectives (https://mihp.utah.gov/wp-content/uploads/Maternal-Mental-Health-Report_finals.pdf). For this report, depression and anxiety *during* pregnancy were examined with similar findings. These findings also highlight the importance of research related to how a partner's feelings about pregnancy are associated with maternal mental health. Growing research suggests psychosocial, cultural, and environmental stressors experienced during pregnancy can affect both maternal and fetal health, including mental health[10, 11]. The Centers for Disease Control and Prevention report that about 1 in 4 people (or 25%) have experienced some form of intimate partner violence (IPV) during their lifetime[12]. Survivors of intimate partner violence are at higher risk for diagnoses such as depression or post-traumatic stress disorder and at higher risk for behaviors such as smoking, drinking, and sexual risk behaviors[12, 13], all of which can have an effect on health and birth outcomes. Our findings regarding risk factors during pregnancy indicate people with risk factors should not only be screened early, but should also be closely monitored for mental health changes throughout the pregnancy and postpartum.

Resources

As the prevalence of perinatal mental health conditions is increasing in Utah (Figures 8 & 9), timely access to mental health resources is vital for parents and providers. Maternal mental health resources, including counselors/therapists, support groups, and other types of providers trained in maternal mental health can be found on the statewide referral network: https://maternalmentalhealth.utah.gov/. At this site, providers can be found based on location, provider type, and insurance type. Listed providers work with people who have complications during pregnancy and postpartum, infertility, miscarriages, losses, and issues with partner support among other services.

Information and materials about maternal mental health and prevention resources can be found on the Maternal and Infant Health website: https://mihp.utah.gov/maternal-mental-health

To speak with someone who will administer a mental health screening in Spanish or English, in addition to providing resources for support, please contact Help Me Grow Utah at 801-691-5322.

Education and resources are regularly shared on the Utah Maternal Mental Health Program's Instagram page https://www.instagram.com/maternalmentalhealthutah/ and Facebook page https://www.facebook.com/MaternalMentalHealthUtah/ .

The Utah Department of Health Maternal and Infant Health Program maintains a Community Resources Guide with contact information for several mental health agencies. The Community Resources Guide can be found at https://mihp.utah.gov/wp-content/uploads/MIHP_English_Community_Resources.pdf.

PRAMS participants are provided the opportunity to share comments about their pregnancy experiences. Below are examples of participants' comments related to maternal mental health.

"*My mental health was my biggest concern during my pregnancy. I discussed with my doctor, but not much care was placed on the matter. My insurance dictated my prenatal care.*"

-PRAMS respondent, 2017

"I know postpartum depression is getting a lot of attention but with this past pregnancy I've experienced more postpartum anxiety. I am lucky that my insurance covers therapy because it has helped tremendously but w/o insurance I would never have sought help."

-PRAMS respondent, 2017

"I sought help from my doctor for my postpartum. I still feel extreme anxiety and overwhelming sadness. Mostly scared. I still need help with it and am worried about returning to work."

-PRAMS respondent, 2019

"Diagnosis and treatment for postpartum depression and anxiety has improved since my first pregnancy 3 years ago. I ended up in the ER for suicidal thoughts and intentions. This time my baby's pediatrician gave me a survey about PPD and PPA to screen me and discussed my results to make sure I had seen a doctor about it."

-PRAMS respondent, 2019

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Appendix 1. Depression Before Pregnancy 2017-2019

