
# PRAMS Trend Report 2018-2022

## Pregnancy Risk Assessment Monitoring System

**Tennessee Department of Health**

# Acknowledgements

This report was the product of the following individuals' efforts at the Tennessee Department of Health:

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- Dr. Tobi Amosun, MD, FAAP, *Deputy Commissioner for Population Health*
- Dr. John R. Dunn, DVM, PhD, EMBA-SL, *Commissioner, Tennessee Department of Health*

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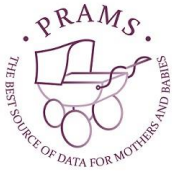


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# Background: What is PRAMS?

The **Tennessee Pregnancy Risk Assessment Monitoring System (PRAMS)** is a state-run surveillance study conducted in collaboration with the Centers for Disease Control and Prevention (CDC) that improves the understanding of the health and wellness of maternal and infant populations to inform policies and programs to improve birth outcomes ultimately. State-specific, population-based information is collected by individual states on women's attitudes, beliefs, and experiences before, during, and after pregnancy. Currently, 46 states and four independent regions/territories participate in PRAMS, representing nearly 81% of all live U.S. births.

Data is collected and weighted to represent the entire Tennessee population of women who have given birth to a live infant during that year. Tennessee's PRAMS program surveys approximately 120 women per month (~1800 per year) from Tennessee birth records. To be selected for participation, women must be residents of Tennessee who delivered a live-born infant within the previous 2-6 months. Out of the total sampled population of Tennessee births, around 600 women participate in the survey each year. The CDC sets a specific response rate threshold, currently 50%, that states must meet to be included in the CDC's published national estimates and reports, such as the *Selected Maternal and Child Health Indicators* (MCH) reports. Tennessee *did not* meet the threshold to be included in the United States estimates presented in those reports for a few years, included in this trend report.

Because only a small number of women with live births are selected for participation in PRAMS, PRAMS should not be considered the primary data source for maternal and child health measures. The birth certificate captures information on every Tennessee-residing mother-infant pair and is a better primary source for some measures. That said, PRAMS is unique in that it is the only data source that captures information before, during, and after pregnancy, and it also captures qualitative data about these periods. For example, the birth certificate captures a woman's insurance status at the time of delivery. In contrast, PRAMS captures insurance status before, during, and after pregnancy, as well as any barriers in addition to health care coverage that the woman may have experienced in seeking first-trimester prenatal care.

For more information on:

- **PRAMS methodology**, visit: https://www.cdc.gov/prams/index.htm
- **Healthy People 2030 Goals** for Maternal, Infant, and Child Health, visit: Pregnancy and Childbirth - Healthy People 2030 | health.gov
- **TN Department of Health Maternal and Child Health Priorities: MCH Priorities**
- **TN PRAMS Data Request:** Health Statistics (tn.gov)

# Executive Summary

The Tennessee PRAMS trend report includes data from 2018-2022 to identify emerging trends in maternal health indicators, behaviors, and outcomes. These trends include statewide changes in risk factors, prevalence rates, utilization of prenatal care services, and maternal health disparities.

Different factors and experiences before, during, and after a woman's pregnancy influence these indicators, and understanding data trends can help shape policies and programs that improve maternal and infant outcomes.

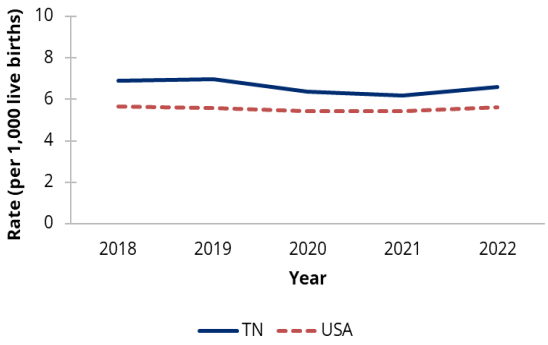
This report is based on the maternal and child health (MCH) indicator reports published by the CDC, which provide trends for select MCH indicators that have been prioritized at the state and national levels.[1]

## *What is Tennessee Doing Well?*

From 2018 to 2022:

- Fewer Tennessee women (3.9%) reported using **hookah's in the last 2 years** before delivery as compared to U.S. women (4.2%).
- More Tennessee women (79.9%) reported using **postpartum contraceptive use** compared to the U.S. women (74.7%).
- A slight difference in Tennessee women reported putting their babies **to sleep on their backs** (79.7%) compared to the U.S. average (80.6%). Implementing safe sleep practices reduces the risk of infant mortality. Between 2018 and 2022, the infant mortality rate in Tennessee decreased by 4.1% (**Figure a**).

**Figure a: Infant Mortality Rate by Year**




- Fewer women in Tennessee (22.2%) reported using any of the least effective methods post-partum family planning compared to the U.S. average (23.5%)

## *What Can Tennessee Improve?*

From 2018 to 2022:

- Fewer Tennessee women (63.7%) reported having a **health care visit before pregnancy** compared to U.S. women (67.7%), and the percentage of Tennessee women who began **prenatal care** during the 1st trimester and had a **postpartum checkup** is about the same compared to the U.S women.
- More Tennessee women (20.1%) reported having a **mistimed pregnancy** compared to the U.S. (17.7%), while more (79.9% vs. 74.7%) reported using any **postpartum contraceptives**
- **Multivitamin use** 4+ times a week before pregnancy is lower in Tennessee women (40.7%) than in U.S. women (43.8%).
- **Cigarette smoking** in Tennessee women before (19.0%), during (9.5%), and after (12.4%) pregnancy is

more common compared to U.S. women (13.5%, 6.1%, and 8.5%, respectively).

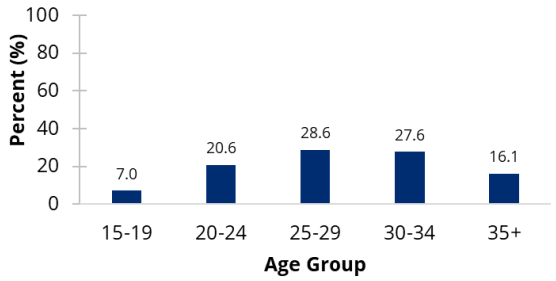
- Fewer Tennessee women (52.5%) report receiving a **flu shot** 12 months before delivery than U.S. women (58.6%).
- Slightly more women in Tennessee (13.7%) report experiencing **postpartum depressive symptoms** compared to U.S. women (13.1%).
- Only about (51.9%) of Tennessee women reported having **intended pregnancies** compared to U.S. women (60.6%).
- Nearly 4 out of 5 babies (84.8%) were **ever breastfed** in Tennessee, a figure lower than the U.S. percentage (88.5%).
- Fewer Tennessee women (60.9%) reported any **breastfeeding at 8+ weeks** compared to U.S. women (69.3%).
- More Tennessee women (8.9%) reported being **uninsured after pregnancy** than U.S. women (8.3%).
- Only about (35.9%) of Tennessee women reported having **teeth cleaned** during pregnancy by a dentist or dental hygienist compared to U.S. women (45.0%).

Preconception health is essential not only for the general health of all women but also for setting them up for a healthy pregnancy and delivery and for reducing the risk of poor birth outcomes.[2] Additionally, unintended pregnancy can exacerbate the effects of inadequate preconception health, as it limits the ability of women to actively improve and address health and lifestyle problems that can increase the risk of poor pregnancy and birth outcomes.[3] Finally, many of the preconception health and lifestyle factors mentioned above have been associated with an increased risk of postpartum depression and decreased likelihood of breastfeeding initiation.[4,5]

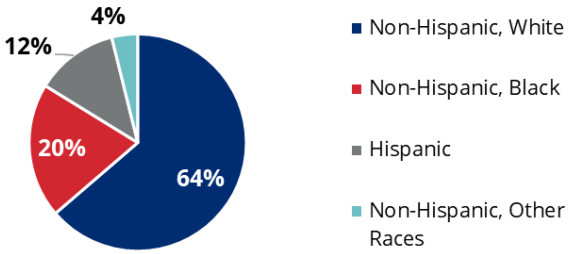
# Demographics of Women with a Recent Live Birth in Tennessee *†

The demographic characteristics of PRAMS respondents do not change drastically from year to year; during 2018-2022, most women, on average, were 25-34 years old, non-Hispanic White, married, and had more than a high-school-level education.

