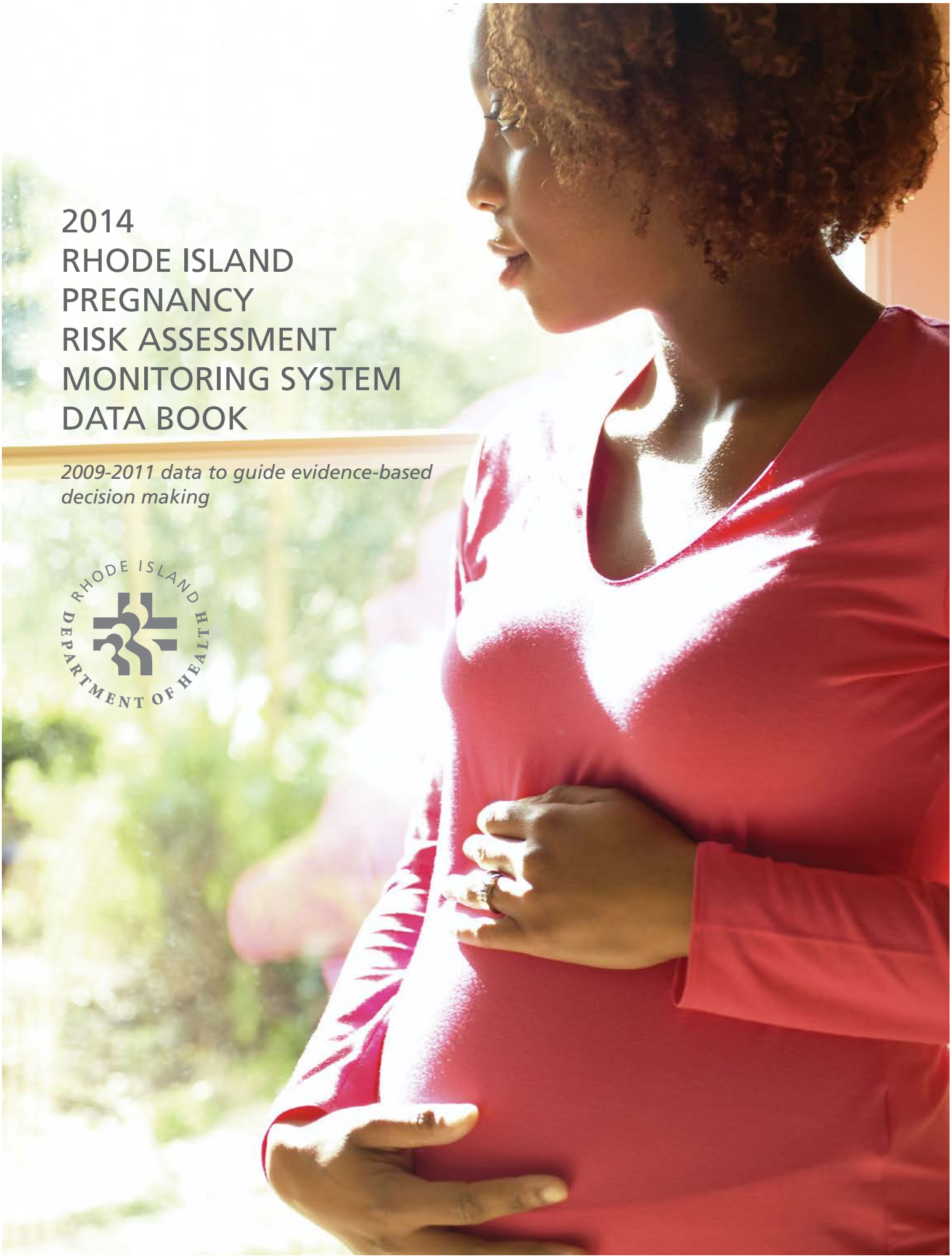

2014 RHODE ISLAND PREGNANCY RISK ASSESSMENT MONITORING SYSTEM DATA BOOK

2009-2011 data to guide evidence-based decision making

RHODE ISLAND DEPARTMENT OF HEALTH

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INTRODUCTION

The goal of the Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS) Program is to improve the health of mothers and infants by providing accurate, timely, and comprehensive data to decision makers and health professionals as well as the general public. To this end, the Rhode Island PRAMS Program collects, monitors, analyzes, and disseminates information on a variety of maternal behaviors and experiences that may be associated with maternal and infant health outcomes.

This 2nd edition of the Rhode Island PRAMS data book provides information on 14 health topics regarding maternal behaviors and experiences before, during, and shortly after pregnancy, using the Rhode Island PRAMS data.[a] The 14 topics include unintended pregnancy, pre-pregnancy obesity, pre-pregnancy multivitamin use, intimate partner violence, tobacco use, prenatal care, flu vaccination, human immunodeficiency virus (HIV) testing, dental visit, perinatal depression, low birth weight, preterm birth, breastfeeding, and infant sleep position. These topics were selected by the Rhode Island PRAMS Steering Committee as the key areas that may contribute to maternal and infant health during perinatal periods (the periods around childbirth). This data book focuses on monitoring the prevalence of health problems over time and identifying groups at high risk for the problems. We hope that the information provided in this data book is used to help guide policy, decision making, program planning, and other efforts to reduce health disparities among groups and improve the health of pregnant women and their infants in Rhode Island.

[a] The first edition of the Rhode Island PRAMS data book can be viewed at www.health.ri.gov/publications/databooks/2012PregnancyRiskAssessmentMonitoringSystem.pdf

What is PRAMS?

PRAMS is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments, which collects state-specific, population-based data on maternal behaviors and experiences before, during, and shortly after pregnancy.[1] PRAMS was initiated in 1987 and the survey instrument is revised periodically (called survey phases). The PRAMS survey instrument consists of three parts: core questions that all states must include, standardized optional questions that states may select from, and state-developed questions that reflect state-specific issues.[1,2]

Rhode Island has collected PRAMS data since 2002 and is one of 40 states and New York City currently participating in PRAMS.[2] Each year, about 1,900 women who delivered a live infant are randomly selected from the state's birth file as a PRAMS sample, which represents more than 16% of recent mothers.[2] The Rhode Island PRAMS Program selects all mothers delivering a low birth weight baby and over-sampled mothers who resided in core cities[b] to ensure adequate data in the smaller but higher-risk populations.[2] The survey is mailed to the sampled mothers up to three times, and then phone follow-ups are made for non-respondents.[1,2] The survey is conducted two to six months postpartum and is available in both English and Spanish. Currently, CDC requires a minimum response rate of 65% in order to analyze and use the data.[2] More detailed information is available on the PRAMS website.[1,2]

A summary of the Rhode Island PRAMS population size, number of survey respondents, and weighted response rate for 2002-2011 appears below.

Year	RI PRAMS Population Size	RI Number of Respondents	RI Weighted Response Rate	Response Rate Required by CDC	PRAMS Survey Phase
2002	12,179	1,414	71.7	70	4
2003	12,426	1,533	71.8	70	4
2004	12,064	1,506	75.5	70	5
2005	12,013	1,424	75.1	70	5
2006	11,732	1,360	72.5	70	5
2007	11,802	1,372	72.1	65	5
2008	11,467	1,297	70.4	65	5
2009	10,910	1,294	71.4	65	6
2010	10,652	1,282	68.0	65	6
2011	10,469	1,252	69.2	65	6

About This Data Book

The topics presented in this data book are organized according to the pregnancy periods: **before pregnancy** (unintended pregnancy, pre-pregnancy obesity, pre-pregnancy multivitamin use), **during pregnancy** (intimate partner violence, tobacco use, prenatal care, flu vaccination, HIV testing, dental visit, perinatal depression[c]), and **after pregnancy** (low birth weight, preterm birth, breastfeeding, infant sleep position). Each topic includes the definition and significance of the health issue, the Healthy People 2020 Target, a comparison of Rhode Island with other PRAMS states, prevalence and trend data, demographic characteristics, associations with maternal risk behaviors and birth outcomes, and other related information. Graphs and a brief explanation on reading them are also included.

[b] Core cities were defined in 2009 as those cities with more than 15% of children in families living below the federal poverty line. In Rhode Island, they included: Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket.
[c] Perinatal depression includes both depression during pregnancy and postpartum depression (depression after pregnancy).

The 2009-2011 Rhode Island PRAMS data (Phase 6) are analyzed to describe demographic characteristics and related health risks for each topic. In the trend graphs, the 2004-2011 data are presented if the 2004-2008 (Phase 5) data are available and consistent with 2009-2011 (Phase 6) data. The trend of the prevalence was examined using logistic regression analyses with linear trend tests. Throughout this data book, weighted data are used to represent all women who delivered a live birth in Rhode Island. The p-values from the chi-square tests are presented in the graphs to determine the statistical significance of the differences among groups. The p-values less than 0.05 are considered statistically significant in this data book, and the smaller p-values reflect stronger evidence of significant differences among the groups that are compared. The response categories of "don't know" and "refused" are excluded from the analyses, unless otherwise stated. PRAMS CPONDER[3] report is used to compare Rhode Island with and rank it among other PRAMS sites with respect to the prevalence of the health issue. CPONDER is a web-based query system created by CDC PRAMS to access data collected through the PRAMS survey. CPONDER is available to the general public via the internet and includes only states that reached the required response rate. At this time, the most current year available for the CPONDER report is 2011, and data from 23 PRAMS states and New York City [24 PRAMS sites] are reported for the core indicators. (Optional indicators may have different number of reporting sites.) Healthy People 2020 objectives are introduced for relevant health topics, if available.

A description of the Rhode Island PRAMS population for 2011, the PRAMS Phase 6 questionnaire, and detailed data tables for each topic are included in appendices A and B.

Limitations

The data reported in this data book have several limitations. First, since the PRAMS data are based on self-reporting and are not verified by the physician or medical records, they can be subject to a recall bias or a bias towards the socially-desirable answer. Second, even though Rhode Island achieved high response rates for all survey years, certain high-risk populations may be underrepresented in the estimates due to non-response or non-coverage bias. Third, the PRAMS Program samples only women who have delivered a live infant, so the estimates cannot be extrapolated to all pregnant women in Rhode Island. Nevertheless, the PRAMS survey is an important data source that provides data not available from other sources about pregnancy and the first few months after birth.

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2. State of Rhode Island, Department of Health. Pregnancy Risk Assessment Monitoring System. Available from: www.health.ri.gov/programs/pregnancyriskassessmentmonitoring

3. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

1. UNINTENDED PREGNANCY

Definition and Significance

An unintended pregnancy is defined as a pregnancy that is either mistimed (the woman wanted to be pregnant later) or unwanted (she did not want to be pregnant then or at any time in the future) at the time of conception.[1] An unintended pregnancy may influence a woman's behaviors and experiences during and after pregnancy: women with an unintended pregnancy are more likely to engage in negative health behaviors, including delayed prenatal care, tobacco and alcohol use during pregnancy, and not breastfeeding their infants, which can cause adverse effects for both mothers and infants.[1] A better understanding of unintended pregnancy can lead to more effective interventions that might decrease its prevalence and would further decrease the health risks to mothers and newborn infants.[1] The PRAMS survey asks mothers about the timing and intention of their pregnancy at the time of conception as well as their reasons for not using birth control.

