

Highlights from the Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2022

Massachusetts Department of Public Health
Bureau of Family Health and Nutrition
Division for Family Health Data and Analytics

July 2026

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<https://www.mass.gov/dph/prams>

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In this report we use the term "partner" to talk about another person who is co-parenting with the respondent. The term "father" is included in one question written by the CDC and specifically refers to the person whose sperm was involved in conception. MA PRAMS strives to include the voices of all people who experience pregnancy in Massachusetts.

The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Introduction

This report contains data from the 2022 Massachusetts Pregnancy Risk Assessment Monitoring System (MA PRAMS) survey. MA PRAMS is a collaborative surveillance project between the Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health (MDPH). PRAMS collects state-specific, population-based data on parental attitudes and experiences before, during, and shortly after pregnancy. In addition, PRAMS provides unique data on racism, mental health, family medical leave, disability status, and social supports. MA PRAMS oversamples by race and Hispanic ethnicity to ensure adequate representation of mothers from racially and ethnically diverse backgrounds and the survey is conducted in English and Spanish. Findings from the MA PRAMS survey are used to assess the health of birth parents and infants across the state and to inform program monitoring, maternal and child health research and evaluation, and policy development. PRAMS data are also used to inform the Title V Maternal and Child Health (MCH) needs assessment, measure progress on national and state MCH performance measures, increase visibility of MCH issues, justify and support allocation of resources, and build state data capacity. The [Title V program](#) is a federal-state partnership between the Health Resources and Services Administration and state health departments and plays a key role in the provision of MCH services in Massachusetts.

PRAMS is conducted annually with monthly samples collected throughout the year from January to December. Details of CDC PRAMS methodology are available from CDC [here](#).

Data collected through MA PRAMS enable MDPH to provide estimates of a variety of risk factors, preventive behaviors, perinatal conditions, and emerging public health issues for the Massachusetts birthing population by demographic and socioeconomic characteristics (race and Hispanic ethnicity, age, education, federal poverty level, nativity, marital status, and disability status). These analyses highlight health inequities within and across population sub-groups. In interpreting these results, it is critical to recognize that the social, economic, behavioral, and physical factors experienced by pregnant and postpartum people where they live and work have a profound impact on their health. Disparities in outcomes by race, for example, are much more often due to inequities in social factors and the perpetuation of racial discrimination than biological causes. The social determinants of health (SDoH) are rooted in systems—and therefore—public health action must be directed at system changes to reduce and prevent health inequities.

In 2022, a total of 2,630 parents were sampled, with 1,527 responses, resulting in a weighted response rate of 61%. MA PRAMS has consistently met or exceeded the CDC PRAMS response rate threshold, which was 50% for 2022. We provide highlights of the data in this report.

Highlights of the data

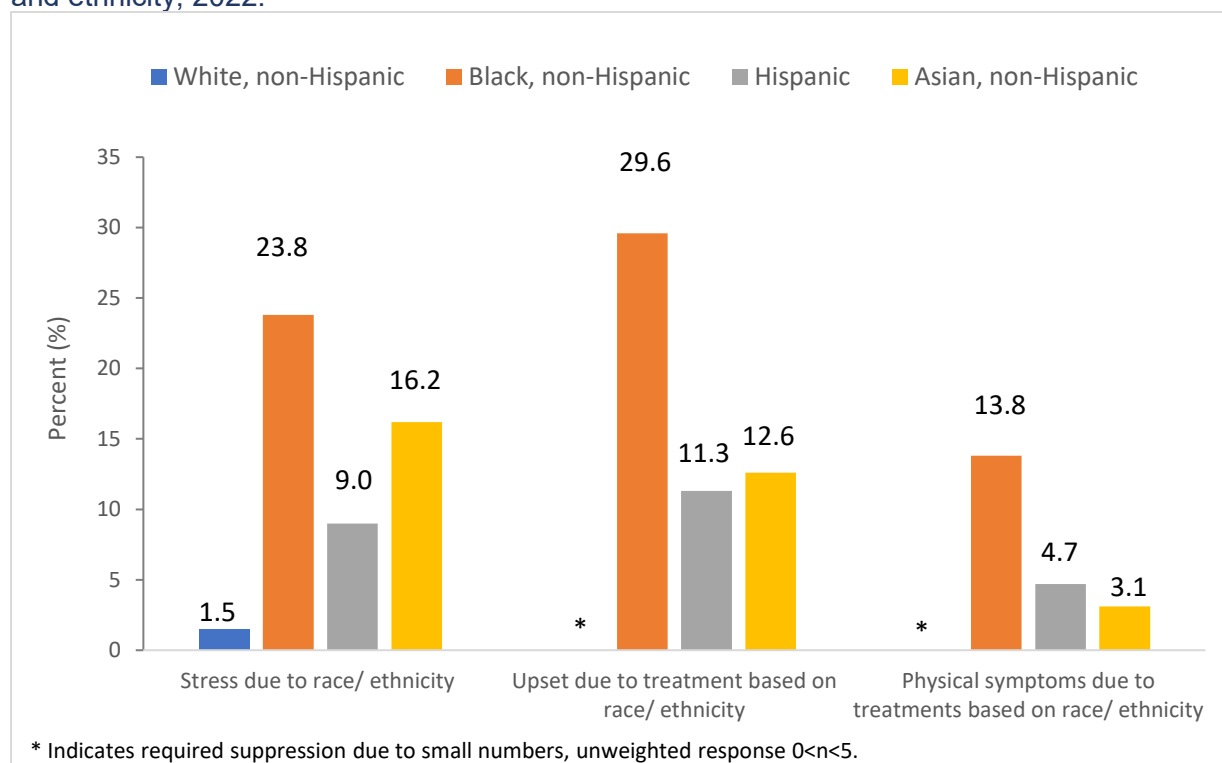
The Impact of Racism on Stress

Massachusetts was the first state to include racism-related questions in its PRAMS survey. This is a significant advancement, as other current state and national data systems lack the ability to highlight the drivers of many health outcomes across populations. MA PRAMS data on experiences of racism were used to inform the [Special Legislative Commission on Racial Inequities in Maternal Health](#), created by a legislative act signed by former Governor Charlie Baker in January 2021. MA PRAMS data allow MDPH to understand how the impact of racism, discrimination, and stigma contribute to the adverse outcomes experienced among Black and Brown people and help MDPH take a data-driven approach to address variations in health outcomes.

In 2022, Black non-Hispanic respondents were more than 16 times as likely to report feeling stressed due to treatment based on their racial or ethnic background compared to White non-Hispanic respondents. Black, non-Hispanic respondents were statistically more than 4 times as likely to report physical symptoms due to treatment based on their racial or ethnic background compared to Asian, non-Hispanic respondents and 3 times as likely compared to Hispanic respondents.

Black, non-Hispanic respondents were statistically more than 2 times as likely to report feeling upset due to treatment based on their racial or ethnic background compared to Asian, non-Hispanic respondents and Hispanic respondents.

Figure 1. Prevalence of reactions to racism during the twelve months before delivery, by race and ethnicity, 2022.

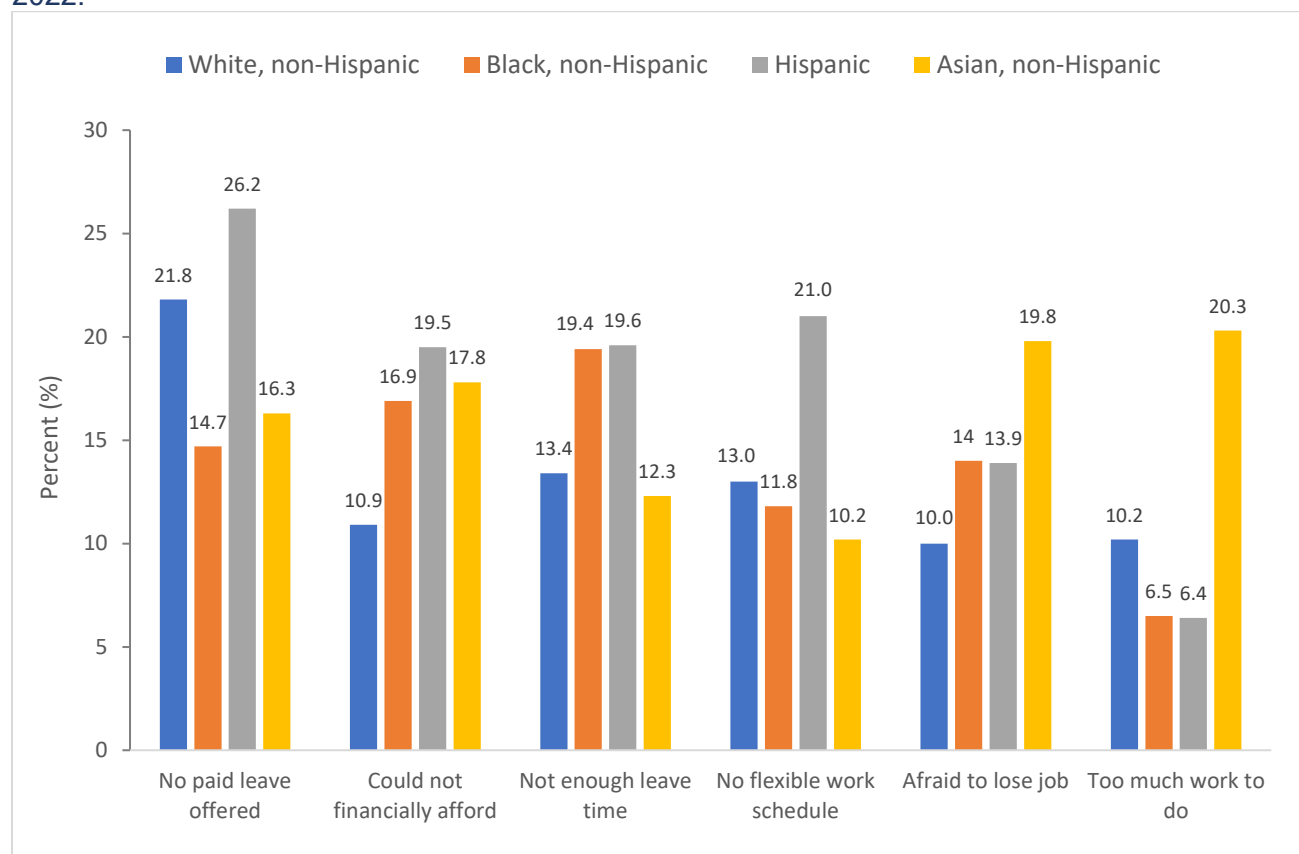


Factors Affecting Maternity Leave

[MA Paid Family and Medical Leave \(PFML\) legislation](#) was passed in June 2018 and benefits became available in January 2021. MA PRAMS data were used to inform the legislation and will be used to monitor the implementation of the PFML [program](#). **MA PRAMS data from 2022 found that 68.2% of MA respondents who were employed during pregnancy took paid leave only and 6.9% took both paid and unpaid leave, compared with 40-47% and 13-15% respectively in 2019-2020 combined data.**

In 2022, Asian mothers were twice as likely to report having too much work as the reason for not taking leave, compared to White mothers (20.3% vs 10.2%), a statistically significant difference. All other variations across race and ethnicity were not statistically significant.

Figure 2. Prevalence of reasons for not taking family leave after birth by race and ethnicity, 2022.

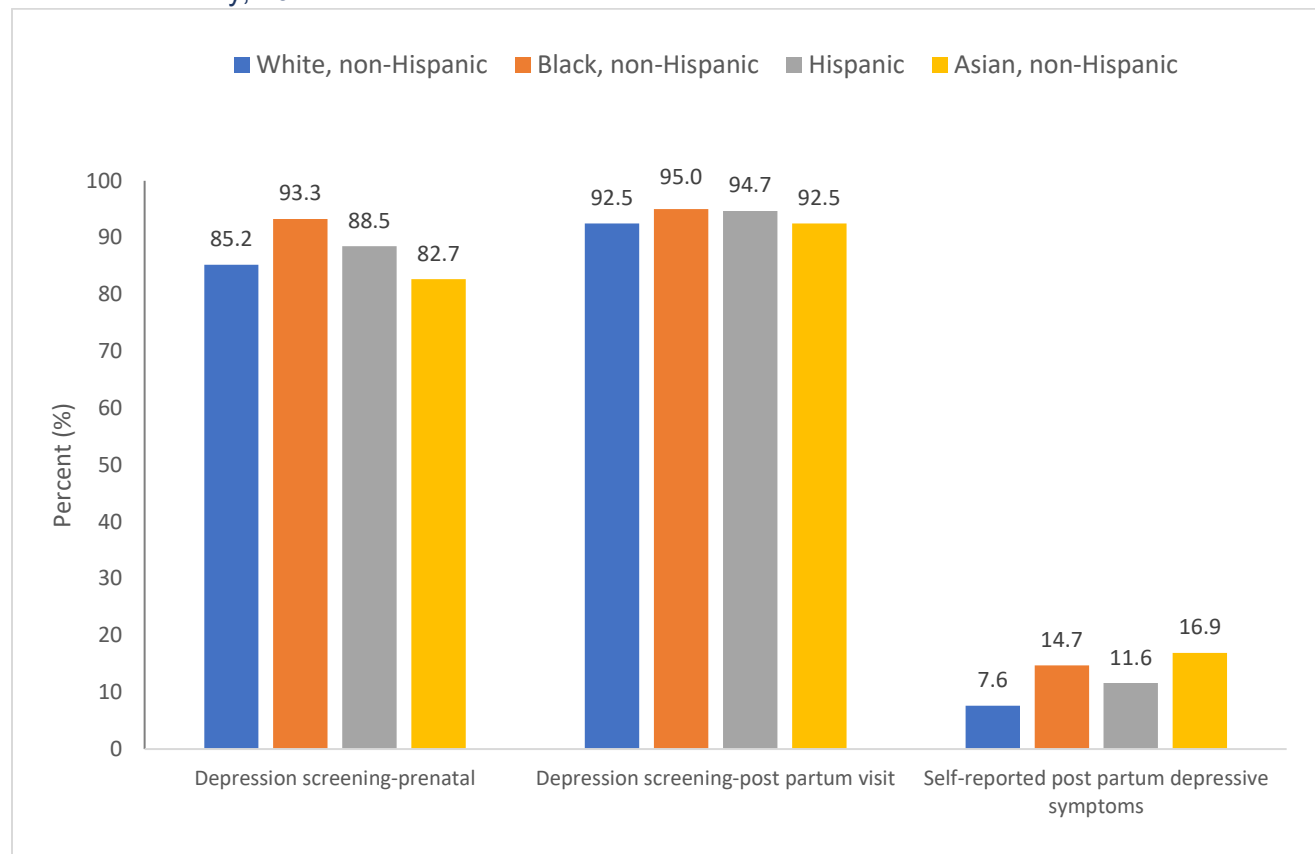


Postpartum Depressive Symptoms and Screenings

PRAMS data are used by a variety of MCH programs, policy makers and initiatives including: [An Act Relative to Postpartum Depression](#) (PPD), Chapter 313 of the Acts of 2010, which helped establish a Special Legislative Commission on PPD and requires health care providers and health plans to report PPD screening. MDPH includes PRAMS data on PPD screening and postpartum depressive symptoms in the annual legislative report. PRAMS data on postpartum depressive symptoms are also used to inform the MDPH Title V priority on mental health and emotional well-being and is a National Outcome Measure (NOM-24) for Title V.

Based on 2022 data, a higher prevalence of postpartum depressive symptoms was observed among Black non-Hispanic and Asian non-Hispanic respondents (14.7% and 16.9% respectively) compared to White non-Hispanic respondents (7.6%). Although Asian, non-Hispanic respondents reported the highest postpartum depressive symptoms, they were least likely to receive a depression screening during either prenatal (82.7%) or postpartum visit (92.5%).

Figure 3. Prevalence of depression screening and self-reported postpartum depressive symptoms by race and ethnicity, 2022.

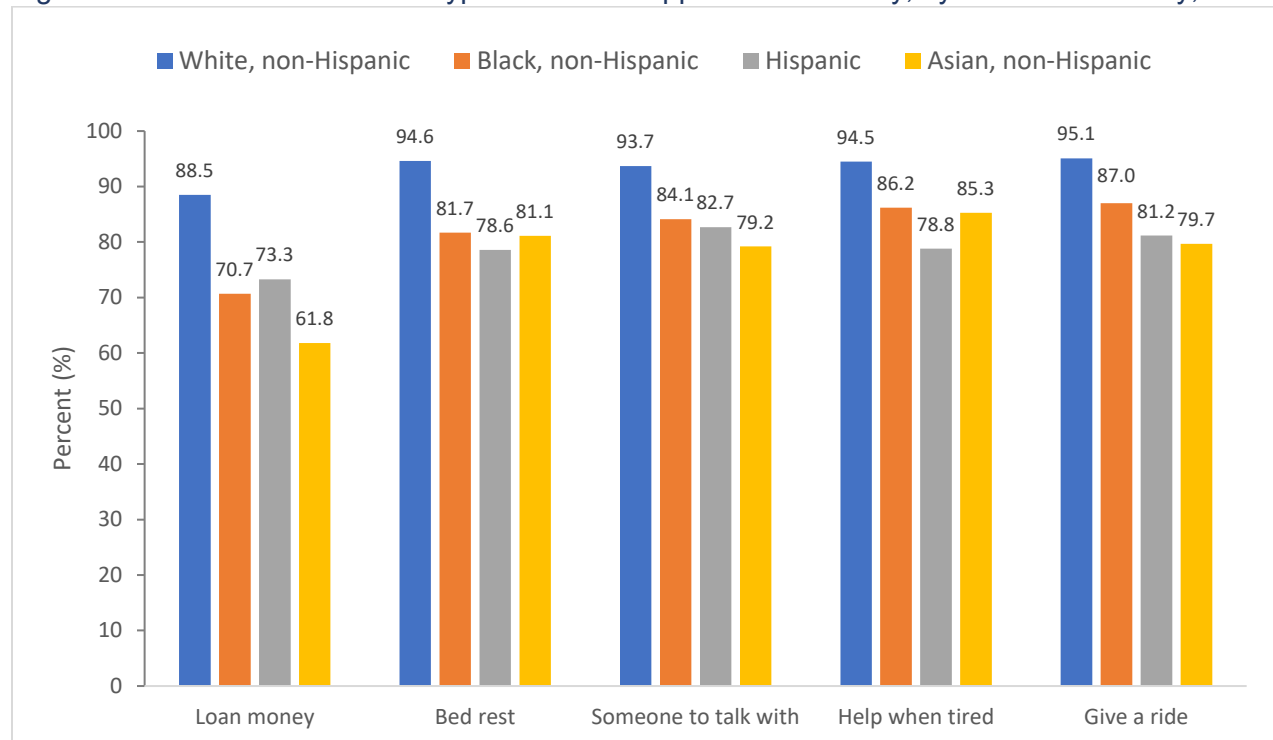


Social, Emotional, and Financial Support Among Pregnant People

PRAMS data are a unique source for information on social support and partner support among pregnant and postpartum people and are used to monitor the Title V priority “Strengthen the capacity of the health system to promote mental health and emotional well-being.” Across all five measures of social support (i.e., someone to loan new parent \$50, someone to help if sick and in bed, someone to talk with about problems, someone to help if frustrated with new baby, someone to give new parent and baby a ride to doctor’s office), **people of color reported statistically significantly less support compared to White non-Hispanics, with percentages between 61-87% compared to percentages between 88-95% of respondents in 2022, respectively.**

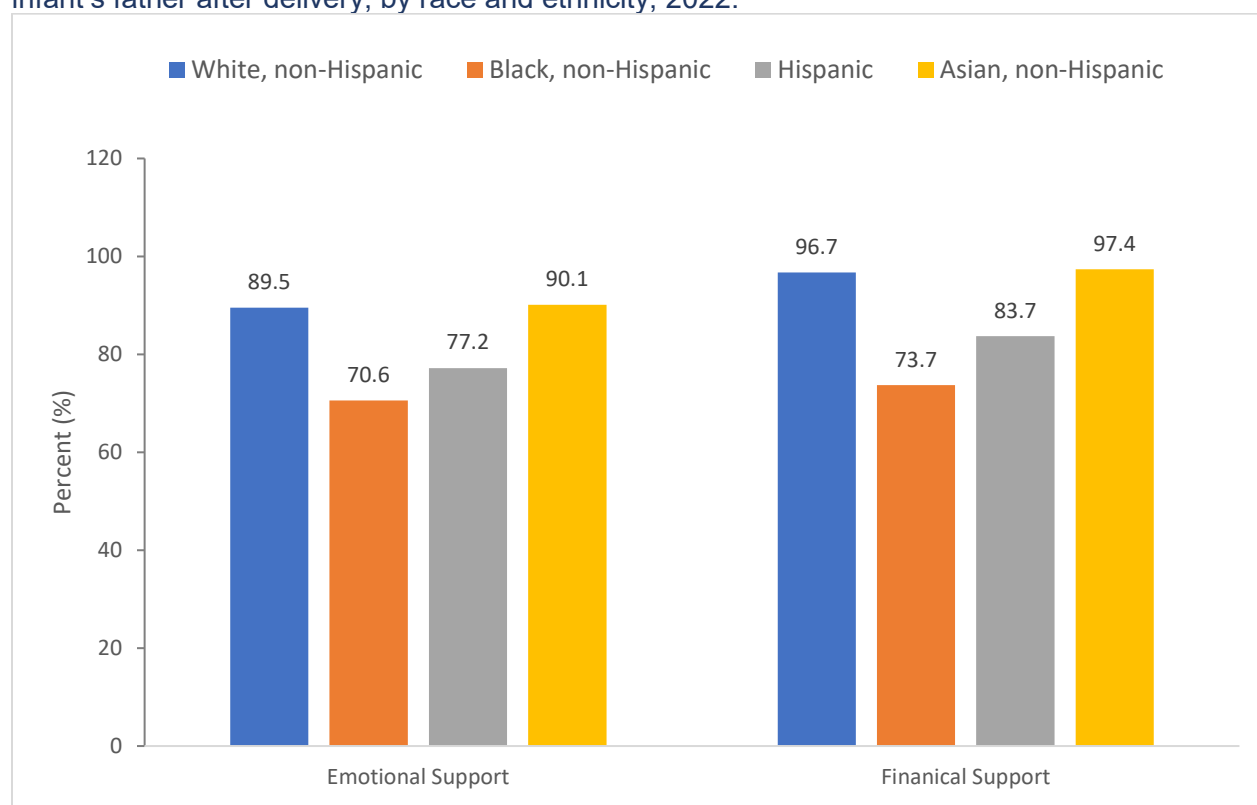
White, non-Hispanic respondents were 1.4 times more likely to receive financial support (i.e., loan money) compared to Asian, non-Hispanic residents.

Figure 4. Prevalence of different types of social support after delivery, by race and ethnicity, 2022.



Starting in 2017, MA PRAMS began collecting data on a respondent's emotional support from their partner and financial support from infant's father. **In 2022, 84% of respondents reported emotional support from their partner and 91% of respondents reported financial support from infant's father.** In 2022, Black, non-Hispanic and Hispanic respondents reported statistically lower financial support (73.7% and 83.7%) compared to White, non-Hispanic and Asian, non-Hispanic respondents (96.7% and 97.4%). Black, non-Hispanic and Hispanic respondents reported statistically significantly lower emotional support (70.6% and 77.2%) compared to White, non-Hispanic and Asian, non-Hispanic respondents (89.5% and 90.1%).

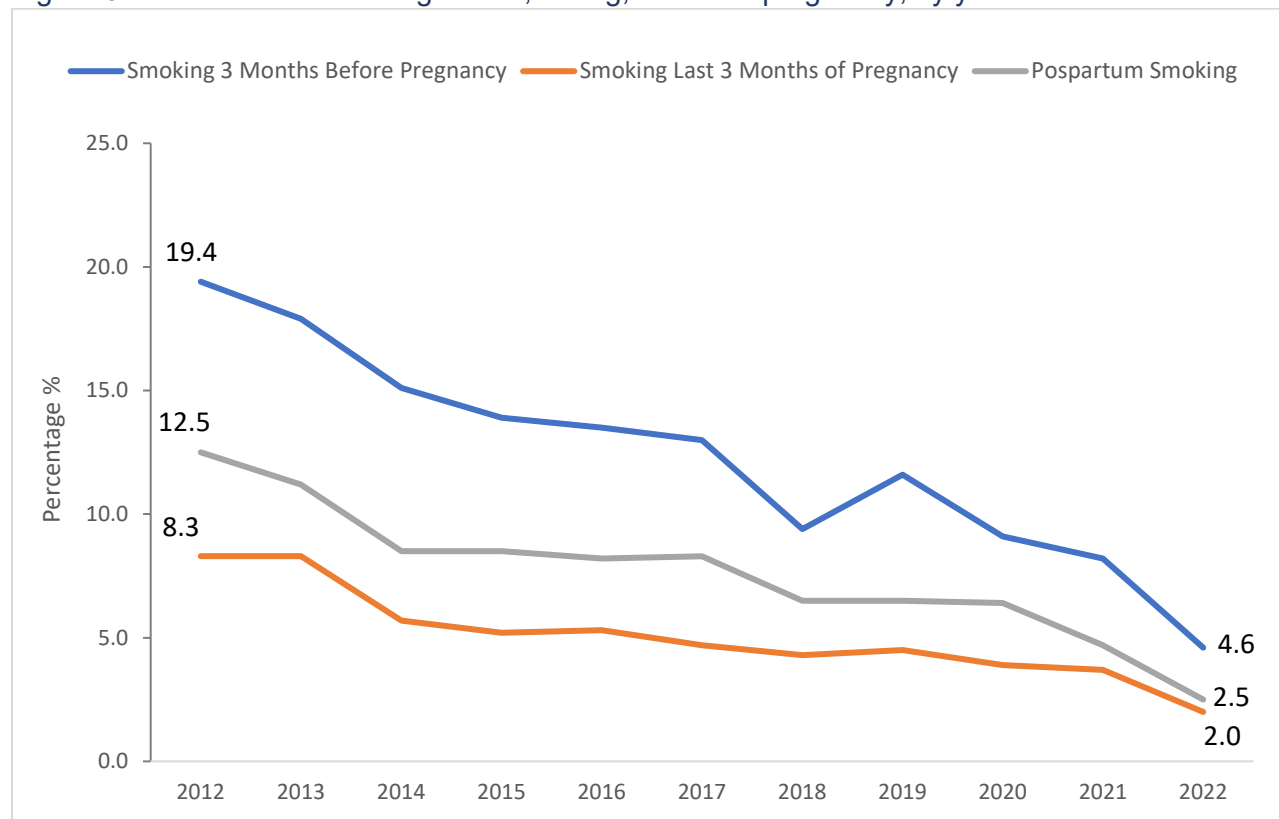
Figure 5. Prevalence of emotional support from respondent's partner and financial support from infant's father after delivery, by race and ethnicity, 2022.