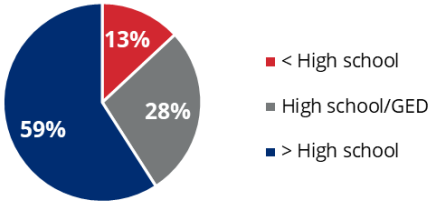
### Age Group




### Race/Ethnicity#



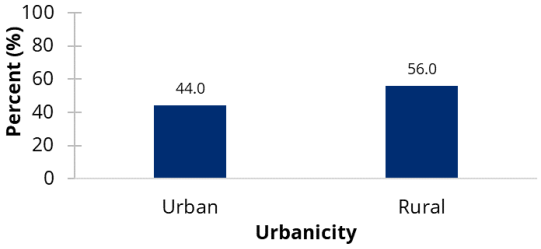

### Education Level



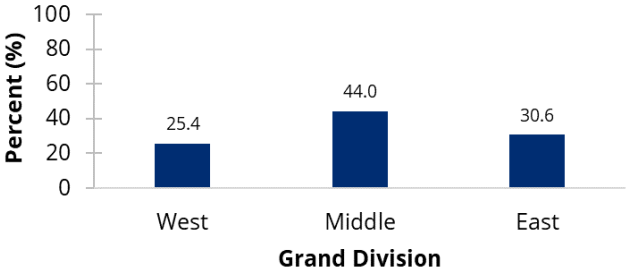

### Marital Status

Over 1 in 2 women **(56.5%)** were married.

### Urbanicity




### Grand Division



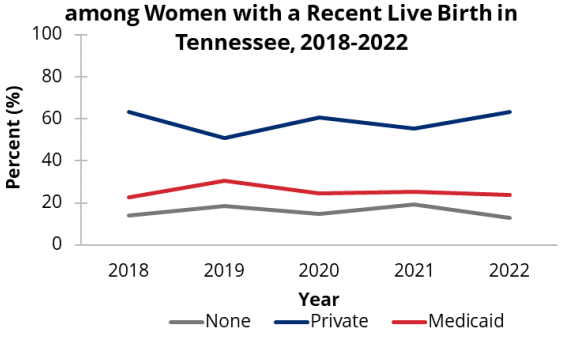

* PRAMS samples women with a recent live birth, and is weighted to be representative of that population, which will be referred to as "women" throughout this report.
†All presented estimates are based upon weighted PRAMS data.
#Race and ethnicity estimates shown here depict only respondents to the PRAMS survey.

# Maternal Health Insurance Coverage

Uninsured women tend to receive less prenatal care due to reduced access compared to women who are insured, and consequently experience worse birth outcomes.[6] Low-income, minority, undocumented immigrants without insurance have higher barriers to accessing healthcare, especially prenatal care.[7,8.]

## *Prior to pregnancy*

**Figure 1: Preconception Insurance Status among Women with a Recent Live Birth in Tennessee, 2018-2022**




*Source: TN PRAMS*

In Tennessee, between 2018 and 2022, more women were covered by private insurance **(58.7%)** than by Medicaid **(25.3%),** and these percentages stayed relatively constant (Figure 1).

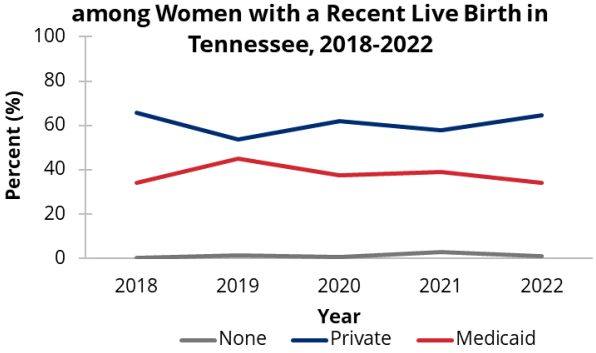
Compared with U.S. rates from 2018-2022, Tennessee women had a higher uninsured rate **(15.9%; figure 1)** than U.S. women (**12.7%**).

## *During pregnancy*

Few women **(1.3%)** remained uninsured during pregnancy, while more women reported having insurance from Medicaid **(38.0%)** and Private (**60.7%)** during pregnancy (Figure 2).

Low-income women may become eligible for Medicaid during pregnancy; thus, the percentage of women covered by Medicaid increased while the percentage of uninsured women decreased.

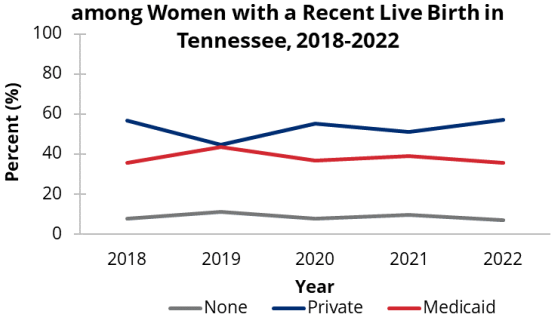
**Figure 2: Prenatal Insurance Status among Women with a Recent Live Birth in Tennessee, 2018-2022**




*Source: TN PRAMS*

## *After pregnancy*

**Figure 3: Postpartum Insurance Status among Women with a Recent Live Birth in Tennessee, 2018-2022**




*Source: TN PRAMS*

Compared to the U.S. average (**8.9%**), a higher percentage of Tennessee women remained uninsured postpartum (**9.2%**) during 2018-2022(Figure 3). The percentage of Tennessee women covered by Medicaid during pregnancy, compared to the U.S. after pregnancy, remains unchanged (38.1% vs. **38.2%**, respectively).

# Pregnancy Intention & Family Planning

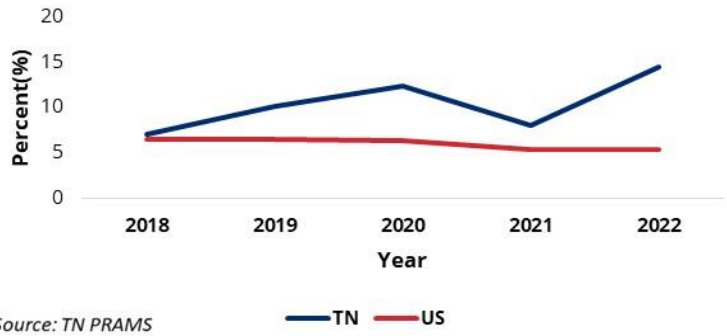
Family planning and pregnancy intentions are important aspects of reproductive health that help individuals and couples make informed choices about when and if to have children. An unintended pregnancy is either unwanted or occurred earlier than desired. In the U.S., during 2017-2019, 22.4% of women aged 15-19 reported a mistimed pregnancy, and 15.7% reported an unwanted pregnancy.[9]

Unintended pregnancy is associated with adverse maternal and child outcomes, such as maternal depression during pregnancy and postpartum, as well as preterm birth and low birth weight.[10] Contraception, also known as 'birth control', plays a fundamental role in comprehensive reproductive healthcare.[11]

## *Pregnancy Intention*†

During 2018-2022, the percentage of unwanted pregnancies among women was an average of **6.0%** in the U.S. compared to an average of **10.3%** in Tennessee. The percent of unwanted pregnancies has nearly doubled between 2018 and 2022. Intended pregnancies have generally been stable from year to year, accounting for about **51.9%** of live births in Tennessee.

**Figure 4.a : Unwanted Pregnancy Rate by Year**




*Source: TN PRAMS*

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## *Family Planning*‡

The proportion of women who used any contraception in Tennessee before or after pregnancy remained largely the same between 2018 and 2022. Overall, around **40.8%** of **women in Tennessee used any contraceptives** before pregnancy; among those with **unintended** pregnancies, **56.1%** did not **use any method** before pregnancy. Overall, around **79.9%** of all women in Tennessee used any **postpartum contraceptives**; among those with unintended pregnancies, **18.3%** did not **use any method** after pregnancy.

About **1.9%** of women in Tennessee reported using the **most effective contraception** methods before pregnancy (Figure 4.b); this shifts after pregnancy, with **30.9%** of women having reported using the most effective techniques (figure 4.c).

**Figure 4.b: Average Preconception Contraceptive Use by Effectiveness among Women with a Recent Live Birth in Tennessee (2018-2022)**

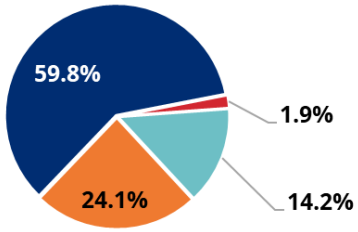
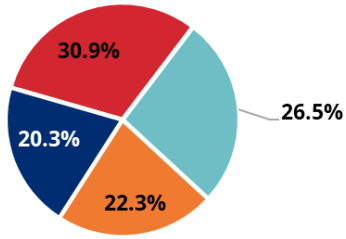
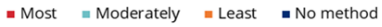



**Figure 4.c: Average Postpartum Contraceptive Use by Effectiveness among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS*

*† Pregnancy intention and ‡contraceptive effectiveness are defined in the Analysis Notes.*

# Maternal Health Care Services

Women who are healthy before and at the time of conception typically have healthier pregnancies with fewer complications. Data from 2017-2021, showed a rise in the percent of U.S women who encountered challenges in accessing reproductive healthcare services, particularly among those who were part of disadvantaged or marginalized populations.[12]

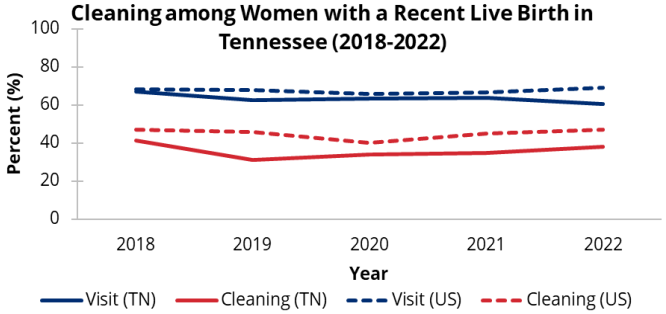
***Healthcare services in preconception, prenatal and postpartum phases are essential for promoting maternal and infant health.***

Some common barriers to women getting sufficient healthcare before or during pregnancy are cost or lack of insurance, difficulty in getting a doctor's appointment, availability of physicians, and lack of adequate transportation.

## *Preconception Healthcare Visit*

Nearly **63.7%** of Tennessee women reported **attending any preconception healthcare visit,** compared with **63.6%** of U.S. women during the 12 months before pregnancy during 2018-2022 (Figure 5).

**Figure 5: Preconception Health Visit & Dental Cleaning among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS; CDC MCH Indicator Report (2018-2022)*

## *Prenatal Care*

About **85.9%** of Tennessee women reported **beginning prenatal care in the first trimester,** compared with **87.9%** of US women; **13.5%** in the second or third trimester; and less than **1%** reported not receiving any prenatal care.

## *Postpartum Checkup*

Nearly **88.5%** of Tennessee women reported attending their postpartum checkup, compared to an average of **90.2%** US women.

## *Flu Vaccinations & Dental Care*

An average of **52.5%** of Tennessee women reported receiving a **flu shot** before delivery, compared with **58.6%** of US women. About **35.9%** of women reported having **their teeth cleaned** during pregnancy, compared with **45%** of US women; this estimate has decreased slightly since 2018, from **41%** to **37.9%** (Figure 5). In addition to being linked to heart disease in the general population[13], due to hormonal changes during pregnancy, poor dental health has been linked to adverse pregnancy outcomes[14] such as preterm birth, pre-eclampsia/eclampsia, and even an increased risk of dental cavities in early childhood among infants born to mothers with poor dental health.

# Maternal Nutrition & Wellness

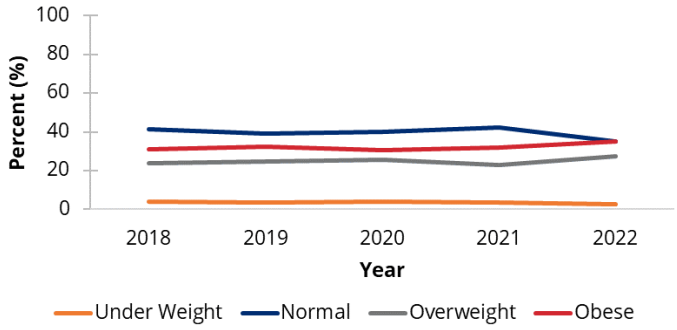
Food insecurity is the social and economic condition of having limited or inconsistent access to healthy, adequate foods within households.[15] Poor nutrition among pregnant women is an important public health concern in the US, as pregnant and postpartum women have more nutrient and calorie needs than those not pregnant or postpartum.[16,17] Some special nutrition requirements are healthy weight gain, seafood, folic acid, iron and iodine, choline, and supplements for healthy neurocognitive fetal development.[18] Women who don't meet these standards can experience weight gain during pregnancy, increased blood pressure, and pregnancy-related diabetes, which can lead to poor birth outcomes like stillbirth, low birth weight, and lasting developmental delays among infants.[19]

Nearly 12.1% of women with a recent live birth in Tennessee reported a higher risk of being unable to afford healthy meals in 2022. WIC is a supplemental nutrition program for Women, Infants and Children that provides additional food to low-income pregnant, postpartum, and breastfeeding women until their children reach age 5. In 2022, only 64.1% of mothers with federal poverty line (FPL) below 195% participated in WIC.

## *Weight Class Status*

On average, over 1 in 2 women with a recent live birth in Tennessee were overweight or obese prior to pregnancy; **24.8%** were overweight compared to **26.1%** of U.S women, and **32.2%** were obese, compared to **27.7%** of U.S women. Only **39.5%** in Tennessee were of normal weight; these percentages did not change significantly between 2018 and 2022 (Figure 6).

**Figure 6: Weight Class Status among Women with a Recent Live Birth (2018-2022)**




*Source: TN PRAMS*

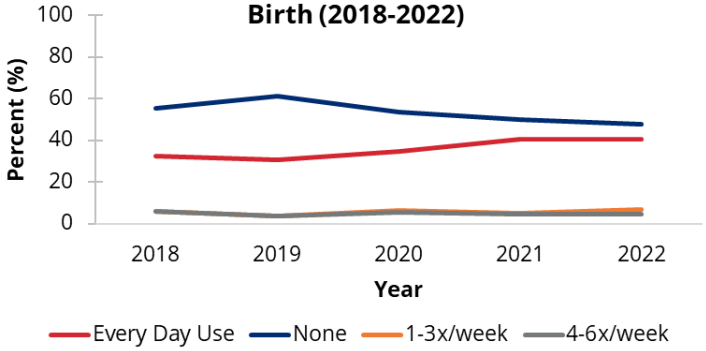
## *Diet & Exercise*

About **27%** of Tennessee women reported **dieting to lose weight** during the 12 months before pregnancy, and an average of **39.4%** reported exercising 3 or more days per week.

## *Multivitamin Use*

About **35.8%** of Tennessee women reported taking **multivitamins every day of the week** during the month before pregnancy, while **53.8%** of women reported not taking any multivitamins (Figure 7). Since 2018, daily multivitamin use has increased from **32.6%** to **40.7%** in 2022.

**Figure 7: Daily Multivitamin Use Before Pregnancy among Women with a Recent Live Birth (2018-2022)**




*Source: TN PRAMS*

# Maternal Substance Use

## *Smoking and E-Cigarette Use*

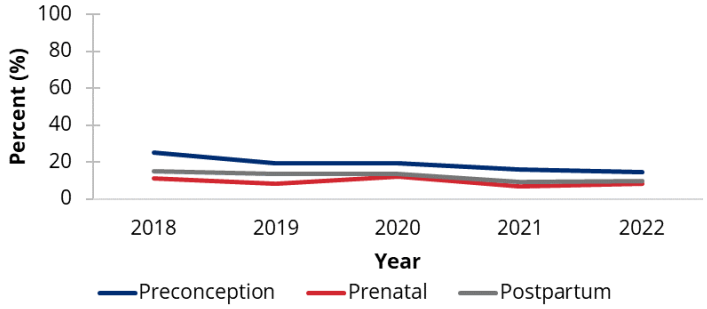
Smoking during pregnancy can lead to fetal death or birth defects such as cleft lip, cleft palate, or both.[20] First and second-hand smoking increases the risk of abnormal bleeding in mothers and sudden infant death syndrome (SIDS) in babies. Data from 2010-2017 showed that the prevalence of smoking in the U.S. during pregnancy was highest among women in the 20-24 age group, non-Hispanic American Indian/Alaska Native women, and those with a high school education or lower.[21]

Between 2016 and 2022, the percentage of U.S mothers who smoked during pregnancy declined from 7.2% to 3.7%.[22.]

During 2018-2022, the proportion of Tennessee women who **smoked cigarettes within the 3 months before pregnancy** averaged around **19%**. However, this has decreased from **25%** in 2018 to **14.8%** in 2022. During the last 3 months of pregnancy, about **9.5%** of all women reported **smoking** (Figure 8).

Prevalence of **postpartum smoking** was about **12.4%** of all women between 2018 - 2022, and since 2018, postpartum smoking has decreased from **15%** to **10%.**

**Figure 8: Cigarette Smoking among Women with a Recent Live Birth in Tennessee (2018-2022)**



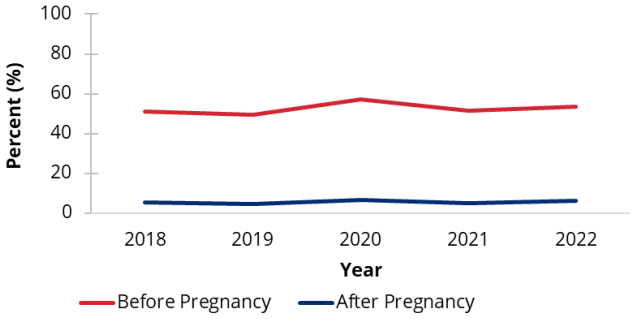

*Source: TN PRAMS*

Since 2018, the use of E-cigarettes before pregnancy has increased among Tennessee women, from **4.6%** to **7.7%** in 2022. The prevalence of E-cigarette and hookah use tends to be much lower compared to cigarette smoking; see Appendix A for more estimates

## *Alcohol Use*

There is no safe type, time, or amount of alcohol use during pregnancy. Drinking alcohol during pregnancy increases the risk of miscarriage and stillbirth.[23] It can also ultimately restrict the baby's mental and physical development and result in a condition known as **fetal alcohol spectrum disorder (FASD).** [24]

**Figure 9: Alcohol Use among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS*

Nearly **52.5%** of Tennessee women **used alcohol** during the **3 months before pregnancy**. About **5.6%** of Tennessee women used alcohol **during pregnancy** (Figure 9).

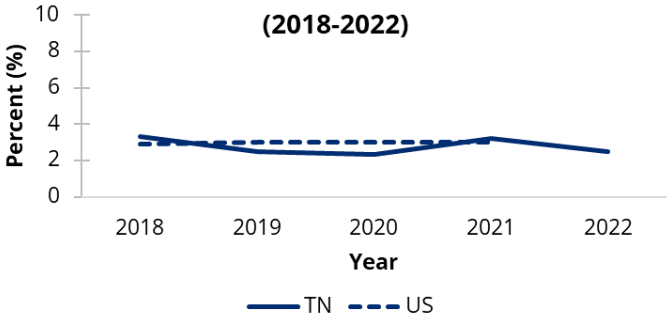
# Intimate Partner Violence & Maternal Depression

## *Intimate Partner Violence*

Experiencing **Intimate partner violence (IPV)** during pregnancy leaves women with an increased risk of poor pregnancy outcomes for both her and her baby.[25] These risks are brought about not only by the physical violence, but also by stress from the lasting psychological effects.

***Historically, more Tennessee women appear to have experienced IPV compared to the U.S. average.***

**Figure 10: Experience of Intimate Partner Violence before Pregnancy among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS; CDC MCH Indicator Report (2016-2019)*

About **2.8%** of Tennessee women reported experiencing any **IPV before pregnancy** by a current or ex-partner as compared to the national rates of **2.7%** (Figure 10).

During pregnancy, **1.4%** of women in Tennessee reported experiencing **IPV** as compared to the national rates of **2.1%.**

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## *Postpartum Depressive Symptoms*

**Post-partum depression (PPD)**—depression that occurs at any time during the post-partum period is another complication women can face after giving birth.[26] Pre-pregnancy depression, family history of mental illness, substance use disorder, changing hormone levels after pregnancy as well as young maternal age are thought to increase the risk for PPD.[27] Women suffering from PPD can experience low self-esteem, sadness, and increased anxiety.[28] Infants born of mothers with PPD can experience lowered overall health, gain less weight, and have reduced cognitive and motor-skill development.[28]

About **17.7%** of women reported experiencing depression prior to pregnancy between 2018 and 2022. An average of **15.5%** of Tennessee women reported **experiencing symptoms of postpartum depression (PPDS)** between 2018 and 2022. From year-to-year in Tennessee, women reporting depression or depressive symptoms around the time of pregnancy has remained the same from 2018 to 2022.

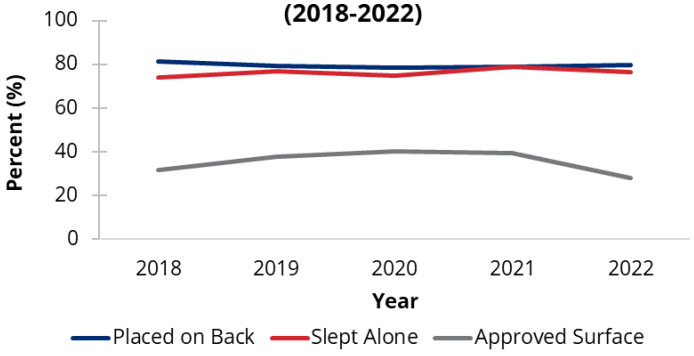
# Infant Sleep Practices and Breastfeeding

**Sudden Infant Death Syndrome (SIDS)**—the sudden and unexplained death of an infant under 12 months of age—is the leading cause of death among infants aged 1-12 months, and the fourth leading cause among all infants in the U.S.[29] While other factors such as substance use during or after pregnancy and low birth weight may play a role, the majority of SIDS cases are linked to improper sleeping position in babies. Research indicates that placing babies on their backs to sleep and breastfeeding them can help dramatically decrease the risk of SIDS.[30]

## *Safe Sleep*

An average of **79.7%** of Tennessee women reported that they most often **place their baby on his or her back to sleep,** as compared to national rates of **80.6%**(Figure 11); **76.3%** of women reported their baby most often slept alone, and **35.5%** reported their baby sleeps on an approved sleep surface.