Healthy People 2020 Target

FP-1: Increase the proportion of pregnancies that are intended to 56% (or reduce the proportion of pregnancies that are unintended to 44%).[2]

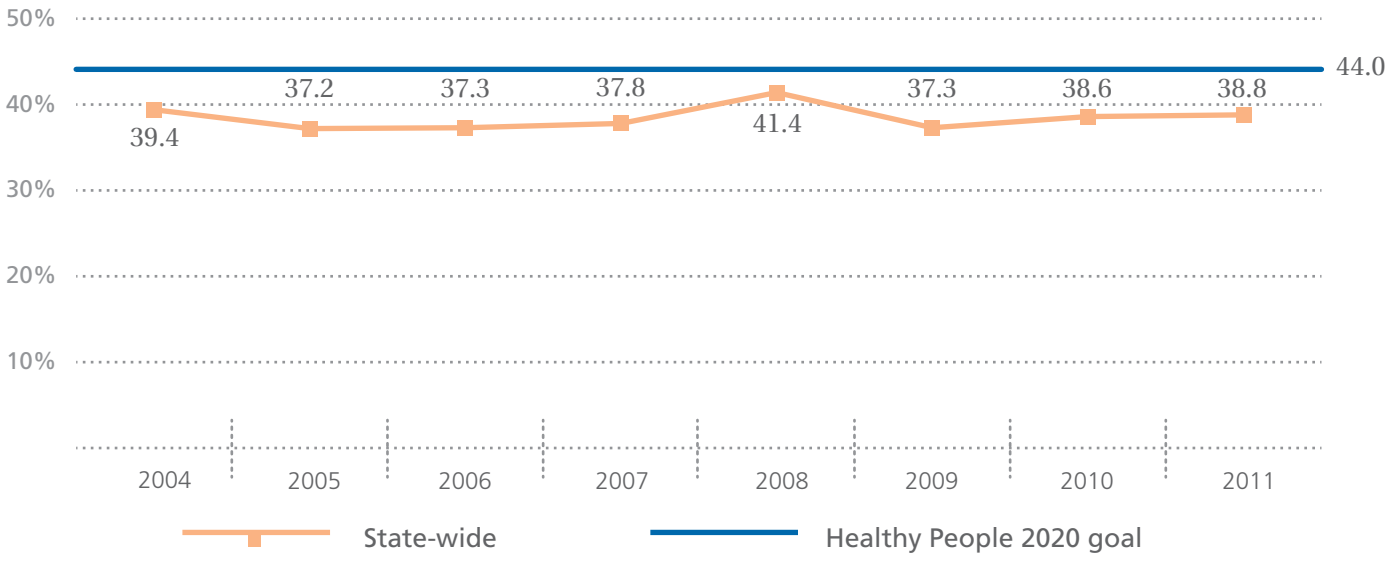
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of unintended pregnancy ranged from 31.5% (best) to 54.8% (worst) in 2011.[3] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 13th (1st is the best) with 38.8% of mothers reporting their pregnancy was unintended.[3]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who had an unintended pregnancy ranged from 37.2% to 41.4% during 2004-2011. However, the linear trend during the period was not statistically significant. The Healthy People 2020 goal of reducing the proportion of unintended pregnancies to 44%[2] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

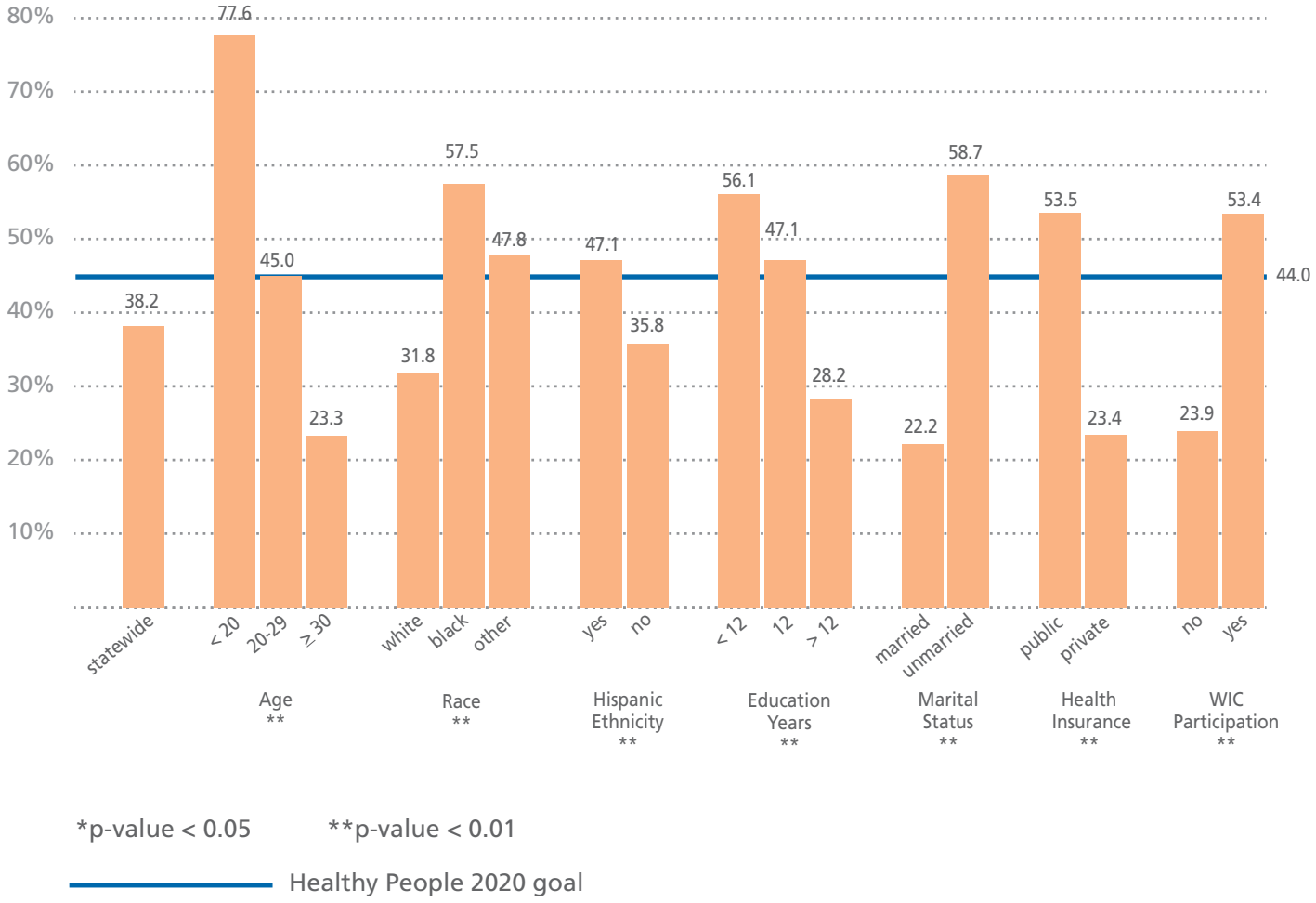
FIGURE 1-1: UNINTENDED PREGNANCY BY YEAR, RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers with an unintended pregnancy was 38.2%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with unintended pregnancy included age, race, ethnicity, educational level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were younger than 20 (77.6%), black (57.5%), Hispanic (47.1%), unmarried (58.7%), had less than 12 years of education (56.1%), had public health insurance (53.5%), and participated in the WIC program (53.4%) had a higher prevalence of unintended pregnancy compared with their counterparts.

FIGURE 1-2: UNINTENDED PREGNANCY: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011



*p-value < 0.05 **p-value < 0.01

Healthy People 2020 goal

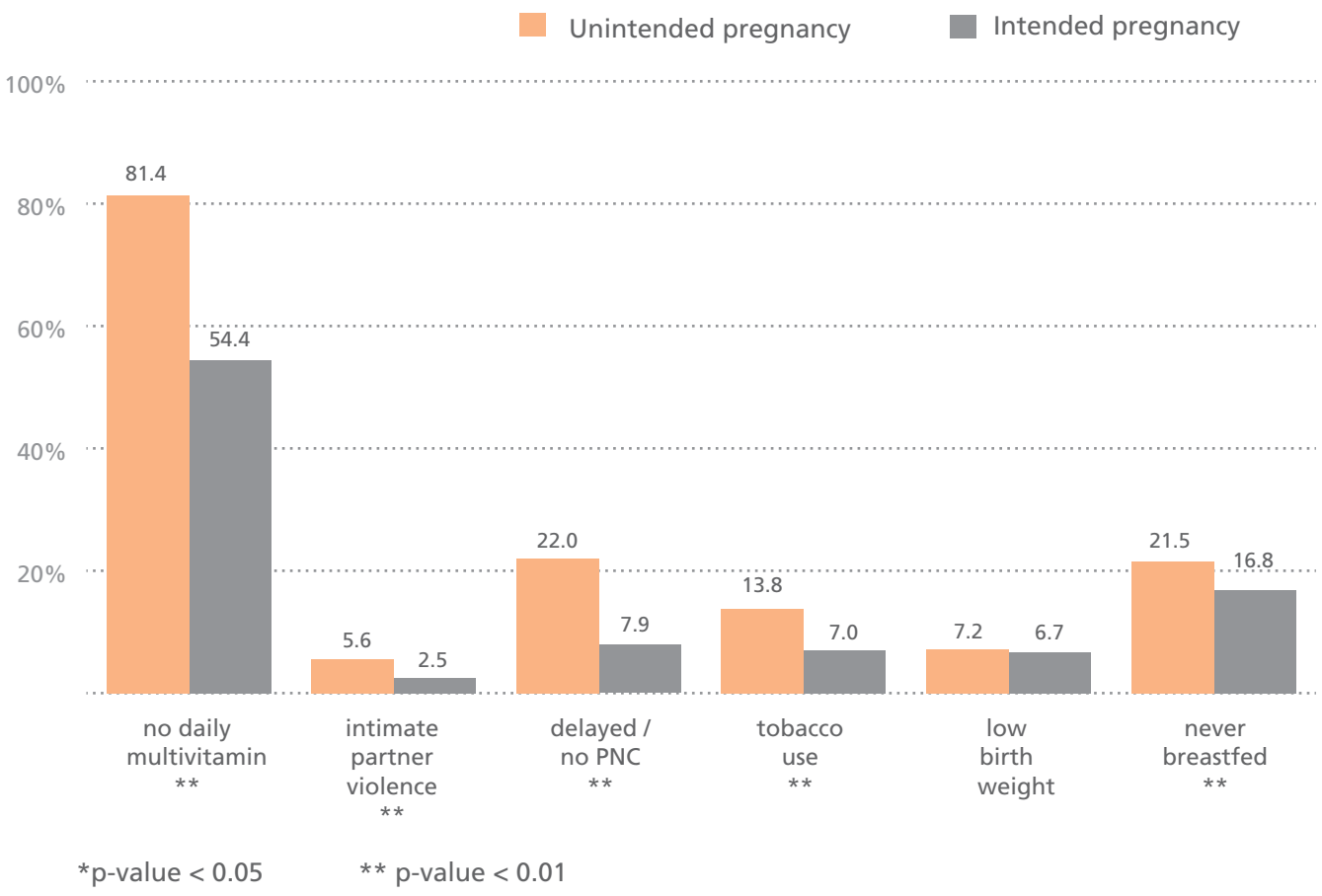
Risk Behaviors and Outcomes by Pregnancy Intention, 2009-2011

Mothers who had an unintended pregnancy, compared to mothers who had an intended pregnancy, were significantly (p-value less than 0.05) more likely to report that:

- They did not take multivitamins daily prior to pregnancy (81.4% vs. 54.4%).
- They experienced intimate partner violence during the 12 months before or during pregnancy (5.6% vs. 2.5%).
- They had delayed or no prenatal care (PNC) (22.0% vs. 7.9%).
- They smoked during their pregnancy (13.8% vs. 7.0%).
- They never breastfed their baby (21.5% vs. 16.8%).

