PREGNANCY RISK ASSESSMENT MONITORING SYSTEM

A survey for healthier babies in New Jersey

# 2015 Annual Chart Book

## (PRAMS Phase 7 Survey Questionnaire)

The Annual Chart Book is intended to provide information from the Pregnancy Risk Assessment Monitoring System (PRAMS). NJ-PRAMS is a joint project of the New Jersey Department of Health and the Centers for Disease Control and Prevention (CDC). One out of every 50 mothers are sampled each month, when newborns are 2-6 months old. Survey data is collected on maternal attitude and experiences before, during, and shortly after pregnancy. Information from PRAMS is used to help plan better health programs for New Jersey mothers and infants – such as improving access to high quality prenatal care, reducing smoking, and encouraging breastfeeding.

The PRAMS sample design oversamples smokers and minorities to ensure adequate representation in these groups. Survey data is weighted to give representative estimates of proportions in specific categories and of actual persons across the NJ Birth Certificate database. Approximately 1,500 mothers have been interviewed annually between 2003-2015 with a 70% response rate. In 2015, 44.5% of the PRAMS sample was White, non-Hispanic (NH), while 30.1% were Hispanic, 14.3% were Black, NH and 11% were Asian, NH. The average age of the mothers responding was 30 years. A greater proportion of the mothers were married (66.3%), had some college education (64.5%) and reported an annual household income greater than $67,000 (48.7%). Of the mothers who responded to the 2015 NJ PRAMS survey, 35.7% were Women, Infants, and Children (WIC) participants.

New Jersey joined PRAMS during the Phase 4 questionnaire in 2002; since that time there have been four additional phases of questionnaires. The 2015 Chart Book includes data from the Phase 7 questionnaire which is available both on the New Jersey PRAMS website as well as the CDC PRAMS website.

The tables in the Chart Book present data that is relevant for program planning and are part of New Jersey's high priority areas. Data is presented in trend tables from 2003-2015 and by sociodemographic variables for 2015. Topics of interest include:

- Insurance status
- Pregnancy intention
- Health behaviors (e.g. smoking, vaccination, BMI, etc.)
- Postpartum behavior (e.g. breastfeeding, newborn sleep patterns, etc.)

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Additionally, this Chart Book also contains updated summary information on four new emerging health related priorities:

- Sociodemographics
- Home visitation
- Dental health
- Workforce trends

(Note: The question numbers listed in the tables next to the topics of interest refer to the corresponding question number in the PRAMS Phase 7 questionnaire.)

Additional data tables and charts for New Jersey (and all other PRAMS states) are available from the *PRAMStat* automated data query system maintained by CDC. The site also provides information on the general background of PRAMS, methodology and publications.

# Overview

## Access and Barriers to Prenatal Care (PNC)

### *Insurance Status*

- Reported use of Medicaid prior to pregnancy was 18.3% in 2015. There has been a steady increasing trend in the use of Medicaid from 2003 (10.8%).
- In 2015, among Hispanic mothers, almost 45% had no insurance prior to pregnancy. This represents a frequency seven times that of White, NH mothers (6.3%).
- Of the women who reported an annual household income less than $37,000, 38.9% had Medicaid/FamilyCare prior to pregnancy.
- Nearly 39% percent of WIC participants had no insurance prior to pregnancy in 2015. Sixty-two percent used Medicaid for prenatal care (PNC) during pregnancy.
- The proportion of mothers who reported using Medicaid for PNC increased slightly from 28.2% in 2014 to 28.7% in 2015.
- There has been an increase in the proportion of mothers who reported no insurance for PNC from 7.2% in 2003 to 8.7% in 2015.
- In 2015, among those women who received late or no PNC, 32.5% had no insurance for prenatal care – a decrease from 36.5% in 2014.

### *Pregnancy Intention*

- In 2015, the proportion of mothers who reported intended pregnancies was 70.2%, while 21.5% reported mistimed pregnancies, and 8.3% reported unintended pregnancies.
- Among mothers who reported having Medicaid for PNC, the frequency of mistimed pregnancies was 34.7%. Mothers who reported using private insurance for PNC had a mistimed pregnancy rate of 17.1%, a decrease from 19.3% in 2014.
- Among mothers who received late or no PNC, the unintended pregnancy rate (13.6%) was nearly twice as high as mothers who received early PNC (7.2%).
- Nearly two times as many Black, NH, mothers reported unintended pregnancies as White, NH mothers (13.2% and 6.9%, respectively).
- Unintended pregnancies were more likely to be reported by mothers who had a high school diploma or less (11.3%), unmarried (13.9%), had an annual household income of less than $37,000 (10.9%), were uninsured prior to pregnancy (13.1%), and were 18-29 years of age (9.7%).

- In 2015, more than half (55.1%) of WIC participants reported that their pregnancies were intended, 31.1% reported their pregnancies were mistimed, and 13.8% reported their pregnancies were unintended.

## Prenatal Care

### *Receipt of Prenatal Care*

- The proportion of women who reported receiving late or no PNC decreased from 19.2% in 2003 to 17.4% in 2015.
- In 2015, 8.1% of mothers reported not being able to get an appointment as a barrier to prenatal care, while 4.3% identified not knowing about their pregnancy as a barrier. Women also identified not having enough money/insurance (3.2%), that their doctor/health plan would not start care as early as they wanted (2.7%), and not having a Medicaid/NJ Family Care card (2.2%) as barriers to prenatal care.
- Among Black, NH, mothers, 28.0% reported receiving late or no PNC while 22.4% of Hispanic mothers, 14.9% of Asian, NH, mothers, and 11.9% of White, NH, mothers reported receiving late or no PNC in 2015.
- In 2015, 26.8% of WIC participants received late or no PNC.

## Health Behavior

### *Tobacco Use*

- The proportion of mothers who smoked through pregnancy decreased from 7.8% in 2003 to 4.4% in 2015.
- The rate of relapse in postpartum mothers increased from 38.1% in 2014 to 43.1% in 2015.
- The proportion of mothers who quit smoking during pregnancy decreased from 9.5% in 2014 to 7.4% in 2015.
- Among all pregnancy intention categories, mothers with mistimed pregnancies reported higher rates of smoking relapse (44.4%) followed by mothers with intended pregnancies (43.6%) in 2015.
- In 2015, mothers who used Medicaid for prenatal care reported smoking relapse rates of 53.2%.
- The rate of mothers who participated in WIC and experienced a relapse in smoking was 46.6%.
- In 2015, smoking relapse rates were higher in Black, NH mothers (56.2%) followed by Hispanic mothers (52.4%).

***Alcohol Use***

- Alcohol use before pregnancy increased from 49.9% in 2014 to 52.7% in 2015.
- Drinking alcohol during pregnancy increased from 6.8% in 2003 to 10.4% in 2015.
- Binge drinking three months prior to pregnancy decreased from 46.2% in 2003 to 31.3% in 2015.
- In 2015, alcohol use during pregnancy was higher in mothers who had a home visitor help them prior to pregnancy (14.5%), in mothers who reported their pregnancies as unintended (19.4%), and in mothers experiencing their second live birth (10.8%).
- Mothers who reported binge drinking before pregnancy had a high school diploma or less (38.4%), had a home visitor help them care for their babies/themselves (34.1%), had Medicaid/FamilyCare for prenatal care (34.3%), were primarily White, NH (32.5%), and had early prenatal care (32.7%).

***Body Mass Index (BMI) and Flu Vaccination***

- The prevalence of overweight mothers (BMI between 25 and 29.9 kg/m$^2$) has increased from 21.4% in 2003 to 24% in 2015.
- The proportion of obese mothers (BMI ≥30 kg/m$^2$) increased from 13.3% in 2003 to 21.3% in 2015.
- The proportion of women who reported getting a flu shot during pregnancy increased from 21.7% in 2010 to 36% in 2015.
- Mothers who received flu shots during pregnancy had an income greater than $67,000 (45.3%), were primarily Asian, NH (46.1%), and had some college education or more (40.1%).
- Of the mothers who participated in WIC, 27.6% reported receiving a flu shot during their pregnancies.

## Postpartum Behavior and Health

***Breastfeeding***

- Mothers who reported initiating breastfeeding increased from 73.2% in 2003 to 86.5% in 2015.
- Breastfeeding initiation rates were higher among Asian, NH (94.3%) mothers, mothers who had some college education or more (89.7%), and mothers who were at least 30 years of age (86.3%).
- Breastfeeding initiation rates were lower in mothers who had late or no PNC (84%), had a high school education (78.9%), and had Medicaid prior to pregnancy (76.5%).
- In 2015, mothers participating in WIC reported initiating breastfeeding at a rate of 85.4%.

***Newborn Sleep Position, Bed-Sharing Patterns, and Postpartum Depression***

- Routine back (supine) sleep, which is recommended as the best practice to prevent SIDS, increased from 57.8% in 2003 to 70.5% in 2015.
- Mothers who reported using Medicaid prior to pregnancy (58.3%) and were Black, NH (58.3%) or Hispanic (57.3%) were less likely to put their newborn infants down to sleep on their backs in 2015.
- Mothers reporting bed-sharing often increased from 18% in 2014 to 19.8% in 2015.
- Bed-sharing often was reported primarily by Asian, NH (35.1%) mothers and Black, NH (30.2%) mothers.
- The proportion of mothers at risk for postpartum depression in 2015 was 9.5%.
- Mothers reporting a risk for postpartum depression were primarily Asian, NH (19.2%), had Medicaid/FamilyCare before pregnancy (12.7%), and had less than a high school education (12.9%).
- Of those mothers who participated in WIC in 2015, 11% reported a risk for postpartum depression.

## Workforce Summary

Maternal employment status, ability to take maternity leave, ability to return to work and choosing not to return to work, all play important roles in maternal health and the health of her family. New Jersey PRAMS 2012-2015 data provides information on factors that influence a mother's decision to take additional time to bond with her baby versus returning to work.

***General Findings***

Between 2012-2015, 66% of mothers reported that they worked while pregnant. When asked if they had returned to the job they had during pregnancy, nearly half (49.9%) reported that they will not return to work. Only 13.1% reported that they haven't returned but will in the future. Of the 37.1% of mothers who returned to work, nearly 75% took leave paid for by their job while 21.6% took unpaid leave.

***Race/Ethnicity***

Of the mothers who reported working during their most recent pregnancy, 54% were White, NH, 21.9% were Hispanic, 14.9% were Black, NH, and 9.1% were Asian, NH. Forty-three percent of mothers who did not return to work were White, NH. About 68% of mothers that reported delaying their return to work (have not returned but will in the future) were White, NH. There was no great difference in the proportion

of Asian, NH and Black, NH mothers who did not return to work (8.7% vs. 8.5%, respectively). Approximately 54% of those mothers who returned to work were White, NH. There was a greater proportion of Hispanic (19.9%) mothers who returned to work compared to Black, NH (15.8%) and Asian, NH (10.5%) mothers.

***Education***

Of the mothers who reported working during their most recent pregnancy, 72.3% had some college education or more. Among mothers who reported they had not returned to work at all, 56.5% had some college or more whereas 84.2% of mothers who reported delaying the return to work (had not returned but will in the future) had some college education or more. A higher number of mothers who returned to work had some college education of more at 75.1%.

***Income***

Of the mothers who reported working during their most recent pregnancy, 52% reported an annual household income greater than $67,000. Fifty-one percent of mothers who reported they had not returned to work at all had an annual household income less than $37,000 while 73.6% of mothers who reported delaying the return to work (have not returned but will in the future) reported an income greater than $67,000. A higher number of mothers who returned to work had an annual household income of greater than $67,000 at 52.1%.

***Paid Leave***

Mothers who returned to work after their pregnancies reported on their paid leave experiences.

- Among mothers who took paid leave, 55.3% were White, NH, 17.6% were Hispanic, 16.2% were Black, NH, and 10.9% were Asian, NH.
- Of the mothers who took paid leave and returned to work, 49.3% had households characterized by an income less than $37,000 and 79.4% had some college education or more.

Mothers reported using multiple sources for their paid leave.

- Most mothers who took paid leave through their jobs were White, NH (52.3%), had an annual household income greater than $67,000 (51.2%), and had some college education or more (74.6%).

- More mothers who took paid leave using only the New Jersey Family Leave Insurance Program (NJ FLIP) and returned to work had an annual income less than $37,000 (46.4%) and were White, NH (51.3%).
- A comparable proportion of Hispanic (22.9%) and Black, NH (20.6%) mothers took paid leave from their jobs using both New Jersey Temporary Disability Insurance (NJ TDI) and NJ FLIP.

***Unpaid Leave and Other Barriers***

- Most mothers who took an unpaid leave and returned to work had some college education or more (63%), reported an annual household income of less than $37,000 (54%), and were primarily White, NH (47.6%).
- Mothers who returned to work and reported they could not financially afford to take leave had some college education or more (75.7%), were mainly White, NH, (50.4%), and had a household income greater than $67,000 (45.3%).
- Most mothers who returned to work and reported that their job did not offer a flexible work schedule had an annual household income greater than $67,000 (49.2%), were college educated (73.1%), and were White, NH (54.5%).
- Mothers who reported not having built up enough leave time had some college education or more (86.6%), had an annual household incomes greater than $67,000 (51.2%), and were primarily White, NH (46.8%).
- Seventy-six percent of mothers who returned to work and reported being afraid that their job would be lost had some college education or more.

## Home Visitation Summary

New Jersey provides several home visitation programs to provide helpful information and support to pregnant women, new mothers, or other caregivers in the comfort and privacy of their homes. There are 3 core home visiting models – Healthy Families, Nurse Family Partnership, and Parents as Teachers. While some home visiting programs are intended for mothers in the prenatal stage, others target new mothers, and all programs are primarily geared towards low-income and high-risk groups. Between 2012-2015, NJ PRAMS was able to provide further insight into the effectiveness of these programs by asking mothers who responded to the survey to report whether they had home visits. The following section summarizes the knowledge and behavior of mothers who had home visits when compared to mothers who did not.

- Approximately 5% of mothers reported having home visitors help them prepare for their new baby between 2012-2015.
- Mothers who reported having a home visitor help them prepare for their new baby were primarily Black, NH (7.9%) and Hispanic (6.8%), between 18-29 years old (5.9%), had less than a high school education (10.7%), and had an annual household income less than $37,000 (6.8%).
- About 8% of mothers reported having home visitors after the baby was born to help them learn how to take care of themselves or the new baby between 2012-2015.
- Mothers who reported having a home visitor help them care for themselves/their babies after birth were primarily Black, NH (11.9%) and Asian, NH (8.3%), between 18-29 years old (8.8%), had less than a high school education (11.4%), and had an annual household income less than $37,000 (10.5%).
- When compared to mothers who had no home visitor help, mothers who reported help of a home visitor in preparation for their new baby were more likely to discuss certain behaviors such as being a healthy weight (23.7% vs. 17%), getting vaccines updated (16.3% vs. 11.6%), visiting a dentist/dental hygienist (17.1% vs. 11.3%), getting counseling for genetic diseases (13.7% vs. 10.5%), controlling medical conditions like diabetes and high blood pressure (HBP) (16.7% vs. 9.3%), and getting counseling/treatment for depression/anxiety (11.6% vs. 5.6%).
- Mothers with home visitor help during this timeframe were also more likely to be told that they have depression (11.1%) than their counterparts who did not have home visitors to help prepare for the baby (6.6%).
- When compared to mothers who had no home visitor help, mothers who reported the help of a home visitor after their babies were born were more likely to report discussions about feeling sad/anxious (73.5% vs. 69.6%), the harms of shaking/hitting a baby (75.6% vs. 66.3%), having any problems with breastfeeding (74.9% vs. 65.7%), and contacting breastfeeding support groups (78.5% vs. 68.1%).

## Dental Health Report

Oral health before and during pregnancy is known to be associated with various pregnancy outcomes. The following section summarizes findings from 2012-2015 regarding knowledge of and behavior surrounding dental health among mothers.

- The proportion of mothers who reported having their teeth cleaned by a dentist or dental hygienist decreased from 49.2% in 2012 to 50.7% in 2015.

- Among mothers who reported having had their teeth cleaned by a dentist or dental hygienist in 2015, 16.2% also reported having been told by a health care worker about visiting a dentist or dental hygienist during pregnancy.
- In 2015, lower rates of teeth cleaning during pregnancy were found in mothers 18-29 years of age (41.6%), Asian, NH mothers (39%), and those who graduated with a high school education (40.3%).
- Insurance to cover dental care during pregnancy was reported in 73.8% of mothers in 2014 and increased to 75.5% in 2015.
- There was an increase in mothers who reported needing to see a dentist for a problem from 72% in 2014 to 75.2% in 2015.
- Approximately 83% of mothers who had dental insurance during pregnancy reported that they went to see a dentist for a problem in 2015.

