



# UTAH PRAMS

## SURVEILLANCE REPORT 2016-2017

Utah Pregnancy Risk Assessment Monitoring System

Key Findings



# *Preface*

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The Utah Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing, population-based, risk factor surveillance system designed to identify and monitor selected maternal experiences and behaviors that occur before, during, and after pregnancy, as well as the infant's early experience. By publishing data on a regular basis, it is our hope the information will be used by program planners, policy makers, health care providers, and public health leaders to improve care and outcomes for pregnant women and infants in Utah. The Utah Department of Health has collected PRAMS data since 1999. This report represents Utah PRAMS data for live births occurring in 2016-2017.

# Acknowledgements

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This report uses a modified version of a template created by the Louisiana PRAMS team.

This publication was supported by Award Number U01DP006216-04 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

**Thank you to the women who shared their experiences so we could better understand the circumstances affecting the health status of mothers and infants in Utah.**

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# Executive Summary

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The Utah Department of Health began collecting Pregnancy Risk Assessment Monitoring System (PRAMS) data in 1999. PRAMS data are intended to help answer questions that birth certificate data alone cannot answer. By publishing data on a regular basis, it is our hope the information will inform maternal and child health programs and policies, support healthy maternal behaviors, and ultimately, reduce infant and pregnancy-related maternal morbidity and mortality. This report presents Utah PRAMS data representing births from 2016-2017.

## Key Findings

In 2016-2017, Utah PRAMS staff sampled about 5% of the 96,658 births in Utah. Each month, a systematic, stratified sample of approximately 200 live births was selected. During the two-year period, 4,922 women were selected to participate in the Utah PRAMS survey and 2,847 responded, for a response rate of 57.8%. Key findings are highlighted below.

### Health Insurance

- **66%** of women without health insurance before pregnancy said it was because it was too expensive
- **33%** of women with unintended pregnancies had no health insurance before they became pregnant

### Family Planning

- **34%** of women did not intend to become pregnant or were unsure if they wanted to become pregnant when they conceived
- **49%** of women reported using the least effective contraception methods after they had their baby, which has implications for healthy pregnancy spacing

### Preconception Health

- **36%** of women reported having a chronic health condition (such as Polycystic Ovarian Syndrome (PCOS), obesity, high blood pressure, type 1 or 2 diabetes, or asthma) before pregnancy
- **51%** of women had a regular check up with a family doctor or OB/GYN before pregnancy

### Maternal Mental Health

- **54%** of women aged 15-17 reported having anxiety and/or depression before pregnancy compared to **27%** of women aged 18 and older
- **40%** of all women with anxiety or depression before pregnancy reported they were not sure how they felt about being pregnant and **33%** said they did not want to be pregnant when they conceived

### Maternal Oral Health

- **53%** of women got their teeth cleaned during their pregnancy
- **23%** of women said they had an oral health problem during their pregnancy but couldn't afford to go to a dentist

# Methodology

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The PRAMS survey consists of a series of core questions, which all participating PRAMS states include. Each state then has the option of expanding the survey with pre-developed questions from the CDC or state-developed questions.

The sample for the Utah PRAMS survey is all mothers who are Utah residents who delivered a live-born infant within the state, including infants who died after delivery. The sample excludes fetal deaths and induced abortions. Participants are identified through birth certificate records.

Each month, UDOH staff mail PRAMS surveys to approximately five percent of Utah women who are 2–6 months postpartum. Up to three paper surveys are mailed to participants, with a telephone follow-up for women who have not responded to the initial mail survey.

A systematic, stratified sampling approach selects women to participate and allows separate estimates of population subgroups and comparisons across these subgroups. Once a full year of data is collected, it is then weighted by the CDC to represent the birth population for that year and adjusted for sampling probabilities, non-response, and non-coverage.

Each stratum must achieve a weighted response rate of 55% or it is not considered representative of that population. During 2016-2017, a 55% response rate was not achieved in all racial categories therefore, race and ethnicity are reported here as White Non-Hispanic, Other Non-Hispanic and Hispanic. Additional information on PRAMS methodology may be found on the CDC PRAMS website at <https://www.cdc.gov/prams/methodology.htm>.

For this report, Utah PRAMS staff utilized an education/birthweight stratification methodology. Education was separated into three categories: less than high school, high school graduate, and more than high school. Birthweight was defined as less than 2500 grams, or 2500 grams or greater.

This report presents data from the 2016 and 2017 surveys. During this period, 96,658 Utah women delivered a live infant in Utah. Of those, 4,922 were sent a Utah PRAMS survey, of whom 2,847 completed it, giving an average unweighted response rate of 57.8% (weighted response rate of 65.5%).

The Utah PRAMS 2016-2017 survey may be downloaded at [https://mihp.utah.gov/wp-content/uploads/UT\\_Eng\\_P8\\_Final.pdf](https://mihp.utah.gov/wp-content/uploads/UT_Eng_P8_Final.pdf).

Quotes from PRAMS Respondents:

Qualitative data collected from PRAMS respondents are included in this report as direct quotes. Quotes were corrected for minor grammatical errors and where noted, translated from Spanish to English.

# Methodology

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## **Use of Tables in the Appendix:**

Subgroup analyses for select indicators are found in the appendix. The variables used for the subgroup analyses were maternal age, maternal education, maternal race and ethnicity, marital status, prenatal care payer, and infant birth weight.

Each table in the appendix consists of a description of population characteristics, the percentage of women with a 95% confidence interval, the population estimate, and the p-value.

The “Total Birth Population” on each table gives the proportion of women reporting the event for all women with a live birth. Each subsequent category breaks down these women by various characteristics. The categories also show the proportions within these groups.

The 95% confidence interval is the number added to or subtracted from the proportion to get a range that represents the margin of error. A 95% confidence interval means the probability of observing a value outside of the range is less than 5%. Larger confidence intervals reflect smaller sample sizes.

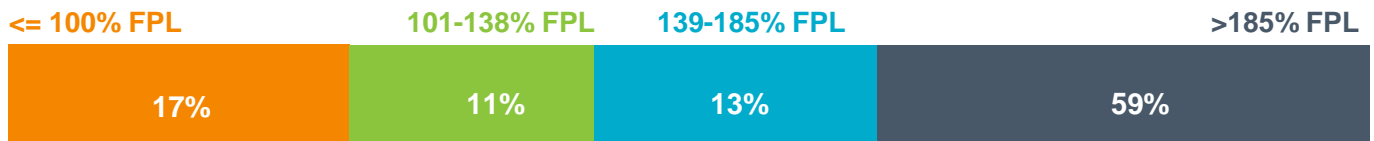
The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

A p-value of  $<.05$  was used as the level of significance in determining statistical significance between the subgroups in the tables.