Note: Mothers who had an unintended pregnancy, compared to mothers who had an intended pregnancy, were more likely to report that they were using postpartum birth control at the time of the survey (91.7% vs. 83.3%: not in graph)

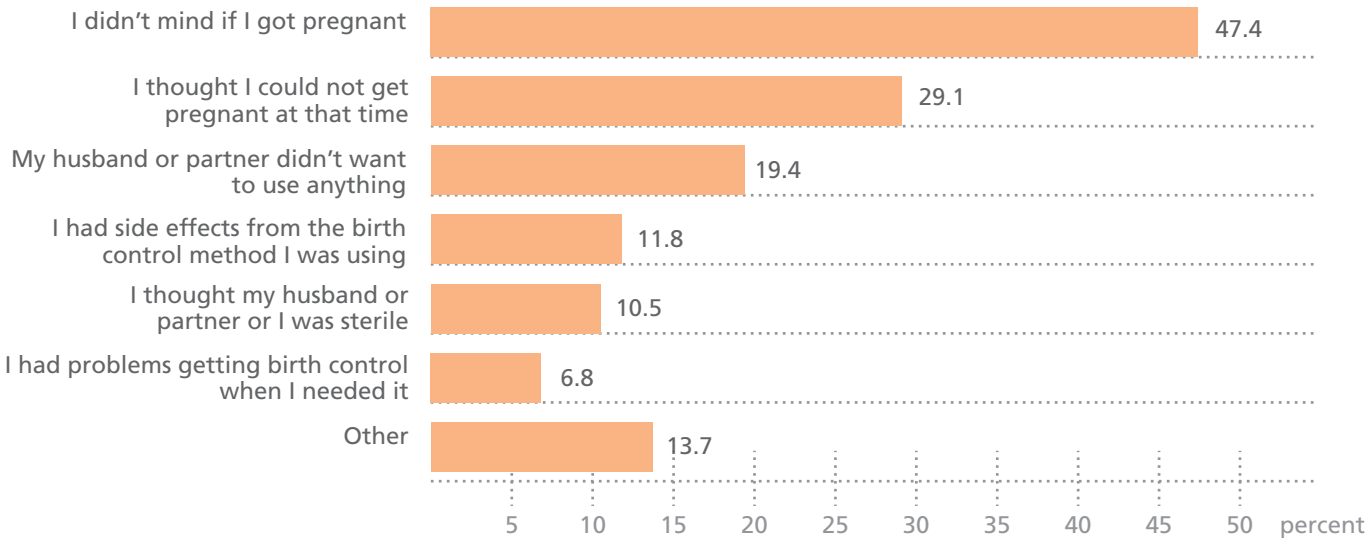
FIGURE 1-3: RISK BEHAVIORS AND OUTCOMES BY PREGNANCY INTENTION RHODE ISLAND, 2009-2011



Reasons for Not Using Birth Control, 2009-2011

Among women who were not trying to get pregnant, 49.7% did not use birth control at the time of pregnancy. Of those who were not trying to get pregnant and did not use birth control at the time of pregnancy, the most common reasons for not using birth control were: they did not mind if they got pregnant (47.4%), they thought they could not get pregnant at that time (29.1%), and their husbands or partners did not want to use anything to prevent pregnancy (19.4%).

FIGURE 1-4: REASONS FOR NOT USING BIRTH CONTROL, RHODE ISLAND, 2009-2011



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3. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

2. PRE-PREGNANCY OBESITY

Definition and Significance

Body mass index (BMI) is calculated as weight in kilograms divided by height in meters squared (kg/m^2).[1] Obesity is defined as having a BMI of 30 or higher.[1] Maternal obesity during pregnancy is associated with many complications such as gestational diabetes, preeclampsia, eclampsia, cesarean section, macrosomia, instrumental delivery, and fetal distress.[2] Children born to obese mothers are twice as likely to be obese and to develop type 2 diabetes in life.[2] A study, published in 2013 using the PRAMS data from 20 states, reported that the prevalence of pre-pregnancy obesity increased from 17.6% in 2003 to 20.5% in 2009.[3] The PRAMS survey asks mothers about their weight prior to pregnancy and their height without shoes to calculate their pre-pregnancy BMI. In the previous edition, pre-pregnancy obesity was calculated as having a BMI>29.0, which represented the old definition. Since a BMI ≥30.0 is used to define pre-pregnancy obesity here, the prevalence and trend data can not be compared between the two editions.

Healthy People 2020 Target

NWS-9: Reduce the proportion of adults who are obese to 30.5%.[4]

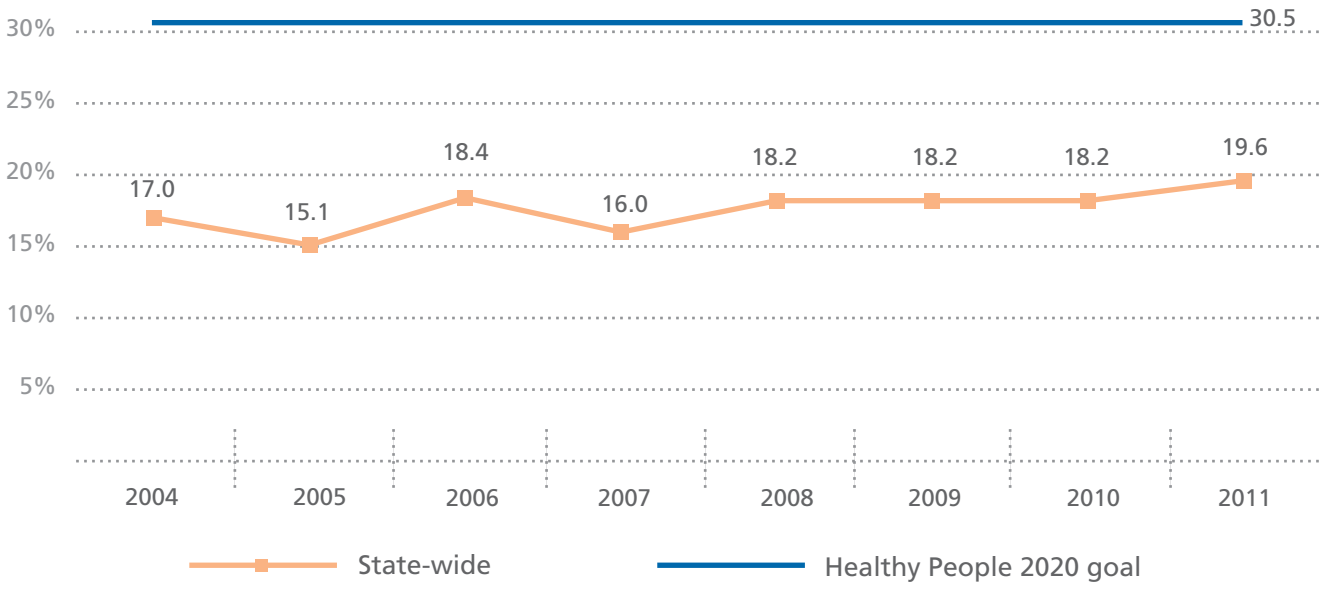
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of obesity prior to pregnancy ranged from 13.9% (best) to 25.6% (worst) in 2011.[5] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 8th (1st is the best) with 19.6% of mothers being obese prior to pregnancy.[5]

Prevalence and Trends, 2004-2011

The prevalence of Rhode Island mothers who were obese prior to pregnancy ranged from 15.1% to 19.6% between 2004 and 2011, which represents a significant increase during the period (p-value less than 0.05). The Healthy People 2020 goal of reducing the adult obesity rate to 30.5%[4] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