## Glossary

***Alcohol Use***

A screening/skip question asks "Have you had any alcoholic drinks in the past two years?". Drinking behavior is queried "in the three months before" and "during" pregnancy. Alcohol use was categorized into: did not use alcohol in the last two years, drink before pregnancy, binge before pregnancy (4 or more drinks in a 2-hour period), and drink during pregnancy.

***Body Mass Index***

Mothers are asked their pre-pregnancy weight and height; this is used to later calculate the body mass index (BMI). BMI is categorized as: underweight - <18.5 $kg/m^2$, normal weight – 18.5-24.9 $kg/m^2$, overweight – 25-29.9 $kg/m^2$, and obese - >30 $kg/m^2$.

***Breastfeeding***

Defined as feeding by breast or using pumped breast milk. For interviews through 2011, exclusive postpartum breastfeeding was reported as of the eighth week (the earliest date of interview). Infants who have not been fed any other liquids or solid food were considered to be exclusively breastfed. Beginning in 2012, it is no longer possible to determine exclusive breastfeeding.

***Dental Health***

Mothers were asked if, before pregnancy, they had been told by a healthcare worker to visit a dentist or dental hygienist. They were also asked to select from a list of options about care of their teeth during their pregnancy. These included knowing the importance of oral health, having insurance to cover dental care, needing to see a dentist, etc.

***Flu Vaccination***

Questions regarding flu vaccination were introduced in 2010. Until 2011, mothers were asked if they had been offered a flu shot at any point during their pregnancy, if they received a flu shot since September 2009, and, if yes, during what month and year they received a flu shot. In 2012 and 2013, mothers were asked if they had been offered a flu shot 12 months before delivery of the baby and if they had received a flu shot in the 12 months before delivery.

***Health Insurance***

Between 2003 and 2009, health insurance status was determined by considering whether the mothers said "yes" or "no" to having health insurance and whether they said "yes" or "no" to having Medicaid. In

2009 the questionnaire was revised to include questions to identify specific sources, if any, of health insurance. Mothers reported on the type of insurance they received before pregnancy, during pregnancy (for prenatal care visits), and to pay for delivery.

***Home Visitation***

Mothers were asked if, during their most recent pregnancy, a home visitor had come to help them prepare for the new baby. They were also asked if, since the new baby was born, a home visitor had come to help them learn how to take care of themselves or the new baby.

***Husband/Partner Abuse***

Mothers were asked if their husband or partner had pushed, hit, slapped, kicked, choked, or physically hurt them in any way 12 months before they got pregnant or during their most recent pregnancy.

***Income***

Annual Household Income categories in the survey questionnaire changed in 2012. Until 2011, the lowest income category was "less than $10,000" while the highest category was "$50,000 or more". In 2012 the lowest income category changed to "less than $15,000" while the highest income category changed to "$79,0001 or more".

***Preconception counseling***

Mothers were asked if a doctor, nurse, or other health care worker had talked to them about improving their health before pregnancy.

***Pregnancy Intention***

Pregnancy intention is derived from a single question in the questionnaire that asks how the mother felt about becoming pregnant at the time just before she got pregnant. Responses included: "I wanted to be pregnant later", "I wanted to be pregnant sooner", "I wanted to be pregnant then", and "I didn't want to be pregnant then or at any time in the future". These were then used to categorize intention into 3 categories: intended to become pregnant, mistimed (wanted to be pregnant later), and unintended (did not want to be pregnant then or in the future).

***Prenatal Care***

Mothers were asked to report at how many weeks/months of their pregnancy they had their first prenatal visit. This week/months report was used to determine whether the mother had an early 1$^{st}$ trimester prenatal care (PNC) visit or a late one. In a separate question, respondents were asked if they had received

PNC as early as they wanted. Comparing these two reveal what proportion of mothers received early care and how many felt they received early care.

Mothers also reported if they did not go for PNC. These mothers were able to select from a list of barriers preventing them from receiving PNC.