## Maternal Demographics

Utah had the highest birth rate in the U.S. at 15.7 per 1,000 Utah population compared to 11.8 per U.S. population in 2017. Birth rates were highest among black women at 18.8 per 1,000 and Hispanic women at 17.9 per 1,000 (Utah Vital Records and Statistics, 2016-2017).

**About 1 in 5 (17%)** Utah women who recently delivered a baby were living at or below 100% of the Federal Poverty Level (FPL) before they became pregnant

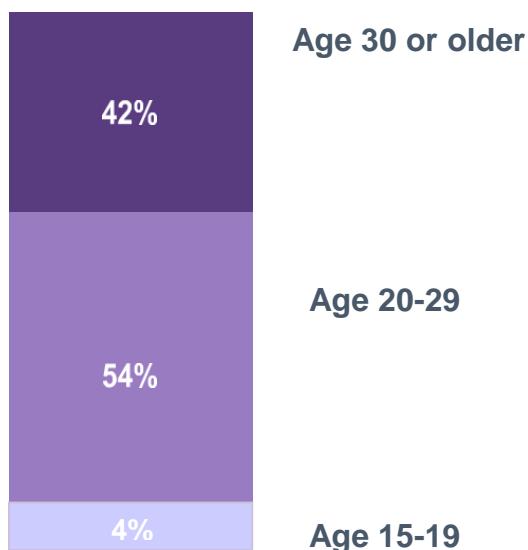


### 22%

of Utah mothers participated in the WIC program

The [Special Supplemental Nutrition Program for Women, Infants, and Children \(WIC\)](#) provides supplemental foods, health care referrals and nutritional counseling for low-income pregnant and breastfeeding women, infants and children up to age 5. To be WIC eligible, the family income must be at or below 185% of the Federal Poverty Level (less than \$46,435 for a family of four).

**More than half (54%)** of Utah mothers were in their **20s** when they delivered their baby



### 70%

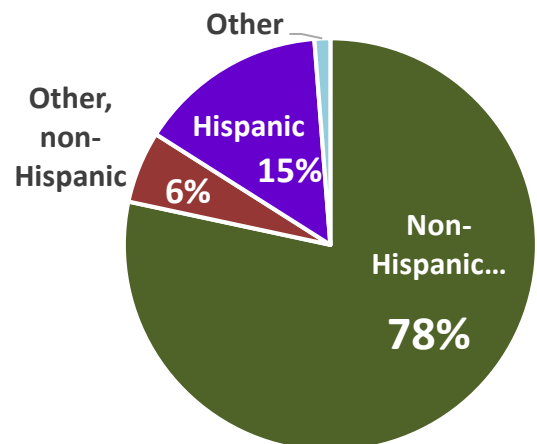
of Utah mothers had more than a high school education



**19%** were high school graduates/GED

**11%** had less than a high school education

The majority of Utah mothers were non-Hispanic white

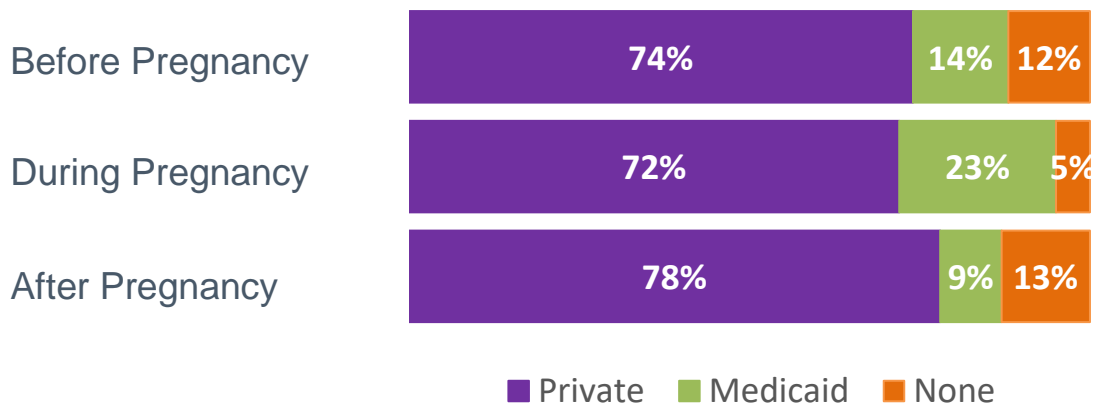




## Health Insurance

Most Utah women had some form of health insurance around the time of their pregnancy. However, gaps in private sector and publicly funded programs resulted in more than one in ten women in Utah reporting they had no health insurance before becoming pregnant or after delivery.

The majority of Utah women had health insurance before, during, and after their pregnancy.



Reasons for not having health insurance before pregnancy:

<b>Health insurance was too expensive</b>	<b>66%</b>
<b>Health insurance was not offered through employment</b>	<b>35%</b>
<b>Income was too high to qualify for Medicaid</b>	<b>27%</b>
<b>Lack of knowledge about how to obtain health insurance or had problems with application process</b>	<b>26%</b>
<b>Income was too high to qualify for coverage through the Affordable Care Act (ACA)</b>	<b>9%</b>

## Public Health Implications

Access to timely, quality, and affordable health insurance during pregnancy ranks high among the many factors that influence birth and health outcomes for both mother and baby (Association of Maternal & Child Health Programs, 2016). As of 2014, all individual and small employer insurance plans, including those available through the Marketplace, are required to cover the cost of maternity and newborn care (before and after delivery) under the Affordable Care Act.

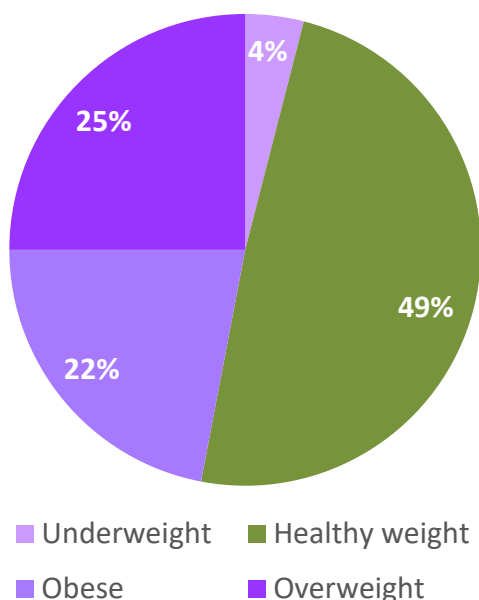
## Pre-conception Health

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Poor preconception health behaviors, chronic medical conditions, and not being at a healthy weight before pregnancy are key factors that can contribute to low birthweight in infants, preterm births, and infant mortality. A preconception health visit allows women and their health care providers to manage health conditions and to choose healthy habits before becoming pregnant. Fifty-one percent of Utah women reported a regular check up with a family doctor or OB/GYN before pregnancy.

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More than half of Utah women (**51%**) were underweight, overweight, or obese before becoming pregnant.\*



The most common chronic medical conditions affecting Utah women were:



**10% asthma**



**4% high blood pressure**



**3% type I or type II diabetes**



**7% Polycystic Ovary Syndrome (PCOS)**

\*Criteria based on national Body Mass Index (BMI) categories and calculated from self-reported height and weight on PRAMS survey.

## Public Health Implications

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Under the Affordable Care Act, several provisions have the potential to improve state efforts to implement preconception health activities and ultimately improve birth outcomes. Preventive care must be covered as part of qualified health plans sold in the Marketplace as well as in many other plans. Within this category, there is also a requirement to cover women's preventive services without charging co-payment or co-insurance.

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## Family Planning

Thirty-four percent of Utah women did not intend to become pregnant or were unsure if they wanted to become pregnant when they became pregnant. Unintended pregnancies are associated with poor behavioral and health outcomes such as late initiation of prenatal care, lower rates of breastfeeding, unsafe infant sleep practices, maternal postpartum depression, and low birthweight (Guttmacher Institute, 2019).

**67%** of Utah women who delivered a baby **intended** to become pregnant.

### Unsure:

Mother wasn't sure what she wanted

12%

### Unintended:

Mother wanted to be pregnant later or never

21%

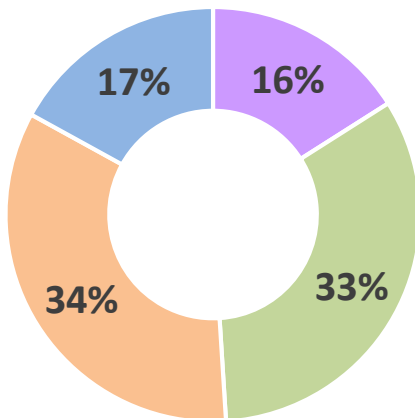
### Intended:

Mother wanted to be pregnant then or sooner

67%

"Two months before I got pregnant, I delivered a healthy baby"

-PRAMS Mom



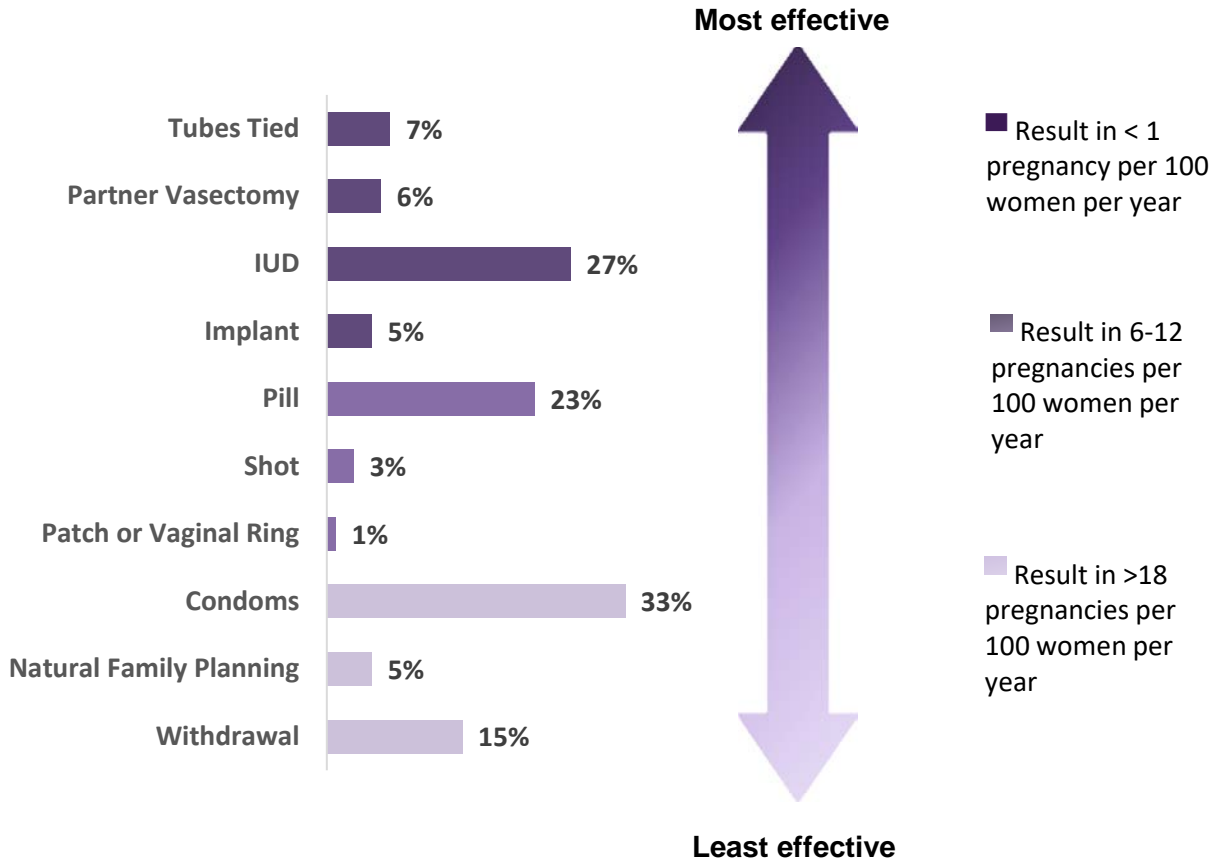
■ Private insurance      ■ No insurance  
■ Medicaid                      ■ Other

**One third (33%)** of Utah women whose pregnancies were unintended had **no health insurance** before pregnancy compared to 12% of all women who had no health insurance before pregnancy.

## Family Planning, cont.

The Healthy People 2020 Objective is to increase the proportion of women delivering a live birth who used contraception postpartum to plan their next pregnancy to 97.5 %. Utah fell short of this goal with 86.7% of women reporting postpartum contraception use.

Many women reported using the **least effective** contraception methods\* after they had their baby (participants checked all that applied)



\*Data source: *Effectiveness of Family Planning Methods, CDC, 2011*

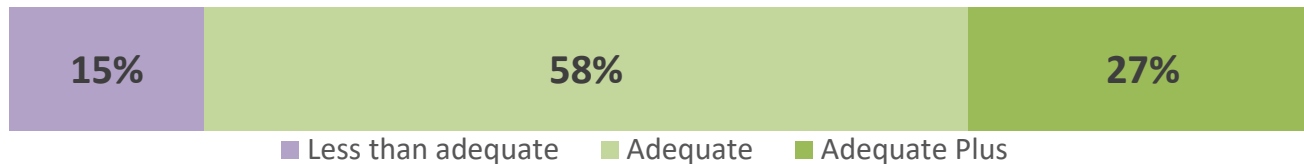
## Public Health Implications

Increased contraceptive access reduces the rate of unintended pregnancy (Family Planning Elevated, 2018). Efforts to improve access to contraceptives were successful through a recent legislative proposal, which expands Medicaid coverage in Utah. As of April 1, 2019, Utah women who fall below 100% of the Federal Poverty Level qualify to receive Medicaid coverage for contraception and immediate postpartum long-acting reversible contraceptive implants and copper IUDs placed in the delivery room prior to discharge. Additionally, Senate Bill 184 (passed during the 2018 legislative session), permits a pharmacist to dispense a self-administered hormonal contraceptive under a standing prescription.

## Prenatal Care

Adequate and timely prenatal care can lead to improved health outcomes for mothers and their babies (National Institutes of Health, 2017). Early prenatal care is important because women can receive accurate information and education on risk factors, necessary vaccines, and healthy behaviors that will help them have a healthy pregnancy and delivery.

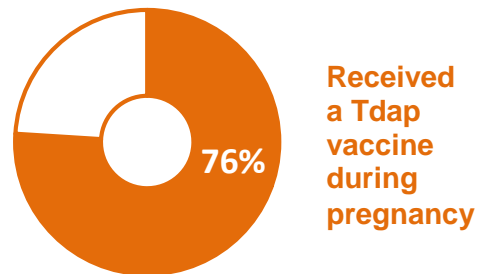
Most (86%) Utah women received **adequate or better prenatal care\***.



\*Based on the Kotelchuck Index Measure

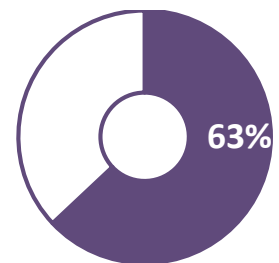
### Health conditions reported during pregnancy:

- 23% anxiety
- 11% pre-eclampsia or eclampsia
- 8% gestational diabetes
- 7% depression



*"I think a lot of moms feel intimidated talking to the doctor and telling them something is wrong."*

- PRAMS Mom



## Public Health Implications

Early entry into prenatal care for women with limited financial resources is available through the Utah Department of Health, Baby Your Baby Program. Applicants that meet the program's eligibility requirements are able to receive temporary healthcare coverage, which allows them access to prenatal care from any willing Medicaid provider in Utah. The Baby Your Baby Program acts as a bridge into Prenatal Medicaid and allows women to start their prenatal care in a timely manner.

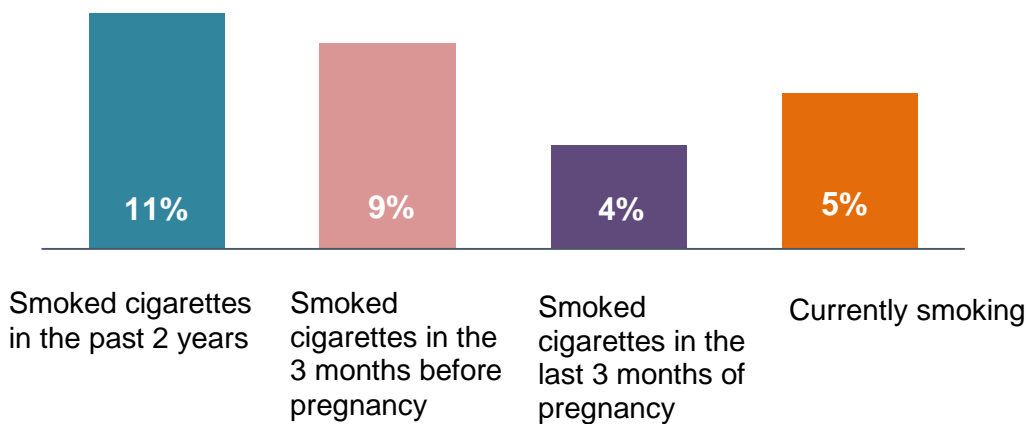
## Maternal Tobacco Use

Tobacco use during and after pregnancy can put a woman and her baby at risk for health complications. In the U.S., nearly 9% of women reported smoking during the last three months of pregnancy (Centers for Disease Control and Prevention, 2016). Smoking during pregnancy and being around cigarette smoke can put both a mother and infant at increased risk for poor health outcomes such as miscarriage, premature birth, low birthweight and birth defects. (March of Dimes Foundation, 2016).

**Healthy People 2020 Goal:** Increase abstinence from cigarette smoking among pregnant women

- Healthy People 2020 target: 98.6%
- 2017 Utah status: 97.5%

About **4%** of Utah women reported smoking during the last trimester of their pregnancy and **5%** of reported smoking postpartum.



*"No one told me that smoking stops breast milk production, so my daughter was not eating enough and was under weight."*

- PRAMS Mom

Women reported using other tobacco products during the past two years

E-cigarettes



7%



Hookah

3%

## Public Health Implications

Pregnancy may provide an opportunity for women to speak with a health care provider about smoking cessation resources and support options so they are less likely to resume smoking postpartum. Quitting services are available through Way to Quit at <http://www.waytoquit.org> or by calling the toll-free Utah Tobacco Quit Line (1-800-QUIT-NOW).

## Breastfeeding

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Evidence consistently shows that breastfeeding has numerous health benefits for infants. Breastfeeding carries antibodies from the mother that help combat disease, lowering the infant's risk of having asthma, allergies, ear infections, respiratory illnesses, and bouts of diarrhea (American Academy of Pediatrics, 2019). The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of a baby's life.

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**94% of Utah women breastfed at least once.**

**70% of Utah women were still breastfeeding at the time they participated in the PRAMS survey.**

<b>Breastfeeding Friendly Hospital Experiences in Utah</b>	
Given information about breastfeeding	<b>95%</b>
Breast fed in the first hour after delivery	<b>82%</b>
Taught how to breastfeed	<b>93%</b>
Baby placed skin to skin	<b>87%</b>
Baby only fed breastmilk	<b>63%</b>
Baby stayed in same hospital room	<b>89%</b>
Encouraged to breastfeed on demand	<b>84%</b>
Baby NOT given pacifier by hospital staff	<b>21%</b>
Telephone number provided for help with breastfeeding	<b>80%</b>
NOT given formula gift pack	<b>40%</b>

Two out of three Utah babies (**75%**) were born at a designated **Baby Friendly Hospital\*** or at a hospital working on the **Stepping Up for Utah Babies** certification\*\*.