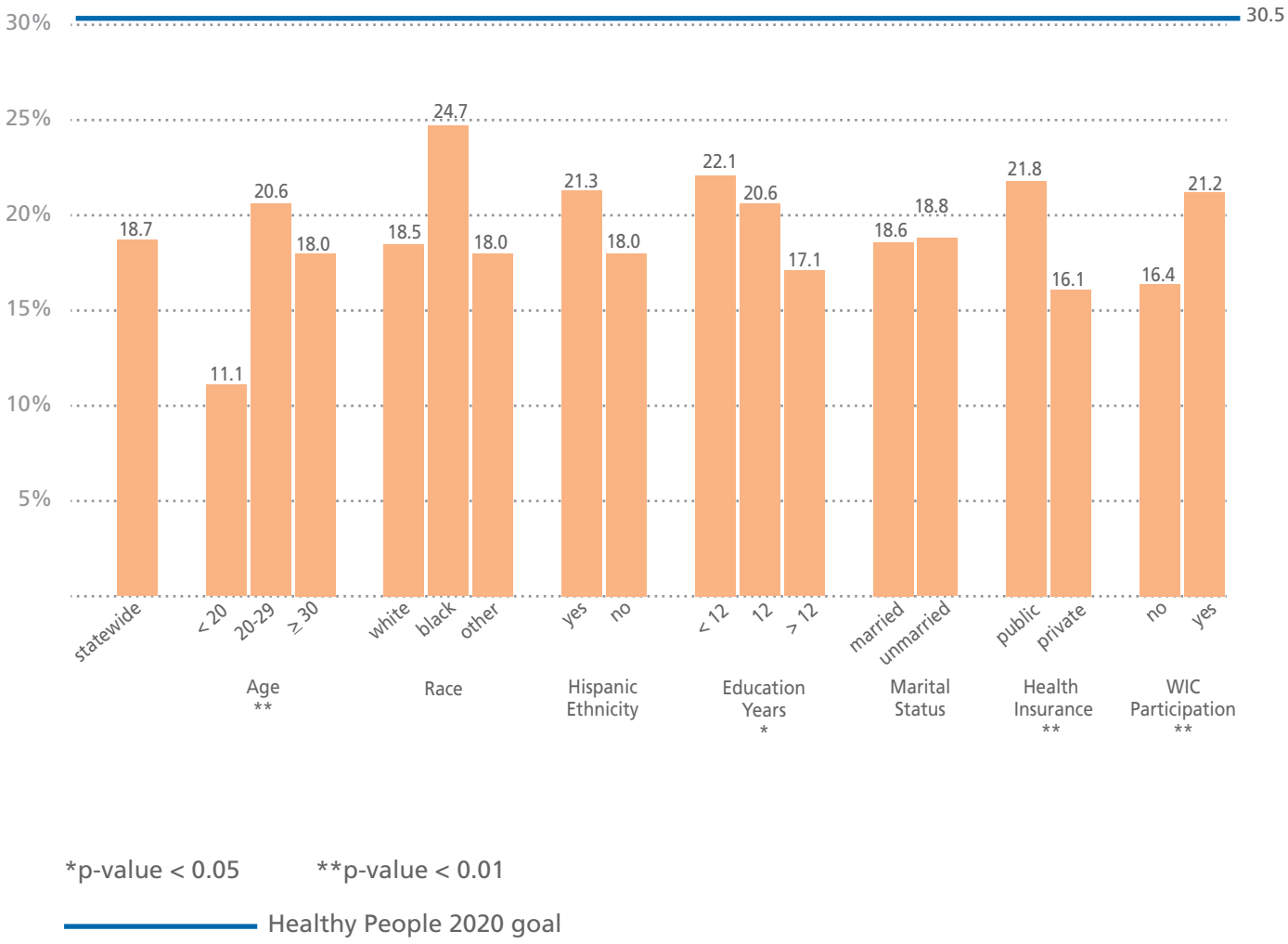
FIGURE 2-1: PRE-PREGNANCY OBESITY BY YEAR, RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers being obese prior to pregnancy was 18.7%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with pre-pregnancy obesity included age, education level, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were aged 20-29 years (20.6%), had less than 12 years of education (22.1%), had public health insurance (21.8%), and participated in the WIC program (21.2%) had a higher prevalence of pre-pregnancy obesity compared with their counterparts.
- All of the demographic groups met the Healthy People 2020 goal of a 30.5% obesity rate.

FIGURE 2-2: PRE-PREGNANCY OBESITY: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011

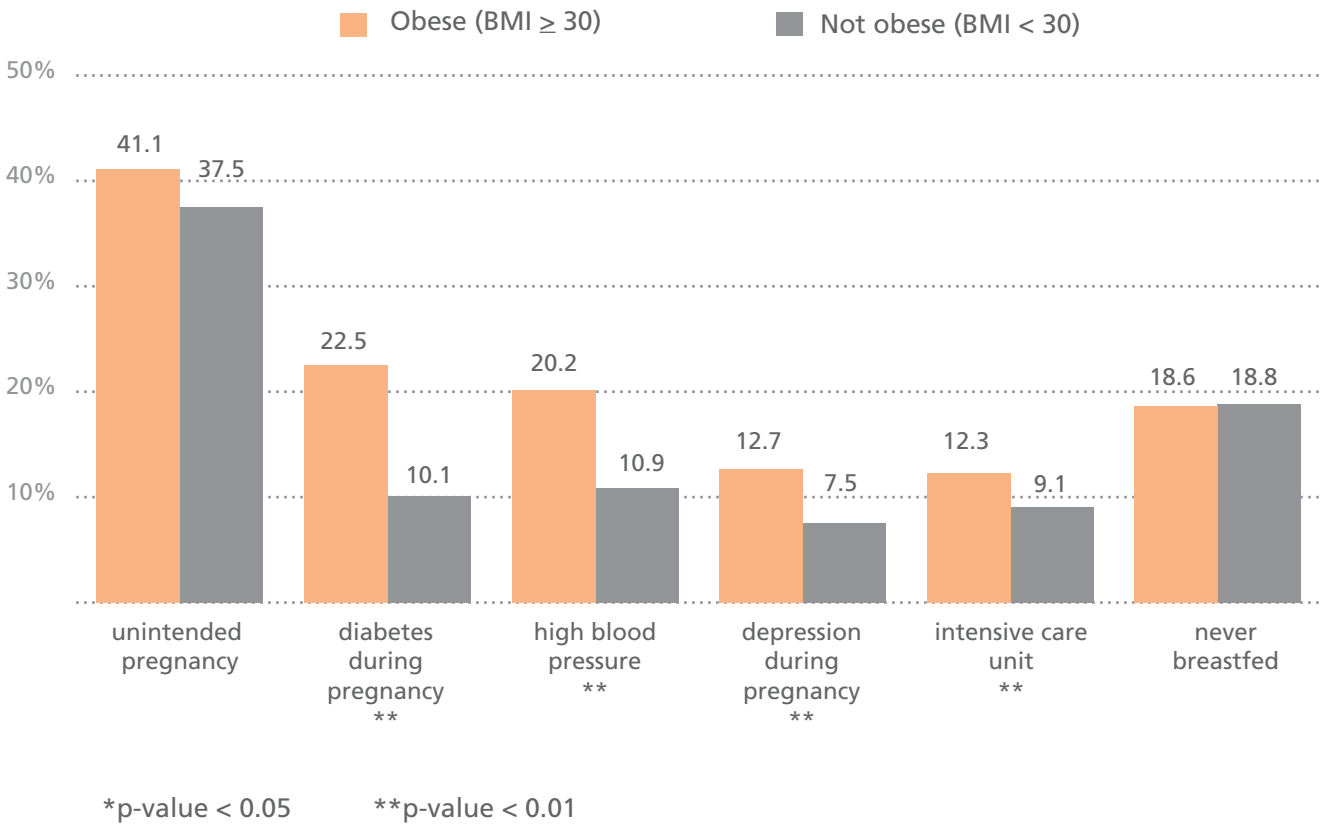


Risk Behaviors and Outcomes by Pre-Pregnancy Obesity, 2009-2011

Mothers who were obese prior to pregnancy, compared to mothers who were not obese, were significantly (p-value less than 0.05) more likely to report that:

- They had high blood sugar (diabetes) that started during the pregnancy (22.5% vs. 10.1%).
- They had high blood pressure, hypertension (including pregnancy-induced hypertension), preeclampsia, or toxemia during their pregnancy (20.2% vs. 10.9%).
- They were diagnosed with depression during pregnancy (12.7% vs. 7.5%).
- Their baby was put in an intensive care unit after the baby was born (12.3% vs. 9.1%).

FIGURE 2-3: RISK BEHAVIORS AND OUTCOMES BY PRE-PREGNANCY OBESITY RHODE ISLAND, 2009-2011



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3. PRE-PREGNANCY MULTIVITAMIN USE

Definition and Significance

The consumption of 400 µg (micrograms) of folic acid daily before conception and during the first trimester is recommended in order to reduce the occurrence of neural tube defects (NTDs).[1,2] NTDs, including spina bifida and anencephaly, affect an estimated 3,000 pregnancies annually in the United States and are among the most common birth defects that contribute to perinatal mortality, infant mortality, and serious disability in surviving children.[1,2] Although folic acid can be obtained from fortified foods or dietary supplements containing folic acid, not all women obtain an adequate level of folic acid through their diet.[1,2] Therefore, taking daily multivitamins is recommended since they generally contain 400 µg of folic acid.[1,2] The PRAMS survey asks mothers how many times a week they took a multivitamin or a prenatal vitamin during the month before they got pregnant. The response options include "did not take it at all," "1 to 3 times a week," "4 to 6 times a week," and "every day of the week."

Healthy People 2020 Target

MICH-16.2: Increase the proportion of women delivering a live birth who took multivitamins/folic acid prior to pregnancy to 33.1%.[3]

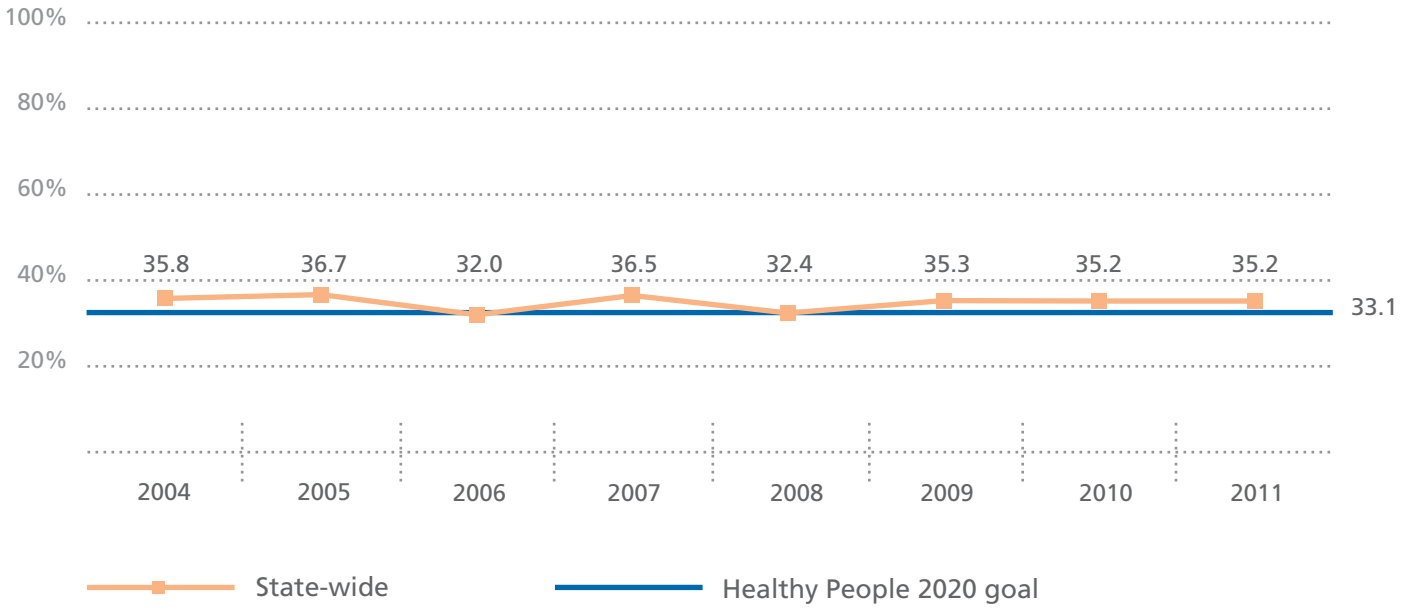
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of women taking a daily multivitamin during the month before pregnancy ranged from 38.6% (best) to 23.0% (worst) in 2011.[4] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 9th (1st is the best) with 35.2% of mothers taking a daily multivitamin during the month before pregnancy.[4] The prevalence of taking multivitamins four or more times a week during the month prior to pregnancy ranged from 47.9% (best) to 29.1% (worst), and Rhode Island ranked 13th (1st is the best) with a 39.3% prevalence.[4]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who took a daily multivitamin during the month prior to pregnancy ranged from 32.0% to 36.7% during 2004-2011. However, the linear trend was not statistically significant. Rhode Island had achieved the Healthy People 2020 goal of increasing the proportion of women delivering a live birth who took multivitamins/folic acid every day prior to pregnancy to 33.1%[3] for all years except for 2006 and 2008.