Those who received PNC, were asked if, during any of their PNC visits, a doctor, nurse, or health care worker had talked to them about a number of topics such weight gain, smoking, breastfeeding, HIV testing, abuse, etc.

***Postpartum Depression Symptoms***

Mothers who responded by choosing "always" or "often" to feeling "down, depressed, or hopeless" or to "having little interest or little pleasure in doing things", were considered to be at a risk for postpartum depression.

***Race and Hispanic Origin***

The NJ-PRAMS sampling plan calls for oversampling to more accurately address important social disparities in health. Any person who identifies as Hispanic is classified as such, regardless of what race(s) is/are selected, and these respondents are counted as a separate group. For non-Hispanics, if Black and any additional races are checked, mothers are grouped as non-Hispanic Blacks. Similarly, non-Hispanics who select any of the Asian races are grouped as non-Hispanic Asians. Non-Hispanic Whites include not only mothers who selected non-Hispanic and White but also mothers who selected Other or Unknown or any multi-race mother who is not Black or Asian.

***Safe Sleep***

Mothers were asked if they had been told how to lay their new baby down to sleep by a doctor, nurse, or other health care worker. It was also asked which position they most often lay their baby down to sleep at the time of the interview (side, back, stomach). A question that asked how often the baby sleeps in the same bed with the mother or someone else was asked to determine co-sleeping. Finally, the mother was asked to select options to describe how the new baby usually sleeps (in a crib, on a firm mattress, with pillows, etc.).

***Sampling Plan, Stratification***

PRAMS starts with a stratified systematic sample of birth certificates (unduplicated for multiple live births). Infants must be at least two months old before mothers are contacted. There are six sampling strata based on birth certificate variables: Whites who reported smoking during pregnancy; any minority

(Black, Hispanic, Asian) who also smoked; non-smoking Whites, Blacks, Hispanics, and Asians. Compared to non-smoking Whites, all other groups are oversampled to permit their effective analysis. Weights are used in analysis to [a] adjust estimates to represent the underlying population, and [b] project the annual number of mothers in any category or outcome.

***Tobacco Exposure (Smoking Cigarettes)***

A screening/skip question asks "Have you smoked any cigarettes in the past two years?". Smoking behavior is queried "in the three months before" and "during" pregnancy. A question also records if smoking status changed during pregnancy. Responses to indicate quantity have evolved over questionnaire phases. Respondents are also asked whether they smoked at the time of the interview. These responses were utilized to categorize (cigarette) smoking status into 4 categories: "non-smoker", "smoked throughout pregnancy", "quit during pregnancy", and "relapsed after baby was born".

***Teenage Births***

Maternal age is derived from mother's date of birth as reported in the survey. In the Chart Book, mothers who are less than 18 years of age are referred to as teenagers and any live births reported by them are grouped as "teenage births".

***Weighting, Population Estimates***

Most PRAMS states use stratified sampling plans to oversample groups of special interest. New Jersey oversamples smokers as reported by the birth record, and Blacks, Hispanics and Asians. Analysis as a simple random sample will yield biased estimates. Sampling weights are used to correct for oversampling, and an additional round of non-response adjustments further improve the representativeness of the final, interviewed sample. Weighted samples also require special analysis techniques to accurately estimate sampling error, such as implemented in SAS Survey Analysis procedures or the specialty package SUDAAN (but not SPSS).

***Women, Infants, and Children (WIC)***

Mothers were asked if they were on WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children) during their most recent pregnancy. Those who responded "yes" were also asked if when they went for their WIC visits, during their most recent pregnancy, did they speak with a breastfeeding peer counselor or another WIC staff person about breastfeeding.

***Work Status***

Mothers were asked if they had worked at a job for pay during their most recent pregnancy. Those who responded “yes” were asked if they had returned to work or if they were planning on going back to work. Mothers who said that they were going back to work or had already returned to work, were asked to describe the leave or time they took off from work after the birth of their baby by selecting from the following options: paid leave, unpaid leave, leave paid by the NJ Temporary Disability Insurance Program, leave paid by the NJ Family Leave Insurance Program, or no leave at all. They were also asked if their decision was affected by a number of factors which included lack of financial affordability, fear of losing the job, lack of flexibility, etc.