**Figure 11: Infant Sleep Practices among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS*

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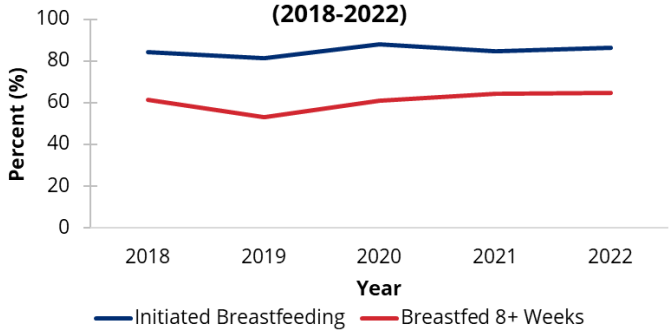
## *Breastfeeding*

**Figure 12: Breastfeeding Practices among Women with a Recent Live Birth in Tennessee (2018-2022)**




*Source: TN PRAMS*

Nearly **84.8%** of women reported **ever breastfeeding their babies,** compared with the national rate of **88.5%** (Figure 12). At the time of the survey, **61%** of women reported they had breastfed their baby for 8 or more weeks compared with the national rate of **69.3%.** *American Academy of Pediatrics* recommends exclusive breastfeeding for the initial 6 months after birth and continuing to breastfeed after the introduction of solid foods; mothers are encouraged to breastfeed until their child reaches two or longer as desired by both mother and child.[31] Since 2018, the reported duration of breastfeeding for 8+ weeks increased slightly among Tennessee women from **61.3%** to **64.9%** in 2022.

# Appendix A: Indicator Trends

| INDICATOR | Response | 2018 % | 2018 [95%CL] | 2019 % | 2019 [95%CL] | 2020 % | 2020 [95%CL] | 2021 % | 2021 [95%CL] | 2022 % | 2022 [95%CL] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Insurance Status Before Pregnancy | Medicaid | 22.5 | 18.8-26.3 | 30.6 | 25.3-35.9 | 24.5 | 19.8-29.2 | 25.3 | 21.2-29.5 | 23.7 | 18.0-29.4 |
| Insurance Status Before Pregnancy | None | 14.0 | 11.1-16.9 | 18.6 | 14.2-22.9 | 14.8 | 11.0-18.7 | 19.1 | 15.5-22.8 | 12.9 | 9.2-16.6 |
| Insurance Status Before Pregnancy | Private | 63.5 | 59.2-67.7 | 50.9 | 45.2-56.5 | 60.7 | 55.3-66.0 | 55.5 | 50.8-60.2 | 63.4 | 57.1-69.7 |
| Insurance Status During Pregnancy | Medicaid | 34.1 | 29.5-38.7 | 45.0 | 39.0-51.1 | 37.5 | 31.6-43.4 | 39.1 | 34.1-44.2 | 34.3 | 27.4-41.2 |
| Insurance Status During Pregnancy | None | 0.3 | 0.0-0.7 | 1.4 | 0.0-2.9 | 0.6 | 0.0-1.4 | 3.0 | 1.2-4.8 | 1.0 | 0.0-2.3 |
| Insurance Status During Pregnancy | Private | 65.6 | 61.0-70.2 | 53.6 | 47.5-59.6 | 61.9 | 56.0-67.8 | 57.9 | 52.7-63.0 | 64.7 | 57.8-71.7 |
| Insurance Status After Pregnancy | Medicaid | 35.6 | 31.3-39.8 | 43.7 | 38.2-49.3 | 36.8 | 31.5-42.2 | 39.1 | 34.6-43.7 | 35.6 | 29.0-42.2 |
| Insurance Status After Pregnancy | None | 7.8 | 5.4-10.1 | 11.4 | 7.9-14.9 | 8.0 | 5.0-11.1 | 9.8 | 7.1-12.5 | 7.3 | 4.7-9.9 |
| Insurance Status After Pregnancy | Private | 56.7 | 52.3-61.1 | 44.9 | 39.4-50.4 | 55.1 | 49.6-60.6 | 51.1 | 46.4-55.8 | 57.2 | 50.4-63.9 |

| Indicator | Response | 2018 % | 2018 [95%CL] | 2019 % | 2019 [95%CL] | 2020 % | 2020 [95%CL] | 2021 % | 2021 [95%CL] | 2022 % | 2022 [95%CL] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mistimed Pregnancy | No | 78.3 | 74.8-81.9 | 79.0 | 74.3-83.6 | 77.3 | 72.8-81.7 | 80.8 | 77.2-84.4 | 84.1 | 79.6-88.7 |
| Mistimed Pregnancy | Yes | 21.7 | 18.1-25.2 | 21.0 | 16.4-25.7 | 22.7 | 18.3-27.2 | 19.2 | 15.6-22.8 | 15.9 | 11.3-20.4 |
| Unwanted Pregnancy | No | 93.0 | 90.9-95.1 | 89.9 | 86.6-93.3 | 87.6 | 83.9-91.3 | 92.0 | 89.3-94.7 | 85.5 | 80.1-90.9 |
| Unwanted Pregnancy | Yes | 7.0 | 4.9-9.1 | 10.1 | 6.7-13.4 | 12.4 | 8.7-16.1 | 8.0 | 5.3-10.7 | 14.5 | 9.1-19.9 |
| Felt Unsure About Pregnancy | No | 81.4 | 77.9-85.0 | 81.2 | 76.8-85.5 | 85.6 | 81.9-89.3 | 78.9 | 75.1-82.6 | 85.1 | 80.9-89.4 |
| Felt Unsure About Pregnancy | Yes | 18.6 | 15.0-22.1 | 18.8 | 14.5-23.2 | 14.4 | 10.7-18.1 | 21.1 | 17.4-24.9 | 14.9 | 10.6-19.1 |
| Intended Pregnancy | No | 47.2 | 42.9-51.6 | 49.9 | 44.5-55.4 | 49.5 | 44.2-54.8 | 48.4 | 43.7-53.0 | 45.3 | 38.6-51.9 |
| Intended Pregnancy | Yes | 52.8 | 48.4-57.1 | 50.1 | 44.6-55.5 | 50.5 | 45.2-55.8 | 51.6 | 47.0-56.3 | 54.7 | 48.1-61.4 |
| Any Method Before Pregnancy | No | 59.3 | 53.4-65.2 | 66.6 | 59.4-73.8 | 57.2 | 49.9-64.6 | 61.5 | 55.3-67.7 | 50.6 | 41.2-60.0 |
| Any Method Before Pregnancy | Yes | 40.7 | 34.8-46.6 | 33.4 | 26.2-40.6 | 42.8 | 35.4-50.1 | 38.5 | 32.3-44.7 | 49.4 | 40.0-58.8 |
| Any Method Before Pregnancy (Among Women With Unintended Pregnancies) | No | 57.0 | 50.6-63.5 | 63.5 | 55.5-71.5 | 53.7 | 45.6-61.9 | 57.8 | 50.9-64.8 | 47.0 | 36.8-57.3 |
| Any Method Before Pregnancy (Among Women With Unintended Pregnancies) | Yes | 43.0 | 36.5-49.4 | 36.5 | 28.5-44.5 | 46.3 | 38.1-54.4 | 42.2 | 35.2-49.1 | 53.0 | 42.7-63.2 |
| Any Method After Pregnancy | No | 22.4 | 18.6-26.1 | 16.9 | 12.8-21.0 | 19.7 | 15.5-23.9 | 19.5 | 15.9-23.0 | 22.0 | 16.5-27.4 |
| Any Method After Pregnancy | Yes | 77.6 | 73.9-81.4 | 83.1 | 79.0-87.2 | 80.3 | 76.1-84.5 | 80.5 | 77.0-84.1 | 78.0 | 72.6-83.5 |
| Any Method After Pregnancy (Among Women With Unintended Pregnancies) | No | 23.2 | 17.6-28.7 | 15.3 | 9.5-21.0 | 16.9 | 11.3-22.6 | 18.0 | 13.1-22.9 | 18.1 | 11.6-24.5 |
| Any Method After Pregnancy (Among Women With Unintended Pregnancies) | Yes | 76.8 | 71.3-82.4 | 84.7 | 79.0-90.5 | 83.1 | 77.4-88.7 | 82.0 | 77.1-86.9 | 81.9 | 75.5-88.4 |
| Contraceptive Use By Effectiveness Before Pregnancy | Least | 25.5 | 20.2-30.7 | 18.9 | 13.0-24.7 | 25.6 | 19.0-32.2 | 20.0 | 14.9-25.1 | 31.3 | 22.3-40.2 |
| Contraceptive Use By Effectiveness Before Pregnancy | Moderately | 13.6 | 9.6-17.7 | 13.2 | 8.0-18.5 | 15.2 | 9.8-20.5 | 15.7 | 11.0-20.4 | 13.5 | 7.2-19.8 |
| Contraceptive Use By Effectiveness Before Pregnancy | Most | 1.1 | 0.0-2.3 | 1.3 | 0.0-2.8 | 1.6 | 0.0-3.5 | 1.3 | 0.0-2.9 | 4.4 | 0.0-9.6 |
| Contraceptive Use By Effectiveness Before Pregnancy | None | 59.8 | 53.8-65.7 | 66.6 | 59.4-73.8 | 57.6 | 50.2-65.0 | 62.9 | 56.8-69.1 | 50.8 | 41.4-60.2 |
| Contraceptive Use by Effectiveness After Pregnancy | Least | 20.4 | 17.0-23.9 | 27.7 | 22.7-32.7 | 16.8 | 12.8-20.8 | 19.8 | 16.1-23.5 | 26.1 | 20.3-32.0 |
| Contraceptive Use by Effectiveness After Pregnancy | Moderately | 26.4 | 22.5-30.2 | 26.0 | 21.1-30.8 | 28.9 | 24.0-33.8 | 26.4 | 22.3-30.5 | 25.0 | 19.2-30.8 |
| Contraceptive Use by Effectiveness After Pregnancy | Most | 30.5 | 26.4-34.5 | 29.3 | 24.4-34.2 | 34.3 | 29.2-39.4 | 34.2 | 29.7-38.7 | 26.5 | 20.5-32.6 |
| Contraceptive Use by Effectiveness After Pregnancy | None | 22.7 | 18.9-26.5 | 17.1 | 12.9-21.2 | 20.0 | 15.8-24.2 | 19.6 | 16.1-23.2 | 22.3 | 16.8-27.9 |

| Indicator | Response | 2018% | 2018 [95%CL] | 2019 % | 2019 [95%CL] | 2020% | 2020 [95%CL] | 2021% | 2021 [95%CL] | 2022% | 2022 [95%CL] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Preconception Visit | No | 32.7 | 28.6-36.8 | 37.2 | 31.9-42.5 | 36.4 | 31.2-41.6 | 36.0 | 31.5-40.5 | 39.5 | 32.9-46.1 |
| Preconception Visit | Yes | 67.3 | 63.2-71.4 | 62.8 | 57.5-68.1 | 63.6 | 58.4-68.8 | 64.0 | 59.5-68.5 | 60.5 | 53.9-67.1 |
| Started Prenatal Care 1st Trimester | 1st Trim. | 86.1 | 83.0-89.3 | 84.7 | 80.6-88.7 | 84.6 | 80.7-88.5 | 88.2 | 85.2-91.1 | 85.7 | 80.8-90.7 |
| Started Prenatal Care 1st Trimester | 2nd/3rd Trim. | 13.3 | 10.1-16.4 | 14.9 | 10.9-19.0 | 14.4 | 10.6-18.2 | 11.6 | 8.7-14.6 | 13.6 | 8.8-18.4 |
| Started Prenatal Care 1st Trimester | No PNC | 0.6 | 0.0-1.2 | 0.4 | 0.0-1.0 | 1.0 | 0.0-2.1 | 0.2 | 0.0-0.3 | 0.7 | 0.0-1.6 |
| Had Postpartum Check-Up | No | 10.7 | 7.9-13.6 | 11.7 | 8.2-15.2 | 11.3 | 7.9-14.7 | 11.3 | 8.6-14.1 | 12.2 | 7.6-16.8 |
| Had Postpartum Check-Up | Yes | 89.3 | 86.4-92.1 | 88.3 | 84.8-91.8 | 88.7 | 85.3-92.1 | 88.7 | 85.9-91.4 | 87.8 | 83.2-92.4 |
| Flu Shot Before Delivery | No | 42.7 | 38.4-47.1 | 43.2 | 37.8-48.7 | 45.3 | 39.9-50.6 | 48.0 | 43.3-52.6 | 58.9 | 52.2-65.6 |
| Flu Shot Before Delivery | Yes | 57.3 | 52.9-61.6 | 56.8 | 51.3-62.2 | 54.7 | 49.4-60.1 | 52.0 | 47.4-56.7 | 41.1 | 34.4-47.8 |
| Flu Shot Before Or During Pregnancy | No | 42.7 | 38.4-47.1 | 43.2 | 37.8-48.7 | 45.3 | 39.9-50.6 | 48.0 | 43.3-52.6 | 58.9 | 52.2-65.6 |
| Flu Shot Before Or During Pregnancy | Yes Before | 10.3 | 7.9-12.8 | 11.7 | 8.3-15.2 | 12.6 | 9.0-16.2 | 15.2 | 11.8-18.7 | 12.6 | 7.6-17.7 |
| Flu Shot Before Or During Pregnancy | Yes During | 46.9 | 42.6-51.3 | 45.0 | 39.6-50.5 | 42.1 | 36.8-47.4 | 36.8 | 32.2-41.3 | 28.4 | 22.4-34.5 |
| Dental Cleaning During Pregnancy | No | 58.6 | 54.3-62.8 | 68.6 | 63.7-73.6 | 66.1 | 61.1-71.1 | 65.2 | 60.8-69.6 | 62.0 | 55.5-68.6 |
| Dental Cleaning During Pregnancy | Yes | 41.4 | 37.2-45.7 | 31.4 | 26.4-36.3 | 33.9 | 28.9-38.9 | 34.8 | 30.4-39.2 | 38.0 | 31.4-44.5 |
| Dieting To Lose Weight Before Pregnancy | No | 69.9 | 65.8-74.0 | 72.3 | 67.4-77.1 | 74.8 | 70.2-79.3 | 73.2 | 69.1-77.4 | 75.0 | 69.2-80.8 |
| Dieting To Lose Weight Before Pregnancy | Yes | 30.1 | 26.0-34.2 | 27.7 | 22.9-32.6 | 25.2 | 20.7-29.8 | 26.8 | 22.6-30.9 | 25.0 | 19.2-30.8 |
| Exercise 3+ Days Per Week Before Pregnancy | No | 58.8 | 54.5-63.1 | 61.0 | 55.7-66.2 | 61.5 | 56.4-66.7 | 60.0 | 55.4-64.5 | 61.8 | 55.4-68.1 |
| Exercise 3+ Days Per Week Before Pregnancy | Yes | 41.2 | 36.9-45.5 | 39.0 | 33.8-44.3 | 38.5 | 33.3-43.6 | 40.0 | 35.5-44.6 | 38.2 | 31.9-44.6 |
| Weight Class Status | Normal | 41.2 | 36.8-45.5 | 39.2 | 33.8-44.6 | 39.9 | 34.5-45.2 | 42.1 | 37.4-46.9 | 34.9 | 28.5-41.3 |
| Weight Class Status | Obese | 31.2 | 27.1-35.2 | 32.5 | 27.3-37.7 | 30.4 | 25.4-35.5 | 31.7 | 27.3-36.1 | 34.9 | 28.4-41.4 |
| Weight Class Status | Over | 23.8 | 20.0-27.6 | 24.5 | 19.8-29.2 | 25.6 | 20.8-30.4 | 22.7 | 18.8-26.7 | 27.3 | 21.2-33.5 |
| Weight Class Status | Under | 3.8 | 2.2-5.5 | 3.8 | 1.8-5.7 | 4.1 | 2.0-6.3 | 3.4 | 1.7-5.2 | 2.8 | 0.6-5.0 |
| Multivitamin Use 4+ Times/Week Before Pregnancy | No | 61.3 | 57.1-65.6 | 65.3 | 60.2-70.4 | 59.7 | 54.5-64.9 | 55.1 | 50.4-59.7 | 54.6 | 48.0-61.2 |
| Multivitamin Use 4+ Times/Week Before Pregnancy | Yes | 38.7 | 34.4-42.9 | 34.7 | 29.6-39.8 | 40.3 | 35.1-45.5 | 44.9 | 40.3-49.6 | 45.4 | 38.8-52.0 |

| Indicator | Response | 2018% | 2018 [95%CL] | 2019% | 2019 [95%CL] | 2020% | 2020 [95%CL] | 2021% | 2021 [95%CL] | 2022% | 2022 [95%CL] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Frequency Of Multivitamin Use Before Pregnancy | 1-3/Wk | 5.9 | 3.7-8.0 | 3.8 | 1.8-5.8 | 6.2 | 3.6-8.8 | 4.9 | 3.0-6.9 | 6.8 | 3.8-9.9 |
| Frequency Of Multivitamin Use Before Pregnancy | 4-6/Wk | 6.1 | 4.1-8.0 | 3.8 | 1.8-5.9 | 5.6 | 3.2-8.1 | 4.5 | 2.5-6.4 | 4.7 | 2.7-6.7 |
| Frequency Of Multivitamin Use Before Pregnancy | Every Day | 32.6 | 28.5-36.7 | 30.8 | 25.9-35.8 | 34.7 | 29.7-39.8 | 40.5 | 35.8-45.1 | 40.7 | 34.2-47.2 |
| Frequency Of Multivitamin Use Before Pregnancy | None | 55.5 | 51.1-59.8 | 61.5 | 56.3-66.7 | 53.5 | 48.1-58.8 | 50.1 | 45.4-54.8 | 47.8 | 41.1-54.4 |
| Any Smoking Before Pregnancy | No | 75.0 | 71.3-78.7 | 80.7 | 76.4-84.9 | 80.8 | 76.6-85.0 | 83.9 | 80.6-87.2 | 85.2 | 80.3-90.0 |
| Any Smoking Before Pregnancy | Yes | 25.0 | 21.3-28.7 | 19.3 | 15.1-23.6 | 19.2 | 15.0-23.4 | 16.1 | 12.8-19.4 | 14.8 | 10.0-19.7 |
| Any Smoking During Pregnancy | No | 88.5 | 85.9-91.2 | 91.7 | 89.0-94.5 | 88.0 | 84.6-91.4 | 92.9 | 90.6-95.2 | 91.4 | 87.5-95.3 |
| Any Smoking During Pregnancy | Yes | 11.5 | 8.8-14.1 | 8.3 | 5.5-11.0 | 12.0 | 8.6-15.4 | 7.1 | 4.8-9.4 | 8.6 | 4.7-12.5 |
| Any Smoking After Pregnancy | No | 85.0 | 82.0-88.1 | 86.4 | 82.8-90.0 | 86.4 | 82.8-90.0 | 90.5 | 87.9-93.1 | 90.0 | 85.7-94.2 |
| Any Smoking After Pregnancy | Yes | 15.0 | 11.9-18.0 | 13.6 | 10.0-17.2 | 13.6 | 10.0-17.2 | 9.5 | 6.9-12.1 | 10.0 | 5.8-14.3 |
| Hookah Use, Last 2 Years | No | 95.8 | 93.8-97.8 | 96.1 | 93.9-98.4 | 96.7 | 94.8-98.7 | 96.2 | 94.5-98.0 | 95.6 | 92.2-99.0 |
| Hookah Use, Last 2 Years | Yes | 4.2 | 2.2-6.2 | 3.9 | 1.6-6.1 | 3.3 | 1.3-5.2 | 3.8 | 2.0-5.5 | 4.4 | 1.0-7.8 |
| Any E-Cigarette Use Before Pregnancy | No | 95.4 | 93.5-97.3 | 94.9 | 92.3-97.4 | 92.7 | 89.9-95.5 | 89.7 | 86.9-92.6 | 92.3 | 88.6-96.0 |
| Any E-Cigarette Use Before Pregnancy | Yes | 4.6 | 2.7-6.5 | 5.1 | 2.6-7.7 | 7.3 | 4.5-10.1 | 10.3 | 7.4-13.1 | 7.7 | 4.0-11.4 |
| Any E-Cigarette Use During Pregnancy | No | 98.2 | 97.0-99.5 | 99.0 | 98.2-99.8 | 97.9 | 96.3-99.4 | 96.3 | 94.5-98.1 | 97.6 | 95.8-99.3 |
| Any E-Cigarette Use During Pregnancy | Yes | 1.8 | 0.5-3.0 | 1.0 | 0.2-1.8 | 2.1 | 0.6-3.7 | 3.7 | 1.9-5.5 | 2.4 | 0.7-4.2 |
| Any Alcohol Use Before Pregnancy | No | 48.8 | 44.4-53.2 | 50.4 | 45.0-55.9 | 42.6 | 37.4-47.9 | 48.6 | 44.0-53.2 | 46.6 | 40.0-53.2 |
| Any Alcohol Use Before Pregnancy | Yes | 51.2 | 46.8-55.6 | 49.6 | 44.1-55.0 | 57.4 | 52.1-62.6 | 51.4 | 46.8-56.0 | 53.4 | 46.8-60.0 |
| Any Alcohol Use During Pregnancy | No | 94.7 | 92.9-96.6 | 95.2 | 93.0-97.4 | 93.2 | 90.5-95.9 | 95.0 | 93.1-96.9 | 93.7 | 90.7-96.8 |
| Any Alcohol Use During Pregnancy | Yes | 5.3 | 3.4-7.1 | 4.8 | 2.6-7.0 | 6.8 | 4.1-9.5 | 5.0 | 3.1-6.9 | 6.3 | 3.2-9.3 |
| Any Intimate Partner Violence Before Pregnancy | No | 96.7 | 95.3-98.1 | 97.5 | 95.9-99.0 | 97.6 | 96.2-99.1 | 96.8 | 95.1-98.5 | 97.5 | 95.6-99.4 |
| Any Intimate Partner Violence Before Pregnancy | Yes | 3.3 | 1.9-4.7 | 2.5 | 1.0-4.1 | 2.4 | 0.9-3.8 | 3.2 | 1.5-4.9 | 2.5 | 0.6-4.4 |
| Any Intimate Partner Violence (Current Partner) Before Pregnancy | No | 98.3 | 97.3-99.3 | 98.8 | 97.8-99.8 | 98.2 | 96.9-99.5 | 98.2 | 96.9-99.5 | 99.3 | 98.6-100 |
| Any Intimate Partner Violence (Current Partner) Before Pregnancy | Yes | 1.7 | 0.7-2.7 | 1.2 | 0.2-2.2 | 1.8 | 0.5-3.1 | 1.8 | 0.5-3.1 | 0.7 | 0.0-1.4 |