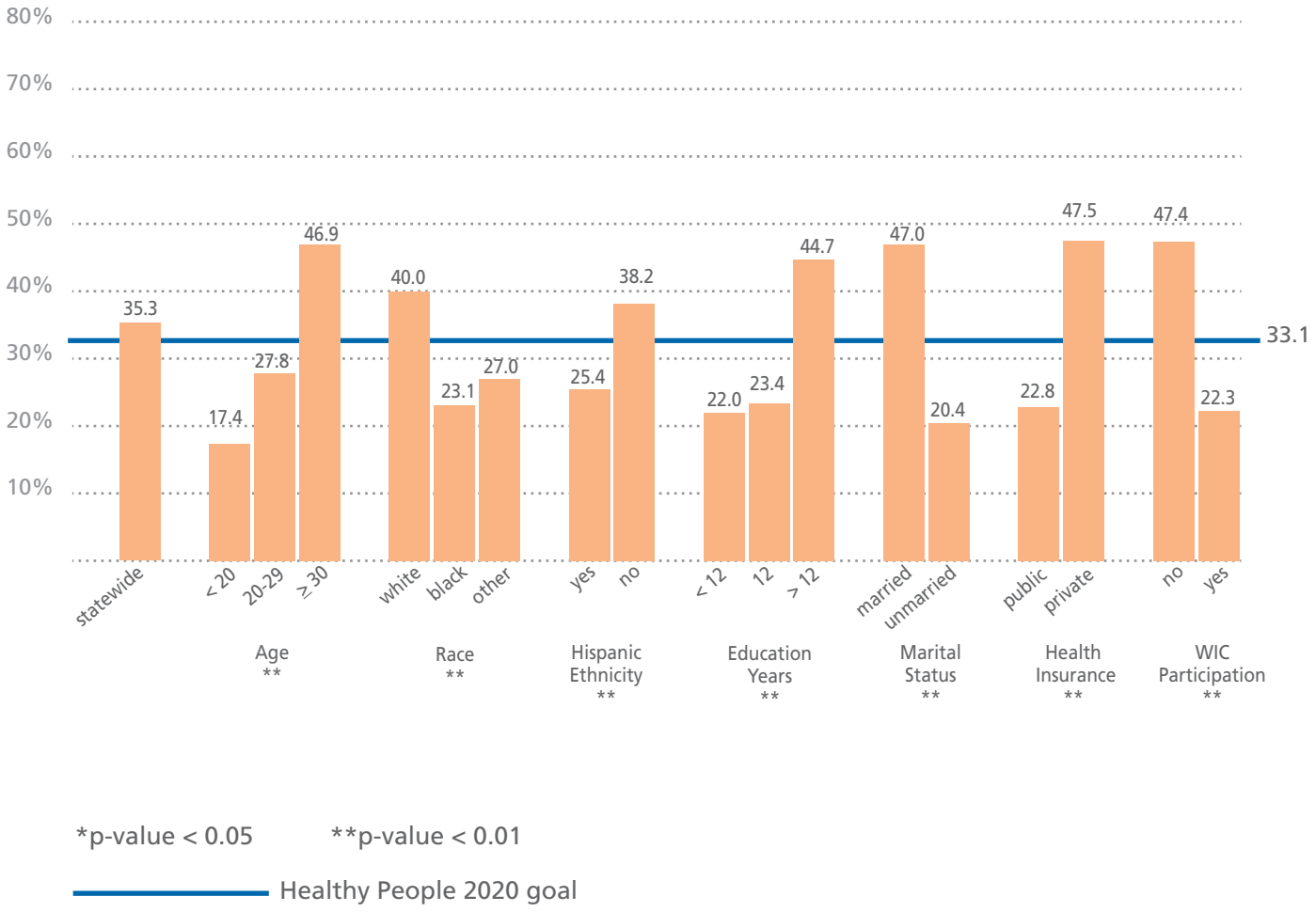
FIGURE 3-1: DAILY MULTIVITAMIN USE PRIOR TO PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers taking a daily multivitamin prior to pregnancy was 35.3%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with daily multivitamin use prior to pregnancy included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were aged 30 or older (46.9%), white (40.0%), non-Hispanic (38.2%), married (47.0%), had more than 12 years of education (44.7%), had private health insurance (47.5%), and did not participate in the WIC program (47.4%) had a higher prevalence of daily multivitamin use prior to pregnancy compared with their counterparts.

FIGURE 3-2: DAILY MULTIVITAMIN USE PRIOR TO PREGNANCY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011

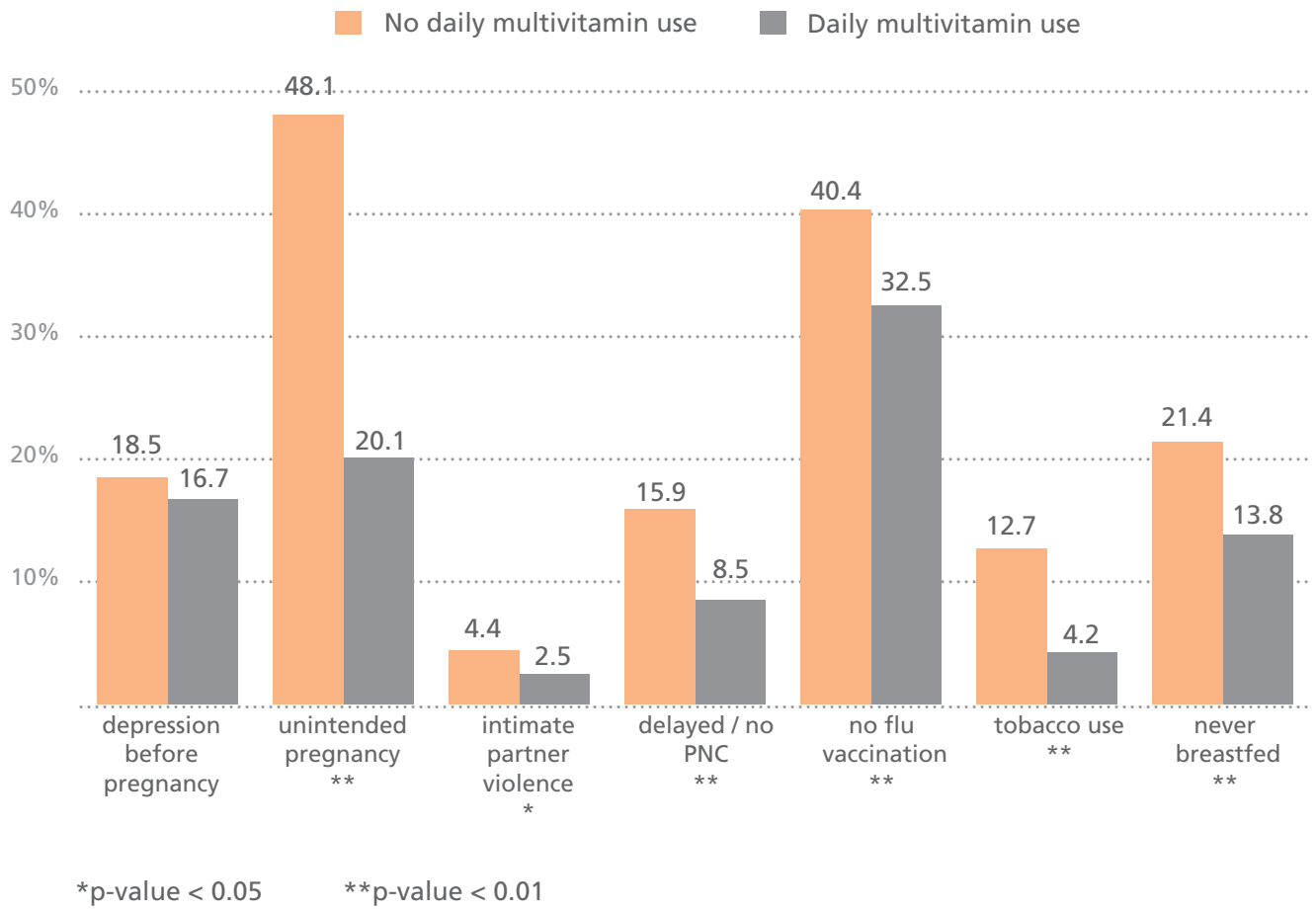


Risk Behaviors and Outcomes by Daily Multivitamin Use, 2009-2011

Mothers who did not take a daily multivitamin prior to pregnancy, compared to mothers who took a daily multivitamin, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (48.1% vs. 20.1%).
- They experienced intimate partner violence before or during pregnancy (4.4% vs. 2.5%).
- They had delayed or no prenatal care (PNC) (15.9% vs. 8.5%).
- They did not get a flu vaccination during their pregnancy (40.4% vs. 32.5%).
- They smoked during their pregnancy (12.7% vs. 4.2%).
- They never breastfed their baby (21.4% vs. 13.8%).

FIGURE 3-3: RISK BEHAVIORS AND OUTCOMES BY DAILY MULTIVITAMIN USE RHODE ISLAND, 2009-2011



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Related Publication

Kim H, Cain R, Viner-Brown S, Yang M. Multivitamin Use prior to Pregnancy in Rhode Island. *Medicine & Health / Rhode Island*, Vol. 94 (No. 9):276-278, September 2011. Available from: www.rimed.org/medhealthri/2011-09/2011-09-276.pdf

4. INTIMATE PARTNER VIOLENCE BEFORE OR DURING PREGNANCY

Definition and Significance

Intimate partner violence (IPV) usually includes four types of behavior: physical violence, sexual violence, threats, and emotional abuse.[1] It occurs between two people in a close relationship including current and former partners.[1] In 2007, IPV resulted in 2,340 deaths in the United States, and 70% of them were females.[1,2] Victims of IPV usually suffer physical injuries, emotional harm, eating disorders, depression, and other adverse health outcomes.[1] They often practice harmful health behaviors such as tobacco and alcohol use.[1] The PRAMS survey asks mothers two questions regarding IPV (one question for before pregnancy and one question for during pregnancy): whether an ex-husband/partner or current husband/partner pushed, hit, slapped, kicked, choked, or physically hurt them in any other way (1) during the 12 months before pregnancy or (2) during pregnancy. In this data book, mothers who responded "yes" to one or both questions were defined as having experienced IPV.

Healthy People 2020 Target

IVP-39.1: (Developmental) Reduce physical violence by current or former intimate partners.[3]

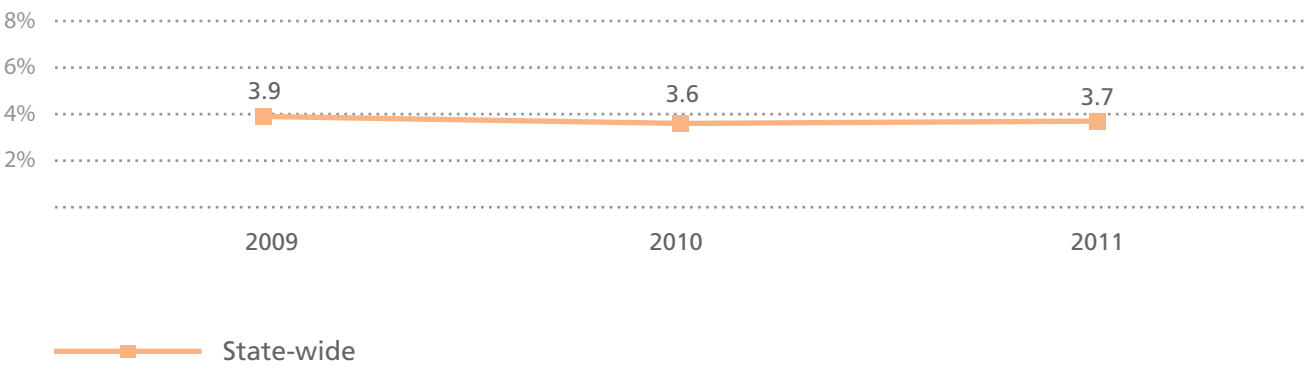
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of experiencing IPV during the 12 months before pregnancy ranged from 2.2% (best) to 6.5% (worst) in 2011.[4] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 6th (1st is the best) with 2.7% of mothers experiencing IPV before pregnancy.[4] The prevalence of experiencing IPV during pregnancy ranged from 1.9% (best) to 4.6% (worst), and Rhode Island ranked 14th (1st is the best) with a 2.5% prevalence.[4]

Prevalence and Trends, 2009-2011

The proportion of Rhode Island mothers who experienced IPV at any time during the 12 months before pregnancy or during pregnancy ranged from 3.6% to 3.9% during 2009-2011. However, the linear trend was not statistically significant during the period. The prevalence of IPV before pregnancy and during pregnancy was combined and data presented here are not compatible with the data presented in the PRAMS CPONDER report. The IPV questions were changed in Phase 6, so the 2004-2008 data are not comparable with the 2009-2011 data and not reported here.

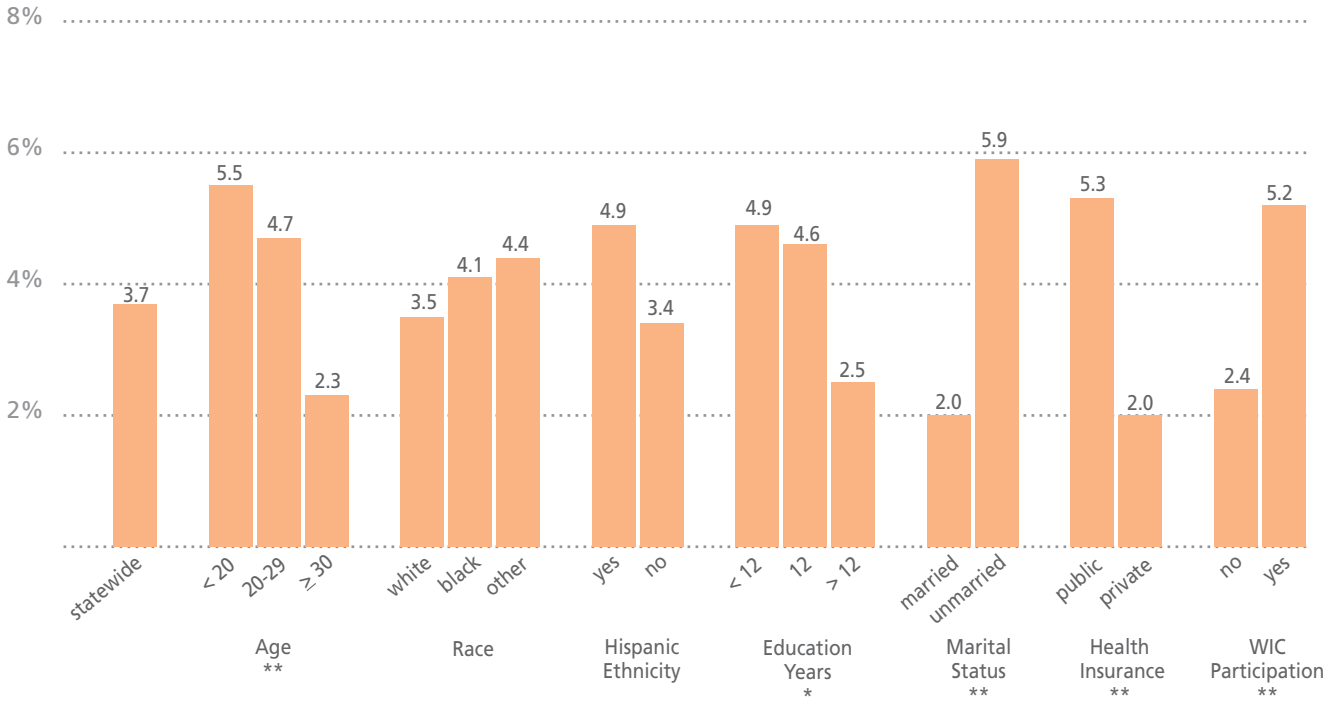
FIGURE 4-1: INTIMATE PARTNER VIOLENCE BEFORE / DURING PREGNANCY BY YEAR RHODE ISLAND, 2009-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers experiencing IPV before or during pregnancy was 3.7%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with experiencing IPV before or during pregnancy included age, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were younger than 20 years of age (5.5%), unmarried (5.9%), had less than 12 years of education (4.9%), had public health insurance (5.3%), and participated in the WIC program (5.2%) had a higher prevalence of experiencing IPV compared with their counterparts.

FIGURE 4-2: INTIMATE PARTNER VIOLENCE BEFORE / DURING PREGNANCY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011



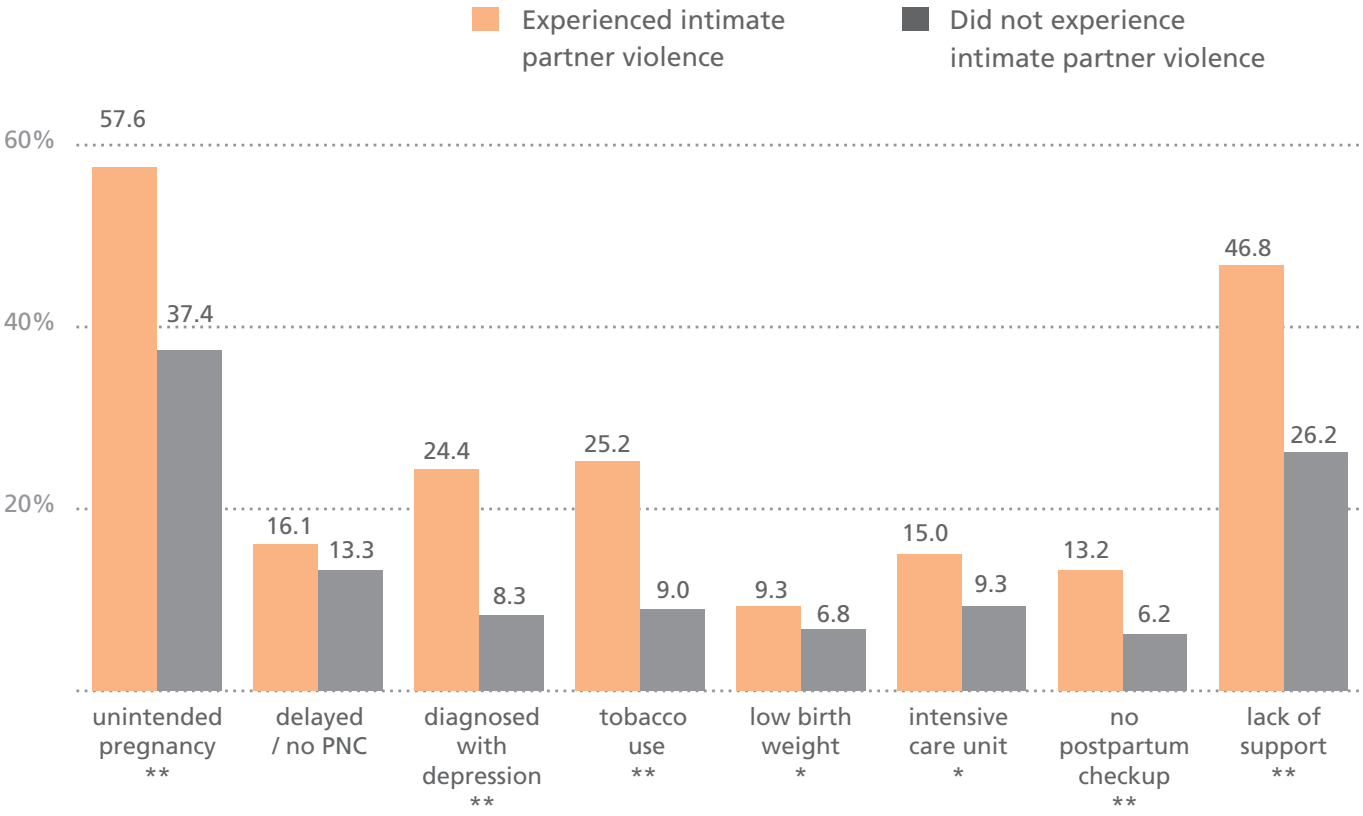
* p-value < 0.05 ** p-value < 0.01

Risk Behaviors and Outcomes by IPV Experience, 2009-2011

Mothers who experienced IPV before or during pregnancy, compared to mothers who did not experience IPV, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (57.6% vs. 37.4%).
- They were diagnosed with depression during their pregnancy (24.4% vs. 8.3%).
- They smoked during their pregnancy (25.2% vs. 9.0%).
- They had a low birth weight baby (9.3% vs. 6.8%).
- Their baby was put in an intensive care unit after the baby was born (15.0% vs. 9.3%).
- They did not have a postpartum checkup (13.2% vs. 6.2%).
- They lacked some social support since delivery (46.8% vs. 26.2%).