	Percentage	95% Confidence Interval	P-Value
Sample Population	18.4	17.0 – 19.9	
Maternal Age			<.0001
≤ 17	**38.8**	23.4 - 54.3	
18 - 19	**40.3**	30.3 - 50.4	
20 - 24	**26.6**	23.0 - 30.3	
25 - 29	16.3	13.9 - 18.8	
30 - 34	13.1	10.7 - 15.5	
35 - 39	18.4	14.2 - 22.6	
40 +	8.1*	2.2 - 14.0	
Education Level			<.0001
Less than High School	**26.2**	21.6 - 30.8	
Completed High School	**23.2**	20.3 - 26.0	
Some College	19.0	16.2 - 21.9	
College Graduate	13.8	11.4 - 16.2	
Marital Status			<.0001
Married	17.0	15.4 - 18.6	
Unmarried	**25.2**	21.7 - 28.8	
Race			NS
White	18.9	17.3 - 20.5	
Other than White	14.6	10.9 - 18.4	
Ethnicity			NS
Non-Hispanic	18.9	17.3 - 20.6	
Hispanic	15.9	12.6 - 19.2	
Federal Poverty Level (FPL)			<.0001
≤100% of FPL	**29.0**	25.1 - 33.0	
101-138% of FPL	22.5	17.3 - 27.6	
139 -185% of FPL	17.6	13.6 - 21.6	
185+% of FPL	15.0	13.2 - 16.9	
Prenatal Care Payer			<.0001
No Insurance	6.4	3.6 - 9.1	
Medicaid	**27.8**	24.4 - 31.3	
Private Insurance	16.3	14.5 - 18.0	
Pre-pregnancy Body Mass Index			<.0001
Underweight	17.2	13.3 - 21.2	
Normal weight	14.9	12.9 - 16.8	
Overweight	22.5	18.0 - 27.0	
Obese	**24.2**	27.4 - 21.0	
Pregnancy Intention			<.0001
Intended	15.1	13.3 - 16.8	
Unintended	22.9	19.5 - 26.2	
Not Sure	**28.3**	23.7 - 32.9	
1st Trimester Prenatal Care			NS
No	15.2	11.4 - 19.1	
Yes	18.9	17.3 - 19.1	
Received WIC Services			<.0001
No	16.0	14.4 - 17.6	
Yes	**26.7**	23.2 - 30.1	

NS=Not Significant
Percentages shown in bold are significantly higher than the percentage in the sample population
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability

Appendix 2. Depression During Pregnancy 2017-2019			
	Percentage	**95% Confidence Interval**	**P-Value**
Sample Population	18.4	17.0 - 19.9	
Maternal Age			<.0001
≤ 17	28.8	14.5 - 43.1	
18 - 19	**33.3**	23.5 - 43.0	
20 - 24	23.4	19.9 - 26.8	
25 - 29	17.6	15.1 - 20.0	
30 - 34	14.3	11.7 - 16.9	
35 - 39	19.7	15.3 - 24.0	
40 +	9.4*	2.9 - 15.8	
Education Level			<.0001
Less than High School	**25.0**	20.3 - 29.6	
Completed High School	22.3	19.6 - 25.0	
Some College	19.5	16.7 - 22.4	
College Graduate	13.9	11.6 - 16.3	
Marital Status			<.0001
Married	17.0	15.4 - 18.6	
Unmarried	**25.0**	21.6 - 28.5	
Race			NS
White	18.9	17.3 - 20.5	
Other than White	15.3	11.6 - 18.9	
Ethnicity			NS
Non-Hispanic	19.3	17.7 - 21.0	
Hispanic	14.5	11.5 - 17.5	
Federal Poverty Level (FPL)			<.0001
≤100% of FPL	**26.9**	23.1 - 30.7	
101-138% of FPL	20.4	15.6 - 25.2	
139 -185% of FPL	20.1	15.9 - 24.3	
185+% of FPL	15.4	13.5 - 17.3	
Prenatal Care Payer			<.0001
No Insurance	12.0	7.2 - 16.9	
Medicaid	**27.6**	24.1 - 31.0	
Private Insurance	15.7	13.9 - 17.4	
Pre-pregnancy Body Mass Index			<.05
Underweight	19.1	14.7 - 23.5	
Normal weight	16.0	14.0 - 18.0	
Overweight	21.0	16.6 - 25.4	
Obese	22.7	19.6 – 25.8	
Pregnancy Intention			<.0001
Intended	14.9	13.2 – 16.7	
Unintended	**23.4**	20.1 - 26.7	
Not Sure	**28.4**	23.7 – 33.2	
1st Trimester Prenatal Care			NS
No	17.8	13.6 – 22.0	
Yes	18.5	16.9 – 20.1	
Received WIC Services			<.0001
No	16.3	14.7 - 17.9	
Yes	**26.1**	22.7 - 29.5	

NS=Not Significant
Percentages shown in bold are significantly higher than the percentage in the sample population
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.