Smoking and Other Substance Use During Pregnancy

Massachusetts also relies on PRAMS data to inform its Title V priority “Prevent the use of substances, including alcohol, tobacco, marijuana and opioids, among youth and pregnant people.” MA PRAMS has asked questions on alcohol consumption and smoking since 2007 and added questions on vaping in 2016. **During the last decade, smoking in the last three months of pregnancy has declined from 8.3% in 2012 to 4.5% in 2019 and to 2% in 2022.** Smoking postpartum decreased from 12.5% in 2012 to 6.5% in 2019 and to 2.5% in 2022.

Figure 6. Prevalence of smoking before, during, and after pregnancy, by year.



PRAMS asks several questions about substance use. **Marijuana use was reported by 3.6% of respondents during pregnancy, while the use of any prescription pain relievers during pregnancy was reported by 4.8% of respondents in 2022.** Among respondents who used prescription pain relievers during pregnancy, approximately 57% said that the prescriptions came from their obstetrician, midwife, or prenatal care provider, 21% reported receiving their prescription from the Emergency Department, and 16% received their prescriptions from their primary care physician in 2022. Notably, 13% of respondents said they took prescription pain relievers during pregnancy without having received a prescription for them.

Figure 7. Prevalence of prescription pain relief during pregnancy, 2019-2022.

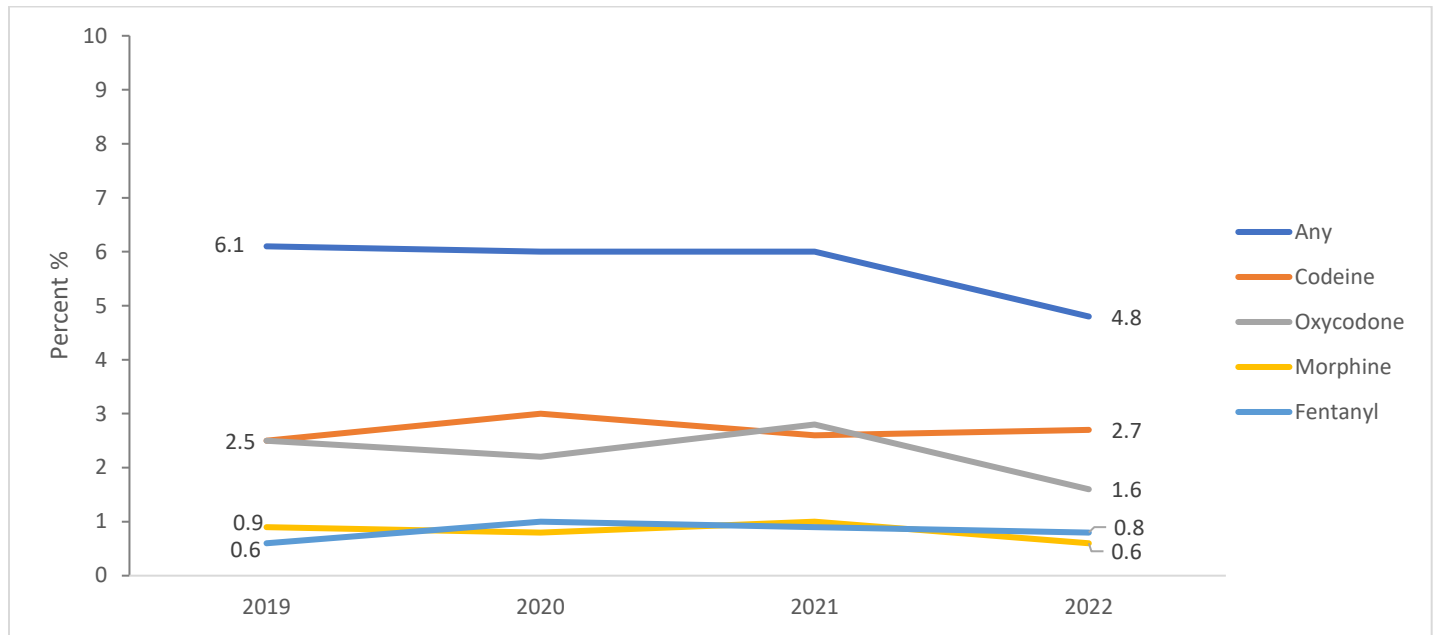
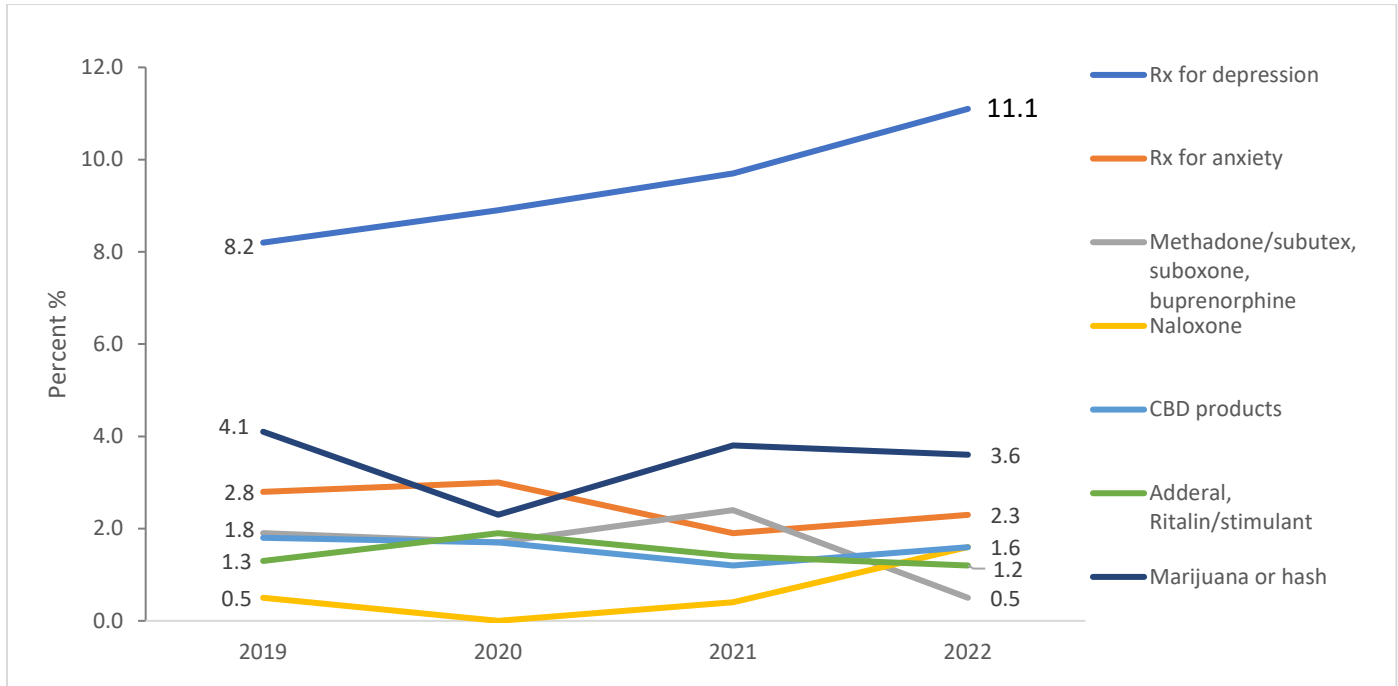


Figure 8. Prevalence of other prescriptions used in pregnancy, 2019-2022.

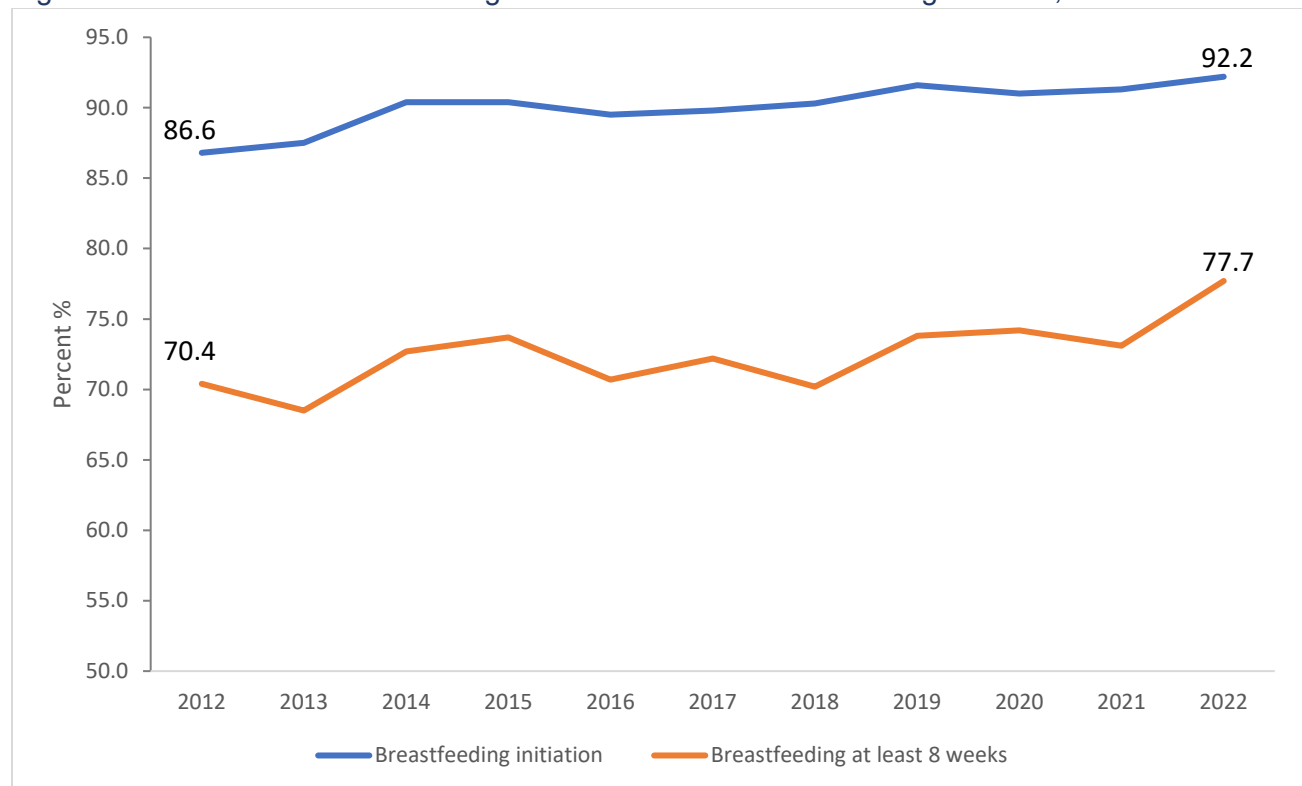


Breastfeeding

Although the majority of MA respondents initiate breastfeeding (92.2% overall), **PRAMS 2022 data show that by eight weeks postpartum, the proportion of new parents reporting any breastfeeding was 68.8% for Hispanic parents and 71.8% for Black, non-Hispanic parents. This is statistically lower than Asian non-Hispanic parents (86.3%) and White non-Hispanic parents (82.6%).**

Parents with lower socioeconomic status were also less likely to breastfeed at eight weeks; among parents with Medicaid, 66.1% breastfed for eight weeks, compared to 86.6% with private insurance, and among parents at $\leq 100\%$ federal poverty level vs. $>100\%$, rates were 61.7% and 83.9% respectively. Parents who breastfeed vary with educational levels, parents with lower educational levels were less likely to breastfeed at eight weeks; among parents who didn't complete high school, 57.4% breastfed for eight weeks, compared to college graduates, 88.4%.

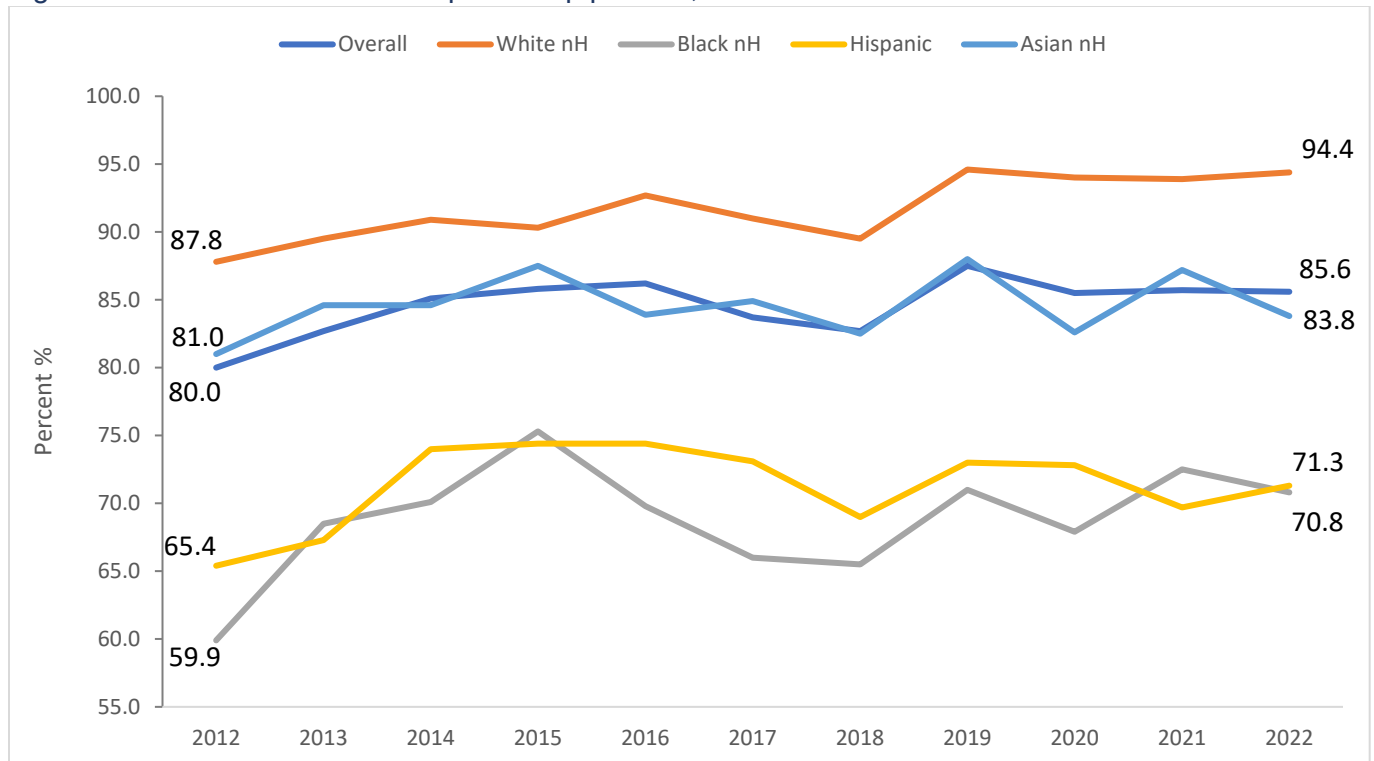
Figure 9. Prevalence of breastfeeding initiation and duration at least eight weeks, 2012-2022.



Infant Safe Sleep

According to data from MA PRAMS, while the prevalence of supine (laid on the back) sleep positioning has increased from 80.0% in 2012 to 85.6% in 2022, disparities continue to persist. For example, in 2021, **fewer non-US-born respondents (74%) placed their infant supine to sleep compared with US-born respondents (91%). Furthermore, Black non-Hispanic (70.8%) and Hispanic (71.3%) infants had a lower prevalence of supine sleep position than White non-Hispanic infants (94.4%).**

Figure 10. Prevalence of infant supine sleep position, 2012-2022.



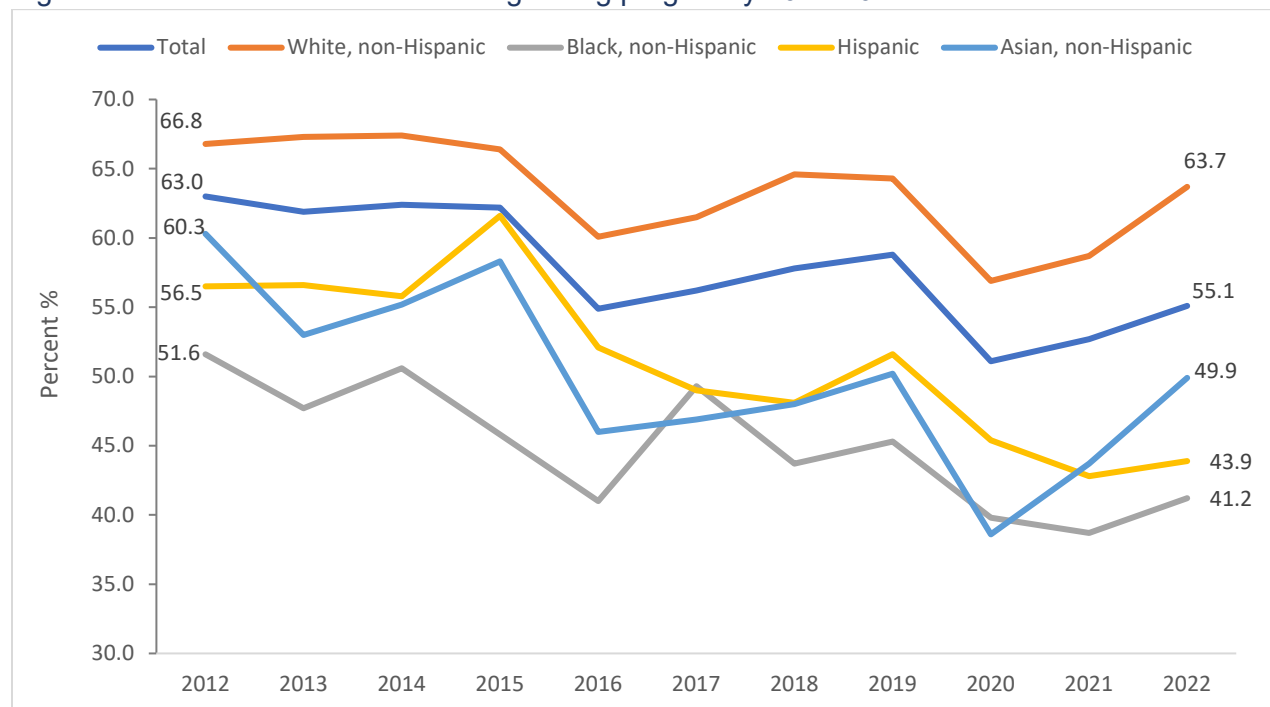
Oral Health

MA PRAMS data were used to inform the development of the [Massachusetts Oral Health Practice Guidelines for Pregnancy and Early Childhood](#). The aim of the Guidelines was to motivate providers to promote oral health care among pregnant people and young children. While maintaining good oral hygiene is important prior to and during pregnancy and can help prevent or reduce the severity of oral health problems such as gingivitis, gingival hyperplasia, and pyogenic granuloma, change in practice has been challenging.

PRAMS data showed a slight increase in the percentage of women receiving cleanings during pregnancy from 2020 to 2022, from 51.1% to 55.1% respectively. This is likely due to the increase in access in the post-pandemic period.

Inequities in dental cleaning persist across racial and ethnic groups, with statistically lower number of people of color reporting a dental cleaning; 41.2% of Black, non-Hispanic, 43.9% of Hispanic and 49.9% of Asian non-Hispanic respondents reported dental cleaning, compared to 63.7% of White, non-Hispanic respondents.

Figure 11. Prevalence of teeth cleaning during pregnancy 2012-2022.



Sample Characteristics

Table 1. Details of Sample Characteristics, MA PRAMS 2022

Characteristics	Number of respondents	Weighted N	PRAMS percent (%)	Statewide percent from MA birth certificate (%)
Total	1,527	66,086	---	
Race/ethnicity¹				
White, non-Hispanic	335	35,571	55.2	54.5
Black, non-Hispanic	389	7,272	11.3	10.8
Hispanic	440	14,959	23.2	22.7
Asian, non-Hispanic	331	6,296	9.8	9.3
Other, non-Hispanic	15	330	0.5	0.7
missing				2.0
Age (years)¹				
<20	26	956	1.4	1.9
20-29	496	20,395	30.9	30.5
30-39	915	41,573	62.9	62.0
40+	90	3,163	4.8	5.6
Education¹				
<High school	141	4,587	7.2	8.3
High school diploma	266	10,075	15.8	16.7
Some college	343	13,012	20.5	21.0
College graduate	740	35,926	56.5	51.5
missing				2.5
Insurance type¹				
Private	734	37,476	59.6	59.7
Medicaid	663	23,886	38.0	39.0
Other	42	1,526	2.4	1.1
missing				0.2
Household poverty level²				Not available
≤100% FPL	371	13,143	21.5	
>100% FPL	1,010	48,079	78.5	
Nativity¹				
Non-US-born	791	21,243	32.1	32.8
US-born	736	44,843	67.9	67.2
missing				
Marital status¹				
Unmarried	499	20,468	31.0	33.1
Married	1,028	45,618	69.0	66.8
missing				0.0
WIC participation¹				
No	908	44,062	67.2	68.9
Yes	603	21,500	32.8	29.3
missing				1.8
Disability status²				Not available
No	1,295	56,748	87.7	
Yes	196	7,927	12.3	
Preferred Written Language¹				
English	1211	54,324	85.9	86.0
Spanish	158	5,459	8.6	7.0
Other	131	3,475	5.5	5.8
missing	27			1.2
Parity¹				
No previous live birth	692	31,140	47.2	43.9
Previous live birth	833	34,842	52.8	56.1
missing	2	0	0	0.0

¹variable from MA certificate of live birth; ²variable from PRAMS.

Additional Data

MA PRAMS data reports for earlier years are available on the MA PRAMS website [here](#). Additional data are available on the MA Population Health Information Tool website for PRAMS [here](#).

PRAMS Sampling Methodology

The MA PRAMS is an ongoing, population-based surveillance system designed to identify and monitor selected attitudes, experiences and behaviors that occur before, during and after pregnancy. The PRAMS survey consists of three types of questions. All surveys include a required set of questions (“Core” questions), which allow for multi-state analyses. Each state can select additional questions from a CDC-approved-questions list (“Standard” questions) or can create questions tailored to meet its needs (“State-developed” questions). The MA PRAMS survey is available on the MA PRAMS website [here](#). The survey was administered in English and Spanish only.

PRAMS survey participants were sampled from a frame of eligible birth certificates which included all live-born infants of Massachusetts resident birthing people, delivered in the state, for whom a birth certificate was available. Based on CDC’s PRAMS protocol, stillbirths, fetal deaths, induced abortions, and multiple births with quadruplets or more were excluded from the sampling frame.

Since 2007, Massachusetts has used a stratified sampling methodology, sampling disproportionately from four racial and Hispanic ethnic groups: (1) White non-Hispanic; (2) Black non-Hispanic; (3) Hispanic; and (4) Other, non-Hispanic. All but White non-Hispanic birthing people were oversampled to improve precision in examining disparities by race and ethnicity. For oversampling purposes, the category of Other, non-Hispanic includes all racial and ethnic groups besides White, Black, and Hispanic. Similar to previous reports, in the 2022 report, Massachusetts separates Asian non-Hispanics from the “Other, non-Hispanic” category for analytical purposes. Due to DPH suppression rules for small sample, the remaining “Other, non-Hispanic” group is not presented here. Disability status was ascertained by participants’ response to the PRAMS question: “Are you limited in any way in any activities because of physical, mental, or emotional problems?” Additional demographic information was obtained from the birth file, including the birthing person’s education, age, marital status, parity, and nativity.

About three percent of Massachusetts birthing people with a live birth in our study period were sampled and received up to three mailed paper surveys. Birthing people who did not respond to the survey after the third mailing were contacted by telephone. The survey data were weighted using selected demographics to account for non-response and adjusted for sampling probabilities and coverage to represent the Massachusetts birth population in 2022.

Analyses for the MA PRAMS 2022 report accounted for the stratified sampling method and included the final survey weights. SAS Enterprise through AWS was used to calculate prevalence and bivariate statistics.

Limitations

The data presented in this report are generalizable only to pregnancies resulting in a live birth of singletons or multiples of fewer than four, to Massachusetts residents who gave birth in the state.

The PRAMS survey is currently only administered in English and Spanish. This might present a limitation in collecting data from birthing people with limited proficiency in either of these languages.

Because PRAMS is based on self-reported information, there is the potential for misclassification error. Bias may occur if some groups of birthing people recall experiences more or less accurately than others.

Income data were collected; however, about seven percent of respondents declined to report income, and analyses involving household poverty could not include these respondents. In general, income data tend to be underreported on surveys.