FIGURE 4-3: RISK BEHAVIORS AND OUTCOMES BY INTIMATE PARTNER VIOLENCE RHODE ISLAND, 2009-2011



*p-value < 0.05 ** p-value < 0.01

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4. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

Related Publication

Kim H, Cain R, Viner-Brown S. Intimate Partner Violence Before or During Pregnancy in Rhode Island. *Medicine & Health / Rhode Island*, Vol. 93 (No. 1):29-31, January 2010. Available from: www.rimed.org/medhealthri/2010-01/2010-01-29.pdf

5. TOBACCO USE

Definition and Significance

Cigarette smoking during pregnancy increases the risk for several adverse health outcomes for both mothers and their newborns.[1,2] Women who smoke during their pregnancy are more likely to experience premature rupture of membranes (PROM), placental abruption, or placenta previa during pregnancy.[1,2] Babies born to women who smoke during pregnancy are more likely to be born prematurely, be low birth weight, or die of Sudden Unexpected Infant Death (SUID).[1,2] Therefore, the Centers for Disease Control and Prevention (CDC) recommend that pregnant women not smoke cigarettes during pregnancy. The PRAMS survey asks mothers about their tobacco use and the amount of cigarettes smoked in the three months before pregnancy, in the last three months of pregnancy, and after delivery. The smoking cessation rate during pregnancy was calculated by comparing mothers who smoked before pregnancy with mothers who smoked during pregnancy.

Healthy People 2020 Target

MICH-11.3: Increase abstinence from cigarette smoking among pregnant women to 98.6% (or reduce cigarette smoking among pregnant women to 1.4%).[3]

TU-6: Increase smoking cessation during pregnancy to 30.0%.[4]

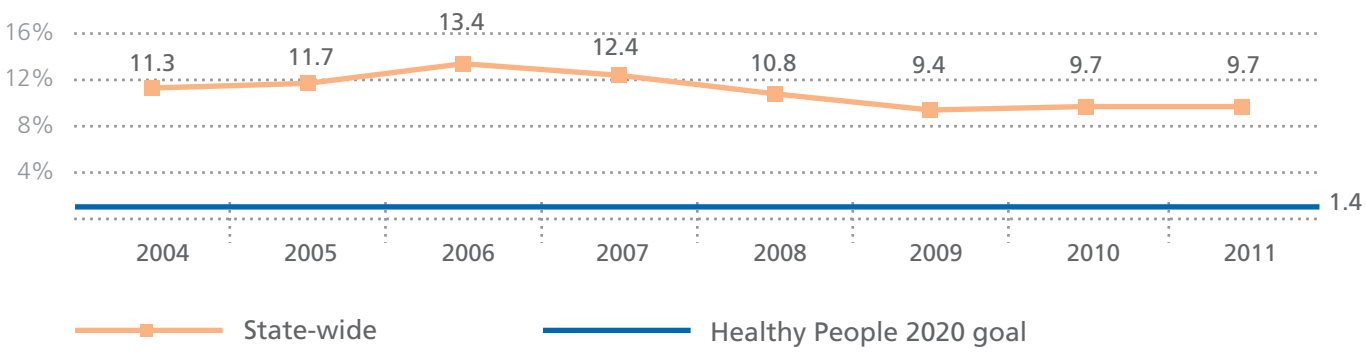
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of tobacco use in the last three months of pregnancy ranged from 1.9% (best) to 29.0% (worst) in 2011.[5] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 11th (1st is the best) with 9.7% of mothers smoking during pregnancy.[5] The prevalence of smoking cessation during pregnancy ranged from 82.2% (best) to 35.3% (worst), and Rhode Island ranked 11th (1st is the best) with a cessation rate of 57.6%.[5]

Prevalence and Trends: Tobacco Use, 2004-2011

The proportion of Rhode Island mothers who smoked in the last three months of pregnancy ranged from 9.4% to 13.4% during 2004-2011. The trends of smoking represent a significant decrease during the period (p-value less than 0.01). Rhode Island had not achieved the Healthy People 2020 goal of reducing cigarette smoking among pregnant women to 1.4%[3] for all years.

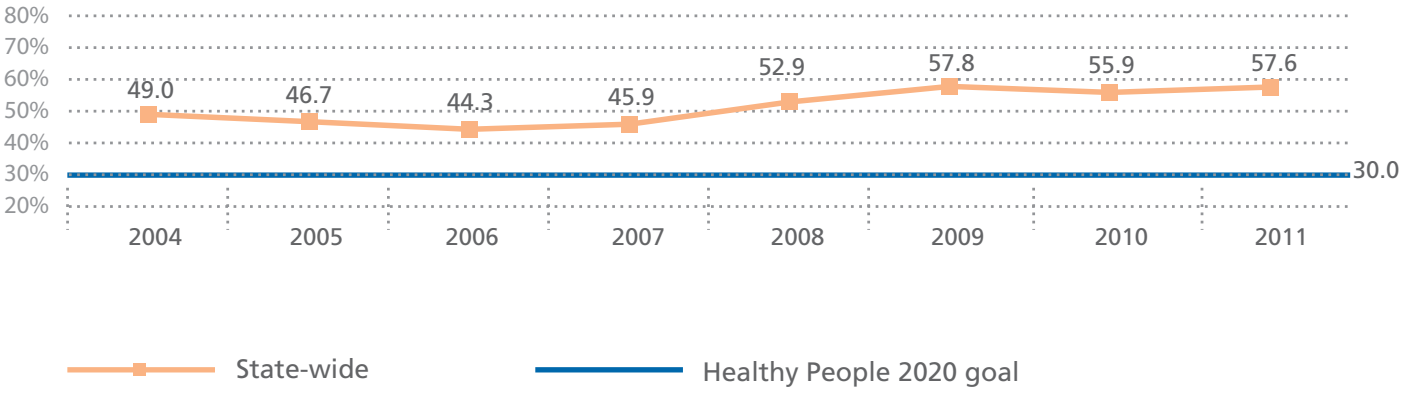
FIGURE 5-1: TOBACCO USE DURING PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Prevalence and Trends: Smoking Cessation, 2004-2011

The proportion of Rhode Island mothers who quit smoking during their pregnancy increased significantly from 49.0% in 2004 to 57.6% in 2011 (p-value less than 0.001). The Healthy People 2020 goal of increasing smoking cessation during pregnancy to 30%[4] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

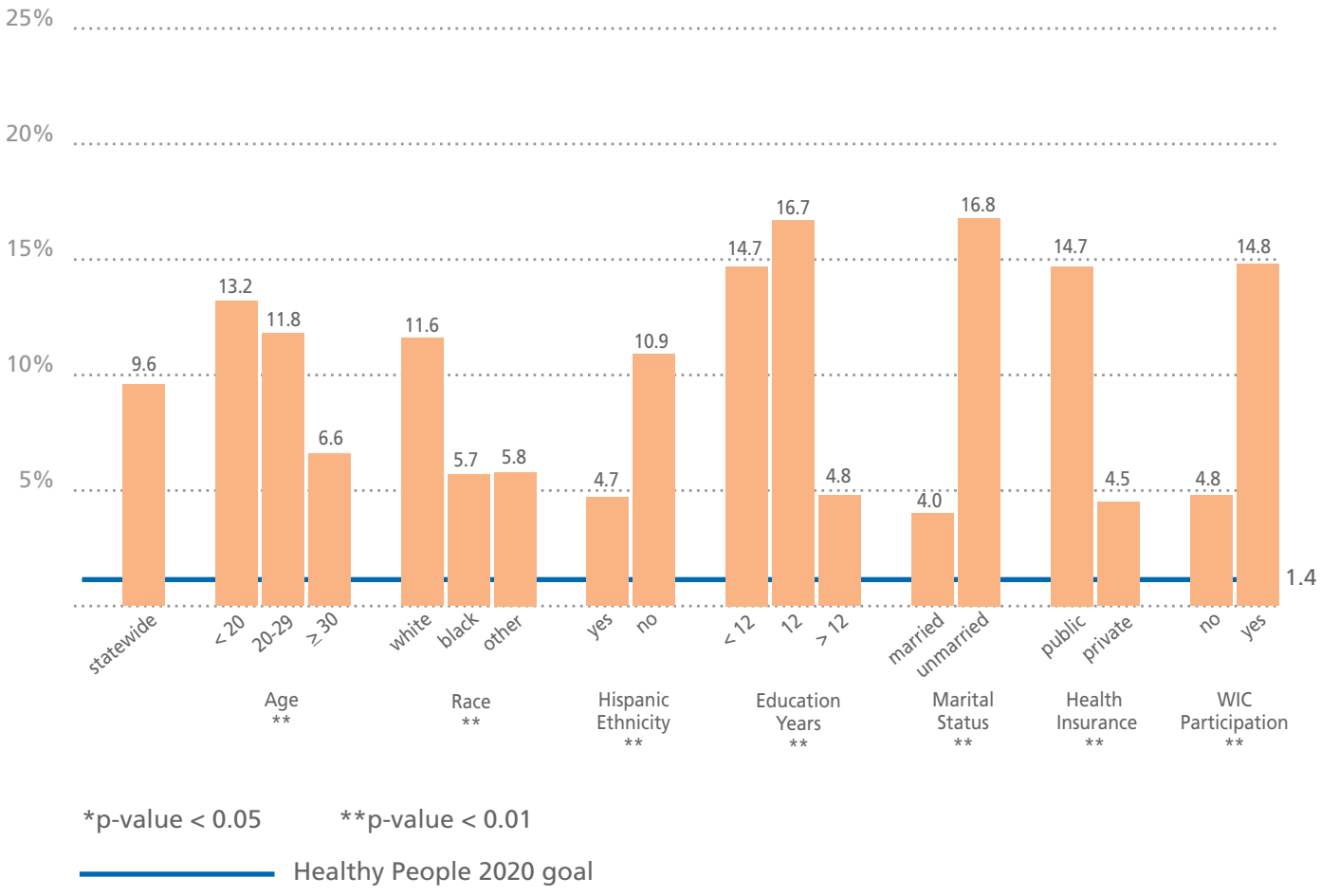
FIGURE 5-2: SMOKING CESSATION DURING PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers smoking in the last three months of pregnancy was 9.6%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with smoking in the last three months of pregnancy included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were younger than 20 years of age (13.2%), white (11.6%), non-Hispanic (10.9%), unmarried (16.8%), had 12 years of education (16.7%), had public health insurance (14.7%), and participated in the WIC program (14.8%) had a higher prevalence of tobacco use during pregnancy compared with their counterparts.