## Public Health Implications

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The maternity care experience strongly affects breastfeeding initiation; therefore, policies and procedures supportive of breastfeeding should be in place in hospitals and birthing centers. \*Baby Friendly Hospitals have fully implemented the Ten Steps to Successful Breastfeeding as defined by the World Health Organization.\*\*The Stepping Up for Utah Babies certification program was developed in 2015 to certify Utah hospitals using the Ten Steps to Successful Breastfeeding to promote, protect, empower, and encourage breastfeeding.

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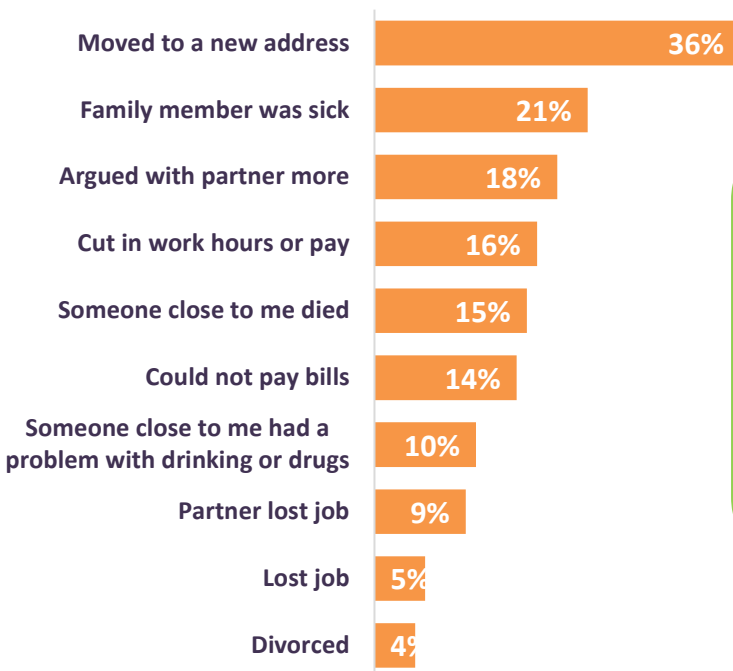
## Prenatal Maternal Stress

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Prenatal Maternal stress can be caused by both chronic and acute events in a woman's life. Certain stress related hormones can affect an infant's growth in the womb and increase the infant's risk for negative long-term health outcomes (March of Dimes Foundation, 2015). Sixty-nine percent of Utah women reported experiencing at least one life stressor during pregnancy.

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### Top 10 life stressors experienced during pregnancy:



“My husband got a work transfer and we moved weeks before the twins were born. Though I didn't lift much, I wonder if they would have matured a week or two more before being born if we hadn't moved”

- PRAMS Mom

**69%** of Utah women experienced at least one life stressor during their pregnancy\*

\*PRAMS collects data on 14 different experiences of stress.

## Public Health Implications

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Physicians should consider expanding the treatment and care they provide to pregnant women to address maternal stress. Further research on the short-term and long-term consequences of stress is warranted to improve health outcomes for women and children throughout their lifetimes.

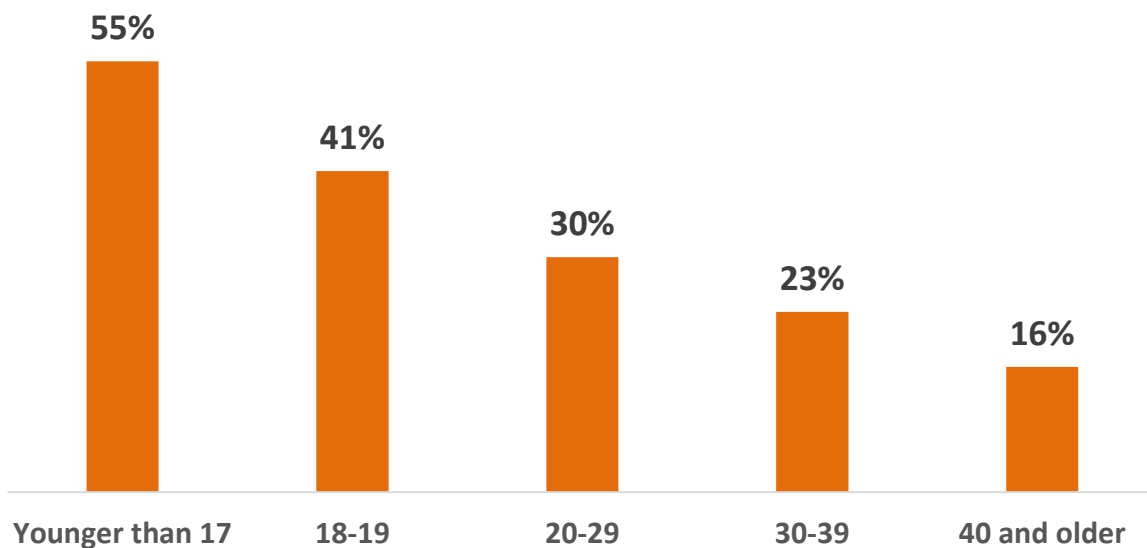
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## Maternal Mental Health

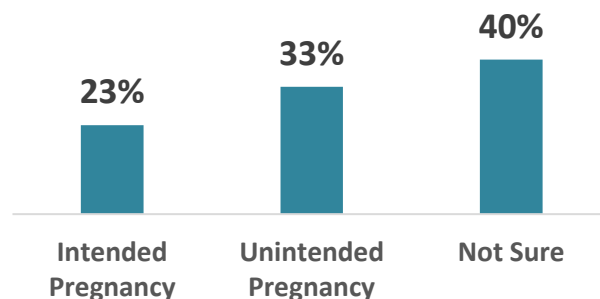
Overall, 16% of Utah women reported a diagnosis of depression before pregnancy, 24% reported having anxiety before pregnancy, and 15% reported symptoms of postpartum depression. Of the women with a history of anxiety or depression before pregnancy, 26% went on to experience symptoms of postpartum depression compared to 11% of women without a history of mental health conditions.

More than half (55%) of Utah women younger than 18 had **anxiety or depression** within the three months *before* their pregnancy.



Anxiety and/or depression before pregnancy were reported more frequently among Utah women whose pregnancies were unintended or who were not sure how they felt about being pregnant compared to women whose pregnancies were intended.

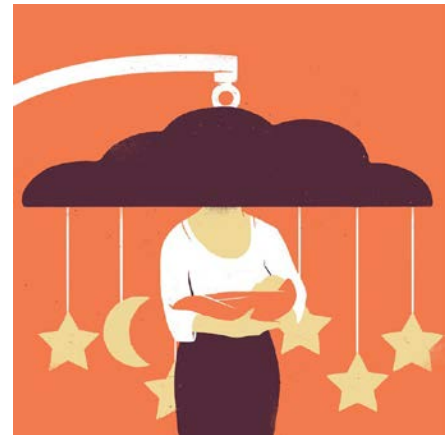
### Pre-pregnancy Anxiety and/or Depression



Less than half (49%) of Utah women with **depression during** pregnancy asked for help for depression from a health care provider and even fewer (41%) with **anxiety during** pregnancy asked for help for anxiety from a health care provider.

## Maternal Mental Health, cont.

Nearly **1 in 5 (19%)** of Utah women with symptoms of postpartum depression had **no health insurance** after their babies were born.



### Among Utah women with symptoms of postpartum depression\*:

<b>89%</b>	Attended a postpartum health visit 4-6 weeks after delivery
<b>84%</b>	Were asked about feeling down or depressed during postpartum health visit
<b>19%</b>	Had <b>no health insurance</b> after delivery to cover the cost of a postpartum health visit
<b>17%</b>	Didn't have transportation to get to a postpartum health visit

“I have postpartum depression and take medication for it. I believe I had depression during my entire pregnancy”

-PRAMS Mom

\*To identify women with symptoms of postpartum depression, the following two questions are asked on the PRAMS survey: 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?” Women responding “always” or “often” to either question were classified as experiencing postpartum depressive symptoms. These questions were based on the Patient Health Questionnaire (PHQ-2).

## Public Health Implications

Research indicates that although depression and anxiety among pregnant and postpartum women are common, they often go undiagnosed. All women during this period should receive frequent mental health screenings and appropriate treatment to decrease the risk of complications for themselves and their baby. Treatment may include medication, therapy, and online or in-person support groups. Women are encouraged to speak to their health care providers if they have any concerns. For questions, information on signs and symptoms, and local Utah resources, visit Postpartum Support International Utah at <https://psiutah.org/>.

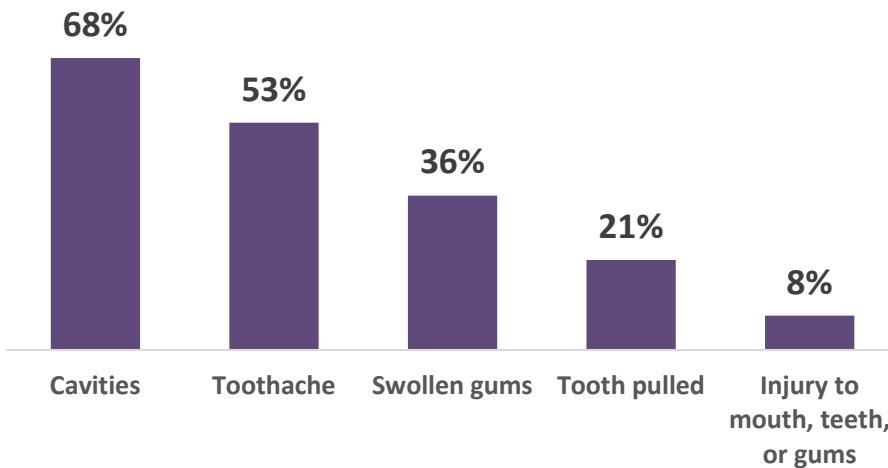
## Maternal Oral Health

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Nearly one quarter (23%) of Utah women said they could not afford to visit a dentist for an oral health problem they had during their pregnancy. Changes in oral health such as lesions, tooth mobility, tooth erosion, dental caries, and periodontitis may result from pregnancy. Periodontitis has been associated with poor pregnancy outcomes, including preterm birth and low birthweight. To prevent these issues, the American College of Obstetrics and Gynecology (ACOG) recommends all women visit the dentist during their pregnancy.

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Dental caries or cavities was the most common oral health problem experienced by Utah women during their pregnancy.



Reasons it was difficult for Utah women to visit a dentist during their pregnancy:

- 23%** Couldn't afford to go
- 20%** Didn't think it was safe
- 10%** Couldn't find a dentist who took patients
- 6%** Couldn't find a dentist who took pregnant patients

## Public Health Implications

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It is recommended that along with reinforcing routine oral health maintenance, health care providers should be aware of patients' dental health coverage during pregnancy so that referrals to the appropriate dental provider can be made (American College of Obstetricians and Gynecologists, 2017). In addition, they should advocate for broader oral health coverage of women before, during, and after pregnancy.

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# PRAMS Moms Say Thank You!

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*"I am a nurse and I work in Labor Delivery Postpartum Recovery. I'm glad this information is being gathered and put to good use. Thank you!"*

*"Gracias por haber me escojido para la encuesta. Es un plaser."*

*"Thank you for choosing me for this survey! It was a pleasure."*

*"Thank you for allowing me to participate in this important research. My baby was born 4 pounds 12 ounces - three weeks early due to preeclampsia. She was in the NICU five days due to hypoglycemia. She is doing very well now!"*

*"Thank you for acknowledging Polycystic Ovary Syndrome, it means so much to me."*

*"I hope this survey helps to assess what helps to keep healthy babies alive or how to have a healthy pregnancy!"*

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## Appendix A – Subgroup Analyses

### Percentage of Women Who Reported Not Taking a Multivitamin Before Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>42.5%</b>	<b>± 2.3%</b>	<b>40,981</b>	
<b>Maternal Age</b>				<.0001
≤ 17	79.0%	± 12.9	717	
18 - 19	67.8%	± 10.7	1,721	
20 - 24	56.6%	± 4.9	11,658	
25 - 29	38.0%	± 4.1	11,963	
30 - 34	37.3%	± 4.3	9,668	
35 - 39	34.6%	± 5.9	4,378	
40 +	40.1%	± 13.6	875	
<b>Education Level</b>				<.0001
Less than High School	66.0%	± 4.8	5,249	
Completed High School	58.5%	± 3.6	10,925	
Some College	43.5%	± 4.4	14,621	
College Graduate	26.7%	± 3.9	9,095	
<b>Race and Ethnicity</b>				<.0001
White non-Hispanic	39.9%	± 2.6	29,997	
Other non-Hispanic	42.6%	± 9.2	2,345	
Hispanic – All races	56.5%	± 5.3	7,889	
<b>Marital Status</b>				<.0001
Married	37.3%	± 2.5	29,740	
Unmarried	67.9%	± 4.6	11,241	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	51.2%	± 9.4	2,054	
Medicaid	59.8%	± 4.5	12,563	
Private Insurance	35.2%	± 2.8	22,744	
<b>Birthweight</b>				NS
<2500 grams	43.5%	± 3.3	2,585	
2500+ grams	42.5%	± 2.4	38,371	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A – Subgroup Analyses

### Percentage of Women with Chronic Health Conditions Before Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>35.9%</b>	<b>± 2.3</b>	<b>31,743</b>	
<b>Maternal Age</b>				<.05
≤ 17	43.8%	±15.4	398	
18 - 19	39.1%	±10.9	998	
20 - 24	30.7%	±4.4	6,350	
25 - 29	35.0%	±3.9	11,086	
30 - 34	35.4%	±4.3	9,229	
35 - 39	44.3%	±6.5	5,633	
40 +	46.8%	±15.2	1,020	
<b>Education Level</b>				<.0001
Less than High School	42.8%	±4.9	3,446	
Completed High School	41.0%	±3.6	7,718	
Some College	37.9%	±4.4	12,781	
College Graduate	29.3%	±3.9	9,975	
<b>Race and Ethnicity</b>				<.05
White non-Hispanic	34.7%	±2.5	26,300	
Other non-Hispanic	30.7%	±8.4	1,670	
Hispanic – All races	42.1%	±5.2	6,019	
<b>Marital Status</b>				<.05
Married	34.6%	±2.5	27,704	
Unmarried	41.7%	±4.9	7,009	
<b>Prenatal Care Payer</b>				<.05
No Insurance	32.7%	±8.9	1,327	
Medicaid	42.7%	±4.6	8,985	
Private Insurance	33.8%	±2.8	21,916	
<b>Birthweight</b>				
<2500 grams	41.8%	±3.4	2,499	
2500+ grams	35.5%	±2.3	32,191	<.05

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A – Subgroup Analyses

### Percentage of Women with Depression or Anxiety Before Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>27.4%</b>	<b>±2.1</b>	<b>26,556</b>	
<b>Maternal Age</b>				<.0001
≤ 17	54.5%	±15.4	495	
18 - 19	41.3%	±11.0	1,054	
20 - 24	33.5%	±4.6	6,921	
25 - 29	28.0%	±3.7	8,878	
30 - 34	21.7%	±3.8	5,659	
35 - 39	25.2%	±5.6	3,201	
40 +	15.9%	±10.9	347	
<b>Education Level</b>				<.0001
Less than High School	36.1%	±4.7	2,903	
Completed High School	33.6%	±3.4	6,328	
Some College	30.1%	±4.1	10,158	
College Graduate	19.4%	±3.5	6,617	
<b>Race and Ethnicity</b>				<.05
White non-Hispanic	29.1%	±2.4	22,082	
Other non-Hispanic	23.2%	±8.4	1,265	
Hispanic – All races	21.4%	±4.4	3,064	
<b>Marital Status</b>				<.0001
Married	24.9%	±2.3	19,945	
Unmarried	39.3%	±4.9	6,611	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	18.6%	±7.6	755	
Medicaid	38.4%	±4.4	8,079	
Private Insurance	24.4%	±2.5	15,776	
<b>Birthweight</b>				<.0001
<2500 grams	34.6%	±3.2	2,066	
2500+ grams	27.0%	±4.7	24,471	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.



## Appendix A – Subgroup Analyses

### Percentage of Women Who Smoked Tobacco Before Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>9.2%</b>	<b>±1.14</b>	<b>8,808</b>	
<b>Maternal Age</b>				<.0001
≤ 17	22.8%	±13.3	196	
18 - 19	26.4%	±9.4	655	
20 - 24	16.0%	±3.4	3,303	
25 - 29	7.7%	±1.8	2,408	
30 - 34	5.8%	±1.8	1,491	
35 - 39	6.0%	±2.9	755	
40 +	**	**	**	
<b>Education Level</b>				<.0001
Less than High School	23.5%	±4.3	1,823	
Completed High School	20.8%	±3.0	3,867	
Some College	6.4%	±2.2	2,145	
College Graduate	2.1%	±1.4	717	
<b>Race and Ethnicity</b>				>.0001
White non-Hispanic	9.0%	±1.3	6,777	
Other non-Hispanic	11.6%	±6.6	686	
Hispanic – All races	8.0%	±2.5	1,124	
<b>Marital Status</b>				<.0001
Married	3.8%	±0.8	3,002	
Unmarried	35.1%	±4.7	5,806	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	2.6%	±2.3	100	
Medicaid	23.9%	±3.6	4,989	
Private Insurance	4.7%	±1.3	3,072	
<b>Birthweight</b>				<.001
<2500 grams	13.4%	±2.4	793	
2500+ grams	8.9%	±1.2	8,006	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

\*\* Insufficient data to report

## Appendix A – Subgroup Analyses

### Percentage of Women Who Reported Their Pregnancy was Unintended

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>21.3%</b>	<b>±1.8</b>	<b>20,102</b>	
<b>Maternal Age</b>				<.0001
≤ 17	59.0%	±15.3	510	
18 - 19	48.1%	±11.3	1,216	
20 - 24	30.3%	±4.5	6,152	
25 - 29	20.0%	±3.4	6,228	
30 - 34	15.0%	±3.2	3,813	
35 - 39	15.4%	±4.7	1,894	
40 +	14.2%	±11.5	290	
<b>Education Level</b>				<.0001
Less than High School	34.3%	±4.9	2,618	
Completed High School	30.5%	±3.4	5,575	
Some College	21.2%	±3.7	7,024	
College Graduate	12.9%	±3.0	4,322	
<b>Race and Ethnicity</b>				<.0001
White non-Hispanic	18.3%	±2.1	13,595	
Other non-Hispanic	31.3%	±9.2	1,670	
Hispanic – All races	32.4%	±5.0	4,479	
<b>Marital Status</b>				<.0001
Married	16.8%	±1.9	13,191	
Unmarried	42.6%	±4.9	6,912	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	32.5%	±8.9	1,246	
Medicaid	33.6%	±4.4	6,919	
Private Insurance	16.0%	±2.2	10,184	
<b>Birthweight</b>				<.05
<2500 grams	22.2%	±2.9	1,295	
2500+ grams	21.2%	±1.9	18,807	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A – Subgroup Analyses

### Percentage of Women Who Received Prenatal Care After the First Trimester or Not at All

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>11.1%</b>	<b>±1.4</b>	<b>698</b>	
<b>Maternal Age</b>				<.0001
≤ 17	31.8%	±14.8	273	
18 - 19	18.0%	±8.7	441	
20 - 24	13.7%	±3.4	2,809	
25 - 29	8.8%	±2.3	2,723	
30 - 34	10.3%	±2.7	2,651	
35 - 39	11.3%	±4.2	1,402	
40 +	11.7%	±9.6	244	
<b>Education Level</b>				<.0001
Less than High School	19.5%	±4.2	1,477	
Completed High School	15.2%	±2.7	2,809	
Some College	11.1%	±2.8	3,694	
College Graduate	6.5%	±2.3	2,193	
<b>Race and Ethnicity</b>				<.01
White non-Hispanic	9.7%	±1.6	7,281	
Other non-Hispanic	10.3%	±5.5	532	
Hispanic – All races	16.3%	±3.8	2,262	
<b>Marital Status</b>				<.0001
Married	9.6%	±1.5	7,588	
Unmarried	18.3%	±3.7	2,957	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	22.9%	±8.5	892	
Medicaid	18.1%	±3.5	3,746	
Private Insurance	7.8%	±1.6	4,988	
<b>Birthweight</b>				NS
<2500 grams	9.1%	±2.2	529	
2500+ grams	11.2%	±1.5	10,006	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A – Subgroup Analyses

### Percentage of Women Who Reported Physical Abuse Before or During Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>4.2%</b>	<b>±0.9</b>	<b>3,991</b>	
<b>Maternal Age</b>				<.0001
≤ 17	9.7%	±4.3	64	
18 - 19	12.4%	±6.6	310	
20 - 24	7.0%	±2.2	1,434	
25 - 29	3.7%	±1.6	1,142	
30 - 34	2.1%	±1.2	536	
35 - 39	3.9%	±2.4	490	
40 +	0.8%	±1.1	16	
<b>Education Level</b>				<.0001
Less than High School	9.4%	±2.9	700	
Completed High School	6.9%	±1.9	1,293	
Some College	3.5%	±1.6	1,168	
College Graduate	2.1%	±1.3	726	
<b>Race and Ethnicity</b>				>.0001
White non-Hispanic	3.8%	±0.9	2,862	
Other non-Hispanic	4.6%	±3.5	243	
Hispanic – All races	6.2%	±2.4	860	
<b>Marital Status</b>				<.0001
Married	2.5%	±0.8	2,007	
Unmarried	12.1%	±3.1	1,985	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	2.8%	±2.4	110	
Medicaid	8.9%	±2.4	1,846	
Private Insurance	2.6%	±1.0	1,719	
<b>Birthweight</b>				<.05
<2500 grams	6.0%	±1.6	351	
2500+ grams	4.1%	±0.8	3,641	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A – Subgroup Analyses

### Percentage of Women Who Did Not Have Their Teeth Cleaned during Pregnancy

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>47.1%</b>	<b>±2.3</b>	<b>45,265</b>	
				<.0001
<b>Maternal Age</b>				
≤ 17	64.9%	±14.8	556	
18 - 19	64.8%	±10.1	1,647	
20 - 24	54.7%	± 5.0	11,306	
25 - 29	49.1%	± 4.3	15,457	
30 - 34	40.5%	± 4.5	10,449	
35 - 39	40.9%	± 6.3	5,199	
40 +	29.9%	±12.9	651	
				<.0001
<b>Education Level</b>				
Less than High School	66.4%	±4.7	5,283	
Completed High School	61.7%	±3.5	11,590	
Some College	48.1%	±4.5	16,059	
College Graduate	33.4%	±4.1	11,311	
				<.0001
<b>Race and Ethnicity</b>				
White non-Hispanic	43.1%	±2.7	32,467	
Other non-Hispanic	54.9%	±9.6	2,972	
Hispanic – All races	64.1%	±5.2	9,137	
				<.0001
<b>Marital Status</b>				
Married	44.0%	±2.6	34,960	
Unmarried	61.7%	±4.9	10,305	
				<.0001
<b>Prenatal Care Payer</b>				
No Insurance	72.4%	±9.2	2,901	
Medicaid	58.1%	±4.6	12,214	
Private Insurance	41.4%	±3.0	2,667	
				<.0001
<b>Birthweight</b>				
<2500 grams	51.5%	±3.5	3,603	
2500+ grams	46.8%	±2.4	42,173	
				<.05

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A: Subgroup Analyses

### Percentage of Women Who Reported Symptoms of Postpartum Depression

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>14.8%</b>	<b>±1.62</b>	<b>14,321</b>	
<b>Maternal Age</b>				<.05
≤ 17	20.8%	±11.7	189	
18 - 19	21.3%	±8.3	545	
20 - 24	18.4%	±3.7	3,808	
25 - 29	15.4%	±3.0	4,883	
30 - 34	11.8%	±2.96	3,078	
35 - 39	12.2%	±4.2	1,553	
40 +	12.1%	±9.6	265	
<b>Education Level</b>				<.0001
Less than High School	17.8%	±3.7	1,432	
Completed High School	19.3%	±2.8	3,634	
Some College	16.2%	±3.3	5,467	
College Graduate	10.4%	±2.7	3,551	
<b>Race and Ethnicity</b>				<.05
White non-Hispanic	14.2%	±1.8	10,747	
Other non-Hispanic	23.8%	±8.3	1,269	
Hispanic – All races	15.3%	±3.8	2,193	
<b>Marital Status</b>				<.0001
Married	13.4%	±1.8	10,595	
Unmarried	21.7%	±4.0	3,614	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	15.6%	±7.2	631	
Medicaid	23.1%	±3.9	7,814	
Private Insurance	12.1%	±1.8	13,315	
<b>Birthweight</b>				<.05
<2500 grams	18.2%	±2.7	1,093	
2500+ grams	14.5%	±1.7	13,205	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.

## Appendix A: Subgroup Analyses

### Percentage of Women Who Were Still Breastfeeding at Time of Survey

Characteristics	Percent	95% Confidence Interval	Population Estimate*	P-Value
<b>Total Birth Population</b>	<b>70.4%</b>	<b>±2.14</b>	<b>61,435</b>	
<b>Maternal Age</b>				<.0001
≤ 17	49.8%	±17.7	343	
18 - 19	37.3%	±11.9	843	
20 - 24	62.5%	±15.7	11,848	
25 - 29	74.1%	±5.1	21,352	
30 - 34	75.2%	±4.1	17,461	
35 - 39	72.0%	±6.1	8,254	
40 +	75.0%	±13.8	1,333	
<b>Education Level</b>				<.0001
Less than High School	47.5%	±5.6	3,056	
Completed High School	54.0%	±3.8	8,830	
Some College	70.6%	±4.2	22,056	
College Graduate	83.6%	±3.4	26,220	
<b>Race and Ethnicity</b>				<.0001
White non-Hispanic	73.0%	±2.4	50,437	
Other non-Hispanic	69.6%	±8.9	3,326	
Hispanic – All races	60.4%	±5.7	7,214	
<b>Marital Status</b>				<.0001
Married	75.3%	±2.3	54,976	
Unmarried	45.4%	±5.5	6,458	
<b>Prenatal Care Payer</b>				<.0001
No Insurance	63.2%	±9.2	2,279	
Medicaid	54.4%	±4.9	9,899	
Private Insurance	76.4%	±7.3	46,664	
<b>Birthweight</b>				<.05
<2500 grams	54.6%	±3.5	2,870	
2500+ grams	71.5%	±2.2	58,565	

NS = Not statistically significant

\*The population estimate reflects an estimate of the number of women who reported the event in each category. These numbers were weighted to represent the birth population for the years 2016 and 2017 combined.