| Indicator | Response | 2018 % | 2018 [95%CL] | 2019 % | 2019 [95%CL] | 2020 % | 2020 [95%CL] | 2021 % | 2021 [95%CL] | 2022 % | 2022 [95%CL] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Any Intimate Partner Violence (Ex-Partner) Before Pregnancy | No | 98.1 | 97.0-99.2 | 98.2 | 96.9-99.5 | 99.1 | 98.2-99.9 | 97.6 | 96.2-99.0 | 98.2 | 96.5-99.9 |
| Any Intimate Partner Violence (Ex-Partner) Before Pregnancy | Yes | 1.9 | 0.8-3.0 | 1.8 | 0.5-3.1 | 0.9 | 0.1-1.8 | 2.4 | 1.0-3.8 | 1.8 | 0.1-3.5 |
| Any Intimate Partner Violence During Pregnancy | No | 98.0 | 96.9-99.2 | 99.4 | 98.8-100 | 97.4 | 95.7-99.0 | 98.0 | 96.8-99.3 | 98.6 | 97.4-99.8 |
| Any Intimate Partner Violence During Pregnancy | Yes | 2.0 | 0.8-3.1 | 0.6 | 0.0-1.2 | 2.6 | 1.0-4.3 | 2.0 | 0.7-3.2 | 1.4 | 0.2-2.6 |
| Any Intimate Partner Violence (Current Partner) During Pregnancy | No | 98.7 | 97.8-99.6 | 99.8 | 99.7-100 | 97.8 | 96.3-99.4 | 98.9 | 97.8-99.9 | 99.4 | 98.8-100 |
| Any Intimate Partner Violence (Current Partner) During Pregnancy | Yes | 1.3 | 0.4-2.2 | 0.2 | 0.0-0.3 | 2.2 | 0.6-3.7 | 1.1 | 0.1-2.2 | 0.6 | 0.0-1.2 |
| Any Intimate Partner Violence (Ex-Partner) During Pregnancy | No | 99.2 | 98.4-100 | 99.5 | 98.9-100 | 98.8 | 97.6-100 | 98.5 | 97.4-99.5 | 99.2 | 98.2-100 |
| Any Intimate Partner Violence (Ex-Partner) During Pregnancy | Yes | 0.8 | 0.0-1.6 | 0.5 | 0.0-1.1 | 1.2 | 0.0-2.4 | 1.5 | 0.5-2.6 | 0.8 | 0.0-1.8 |
| Reported Depression Before Pregnancy | No | 79.4 | 75.8-83.0 | 82.7 | 78.7-86.7 | 82.6 | 78.6-86.6 | 80.1 | 76.5-83.8 | 87.2 | 83.2-91.3 |
| Reported Depression Before Pregnancy | Yes | 20.6 | 17.0-24.2 | 17.3 | 13.3-21.3 | 17.4 | 13.4-21.4 | 19.9 | 16.2-23.5 | 12.8 | 8.7-16.8 |
| Reported Depression During Pregnancy | No | 83.7 | 80.5-87.0 | 83.2 | 79.1-87.2 | 84.0 | 80.1-87.9 | 82.8 | 79.3-86.3 | 86.6 | 82.6-90.7 |
| Reported Depression During Pregnancy | Yes | 16.3 | 13.0-19.5 | 16.8 | 12.8-20.9 | 16.0 | 12.1-19.9 | 17.2 | 13.7-20.7 | 13.4 | 9.3-17.4 |
| Reported Postpartum Depressive Symptoms | No | 83.7 | 80.4-87.0 | 84.5 | 80.4-88.5 | 84.7 | 80.8-88.5 | 87.0 | 84.0-90.0 | 82.9 | 77.8-87.9 |
| Reported Postpartum Depressive Symptoms | Yes | 16.3 | 13.0-19.6 | 15.5 | 11.5-19.6 | 15.3 | 11.5-19.2 | 13.0 | 10.0-16.0 | 17.1 | 12.1-22.2 |
| Baby Most Often Placed To Sleep On Back | No | 18.7 | 15.3-22.2 | 20.6 | 16.2-25.1 | 21.6 | 17.2-25.9 | 20.9 | 17.1-24.6 | 20.0 | 14.4-25.6 |
| Baby Most Often Placed To Sleep On Back | Yes | 81.3 | 77.8-84.7 | 79.4 | 74.9-83.8 | 78.4 | 74.1-82.8 | 79.1 | 75.4-82.9 | 80.0 | 74.4-85.6 |
| Baby Most Often Slept Alone | No | 25.8 | 21.8-29.8 | 23.1 | 18.4-27.7 | 25.1 | 20.4-29.8 | 20.8 | 16.9-24.6 | 23.6 | 17.7-29.5 |
| Baby Most Often Slept Alone | Yes | 74.2 | 70.2-78.2 | 76.9 | 72.3-81.6 | 74.9 | 70.2-79.6 | 79.2 | 75.4-83.1 | 76.4 | 70.5-82.3 |
| Baby Laid To Sleep On An Approved Sleep Surface | No | 68.3 | 64.3-72.4 | 62.1 | 56.7-67.5 | 59.9 | 54.5-65.2 | 60.6 | 55.9-65.3 | 71.7 | 66.0-77.5 |
| Baby Laid To Sleep On An Approved Sleep Surface | Yes | 31.7 | 27.6-35.7 | 37.9 | 32.5-43.3 | 40.1 | 34.8-45.5 | 39.4 | 34.7-44.1 | 28.3 | 22.5-34.0 |
| Baby Ever Breastfed | No | 15.9 | 12.6-19.2 | 18.7 | 14.3-23.1 | 12.1 | 8.5-15.6 | 15.2 | 11.9-18.6 | 13.5 | 8.8-18.3 |
| Baby Ever Breastfed | Yes | 84.1 | 80.8-87.4 | 81.3 | 76.9-85.7 | 87.9 | 84.4-91.5 | 84.8 | 81.4-88.1 | 86.5 | 81.7-91.2 |
| Breastfeeding Duration | 8+ Weeks | 61.3 | 57.0-65.6 | 53.3 | 47.8-58.8 | 61.0 | 55.7-66.3 | 64.6 | 60.0-69.1 | 64.9 | 58.3-71.5 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Breastfeeding Duration | <8 Weeks | 38.7 | 34.4-43.0 | 46.7 | 41.2-52.2 | 39.0 | 33.7-44.3 | 35.4 | 30.9-40.0 | 35.1 | 28.5-41.7 |

# Appendix B: Data Analysis Notes

SAS 9.4 (Cary, NC) was used for all analyses; appropriate survey procedures were used to account for the nature of complex survey data.

1. PRAMS site aggregate for 2018: Alabama, Alaska, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York City, New York State, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming met the required 50% response rate threshold for inclusion.
2. PRAMS site aggregate for 2019: Alabama, Alaska, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York City, New York State, North Carolina, North Dakota, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming met the required 50% response rate threshold for inclusion.
3. PRAMS site aggregate for 2020: Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York City, North Dakota, Oregon, Pennsylvania, Puerto Rico, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming met the required 50% response rate threshold for inclusion.
4. PRAMS site aggregate for 2021: Alabama, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Hawaii, Illinois, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York City, New York State, North Dakota, Oklahoma, Oregon, Pennsylvania, Puerto Rico, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming met the required 50% response rate threshold for inclusion.
5. PRAMS site aggregate for 2022: Alabama, Arizona, Colorado, Connecticut, Delaware, District of Columbia, Hawaii, Kansas, Kentucky, Maine, Massachusetts, Michigan, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York City, New York State, North Dakota, Northern Mariana Islands, Oklahoma, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming met the required 50% response rate threshold for inclusion.

6. Substance use estimates include *all women with a recent live birth* as the denominator.

7. *Intimate Partner Violence*: Defined as being pushed, hit, slapped, kicked, choked, or physically hurt in any way by a husband/partner and/or an ex-husband/ex-partner. Beginning in 2016 (Phase 8), the question response options were expanded to include “my ex-husband or ex-partner” in addition to “my husband or partner”. PRAMS data has been calculated to reflect this change.

8. *Pregnancy intention*: Defined as the woman's reported feelings about becoming pregnant just before she became pregnant. Intention was assessed 2-6 months postpartum. **Mistimed** pregnancies are those that were wanted, but later. **Unwanted** pregnancies are those not wanted then or any time in the future. **Intended** pregnancies were those that were wanted then or sooner. **Unsure** describes those women who were unsure about their desire for pregnancy.

9. *Post-partum contraceptive use*: Defined as using any kind of birth control at the time when the PRAMS survey was completed. Women who selected the "other" write-in option were excluded from the analysis. **Most effective methods** (**Long-Acting Reversible Contraception (LARC))** include Intrauterine Device (IUD) or contraceptive implant. **Moderately effective methods** include birth control pills, shots or injections (e.g., Depo–Provera), contraceptive patch, and vaginal ring. **Least effective methods** include condom, rhythm method/natural family planning, and withdrawal.

10. *Insurance*: other state-specific government plans or programs such as SCHIP/CHIP were *excluded* from estimates; those selecting "other" types were also excluded.

    - **Private** includes private only, any other insurance in combination with private, TRICARE, or other military-type insurance.
    - **Medicaid** includes Medicaid or another state-named Medicaid program (e.g., TennCare).
    - **None** is defined as no selected insurance or selecting only Indian Health Service (IHS).

# Appendix C: References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