Appendix 3. Depression After Pregnancy (Postpartum Depressive Symptoms) 2017-2019			
	Percentage	**95% Confidence Interval**	**P-Value**
Sample Population	14.8	13.4 - 16.1	
Maternal Age			<.05
≤ 17	24.1	11.4 -36.7	
18 - 19	**25.3**	16.5 - 34.1	
20 - 24	**20.8**	17.4 - 24.2	
25 - 29	13.3	11.1 - 15.4	
30 - 34	11.4	9.1 - 13.7	
35 - 39	14.4	10.7 -18.1	
40 +	9.3*	2.5 - 16.2	
Education Level			<.0001
Less than High School	17.6	13.9 - 21.4	
Completed High School	**19.9**	17.2- 22.6	
Some College	16.0	13.4 - 18.7	
College Graduate	10.3	8.2 - 12.3	
Marital Status			<.0001
Married	13.2	11.8 - 14.7	
Unmarried	**21.8**	18.4 - 25.1	
Race			NS
White	14.3	12.8 - 15.7	
Other than White	18.9	14.8 - 23.0	
Ethnicity			NS
Non-Hispanic	14.9	13.4 - 16.4	
Hispanic	15.0	11.8 - 18.1	
Federal Poverty Level (FPL)			<.0001
≤100% of FPL	**21.2**	17.9 - 24.5	
101-138% of FPL	18.2	13.3 - 23.2	
139-185% of FPL	17.4	13.3 - 21.6	
185+% of FPL	11.7	10.0 - 13.4	
Prenatal Care Payer			<.0001
No Insurance	14.4	9.0 - 19.8	
Medicaid	**23.2**	19.9 - 26.5	
Private Insurance	11.9	10.4 - 13.5	
Pre-pregnancy Body Mass Index			NS
Underweight	16.9	12.7 - 21.2	
Normal weight	12.8	11.0 - 14.7	
Overweight	15.2	11.4 - 18.9	
Obese	17.1	14.3 - 19.9	
Pregnancy Intention			<.0001
Intended	12.3	10.7 - 13.9	
Unintended	**18.8**	15.8 - 21.9	
Not Sure	21.8	17.6 - 26.0	
1st Trimester Prenatal Care			<.05
No	**19.4**	14.9 – 23.8	
Yes	14.3	12.8 - 15.7	
Received WIC Services			<.0001
No	12.9	11.5 – 14.4	
Yes	**22.1**	18.8 – 25.3	

NS=Not Significant
Percentages shown in bold are significantly higher than the percentage in the sample population
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability

Appendix 4. Anxiety Before Pregnancy 2017-2019			
	Percentage	**95% Confidence Interval**	**P-Value**
Sample Population	26.7	25.0 - 28.4	
Maternal Age			<.0001
≤ 17	**39.6**	24.3 - 54.9	
18 - 19	**48.3**	38.4 - 58.3	
20 - 24	**33.1**	29.2 - 36.9	
25 - 29	26.1	23.1 - 29.0	
30 - 34	22.8	19.7 - 25.9	
35 - 39	23.6	19.0 -28.1	
40 +	16.3	7.4 - 25.1	
Education Level			<.0001
Less than High School	**31.1**	26.3 - 36.0	
Completed High School	**32.9**	29.7 - 36.1	
Some College	28.1	24.8 - 31.4	
College Graduate	20.7	17.9 - 23.5	
Marital Status			<.0001
Married	24.7	22.9 - 26.6	
Unmarried	**36.0**	32.0 - 40.0	
Race			NS
White	25.5	23.7 - 27.3	
Other than White	20.2	15.6 - 24.9	
Ethnicity			<.05
Non-Hispanic	28.0	26.1 - 15.9	
Hispanic	19.6	15.9 - 23.3	
Federal Poverty Level (FPL)			<.0001
≤100% of FPL	**36.4**	32.2 - 40.6	
101-138% of FPL	33.6	27.7 - 39.6	
139 -185% of FPL	25.1	20.5 -29.6	
185+% of FPL	23.8	21.6 - 26.0	
Prenatal Care Payer			<.0001
No Insurance	10.9	6.6 - 15.2	
Medicaid	**37.5**	33.8 - 41.3	
Private Insurance	24.0	21.9 - 26.1	
Pre-pregnancy Body Mass Index			NS
Underweight	25.8	20.9 - 30.7	
Normal weight	24.4	22.0 - 26.8	
Overweight	27.9	23.2 - 32.6	
Obese	**31.9**	28.4 - 35.4	
Pregnancy Intention			<.0001
Intended	23.5	21.5 - 25.6	
Unintended	30.7	27.0 - 34.5	
Not Sure	**35.6**	30.6 - 40.7	
1st Trimester Prenatal Care			NS
No	20.3	15.7 - 24.9	
Yes	27.6	25.8 - 29.4	
Received WIC Services			<.0001
No	25.1	23.2 - 27.0	
Yes	**31.2**	28.2 - 35.5	

NS=Not Significant
Percentages shown in bold are significantly higher than the percentage in the sample population
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability

Appendix 5. Anxiety During Pregnancy 2017-2019			
	Percentage	**95% Confidence Interval**	**P-Value**
Sample Population	25.9	24.2 - 27.5	
Maternal Age			<.0001
≤ 17	41.4	25.7 - 57.0	
18 - 19	**41.6**	31.6 - 51.6	
20 - 24	**32.0**	28.1 - 35.8	
25 - 29	24.5	21.7 - 27.4	
30 - 34	23.3	20.1 - 26.5	
35 - 39	23.9	19.4 - 28.5	
40 +	10.2*	3.7 - 16.7	
Education Level			<.0001
Less than High School	28.8	24.1 - 33.6	
Completed High School	29.7	26.6 -32.7	
Some College	28.1	24.8 - 31.3	
College Graduate	20.6	17.9 - 23.4	
Marital Status			<.0001
Married	23.9	22.1 - 25.8	
Unmarried	**34.9**	30.9 - 38.8	
Race			<.05
White	26.3	24.5 - 28.1	
Other than White	20.8	15.0 - 22.0	
Ethnicity			<.0001
Non-Hispanic	27.2	25.3 - 29.1	
Hispanic	16.4	13.1 - 19.7	
Federal Poverty Level (FPL)			<.0001
≤100% of FPL	**34.3**	30.2 - 38.4	
101-138% of FPL	**31.5**	25.8 -37.3	
139 -185% of FPL	27.7	22.9 - 32.4	
185+% of FPL	22.2	20.1 - 24.4	
Prenatal Care Payer			<.0001
No Insurance	13.9	8.8 - 18.9	
Medicaid	**36.4**	32.6 - 40.2	
Private Insurance	22.9	20.9 -24.9	
Pre-pregnancy Body Mass Index			<.05
Underweight	26.9	21.9 - 32.0	
Normal weight	23.4	21.1 - 25.8	
Overweight	26.9	22.2 – 31.6	
Obese	30.4	26.9 – 33.9	
Pregnancy Intention			<.0001
Intended	22.7	20.7 - 24.7	
Unintended	**31.5**	27.7 - 35.3	
Not Sure	**33.8**	28.8 - 38.7	
1st Trimester Prenatal Care			NS
No	22.3	17.5 - 27.0	
Yes	26.5	24.7 - 28.3	
Received WIC Services			<.0001
No	23.7	21.8 - 25.5	
Yes	**33.7**	29.9 – 37.4	

NS=Not Significant
Percentages shown in bold are significantly higher than the percentage in the sample population
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability