LOUISIANA PRAMS SURVEILLANCE REPORT 2018

Louisiana Pregnancy Risk Assessment Monitoring System
Key Findings

Preface

The Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey of Louisiana resident women who deliver a live-born infant in the state within a given calendar year. Since 1997, Louisiana PRAMS has provided vital information on women's behaviors and experiences before, during, and after pregnancy. Louisiana PRAMS data can guide program planners, healthcare providers, policy makers, and public health leaders when designing, implementing, and evaluating programs and services relevant to women and infants in Louisiana. The 2018 Louisiana PRAMS Surveillance Report, a compilation of Louisiana PRAMS results for selected indicators, highlights data for births occurring in 2018.

In 2018, there were 54,204 live births that satisfied the Louisiana PRAMS inclusion criteria, of which 1,294 were sampled. Of this sample, there were 857 respondents, resulting in a 64% overall weighted response rate.

More information and resources related to Louisiana PRAMS, including the 2018 questionnaire, can be found on the Partners for Family Health website: partnersforfamilyhealth.org/prams/.

Louisiana PRAMS is funded by the U.S. Centers for Disease Control and Prevention (CDC) under Cooperative Endeavor Agreement #U01 DP6227-04 and administered by the Louisiana Department of Health (LDH), Office of Public Health (OPH), Bureau of Family Heath (BFH). More information about CDC PRAMS can be found at cdc.gov/prams/index.htm.

Acknowledgements

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

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PRAMS Moms Say Thank You!

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"I hope my information helps . . .
Thanks for the gift card!"

- 2018 PRAMS Mom

"Thank you so much for conducting
this research and outreach!"

- 2018 PRAMS Mom

"Thanks for choosing me to participate
in your survey. I hope my answers help."

- 2017 PRAMS Mom

"Thank you all for your help.
I'm grateful for everything."

- 2018 PRAMS Mom

"Well for the most of everything it's not an
easy thing, but the best thing that a
mother can experience is having a baby.
Watching them grow every day is
wonderful. But take it one day at a time
and don't be afraid to ask for help or
anything cause everyone cares for you and
the baby you have or giving life to.
Congrats to anyone and everyone and
never forget love your baby. Thank you for
all the support, help and love."

- 2016 PRAMS Mom

"I'm glad y'all are trying to get the
most info to have research to find
answers for something that matters."

- 2017 PRAMS Mom

"Thank you for working to keep
babies healthy in Louisiana."

- 2016 PRAMS Mom

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Louisiana PRAMS Background

The goal of the Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS) is to reduce infant and maternal morbidity and mortality by informing maternal and child health programs and policies designed to support healthy maternal behaviors. Louisiana PRAMS works toward this goal by: collecting high-quality population-based data, analyzing maternal behaviors and experiences and their relationship to health outcomes, and translating those data and analyses into information that can be used to guide and evaluate health programs and policies.

The Louisiana Department of Health (LDH), Office of Public Health (OPH), Bureau of Family Health (BFH) administers Louisiana PRAMS in conjunction with the U.S. Centers for Disease Control and Prevention (CDC). PRAMS collects state-specific, population-based data on maternal attitudes, behaviors, and experiences around the time of pregnancy and childbirth. Results are also linked to Louisiana Vital Records birth data files.

Key Findings

In 2018, Louisiana PRAMS sampled about 2% of the roughly 60,000 births in Louisiana. Each month, a stratified random sample of approximately 120 live births is selected. In 2018, 1,294 mothers were sampled and 857 (64%) responded. Key findings from frequently-requested data are highlighted below.

Family Planning:

- **50%** of women in Louisiana **did not intend to become pregnant or were unsure** if they wanted to become pregnant. **64%** of the women who were not trying to get pregnant **reported not doing anything to prevent a pregnancy**.

- Among women who reported **not using any contraceptive methods** to prevent an unintended pregnancy, the most common reasons were: **I didn't mind if I got pregnant (33%); I thought I couldn't get pregnant (28%);** and **I had side effects from birth control (14%)**.

Prenatal Care:

- **91%** of women reported they **received prenatal care during their first trimester**. **8%** of mothers began prenatal care after their first trimester and about **1%** of mothers reported **not receiving any prenatal care** during their pregnancy.

- The most commonly-reported **barriers to receiving prenatal care** as early as desired were: **not knowing they were pregnant (46%) ,couldn't get an appointment when desired (34%), not having money or insurance to pay (23%)**, and **having too many other things going on (22%)**.

Tobacco and Alcohol Use During Pregnancy:

- **14%** of women reported that they were **currently smoking cigarettes** (at the time of the survey). **8%** of women reported that they **smoked cigarettes during the last three months of pregnancy**.

- **3%** of women reported they **consumed at least one alcoholic drink during the last three months of pregnancy**.

Breastfeeding and Infant Care:

- **73%** of women **breastfed or fed pumped milk** to their new baby **at least once**. **69%** of women reported **breastfeeding for 8 weeks or more.**

- **68%** of women reported that their **new baby is placed to sleep most often on their back**.

This report contains more information on a variety of population health topics related to pregnancy. It is intended to guide maternal and child health resource distribution, policies, and programs – as well as educate healthcare providers and the public.

Methodology

Sampling and Data Collection

Women are selected to participate in PRAMS from Louisiana's Vital Records birth certificate files. To participate in Louisiana PRAMS, mothers must be Louisiana residents who gave birth to a live-born infant in the state. Each month, a stratified random sample of approximately 120 live births is selected. In 2018, three sampling strata were used: race (African-American or non-African American) and an oversample of pregnant women served by Healthy Start in the greater Lafayette area in south central Louisiana. Louisiana PRAMS participated in the Healthy Start oversample project in conjunction with CDC PRAMS and the Health Resources and Services Administration (HRSA) as part of a national evaluation of the Healthy Start program. Six months of data from the Healthy Start oversample project were included in the 2018 data. Strata were used in the following arrangement:

African American*

Non-African American

Healthy Start

For the final three batches of sampled 2018 births, Louisiana began implementing additional survey questions regarding experiences around maternal disability. This supplement was funded by the National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Center for Medical Rehabilitation Research (NCMRR) under Grant # U01DP006227-03-02. Louisiana PRAMS will continue to include these questions throughout the 2019 birth sampling period.

Each monthly sample follows a 90-day cycle of scheduled contact attempts, first by mail and then by phone. The day after the sample is selected, an introductory letter is mailed. Within seven days of that, an initial questionnaire packet is mailed to the sample. The packet contains the questionnaire, an informed consent document, a calendar to serve as a reference for survey respondents when asked about their experiences in the past year, a Louisiana PRAMS informational page, and a small incentive gift provided by federal funds.

If the questionnaire is not returned, a reminder letter is sent 7 to 10 days after the initial questionnaire is mailed, and a second questionnaire is mailed approximately 12 days after the reminder letter. If the second questionnaire is not returned, a third and final questionnaire is mailed approximately 2 weeks after the second questionnaire. Telephone follow-up is used for women who have not responded by mail by day 63, and continues until day 90. Several methods are used to identify phone numbers for women who require telephone follow up, and a maximum of 15 attempts are made using each identified phone number before the participant is considered unreachable.

More detailed information on PRAMS methodology, including weighting procedures, can be found on the CDC PRAMS webpage.

*Note: African American and Black are both used within this report to reflect terms that were used in original documentation and data collection. Maternal race and ethnicity data for Louisiana PRAMS can be categorized by the following: Non-Hispanic White, Non-Hispanic Black, Hispanic, and Non-Hispanic Other.

Program Funding

Louisiana PRAMS is funded by the CDC under Cooperative Endeavor Agreement #U01 DP6227 – 04.

Data Analysis and Dissemination

Each year, Louisiana PRAMS develops a state analysis plan. In 2018, this plan was based on the following:

- Healthy People 2020 goals and objectives related to maternal and child health
- Expressed analytic needs of the Bureau of Family Health (BFH)
- Guidance provided by the Louisiana PRAMS Steering Committee.

The Steering Committee is comprised of internal BFH staff and external stakeholders who have an interest in using PRAMS data for maternal and child purposes. The state analysis plan is ultimately approved by the BFH Senior Management Team and the Louisiana PRAMS Coordinator.

Data dissemination occurs on a statewide and national basis. Current dissemination activities include presentations at national meetings and data factsheets. The Louisiana PRAMS Surveillance Report is an annual publication of Louisiana PRAMS, presenting detailed results of data analysis for the most recent year of available data. Louisiana PRAMS data reports – which do not include additional analysis or interpretation – are also available on an annual basis. Additional data analyses are available by request and are provided on a case-by-case basis.

Louisiana PRAMS Response Rates

Louisiana PRAMS data are weighted to be reflective of all Louisiana mothers delivering a live-born singleton (single infant), twin, or triplet in Louisiana. The CDC recommends a response rate of at least 55% for data to be considered representative of the population. Louisiana's 2018 weighted response rate was 64% and successfully met this threshold.

Maternal Demographics

Louisiana differs from many U.S. states in its demographic and socioeconomic profile. In 2018, 37% of all Louisiana resident births were to Non-Hispanic Black mothers, compared with 14% nationally. 47% of births were to mothers with a high school degree or lower, compared with 39% nationally. 44% of Louisiana PRAMS respondents in 2018 were married, compared to 60% nationally. Lastly, in close alignment with national trends, 98% delivered singleton births (single infants, as opposed to twins or triplets), as compared to 97% nationally.

More than 1 in 3 Louisiana mothers (36%) live in homes with a yearly household income of $16,000 or less.

$0-16,000	$16,001-32,000	$32,001-60k	$60,001-85k	$85,001+
36%	25%	11%	10%	18%
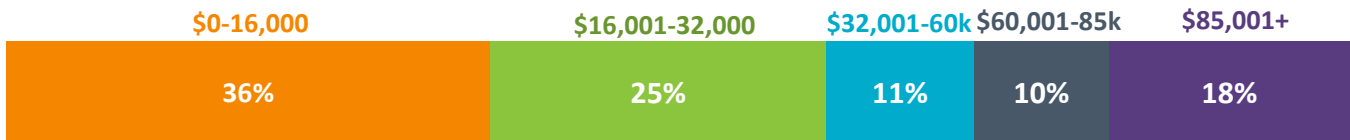
46%
of Louisiana mothers are WIC participants

The **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)** provides supplemental foods, healthcare 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 (**$46,435 or below** for a family of four).

53%
of Louisiana mothers have completed some education beyond high school

- **32%** are high school graduates/GED

- **15%** have less than a high school education

Over half (56%) of Louisiana mothers are in their 20s

- 38% — 30 or over
- 56% — 20-29
- 6% — Under 20
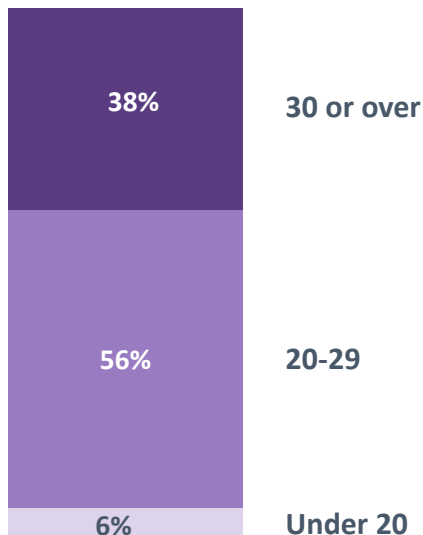
Most Louisiana mothers are Non-Hispanic White & Non-Hispanic Black

- Non-Hispanic Other 5%
- Hispanic 9%
- Non-Hispanic White 49%
- Non-Hispanic Black 37%
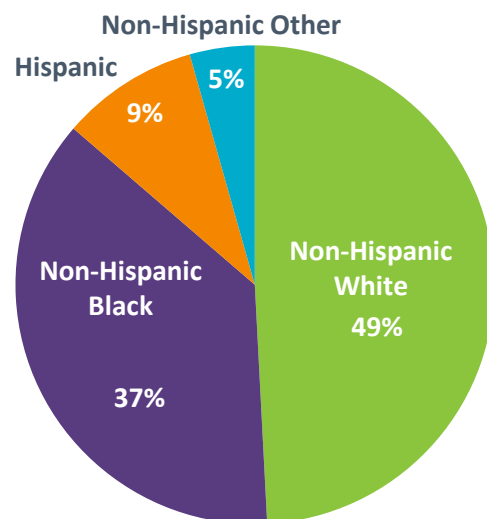
Insurance

Adequate insurance coverage is essential for women to receive high-quality prenatal and delivery care to support maternal and infant health. As of 2014, the Affordable Care Act made health insurance for pregnancy, labor, delivery, and newborn care mandatory. On June 1, 2016, Louisiana residents with incomes up to 138% of the federal poverty level became eligible to enroll in the state's expanded Medicaid program. In 2018, Medicaid provided prenatal coverage for 56% of Louisiana women, compared with 42% nationally.

Health insurance coverage: prior to, during, and after pregnancy

Health insurance coverage gaps exist, especially among those without private insurance prior to pregnancy.

	Insurance **prior to** pregnancy	Insurance **during** pregnancy	Insurance **after** pregnancy
Private	48%	43%	43%
Medicaid	39%	56%	49%
None	13%	<1%	8%
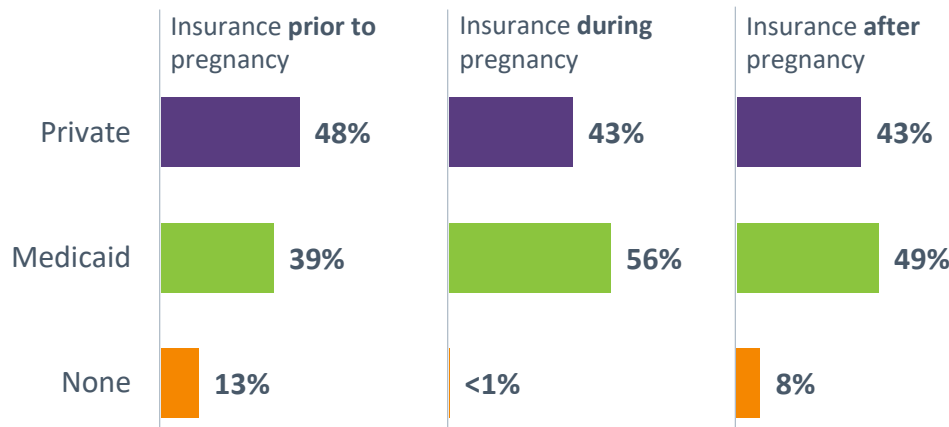
> *"Really wish I could find a primary care doctor to see with my insurance. Also, a dentist. I didn't get any dental care in over 2-3 years."*
>
> *- 2018 PRAMS Mom*

Less than 1% of mothers were uninsured during pregnancy

Racial disparities* among uninsured populations

Denominator is the total number of births in each racial group

	No insurance prior to pregnancy	**No** insurance during pregnancy	**No** insurance after pregnancy
Hispanic	55%	0%	47%
African-American	8%	<1%	4%
White	9%	0%	4%
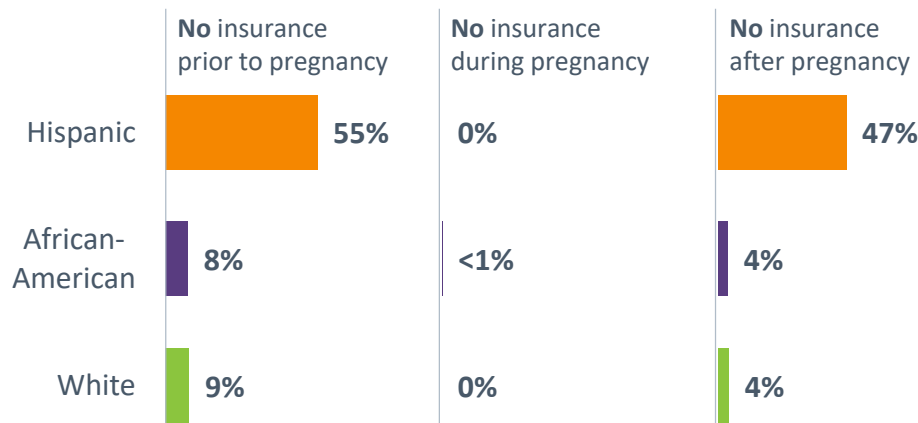
Hispanic women in Louisiana were **most likely to be uninsured**. While almost all Hispanic women had some form of insurance during pregnancy, **55% were uninsured prior to pregnancy** and **47% were uninsured after pregnancy**.

Public Health Implications

While Medicaid covers over half of Louisiana births prenatally, fewer mothers had postpartum insurance coverage. Additionally, fewer Hispanic women have access to insurance coverage both prior to and after pregnancy as compared to non-Hispanic women. Continuous access to health insurance and healthcare for women could improve maternal and infant health by providing opportunities to manage or treat conditions before, during, and between pregnancies (The Henry J. Kaiser Family Foundation, 2010).

Preconception Health

Driving factors behind preterm birth, low birth weight, and infant mortality are linked to poor maternal health status at the time of conception. Poor preconception health, pre-pregnancy weight, pre-pregnancy medical conditions (including diabetes and hypertension), and lack of interconception care are linked to adverse birth outcomes. According to AmericasHealthRankings.org, Louisiana ranks 47th in the nation for diabetes, 45th for obesity, and 50th for overall health.

NATIONAL HEALTH GOALS

Healthy People 2020 Goal: Increase the proportion of women delivering a live birth who took multivitamins/folic acid every day in the month prior to pregnancy.
- Healthy People 2020 target: **33.3%**
- 2018 Louisiana status: **23.8%**

Prior to pregnancy, the majority of women (62%) had BMIs* outside of the normal weight range

Obese	34%
Overweight	26%
Normal	38%
Underweight	2%
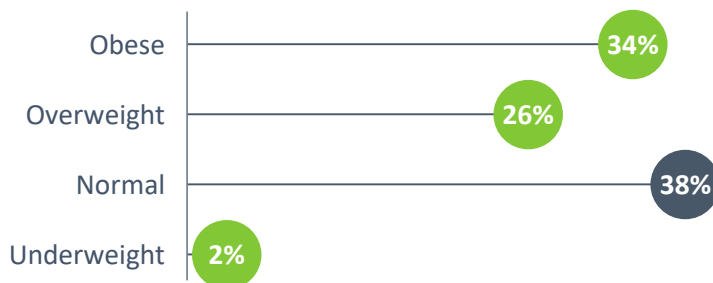
Weight criteria based on national Body Mass Index (BMI) categories and calculated from self-reported height and weight before pregnancy on PRAMS Survey

Pre-pregnancy Conditions

13% had depression

9% had high blood pressure

5% had diabetes

Topics discussed with a healthcare worker during any visit before pregnancy

Healthcare workers can support better birth outcomes by helping women manage chronic conditions throughout their lives.

Smoking cigarettes	77%
Using birth control to prevent pregnancy	48%
Feeling down or depressed	44%
Maintaining a healthy weight	44%
Wanting to have or not have children	36%
Sexually transmitted infections	34%
Improving my health	33%
Taking a vitamin with folic acid	31%
Controlling my medical conditions	21%
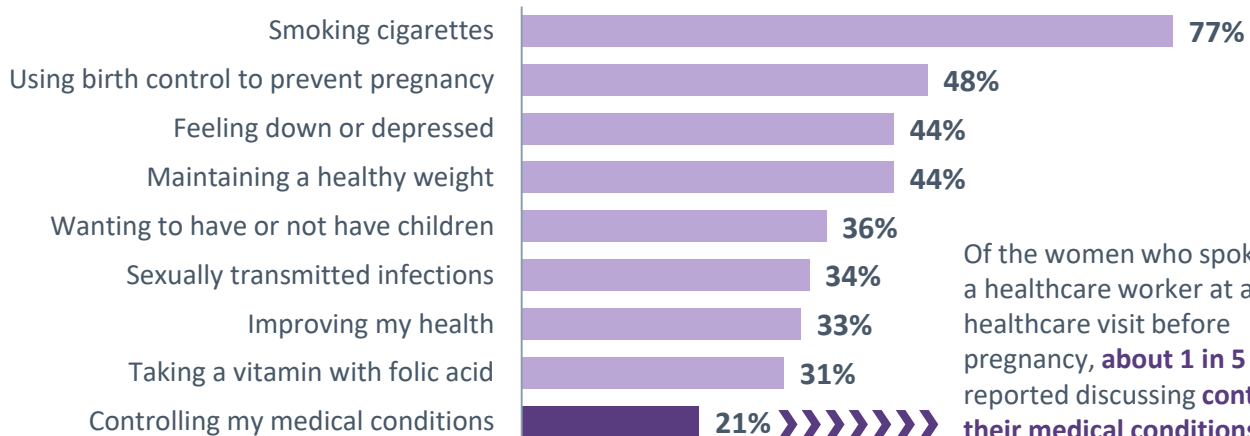
Of the women who spoke to a healthcare worker at any healthcare visit before pregnancy, **about 1 in 5** (21%) reported discussing **controlling their medical conditions.**

Public Health Implications

Maternal and Child Health programs seeking to improve preconception health and birth outcomes may benefit from focusing on improving women's overall health and preventing chronic disease. Furthermore, health and wellness programming should not necessarily be guided by pregnancy intention, as half of pregnancies in Louisiana are unplanned (Louisiana PRAMS, 2018).

Family Planning: Prior to Pregnancy

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50% of new mothers in Louisiana were unsure if they wanted to become pregnant or did not intend to become pregnant (Louisiana PRAMS, 2018). When compared to intended pregnancies, unintended pregnancies are associated with negative behavioral and health outcomes such as late initiation of prenatal care, lower rates of breastfeeding, unsafe infant sleep practices, maternal postpartum depression, and low birth weight (Guttmacher Institute, 2016). In Louisiana, 64% of women who were not trying to become pregnant were also not using any form of contraception when they became pregnant (PRAMS, 2018). Providing contraception and counseling around family planning improves maternal and infant health outcomes by helping people achieve their desired family size while maintaining healthy birth spacing.

Half (50%) of mothers intended to become pregnant

Unsure:
Mother wasn't sure what she wanted

15%

Unintended:
Mother wanted to be pregnant later or never

35%

Intended:
Mother wanted to be pregnant sooner or then

50%
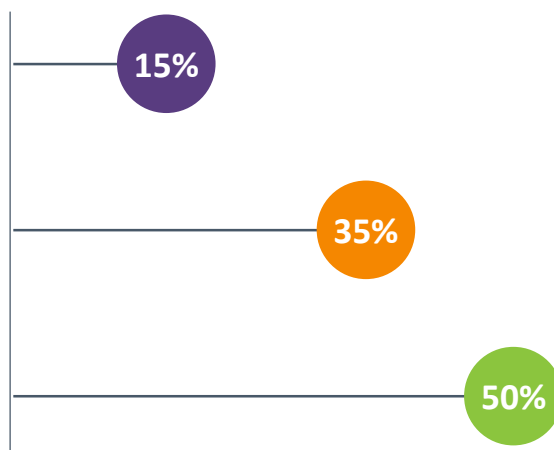
"I have endometriosis. I have had several surgeries for treatment of it. Also had my left tube and ovary taken out that was consumed by the endometriosis. Getting pregnant was a complete and total shock and blessing to me and my family!"

- 2018 PRAMS Mom

Among women who were not trying to get pregnant, nearly 2 out of 3 (64%) reported that they did not use any form of contraception prior to pregnancy

Mothers' top reasons for not using contraception *(Participants checked all that apply)*

12%	14%	28%	33%
Forgot to use birth control	Had side effects from birth control	Thought I couldn't get pregnant at the time	Didn't mind if I got pregnant
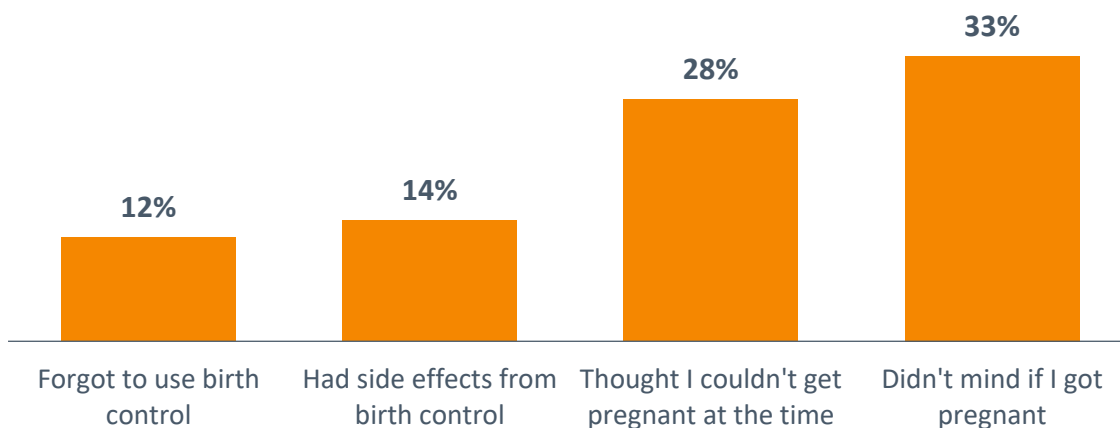
Family Planning: Postpartum

NATIONAL HEALTH GOALS

Healthy People 2020 Goal: Increase the proportion of women delivering a live birth who used contraception postpartum to plan their next pregnancy.
- Healthy People 2020 target: **97.5%**
- 2018 Louisiana status: **75.8%**

3 out of 4 mothers (76%) used contraception postpartum

Contraception methods used by Louisiana mothers postpartum and methods' effectiveness (respondents checked all that apply)

Method	Percentage
Tubes tied	17%
Partner vasectomy	5%
Intrauterine device	12%
Contraceptive implant	7%
Birth control pill	26%
Injection	13%
Contraceptive patch or vaginal ring	4%
Condoms	21%
Natural family planning	4%
Withdrawal	11%

Most effective*

↑

■ Result in < 1 pregnancy per 100 women per year

■ Result in 6-12 pregnancies per 100 women per year

■ Result in > 18 pregnancies per 100 women per year

↓

Least effective

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

Top three reasons reported for not using contraception after having the baby
(Participants checked all that apply)

Reason	Percentage
I'm not having sex	31%
I don't want to use birth control	29%
I'm worried about the side effects from birth control	22%
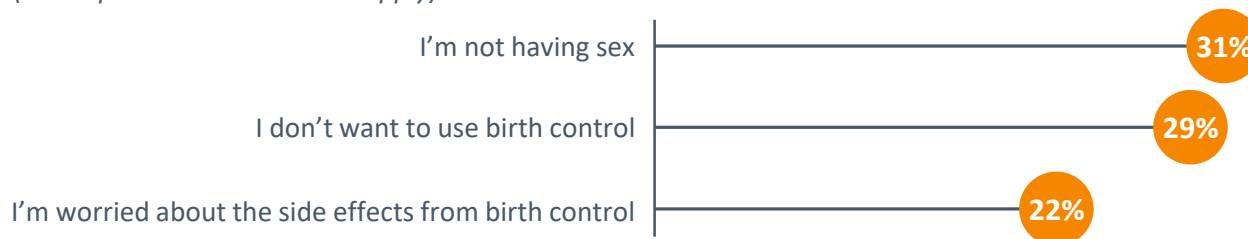
Public Health Implications

Louisiana PRAMS data highlight opportunities to improve family planning programs and services. When developing educational materials and clinical guidelines, family planning and reproductive health programs may benefit from examining commonly-cited barriers to contraception use. As mentioned on the previous page, the top two barriers prior to pregnancy included women not minding if they got pregnant, as well as their belief that they could not get pregnant. This could potentially be addressed through health education, regular reproductive healthcare, and provider counseling on the full range of contraceptive methods to help women determine their best-fit method based on their values, lifestyle, and family planning goals.

Prenatal Care

One of the Healthy People 2020 goals was to increase the proportion of pregnant women who receive early and adequate prenatal care. In order to be early, prenatal care must begin in the first trimester, and in order to be adequate, it must begin by the fourth month of pregnancy. Consistent prenatal care that begins early in pregnancy can lead to improved health outcomes for mothers and infants because it allows for timely assessment of risk factors (both genetic and behavioral), provision of health education, and treatment or management of chronic and pregnancy-associated conditions.

About 1 in 11 (9%) Louisiana mothers do not receive prenatal care in the first trimester

Timing of entry into prenatal care:

91% First Trimester

9%

▶ **8% Second Trimester**
▶ **0.4% Third Trimester**
▶ **0.6% No prenatal care**
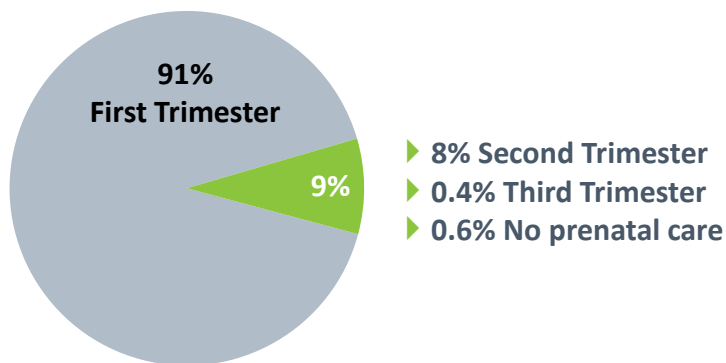
> *"When switching doctors around 19 weeks pregnant, I went 10 weeks without prenatal care because no doctor in my area would accept me due to how far along I was. Some women don't even know they are pregnant until then or later."*
>
> **- 2018 PRAMS Mom**

The top two factors preventing women from getting early prenatal care were: not knowing they were pregnant & inability to get an appointment when desired

All reported barriers to early prenatal care (PNC):

Didn't want prenatal care

Couldn't take time off from work or school

No one to take care of my children

Didn't want anyone to know I was pregnant

No transportation to appointment

Too many other things going on

Doctor or plan wouldn't start as early as I wanted (0% for women without PNC in first trimester)

Didn't know I was pregnant

Couldn't get an appointment when I wanted

Didn't have enough money/insurance to pay for visits

Didn't have Medicaid or LaMoms card

Legend:
- Women without PNC as early as desired
- Women without PNC in the first trimester

0% 10% 20% 30% 40% 50% 60% 70%

Prenatal Care – Part 2

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Nearly 1 in 4 women received less than adequate prenatal care

Adequacy of Prenatal Care Utilization Index (Kotelchuck Index) scores two elements: (1) Timing of initial prenatal care visit and (2) number of prenatal visits from initiation until delivery.

The index defines **less than adequate** prenatal care as having **received fewer than 80% of the recommended prenatal visits** for gestational age based on standards set by the American Congress of Obstetricians and Gynecologists. "**Less than adequate**" **includes both "inadequate" and "intermediate" responses**. It is important to note that this index does not measure quality of care. Additionally, women who experience high risk pregnancies require more prenatal care visits. It is possible that women with greater health needs (high risk pregnancies) make up a greater proportion of the "adequate plus" category.

Inadequate	Intermediate	Adequate	Adequate Plus
14%	**8%**	**39%**	**39%**
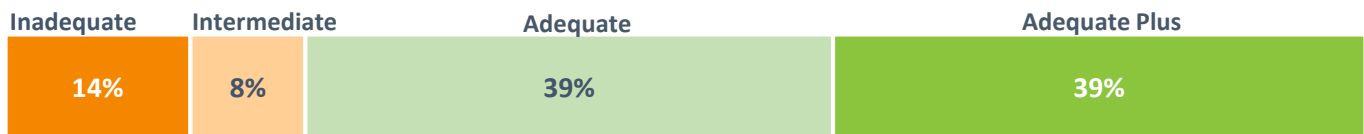
"My first pregnancy was very difficult because I had preeclampsia and had a seizure and delivered my baby at 7 months. This was my third pregnancy; it was somewhat stressful, but I had a great doctor and wonderful nurses to help and monitor me and the baby."

- 2018 PRAMS Mom

Conditions during Pregnancy

18% had high blood pressure, pre-eclampsia, or eclampsia. **Pre-eclampsia and eclampsia** are among the **top underlying causes** of pregnancy-related deaths in Louisiana (Louisiana PAMR 2017).

13% had depression

10% had gestational diabetes

Louisiana mothers with Medicaid reported discussing various topics with a doctor during prenatal care more frequently than mothers with private insurance

Smoking cigarettes during pregnancy
Drinking alcohol during pregnancy
Taking prescription medications
Breastfeeding
Using illegal drugs during pregnancy
Using birth control after baby is born
Feeling down or depressed
Physical or emotional abuse
Getting tested for HIV
How much weight to gain during pregnancy

0%   20%   40%   60%   80%   100%

Medicaid for PNC   Private Insurance for PNC

Prenatal Risk Factors

Certain medical factors, including viruses and previous adverse birth outcomes, increase the risk of health complications during pregnancy. It is recommended that all pregnant women receive a flu shot, as flu is more likely to cause severe illness in pregnant women than in women who are not pregnant (CDC, 2018). Also, the American College of Obstetrics and Gynecology (ACOG) recommends certain routine blood tests be included in prenatal care to detect infections and other conditions in pregnancy, including tests for HIV and Hepatitis B.

More than half (54%) of mothers did not receive a flu shot before or during their most recent delivery

54% No flu shot
33% Flu shot during pregnancy
13% Flu shot before pregnancy

About 2 out of 5 (41%) mothers who had a prior preterm birth received 17P injections during pregnancy

17P, also called progesterone, Makena® or 17 alpha-hydroxyprogesterone, is a series of weekly injections administered to prevent preterm birth. The findings below are based on PRAMS participant recall and self-report, not medical records or birth certificate data.

41% About **2 in 5 mothers** who **had a prior preterm birth received 17P**

9% **1 in 11 (9%)** mothers who **did not have** a prior preterm birth **received 17P**

Less than half of mothers were tested for HIV (45%) or Hepatitis B (40%) prior to pregnancy

45% Received an **HIV test** prior to pregnancy

40% Received a **Hepatitis B** test prior to pregnancy

> *"I had a lot of stress during my pregnancy. My baby girl was born at 35 weeks and 4 days. The night before I had a fever . . . I believe that may have contributed to my early labor. I had a stillborn a little over a year ago."*
>
> **- 2018 PRAMS Mom**

Public Health Implications

It is important that women know if they have an infection or are at increased risk for preterm birth so they can receive necessary special care during pregnancy and delivery. Increased patient-provider dialogue during prenatal care visits may help pregnant women and their care providers determine what steps should be taken to ensure the health and safety of both mother and baby. Additionally, all women should be made aware of common risk factors, including influenza. In 2018, less than half (46%) of pregnant women in Louisiana got a flu shot, leaving the majority of women and babies unprotected from the flu.

Maternal Tobacco Use

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Tobacco use during and after pregnancy can put a woman and her baby at risk for health complications. In the United States, 8% of women reported smoking during the last three months of pregnancy (CDC PRAMS, 2017). According to the Centers for Disease Control and Prevention (CDC), smoking during pregnancy and being around cigarette smoke can put both a mother and infant at increased risk for poor health outcomes such as birth defects. Smoking while pregnant can cause gum disease to worsen more quickly than non-smokers and can increase the chance of miscarriage, premature birth, or low birth weight (March of Dimes Foundation, 2016).

NATIONAL HEALTH GOALS

Healthy People 2020 Goal: Increase abstinence from cigarette smoking among pregnant women:
- Healthy People 2020 target: 98.6%
- 2018 Louisiana status: 92.3%

About 1 in 12 (8%) women reported any smoking during their last trimester whereas about 1 in 7 (14%) women reported smoking postpartum

21% Any cigarettes in the past 2 years

19% Any cigarettes in the 3 months before pregnancy

8% Any cigarettes in the last 3 months of pregnancy

14% Currently smoking
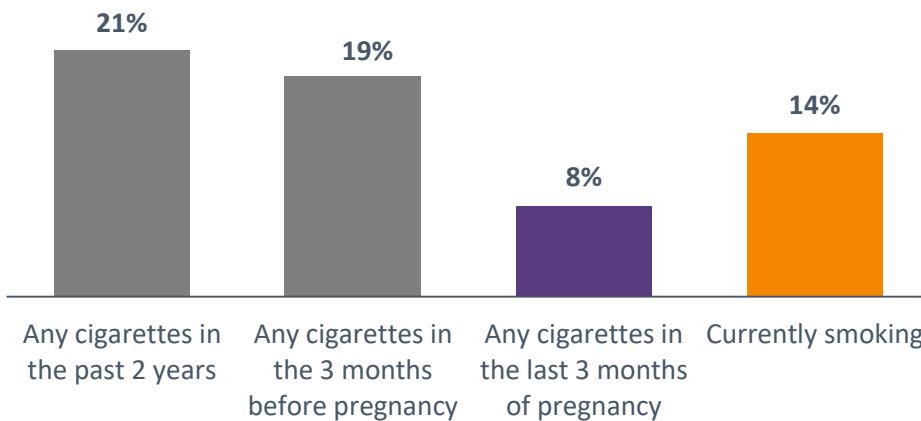
"It would have been nice to get help with not smoking cigarettes while I was pregnant."

- 2017 PRAMS Mom

Women reported using tobacco products (other than cigarettes) during the past two years

5% E-cigarettes

3% Hookah

4% Cigarillos or flavored cigars
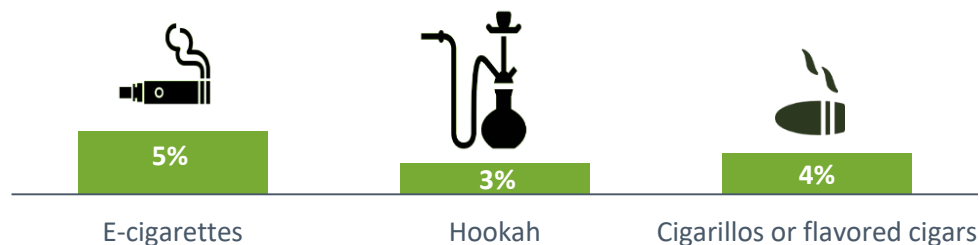
Public Health Implications

While over half of women (52%) who smoked before pregnancy quit by their last trimester, over a third of these women (37%) report smoking again after delivery (Louisiana PRAMS, 2018). Smoking postpartum may expose an infant to secondhand smoke, putting the infant at increased risk for ear infections, asthma, and Sudden Unexpected Infant Death (SUID) (CDC, 2018). Pregnancy may provide a timely opportunity for healthcare providers to initiate conversations with their patients about tobacco use and refer them to cessation resources. Providers are encouraged to continue discussing tobacco and smoking cessation options and supports with women after their babies are born so that new mothers are less likely to resume smoking postpartum.

Maternal Drug & Alcohol Use

Drinking alcohol during pregnancy can cause miscarriage, stillbirth, and a range of physical, behavioral, and intellectual disabilities (CDC, 2018). In general, drugs and pharmaceuticals should not be used during pregnancy without the guidance and approval of a medical professional, as they can cause preterm birth, miscarriage, low birth weight, heart defects, and neonatal abstinence syndrome (NAS) (March of Dimes, 2016).

64% **of women** **used over-the-counter (OTC) pain relievers*** such as aspirin, Tylenol®, Advil®, or Aleve® during pregnancy.
Not all OTC medicines are safe to use during pregnancy. Women should talk to their health provider before taking OTC medicines (March of Dimes, 2015).

Women's use of prescription and illegal drugs in the month before pregnancy

Marijuana or hash	7%
Prescription pain relievers such as hydrocodone (Vicodin®), oxycodone (Percocet®) or codeine	5%
Adderall®, Ritalin® or other stimulant	4%
Synthetic marijuana	1%
Cocaine	1%
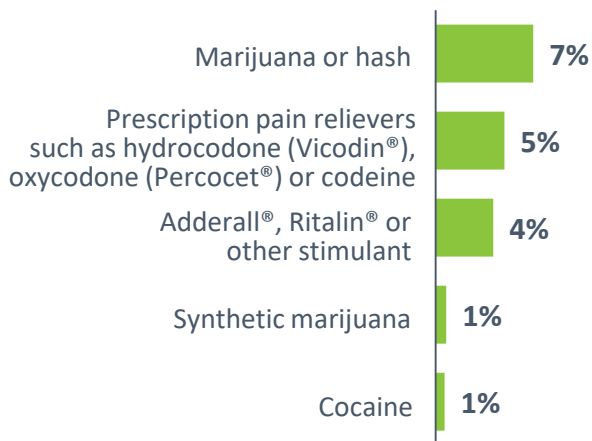
"My child was born addicted to methadone . . . He was released 5.5 weeks after birth. He is a strong and intelligent 3-month-old and I'm very happy to have him home now. If I had continued heroin during my pregnancy he may not be here. Starting the methadone clinic at 2 weeks pregnant helped."

- 2017 PRAMS Mom

Women's alcohol consumption before and during pregnancy

Any alcohol in the past 2 years	55%
Any alcohol in the 3 months before pregnancy	49%
Any alcohol in the last 3 months of pregnancy	3%
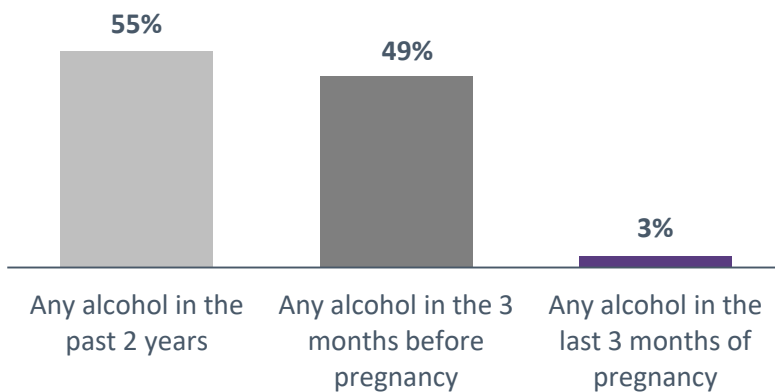
72% of mothers who reported drinking during pregnancy consumed less than one drink per week

Public Health Implications

PRAMS data help illuminate the extent and frequency of prenatal risk factors experienced by women in the state. There is no known safe amount of alcohol use during pregnancy or while trying to get pregnant (CDC, 2018), and even prescription drugs may be harmful if used during pregnancy (March of Dimes, 2018). Pregnancy may be an opportunity for women to change their patterns of alcohol and substance use, which may be facilitated by consulting with their healthcare provider. Providers can also counsel pregnant and postpartum women on how to safely use prescription and over-the-counter medications, and refer them to substance use disorder treatment programs when appropriate.

Breastfeeding

Evidence consistently shows that breastfeeding has numerous health benefits for infants. Breastfeeding carries antibodies from the mother that help combat disease, lowering babies' risk of having asthma or allergies, ear infections, respiratory illnesses, and bouts of diarrhea (American Academy of Pediatrics, 2014). Breastfeeding has also been found to have a protective effect against Sudden Infant Death Syndrome (SIDS) (American Academy of Pediatrics, 2016). The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of a baby's life.

73%
of mothers in Louisiana initiate breastfeeding
*Below national average of 88%

Most commonly-cited reasons for not breastfeeding

1.	**I didn't want to breastfeed**	**45%**
2.	I had other children to take care of	15%
3.	I tried but it was too hard	14%
4.	I didn't like breastfeeding	13%

Most women (69%) who started breastfeeding continued for at least 8 weeks

1 week or less	2-4 weeks	5-7 weeks	8 weeks or more
5%	20%	6%	69%

Racial differences* in breastfeeding support that mothers reported receiving after their baby was born

White Mothers   **Black Mothers**

- Someone answered my questions
- Received help getting my baby positioned correctly
- Received help knowing if my baby was getting enough milk
- Received help managing pain or bleeding nipples
- Received information about where to get a breast pump
- Received help using a breast pump
- Received information about breastfeeding support groups

100% 90% 80% 70% 60% 50%   50% 60% 70% 80% 90% 100%

*Darker colors indicate a **difference of 10 percentage points or more** between groups.
Data represent Non-Hispanic populations.

Breastfeeding - Part 2

Black mothers have different* hospital breastfeeding experiences than white mothers

White Mothers **Black Mothers**

Baby given a pacifier
Given gift pack with formula
Told me to breastfeed on demand ‡
Baby only given breast milk ‡
Baby placed skin-to-skin ‡
Breastfed in first hour after birth ‡
Breastfed baby in the hospital ‡
Baby stayed in the same room ‡

100% 90% 80% 70% 60% 50% 40% 30%   30% 40% 50% 60% 70% 80% 90% 100%
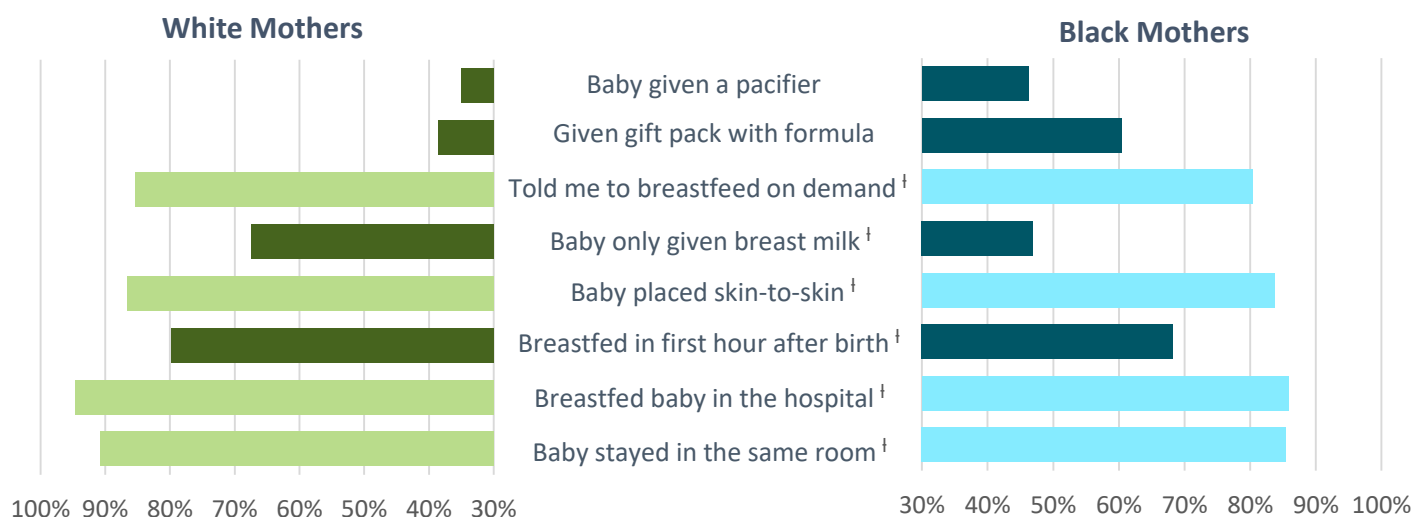
*Darker colors indicate a **difference of 10 or more percentage points** between groups*
‡ *Denotes breastfeeding-friendly practice*

Racial disparities in breastfeeding

46% of Black babies used a pacifier** in the hospital in comparison to **31% of White babies.**

60% of Black mothers were given a gift pack with formula** at the hospital in comparison to **33% of White mothers**.

**These practices do not support and can hinder breastfeeding

> "I wish people understood the importance of breastfeeding more. I wish there was less of a stigma about breastfeeding in public. I wish there was more education about what to do and not do if your milk supply drops (ex. paced feedings, growth spurts, etc.)"
>
> - 2018 PRAMS Mom

> "This last pregnancy, I was positive I wanted to breastfeed. I made that known ahead of time. It was so hard for me to get a lactation nurse in my room. When they were in there, I felt like it was rushed, all while I was struggling to get my baby to latch. I'm pretty sure I had more help at my child's pediatrician's office than at the hospital after delivery."
>
> - 2018 PRAMS Mom

Public Health Implications

Louisiana's breastfeeding initiation rate in 2018 fell short of the Healthy People 2020 goal of 82%. Evidence shows that maternity care practices in the hospital can be a predictor of breastfeeding initiation (babyfriendlyusa.org). It is important to teach hospital staff that giving infants formula and pacifiers are practices that negatively impact mothers' breastfeeding efforts, overall breastfeeding rates, and infants' health (Baby Friendly Hospital Initiative, 2016). Increased lactation support in the hospital and throughout the postpartum period (see previous page), promotion of breastfeeding-friendly work environments, and expanded maternity leave policies are other ways to support women in their efforts to start and continue breastfeeding.

Infant Sleep Environment

In 2018, 84 infants in Louisiana died suddenly and unexpectedly. Deaths caused by Accidental Suffocation and Strangulation in Bed, SIDS (Sudden Infant Death Syndrome), or other unexplained causes are included in a category called SUID (Sudden Unexpected Infant Death).

UNITED STATES vs. LOUISIANA

- In 2018, the national SUID rate was **89.6** per 100,000 live births (National Child Death Review, 2018)
- In 2018, the SUID rate in Louisiana was **141.2** per 100,000 live births (Louisiana Child Death Review, 2018)

The American Academy of Pediatrics cites **bed-sharing** as the greatest risk factor for sleep-related infant deaths.

30% About one third of Louisiana mothers say their infant **sometimes, often, or always bed-shares.**

Safe Sleep Risk Factors*

About 2 out of 3 (65%) mothers reported that their **babies sleep on non-firm sleep surfaces.**

- Mother currently smoking — **14%**
- Bed-sharing** — **30%**
- Sleep position not on back — **32%**
- Sleeping with soft objects — **60%**
- Non-firm sleep surface — **65%**
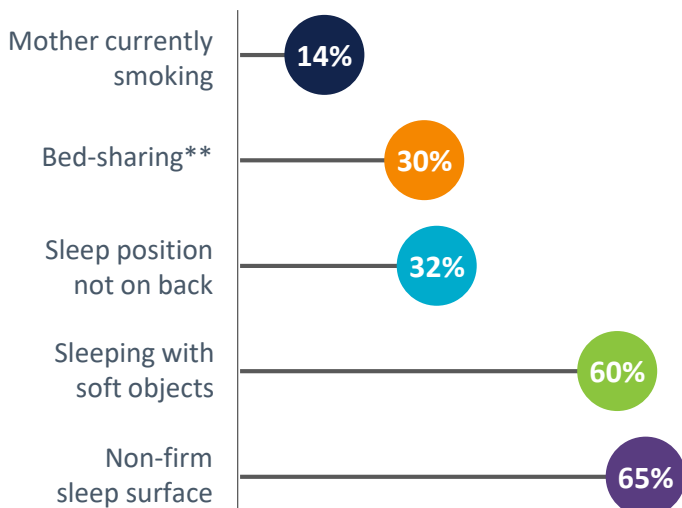
Mothers reported how infants most often sleep in the past two weeks.
**Calculated by mothers' reports of infants sometimes, often, or always bed-sharing.*

Infant Exposure to Risk Factors***

1 in 4 (25%) babies in Louisiana are **exposed to 3 or more risk factors for sleep-related death.**

Risk

- 4 risk factors — **4%**
- 3 risk factors — **21%**
- 2 risk factors — **39%**
- 1 risk factor — **28%**
- 0 risk factors — **8%**
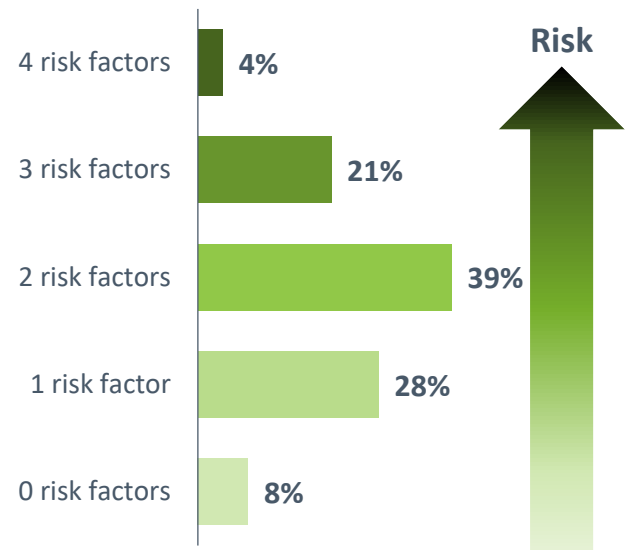
****Risk factors include: bed-sharing, stomach or side sleeping position, mother currently smoking, non-firm sleep surface, and sleeping with soft objects.*

Public Health Implications

PRAMS data bring to light which SUID risk and protective factors occur most frequently in Louisiana. These data can be used to inform and narrow the focus of infant safe sleep interventions. Further investigation into the barriers that prevent Louisiana families from consistently practicing safe sleep will help healthcare providers and public health professionals more effectively support Louisiana families in their efforts to increase protective factors and decrease risk factors for SUID.

Stressors & Discrimination

Prenatal maternal stress can be caused by both chronic and acute events in a woman's life. These stressors are associated with negative outcomes in fetal and infant development. According to the March of Dimes Foundation, high cortisol levels caused by stress during pregnancy can affect an infant's growth in the womb and increase the infant's risk for negative health outcomes later in life.

Top 10 stressors reported by Louisiana mothers

Stressor	%
Moved to a new address	32%
Cut in work hours or pay	28%
Argued with partner more than usual	26%
Family member was sick	23%
Could not pay bills	21%
Someone close to me died	18%
Separated or divorced	13%
Lost job	13%
Partner lost job	13%
Someone close to me had a problem with drinking or drugs	10%
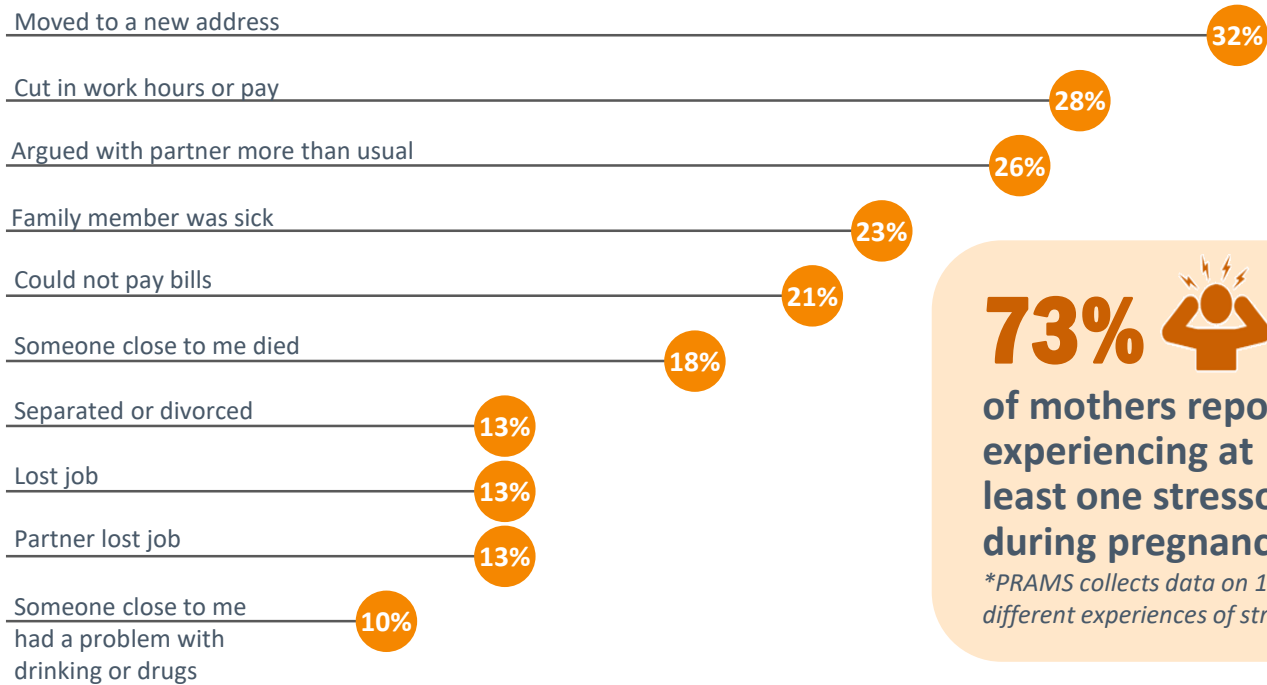
73% of mothers report experiencing at least one stressor* during pregnancy.

*PRAMS collects data on 14 different experiences of stress

"It was really nice having people around to give great advice, family partnership, family time, and the nurse. I had a great experience with my pregnancy besides being put on leave without pay when I was 5 months pregnant. That had me stressed."

- PRAMS Mom

While receiving healthcare, mothers reported experiencing discrimination related to:

Type of health insurance or lack of insurance	4%
Race or skin color	4%
Being pregnant	4%
Age	3%
Income	3%
Sex/gender	2%
Language	1%

Public Health Implications

Prenatal maternal stress is an important consideration when looking at the overall health of both mothers and infants. According to ACOG, the experience of stress during pregnancy has a negative influence on birth outcomes. Physicians are encouraged to expand the treatment and care they provide to identify and address women's stress and anxiety. This may include, but is not limited to, increased screening for depression and other mental health issues, providing referrals to behavioral health providers, or prescribing psychiatric medication. This may help to reduce negative birth outcomes and improve quality of life for women.

Intimate Partner Violence (IPV)

According to the National Coalition Against Domestic Violence, intimate partner violence accounts for 15% of all violent crime in the United States. In 2017, Louisiana had the second-highest homicide rate among female victims murdered by males. 81% of homicides with a female victim in Louisiana are committed by a partner or ex-partner (CDC Intimate Partner Violence: Risk and Protective Factors, 2017).

1 in 25 women* reported being physically abused by someone in the year before or during their most recent pregnancy.

Among those women:

Nearly 1 in 3 reported feeling **frightened for her or her family's safety** because of **anger or threats from her partner** — **29%**

Over 1 in 4 reported that her partner **threatened her** or **made her feel unsafe** — **26%**

Over 1 in 5 reported that her partner tried to **control her daily activities** — **22%**

About 1 in 15 reported that her partner **forced her to take part in touching or sexual activity** when she did not want to — **6%**

Mothers included were 18 years or older.

Mothers' experience of *stressors* and *abuse*

Many mothers experience **stress during or before pregnancy**, and some experienced **abuse** at the same time. The compounding effects of stress and abuse during pregnancy put both mother and infant at risk of poor health outcomes (March of Dimes, 2014). The American College of Obstetrics and Gynecologists recommends that physicians: (1) screen all patients for intimate partner violence and (2) counsel patients on stress management.

Financial Stress:
59% of all mothers — **6% of these mothers experienced abuse**

Emotional Stress:
29% of all mothers — **6% of these mothers experienced abuse**

Partner-Related Stress:
28% of all mothers — **9% of these mothers experienced abuse**

Trauma:
13% of all mothers — **17% experienced abuse**

- **Financial stress includes:** separation or divorce, moved to new address, partner/mother lost job, cut in work hours/pay, or had bills they couldn't pay.
- **Emotional stress includes:** had a sick family member or had someone close to them die.
- **Partner-related stress includes**: argued with partner more or partner said they didn't want the pregnancy.
- **Trauma includes:** homelessness, partner went to jail, or someone close to them had a problem with drinking/drugs

Public Health Implications

Domestic abuse is often life threatening for direct victims, and their dependents are also at increased risk of physical harm. Furthermore, people who experience domestic abuse are at increased risk for losing housing and employment (Louisiana Coalition Against Domestic Violence, 2016). Domestic violence during pregnancy has been linked to maternal depression, substance abuse, smoking, anemia, first and second trimester bleeding, and lower birth weight in infants (National Coalition Against Domestic Violence, 2016). Increased patient-provider dialogue and consistent screening may help ensure individuals at risk for abuse or intimate partner violence are connected to resources.

Postpartum Depressive Symptoms

The Centers for Disease Control reports that approximately 1 in 9 women in the United States experience postpartum depressive symptoms (PPDS). PPDS can lead to clinically diagnosed postpartum depression (PPD), which is associated with altered mother-infant interaction, reduced cognitive development in infants, and overall reduced duration of breastfeeding (Maternal Child Health Journal, 2015). Decreasing the proportion of women who experience postpartum depression is a Healthy People 2020 goal.

More than 1 in 7 (16%) Louisiana mothers experienced PPDS

Mothers' experience of stressors* and postpartum depressive symptoms

See previous page (pg. 22) for operational definitions of Financial Stress, Emotional Stress, Partner-Related Stress, and Trauma.

67% of all women spoke with a healthcare worker **during or after their pregnancy** about **postpartum depressive symptoms**.

75% of women who **experienced postpartum depression symptoms** spoke with a healthcare worker about these symptoms **during a prenatal care appointment**.

Financial Stress 59% — **20% of these mothers experienced PPDS**

Emotional Stress 29% — **19% of these mothers experienced PPDS**

Partner-Related Stress 28% — **28% of these mothers experienced PPDS**

Trauma 13% — **30% of these mothers experienced PPDS**
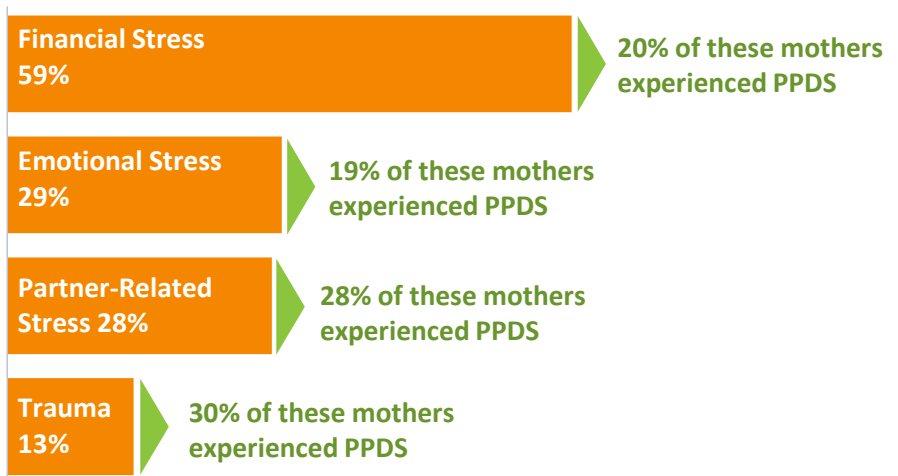
> *"I have experienced problems with depression all my life. After my older child was born, I went through postpartum depression and anxiety. My doctor at that time did not discuss these with me until I had a breakdown. This pregnancy I chose to stay on medication…and my new doctor supported this decision. I am still on the medication and believe it was the best choice for me and my family."*
>
> **- 2018 PRAMS Mom**

Average breastfeeding duration was shorter for women with postpartum depressive symptoms

Legend: ■ With PPDS ■ Without PPDS

Categories: 8 weeks or more, 5-7 weeks, 2-4 weeks, 1 week or less, Didn't breastfeed. X-axis: 0% to 50%.
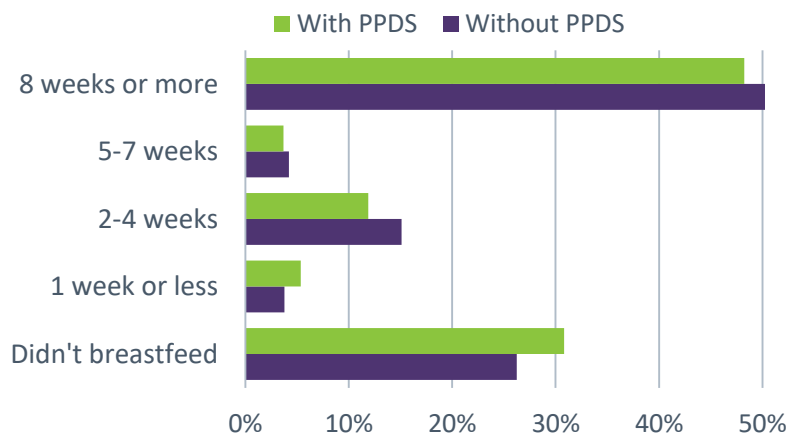
Public Health Implications

PPDS and anxiety may affect rates of breastfeeding and may also reduce breastfeeding duration. More than 1 in 7 (16%) Louisiana mothers report experiencing postpartum depressive symptoms. Of these women, 31% never breastfed. Increasing public health education and patient-provider dialogue about PPD/PPDS resources, as well as decreasing stigma around maternal depression are two important steps to improve mothers' mental health.

Maternity Leave

The United States is currently the only industrialized country that does not require employers to provide their employees paid family leave, although some states have laws granting it. The Louisiana Fair Employment Practices (FEP) Act requires that employers with more than 25 employees provide unpaid leave for up to six weeks for "normal" pregnancies and up to 4 months for more "seriously disabling" pregnancies. In accordance with the Family and Medical Leave Act (FMLA), a federal law, all FMLA-eligible employees in the United States are entitled to 12 work weeks of unpaid leave per year. During this time, employees are entitled to the same health benefits provided by their employer at the same cost they pay while working. When an employee's FMLA leave ends, the employee has the right to return to the same or equivalent position.

Nearly 2 out of 3 (65%)

Louisiana mothers worked *during* pregnancy
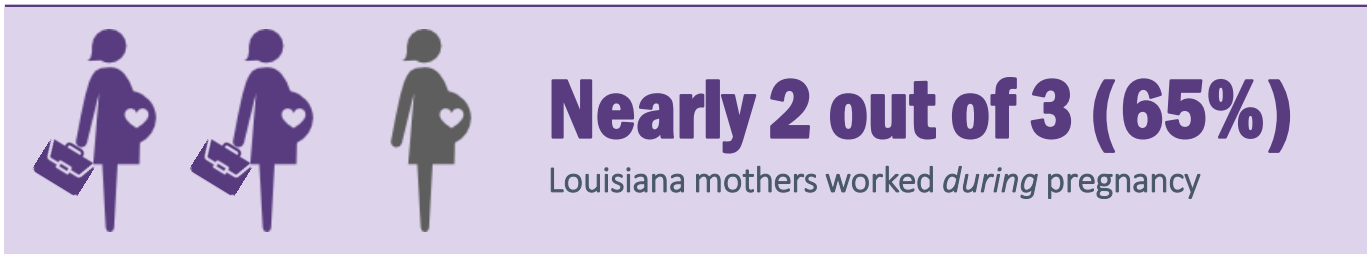
Over half (51%) of Louisiana mothers reported taking only unpaid maternity leave

No Leave	Unpaid Leave Only	Combination	Paid Leave Only
3%	51%	13%	33%

Insufficient earned leave time, inability to afford leave, and lack of paid leave were the top factors affecting leave decisions

All factors affecting mothers' leave decisions:

Factor	%
Not enough leave time earned	39%
Could not afford leave	38%
Job does not offer paid leave	37%
No flexible work schedule	22%
Afraid to lose job	21%
Too much work	20%

76% of women who worked during their pregnancies had **returned to work or planned to return to work** at the time they completed the survey.*

*PRAMS participants take the survey between 8 weeks and 6 months postpartum.

Maternity Leave- Part 2

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Maternity leave type and household income among women who worked prior to pregnancy

	Unpaid leave only	**Paid leave only**	**Combination**
$0-$24,000	59%	20%	9%
$24,001-$48,000	13%	15%	12%
$48,001-$73,000	10%	14%	22%
$73,001 and up	18%	51%	56%

Among mothers who reported taking **only unpaid leave,** most reported an annual household income of **$24,000 or less.**

Among mothers who reported taking a **combination of paid and unpaid leave**, most reported an annual household income of **$73,001 or more.**
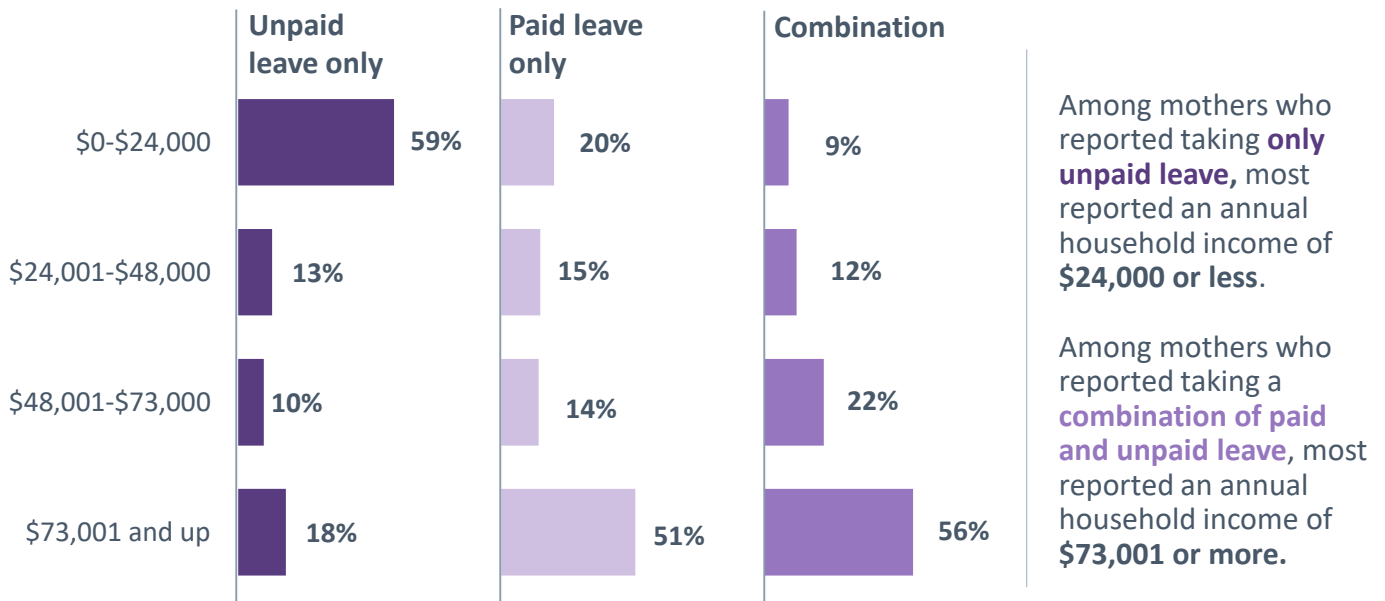
Maternity leave type and breastfeeding duration

A greater percentage of mothers reported **never initiating breastfeeding** if they **did not take leave of any kind (46%)**.
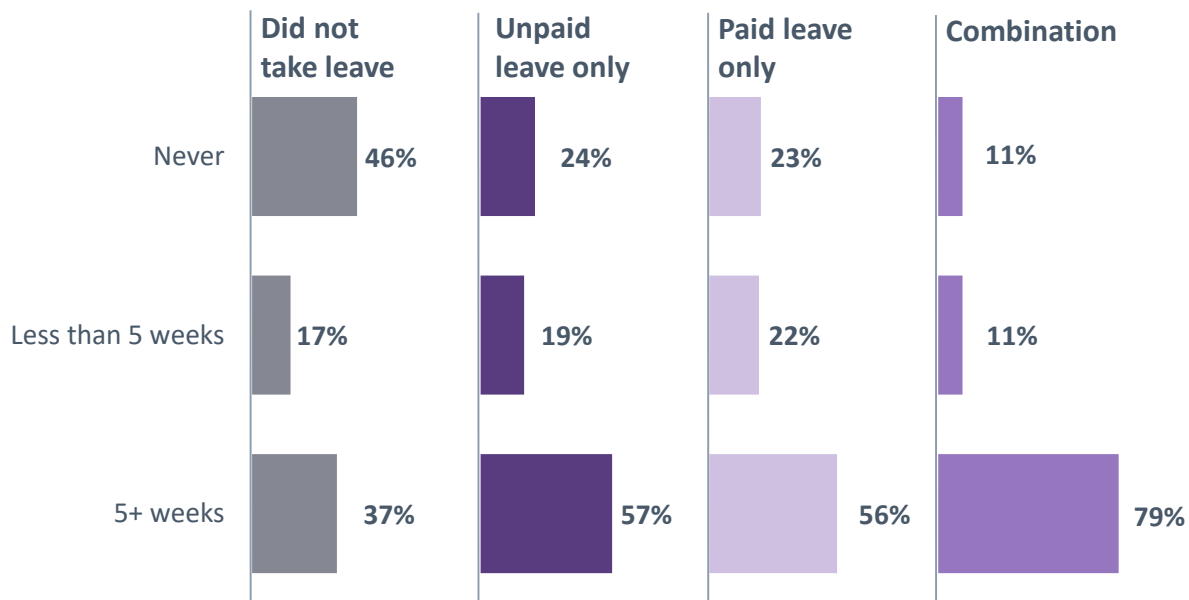
	Did not take leave	**Unpaid leave only**	**Paid leave only**	**Combination**
Never	46%	24%	23%	11%
Less than 5 weeks	17%	19%	22%	11%
5+ weeks	37%	57%	56%	79%

"It was really nice having people around to give great advice, family partnership, family time, and the nurse. I had a great experience with my pregnancy besides being put on leave without pay when I was 5 months pregnant. That had me stressed."

- 2018 PRAMS Mom

"Mothers should not have to return to work 6 months after they have a baby! No one cares about the mom after the baby is born. We are expected to do it all! We should not have to worry about a job taking us back."

- 2018 PRAMS Mom

"My job did not offer maternity leave. While I intended on returning to work, they fired me. Said they could not keep a position for six weeks while I recovered. This caused depression, thus harder to find a new job."

- 2018 PRAMS Mom

Public Health Implications

PRAMS responses show that access to maternity leave is an important issue for mothers in Louisiana. Maternity leave is associated with a variety of individual and public health benefits, which include prolonged gestation, fewer cesarean deliveries, and decreased infant mortality (March of Dimes Foundation, 2016). Maternity leave gives mothers and babies more time to bond, and longer maternity leave is associated with increased breastfeeding duration, improved child development, and better mental health outcomes for both mothers and babies (March of Dimes Foundation, 2016).

Louisiana PRAMS data show that women's inability to afford taking leave was the top factor influencing their leave decisions. Further, most women who took unpaid leave only had an annual household income of $24,000 or less. In 2018, the federal poverty level for a four-person household was $25,100 (U.S. Department of Health and Human Services, 2018). Lack of paid maternity leave could contribute to worse health outcomes among lower income women and children (compared to those in higher income brackets), thereby perpetuating health disparities among Louisiana families.

Maternal Disability

Disability - broadly defined as difficulty with physical and mental functions such as movement, vision, hearing, or cognition - affects approximately 12% of women of reproductive age in the United States (American Journal of Obstetrics & Gynecology, 2016; National Center for Health Statistics, 2008). In Louisiana, 44% of mothers report experiencing at least one of the following disabilities: difficulty seeing, difficulty hearing, difficulty walking or climbing steps, difficulty remembering or concentrating, difficulty with self care, or difficulty communicating (Louisiana PRAMS, 2018). Women with disabilities are at greater risk for adverse birth outcomes, including preterm birth and low birth weight in infants (Disability & Health Journal, 2017). Promoting full community participation, choice, health equity and quality of life among individuals with disabilities of all ages is a Healthy People 2020 goal.

Mothers' difficulty with doing different activities

NOTE: This section includes only 3 months of supplemental question data representing about 12,000 births. A full year of data will be available with the 2019 data report.

Almost 1 in 3 mothers reported difficulty remembering or concentrating

30%
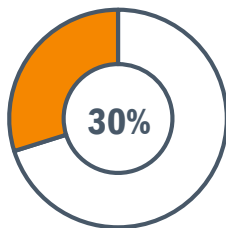
1 in 4 mothers reported difficulty seeing, even when wearing glasses or contact lenses

25%
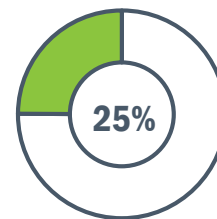
1 in 14 (7%) mothers reported difficulty communicating, such as understanding or being understood

7%
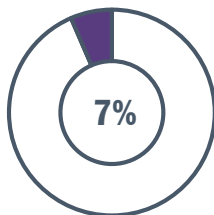
Nearly 1 in 16 mothers reported difficulty hearing, even when using a hearing aid

6%
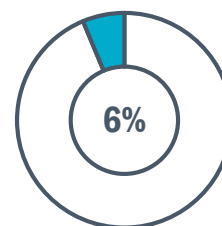
1 in 25 mothers reported difficulty walking or climbing steps

4%
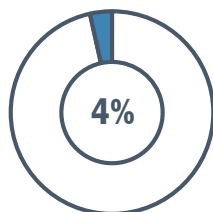
1 in 50 (2%) mothers reported difficulty with self care, such as washing or getting dressed

2%
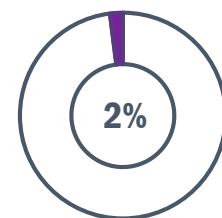
Public Health Implications

In Louisiana, mothers most commonly reported difficulty remembering or concentrating (30%) and difficulty seeing (25%). Further research will help healthcare professionals tailor reproductive health services for mothers with disabilities. Policymakers can also use this information when creating services and programs designed to specifically meet the needs of mothers with disabilities.

Appendices: Overview

The following appendices include a series of subgroup analyses for select indicators, a guide to key variables, and a summary of 2018 Louisiana PRAMS survey response rates. The key variables included in the subgroup analyses were maternal race, maternal age, maternal education, marital status, Medicaid insurance coverage, and infant birth weight. Appendix A contains the categories for these variables.

Appendix B includes data trends between 2016-2018 for certain key variables. Appendix C contains the various subgroup analyses and includes the survey question that corresponds to each indicator. Please refer to the footnotes for additional information about interpretation of the findings. Analyses include:

- Multivitamin use
- Pregnancy intention
- Preconception use of contraception by couples not trying to get pregnant
- Preconception diabetes diagnosis
- Timing of prenatal care
- HIV testing during pregnancy
- Cigarette and alcohol use three months prior to pregnancy
- Physical abuse before and during pregnancy
- Drug use in the month prior to pregnancy

Finally, Appendix C also includes the summary of annual PRAMS response rates. This page includes weighted and unweighted response rates for the strata used during 2018, as well as the total number of respondents and participants sampled by select maternal characteristics.

Variable	Categories
Maternal Race	Non-Hispanic White
	Non-Hispanic Black
	Hispanic
	Non-Hispanic Other (including: American Indian, Japanese, Filipino, Hawaiian, other non-White, other Asian, and multiple races)
Maternal Age (in years)	Less than 20 years (<20)
	20 years - 29 years
	30 years and older (30+)
Maternal Education	Less than High School (<HS)
	High School Graduate (HS)
	More than High School (>HS)
Marital Status	Married
	Other (including: never married, living together, separated, widowed, and divorced)
Medicaid Insurance Coverage	Prior to Pregnancy
	For Prenatal Care
Infant Birth Weight	Low Birth Weight (LBW, < 2,500 grams)
	Normal Birth Weight (NBW)

Health Indicator	2016 % (95% CI)	2017 % (95% CI)	2018 % (95% CI)
Multivitamin Use			
≥4 days/week in month before pregnancy	32.3 (29.0 – 35.5)	28.9 (25.7 – 32.2)	28.4 (25.0 – 31.7)
Pre-pregnancy Weight			
Underweight (BMI < 18.5)	4.5 (3.0 – 6.0)	4.1 (2.6 – 5.6)	2.6 (1.4 – 3.8)
Healthy (18.5 ≤ BMI ≤ 24.9)	38.5 (35.1 – 42.0)	40.5 (37.0 – 44.1)	38.3 (34.7 – 41.9)
Overweight (25.0 ≤ BMI ≤ 29.9)	23.8 (20.9 – 26.8)	25.2 (22.1 – 28.4)	25.6 (22.3 – 28.8)
Obese (BMI ≥ 30.0)	33.1 (29.9 – 36.4)	30.1 (26.9 – 33.3)	33.6 (30.2 – 37.0)
Substance Use			
Any cigarette smoking during the 3 months before pregnancy	21.6 (18.8 – 24.5)	24.6 (21.5 – 27.7)	20.2 (17.3 – 23.2)
Any cigarette smoking during the last 3 months of pregnancy	11.0 (8.8 – 13.2)	12.0 (9.6 – 14.4)	9.5 (7.4 – 11.7)
Any cigarette smoking postpartum	16.4 (13.8 – 18.9)	18.8 (16.0 – 21.6)	14.4 (11.8 – 17.0)
Any alcohol use during the 3 months before pregnancy	52.6 (49.3 – 56.2)	53.8 (50.3 – 57.4)	52.2 (48.5 – 55.8)
Any alcohol use during the last 3 months of pregnancy	5.2 (3.6 – 6.7)	5.7 (4.0 – 7.4)	4.3 (2.8 – 5.8)
Postpartum Contraception Use			
Used any form of contraception postpartum	75.3 (72.3 – 78.3)	73.8 (70.7 – 76.9)	75.8 (72.6 – 78.9)
Pregnancy Intention			
Intended	49.5 (46.1 – 52.9)	44.9 (41.4 – 48.4)	49.7 (46.2 – 53.3)
Unintended*	50.5 (47.1 – 53.9)	55.1 (51.6 – 58.6)	50.3 (46.7 – 55.8)

*Unintended pregnancy intention includes "desired pregnancy later", "desired pregnancy never", and "unsure" responses.

Trends 2016-2018

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Health Indicator	2016 % (95% CI)	2017 % (95% CI)	2018 % (95% CI)
Depression			
Postpartum depressive symptoms	11.3 (9.2 – 13.4)	15.1 (12.6 – 17.6)	15.9 (13.2 – 18.6)
Health Care Services			
Began prenatal care in 1st trimester	88.3 (86.1 – 90.5)	86.6 (84.2 – 88.9)	87.3 (85.0 – 89.7)
Had flu shot before or during pregnancy	48.5 (45.0 – 51.9)	47.3 (43.8 – 50.9)	47.3 (43.7 – 50.9)
Had maternal postpartum checkup	86.2 (83.8 – 88.6)	84.9 (82.3 – 87.4)	88.9 (86.7 – 91.2)
Pre-pregnancy Health Insurance			
Private insurance	51.4 (48.0 – 54.7)	47.4 (43.9 – 50.9)	47.7 (44.1 – 51.3)
Medicaid	28.2 (25.3 – 31.1)	36.8 (33.6 – 40.1)	38.9 (35.6 – 42.1)
No insurance	20.4 (17.6 – 23.2)	15.8 (13.1 – 18.5)	13.5 (10.8 – 16.1)
Health Insurance During Pregnancy			
Private insurance	46.1 (42.7 – 49.5)	40.5 (37.0 – 44.0)	43.5 (39.9 – 47.1)
Medicaid	53.4 (50.0 – 56.9)	59.3 (55.8 – 52.8)	56.4 (52.8 – 60.0)
No insurance	**	**	**
Health Insurance Postpartum			
Private insurance	45.9 (42.5 – 49.3)	39.8 (36.3 – 43.2)	42.9 (39.3 – 46.5)
Medicaid	44.4 (41.1 – 47.6)	50.2 (46.8 – 53.6)	49.1 (45.6 – 52.6)
No insurance	9.7 (7.5 – 11.9)	10.1 (7.8 – 12.3)	8.0 (5.9 – 10.1)
Infant Sleep Practices			
Baby most often laid on back to sleep	67.4 (64.2 – 70.6)	67.9 (64.6 – 71.3)	68.5 (65.1 – 71.8)
Breastfeeding Practices			
Ever breastfed	72.9 (70.0 – 75.8)	69.2 (66.0 – 72.3)	73.3 (70.2 – 76.4)
Breastfeeding at 8 weeks	44.8 (41.5 – 48.2)	44.9 (41.4 – 48.4)	48.3 (44.7 – 51.9)

** Insufficient data to report

Appendix C: Subgroup Analyses

Multivitamin use at least four times a week during the month prior to pregnancy*, survey question 5

	% Multivitamin	95% CI
Total	28.4	25.0, 31.7
Race/Ethnicity		
Non-Hispanic White	37.0	31.4, 42.5
Non-Hispanic Black	19.6	15.8, 23.4
Non-Hispanic Other	**	**
Hispanic	26.4	14.4, 38.4
Age in Years		
<20	17.1	6.0, 28.2
20-29	20.2	16.2, 24.2
30+	42.5	36.5, 48.5
Education		
<HS	18.0	10.8, 25.1
HS	20.8	15.5, 26.0
>HS	36.1	31.1, 41.0
Marital Status		
Married	42.8	37.0, 48.6
Other	16.9	13.4, 20.4
Insurance Status		
Medicaid before pregnancy	20.0	15.6, 24.5
Medicaid for prenatal care	18.2	14.4, 21.9
Birth Weight		
LBW	25.6	16.0, 35.2
NBW	28.7	25.1, 32.2

* Denominator is the total sub-analysis group. For example: Among married respondents, 42.8% reported multivitamin use at least four times a week during the month prior to pregnancy.

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Pregnancy intention*, survey questions 12-13

	% Unintended	95% CI	% Trying	95% CI
Total	50.3	46.7, 53.8	49.7	46.2, 53.3
Race/Ethnicity				
Non-Hispanic White	38.1	32.5, 43.7	61.9	56.3, 67.5
Non-Hispanic Black	67.7	63.1, 72.2	32.3	27.8, 36.9
Non-Hispanic Other	57.7	37.4, 78.0	42.3	22.0, 62.6
Hispanic	41.7	28.4, 55.1	58.3	44.9, 71.6
Age in Years				
<20	84.2	72.9, 95.5	15.8	4.5, 27.1
20-29	53.4	48.7, 58.1	46.6	41.9, 51.3
30+	40.1	34.3, 45.9	59.9	54.1, 65.7
Education				
<HS	58.2	49.6, 66.9	41.8	33.1, 50.4
HS	54.7	48.4, 61.1	45.3	38.9, 51.6
>HS	45.3	40.3, 50.2	54.7	49.8, 59.7
Marital Status				
Married	36.6	31.0, 42.2	63.4	57.8, 69.0
Other	61.3	56.8, 65.8	38.7	34.2, 43.2
Insurance Status				
Medicaid before pregnancy	62.7	57.4, 68.0	37.3	32.0, 42.6
Medicaid for prenatal care	61.0	56.4, 65.7	39.0	34.3, 43.6
Birth Weight				
LBW	57.5	46.8, 68.2	42.5	31.8, 53.2
NBW	49.4	45.6, 53.2	50.6	46.8, 54.4

* Denominator is the total sub-analysis group. For example: Among married respondents, 36.6% reported an unintended pregnancy, while 63.4% reported trying to get pregnant. Women who were unsure about wanting to become pregnant were included in the Unintended group. The "trying" category includes women who reported trying to conceive.

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Preconception contraception use by mothers who were not trying to get pregnant*, survey question 14

	% Using Contraception at Time of Conception	95% CI
Total	36.4	31.4, 41.4
Race/Ethnicity		
Non-Hispanic White	36.0	26.4, 45.5
Non-Hispanic Black	33.8	28.1, 39.6
Non-Hispanic Other	38.4	7.9, 69.0
Hispanic	54.5	32.0, 77.1
Age in Years		
<20	43.5	26.7, 60.3
20-29	34.7	28.3, 41.1
30+	37.2	27.7, 46.7
Education		
<HS	38.3	26.3, 50.2
HS	35.3	26.7, 43.8
>HS	36.5	29.2, 43.9
Marital Status		
Married	34.7	25.0, 44.4
Other	37.2	31.3, 43.0
Insurance Status		
Medicaid before pregnancy	37.2	30.3, 44.1
Medicaid for prenatal care	38.0	31.9, 44.1
Birth Weight		
LBW	44.9	33.1, 56.7
NBW	35.2	29.9, 40.5

* Denominator is the total sub-analysis group. For example: Among married respondents, 34.7% reported using contraception at the time of conception.

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Preconception diabetes diagnosis*, survey question 4

	% Diagnosed with diabetes	95% CI
Total	5.4	3.7, 7.0
Race/Ethnicity		
Non-Hispanic White	5.9	3.2, 8.6
Non-Hispanic Black	5.8	3.6, 8.1
Non-Hispanic Other	**	**
Hispanic	**	**
Age in Years		
<20	**	**
20-29	4.4	2.5, 6.3
30+	7.2	4.1, 10.4
Education		
<HS	6.4	1.6, 11.2
HS	5.0	2.4, 7.6
>HS	5.4	3.1, 7.7
Marital Status		
Married	5.7	3.0, 8.5
Other	5.1	3.2, 7.0
Insurance Status		
Medicaid before pregnancy	6.9	4.1, 9.7
Medicaid for prenatal care	5.8	3.6, 8.0
Birth Weight		
LBW	9.6	3.7, 15.5
NBW	4.9	3.2, 6.6

* Denominator is the total sub-analysis group. For example: Among married respondents, 5.7% reported being diagnosed with diabetes before pregnancy.

**Insufficient data to report

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Prenatal care began during first trimester*, survey question 16

	% Prenatal Care in First Trimester	95% CI
Total	87.3	85.0, 89.7
Race/Ethnicity		
Non-Hispanic White	94.3	91.6, 97.0
Non-Hispanic Black	80.0	76.1, 84.0
Non-Hispanic Other	80.0	63.2, 96.8
Hispanic	82.7	72.4, 92.9
Age in Years		
<20	76.5	64.0, 89.0
20-29	85.9	82.7, 89.1
30+	91.1	87.7, 94.4
Education		
<HS	74.2	65.9, 82.5
HS	83.5	78.8, 88.1
>HS	93.3	91.0, 95.7
Marital Status		
Married	92.5	89.4, 95.6
Other	83.1	79.8, 86.5
Insurance Status		
Medicaid before pregnancy	81.7	77.6, 85.9
Medicaid for prenatal care	81.3	77.6, 85.0
Birth Weight		
LBW	77.6	68.8, 86.4
NBW	88.5	86.1, 90.9

*Denominator is the total sub-analysis group. For example: Among married respondents, 92.5% reported receiving prenatal care in the first trimester.

†Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Received prenatal care as early as wanted in pregnancy*, survey question 17

	% Yes	95% CI
Total	89.1	86.9, 91.3
Race/Ethnicity		
Non-Hispanic White	91.7	88.5, 94.9
Non-Hispanic Black	84.9	81.4, 88.4
Non-Hispanic Other	87.0	72.1, 100.0
Hispanic	92.5	85.2, 99.8
Age in Years		
<20	74.4	62.0, 86.7
20-29	88.9	86.0, 91.9
30+	91.5	88.2, 94.9
Education		
<HS	80.3	73.2, 87.4
HS	87.0	82.7, 91.3
>HS	92.7	90.1, 95.3
Marital Status		
Married	93.5	90.7, 96.3
Other	85.5	82.2, 88.8
Insurance Status		
Medicaid before pregnancy	89.1	85.8, 92.5
Medicaid for prenatal care	86.3	83.0, 89.6
Birth Weight		
LBW	90.3	84.3, 96.3
NBW	88.9	86.6, 91.3

* Denominator is the total sub-analysis group. For example: Among married respondents, 93.5% reported receiving prenatal care as early as they wanted.

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Received an HIV test in the 12 months before pregnancy*, survey question 8

	% HIV Test	95% CI
Total	43.7	39.5, 47.9
Race/Ethnicity		
Non-Hispanic White	28.8	22.6, 35.0
Non-Hispanic Black	65.0	59.4, 70.7
Non-Hispanic Other	35.7	7.0, 64.4
Hispanic	48.8	27.8, 69.8
Age in Years		
<20	41.7	27.1, 56.2
20-29	47.5	41.7, 53.3
30+	38.6	32.0, 45.3
Education		
<HS	52.4	39.5, 65.3
HS	52.7	44.9, 60.5
>HS	37.6	32.1, 43.1
Marital Status		
Married	30.0	24.0, 36.1
Other	56.7	50.9, 62.5
Insurance Status		
Medicaid before pregnancy	56.8	50.2, 63.4
Medicaid for prenatal care	54.4	48.3, 60.4
Birth Weight		
LBW	44.7	32.7, 56.7
NBW	43.6	39.1, 48.1

*Denominator is the total sub-analysis group. For example: Among married respondents, 30% reported receiving an HIV test in the year before pregnancy.

**Insufficient data to report

✝ Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Cigarette and alcohol use three months prior to pregnancy*, survey questions 29 & 36

	% Smoked Cigarettes	95% CI	% Drank Alcohol	95% CI
Total	18.7	15.8, 21.6	52.2	48.5, 55.8
Race/Ethnicity				
Non-Hispanic White	24.5	19.5, 29.5	64.7	59.1, 70.3
Non-Hispanic Black	16.0	12.4, 19.5	44.3	39.5, 49.2
Non-Hispanic Other	**	**	23.1	5.8, 40.4
Hispanic	**	**	32.4	19.6, 45.3
Age in Years				
<20	12.8	2.2, 23.4	13.2	2.6, 23.7
20-29	19.1	15.2, 23.0	55.7	50.9, 60.5
30+	18.9	14.2, 23.7	53.2	47.0, 59.3
Education				
<HS	27.5	19.0, 36.0	21.7	14.5, 28.9
HS	20.3	15.0, 25.5	45.6	39.2, 52.0
>HS	15.2	11.5, 19.0	65.2	60.3, 70.1
Marital Status				
Married	12.1	8.2, 16.0	60.3	54.6, 66.0
Other	23.9	19.8, 28.0	45.6	40.9, 50.3
Insurance Status				
Medicaid before pregnancy	27.4	22.3, 32.4	40.1	34.6, 45.6
Medicaid for prenatal care	23.9	19.7, 28.1	41.1	36.4, 45.9
Birth Weight				
LBW	27.9	17.9, 37.9	49.3	38.3, 60.2
NBW	17.6	14.6, 20.6	52.5	48.6, 56.4

* Denominator is the total sub-analysis group. For example: Among married respondents, 12.1% reported smoking cigarettes and 60.3% reported drinking three months prior to pregnancy.

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Abused in 12 months before pregnancy, during most recent pregnancy*, survey questions 40-41

	% Abused Before	95% CI	% Abused During	95% CI
Total	3.0	1.8, 4.2	2.5	1.5, 3.6
Race/Ethnicity				
Non-Hispanic White	2.4	0.6, 4.2	1.4	0.0, 2.7
Non-Hispanic Black	4.0	2.1, 5.8	4.6	2.6, 6.6
Non-Hispanic Other	**	**	**	**
Hispanic	**	**	**	**
Age in Years				
<20	**	**	**	**
20-29	3.7	1.9, 5.5	2.9	1.4, 4.4
30+	1.7	0.2, 3.2	1.5	0.2, 2.8
Education				
<HS	5.2	1.2, 9.2	4.7	1.1, 8.3
HS	2.4	0.4, 4.4	2.0	0.4, 3.7
>HS	2.7	1.2, 4.3	2.3	0.9, 3.7
Marital Status				
Married	**	**	**	**
Other	4.6	2.6, 6.5	4.1	2.3, 5.9
Insurance Status				
Medicaid before pregnancy	1.4	0.3, 2.4	2.2	0.6, 3.7
Medicaid for prenatal care	2.1	0.7, 3.4	2.5	1.1, 3.9
Birth Weight				
LBW	**	**	5.7	0.5, 10.9
NBW	3.1	1.8, 4.4	2.2	1.2, 3.2

* Denominator is the total sub-analysis group. For example: Among respondents with less than a high school (HS) education, 5.2% reported abuse in the 12 months before pregnancy.

**Insufficient data to report

† Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Drug use in month before pregnancy*, survey question 68

	% Over-the-counter drug use	95% CI	% Non over-the-counter drug use	95% CI
Total	63.2	59.7, 66.7	14.6	12.0, 17.2
Race/Ethnicity				
Non-Hispanic White	73.9	68.9, 79.0	18.9	14.4, 23.4
Non-Hispanic Black	54.6	49.8, 59.4	11.6	8.6, 14.6
Non-Hispanic Other	42.3	22.0, 62.6	**	**
Hispanic	51.8	38.2, 65.5	9.1	1.3, 16.9
Age in Years				
<20	45.0	30.8, 59.2	11.0	1.4, 20.7
20-29	61.1	56.4, 65.7	15.3	11.8, 18.9
30+	69.5	63.9, 75.0	14.1	9.9, 18.3
Education				
<HS	52.6	43.3, 61.8	16.4	9.5, 23.3
HS	59.0	52.8, 65.2	15.1	10.4, 19.8
>HS	69.2	64.5, 73.8	13.7	10.2, 17.3
Marital Status				
Married	70.0	64.7, 75.4	11.6	7.8, 15.4
Other	57.8	53.2, 62.3	17.0	13.4, 20.5
Insurance Status				
Medicaid before pregnancy	56.6	51.1, 62.1	15.9	11.8, 20.1
Medicaid for prenatal care	56.9	52.2, 61.6	15.1	11.6, 18.6
Birth Weight				
LBW	61.9	51.8, 72.0	23.1	13.8, 32.4
NBW	63.4	59.7, 67.0	13.6	10.9, 16.3

*Denominator is the total sub-analysis group. For example: Among married respondents, 70% reported over-the-counter drug use, and 11.6% reported non over-the-counter drug use in the month before pregnancy.

**Insufficient data to report

†Rates in some subgroups may be unstable and unreliable due to small population size. This instability is reflected in very wide confidence intervals. In these cases, rates should be interpreted with caution.

Appendix D: Response Rates

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Stratum	% Responding (Unweighted)	% Responding (Weighted)
Black	67.0	67.0
Non-Black	62.7	62.7
Healthy Start	91.9	91.9

Characteristic	# Sampled	Respondents	% Response (Unweighted)	% Response (Weighted)
Overall	1,294	857	66.2	64.3
Race/Ethnicity				
Non-Hispanic White	500	319	63.8	62.1
Non-Hispanic Black	662	450	68.0	67.0
Non-Hispanic Other	41	28	68.3	66.7
Hispanic	90	59	65.6	64.0
Hispanic Ethnicity				
Hispanic	90	59	65.6	64.0
Non-Hispanic	1,204	798	66.3	64.3
Age in Years				
<20	81	57	70.4	70.0
20-29	769	492	64.0	61.8
30+	444	308	69.4	67.4
Education				
<HS	201	133	66.2	65.7
HS	437	283	64.8	62.0
>HS	652	437	67.0	65.2
Marital Status				
Married	492	319	64.8	64.1
Other	802	538	67.1	64.5
Previous Births				
No Prev. Live Births	438	295	67.4	65.5
1+ Prev. Live Births	856	562	65.7	63.7