FIGURE 5-3: TOBACCO USE DURING PREGNANCY: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011

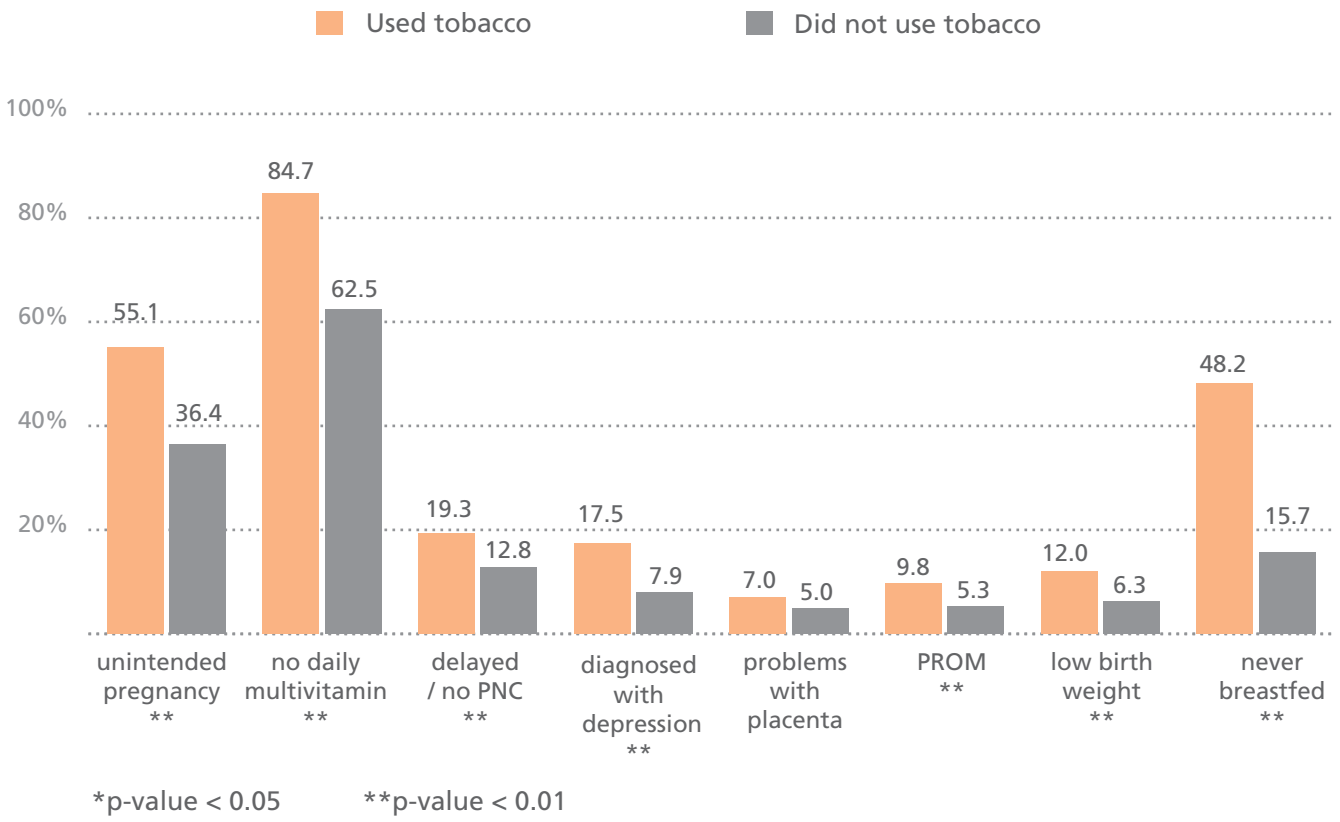


Risk Behaviors and Outcomes by Tobacco Use During Pregnancy, 2009-2011

Mothers who smoked in the last three months of pregnancy, compared to mothers who did not smoke, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (55.1% vs. 36.4%).
- They did not take multivitamins daily prior to pregnancy (84.7% vs. 62.5%).
- They had delayed or no prenatal care (PNC) (19.3% vs. 12.8%).
- They were diagnosed with depression during their pregnancy (17.5% vs. 7.9%).
- They had premature rupture of membranes (PROM) (9.8% vs. 5.3%).
- They had a low birth weight baby (12.0% vs. 6.3%).
- They never breastfed their baby (48.2% vs. 15.7%).

FIGURE 5-4: RISK BEHAVIORS AND OUTCOMES BY TOBACCO USE DURING PREGNANCY RHODE ISLAND, 2009-2011



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5. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

6. PRENATAL CARE

Definition and Significance

Prenatal care (PNC) is a series of assessments and interventions for pregnant women, to help ensure healthy pregnancies and birth outcomes, and to prevent any potential adverse health outcomes to mothers and their babies.[1,2] It is recommended that prenatal care start in the first trimester of pregnancy, and continue throughout the whole pregnancy period.[1] Early prenatal care provides opportunities for detection, treatment, and management of medical and obstetric conditions, as well as the opportunity for encouraging healthy behaviors by educating women in their pregnancies.[1,2] The PRAMS survey asks mothers about how many weeks or months pregnant they were when they had their first visit for prenatal care, which is used to determine the timing of prenatal care initiation. The survey also asks mothers about barriers to getting prenatal care, and the health topics that were discussed during their prenatal care visits.

Healthy People 2020 Target

MICH-10.1: Increase the proportion of pregnant women who receive prenatal care beginning in the first trimester to 77.9%.[3]

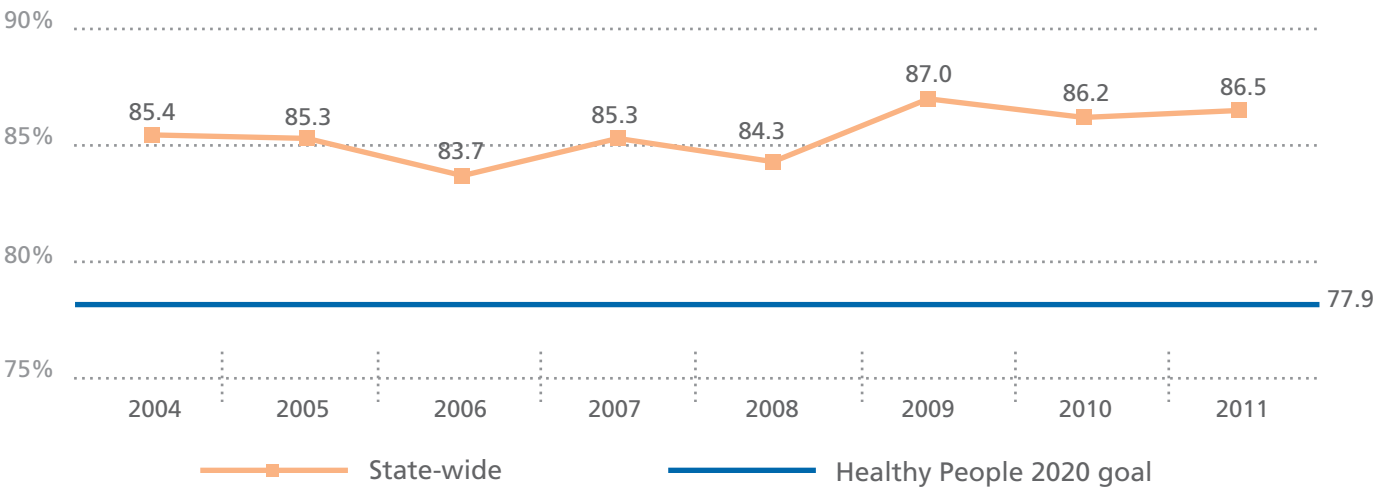
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of initiating prenatal care in the first trimester ranged from 89.3% (best) to 73.8% (worst) in 2011.[4] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 4th (1st is the best) with 86.5% of mothers initiating prenatal care in the first trimester.[4]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who initiated prenatal care in the first trimester ranged from 83.7% to 87.0% during 2004-2011. However, the linear trend was not statistically significant during the period. The Healthy People 2020 goal of increasing the proportion of women initiating prenatal care in the first trimester to 77.9%[3] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

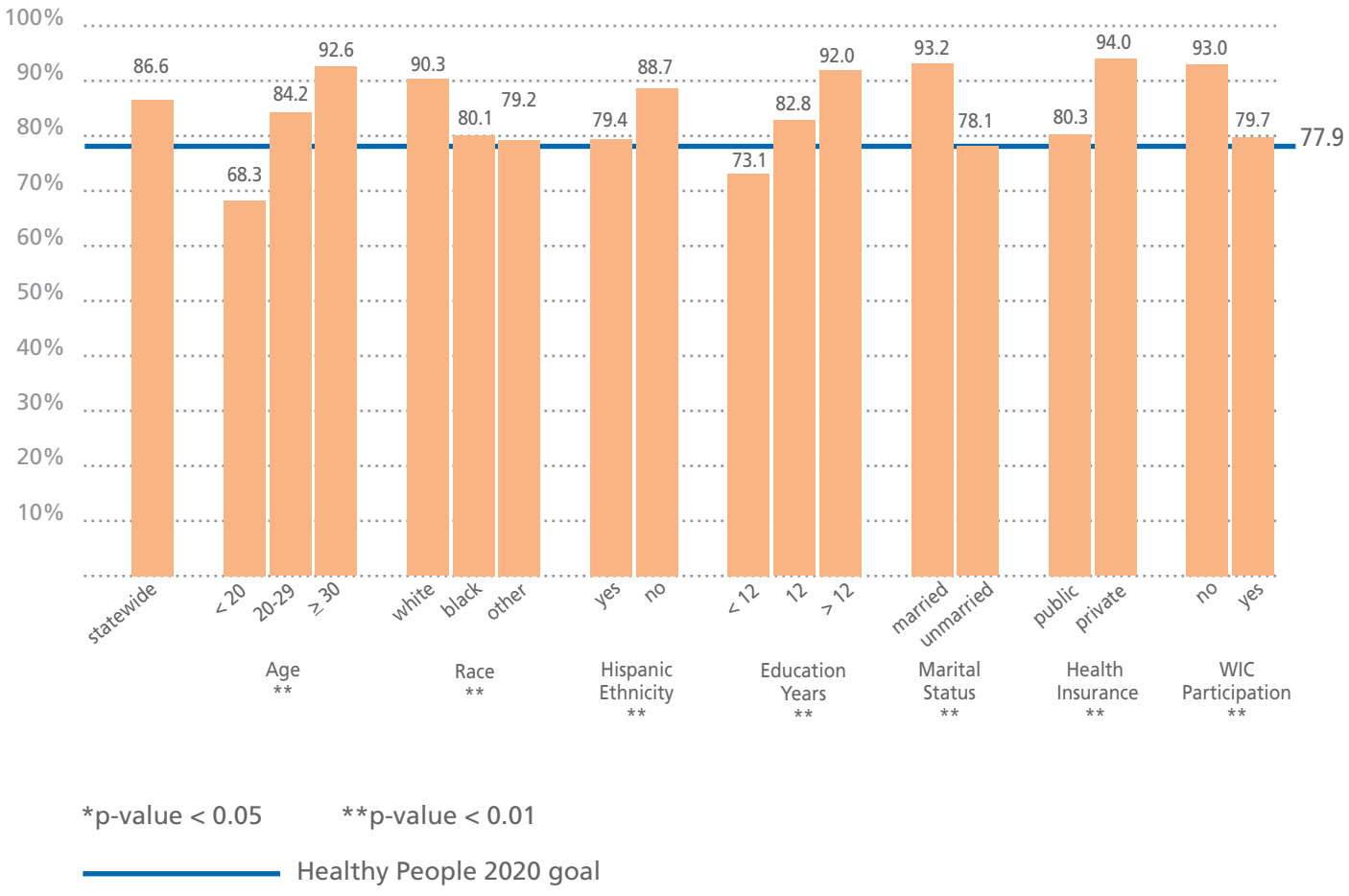
FIGURE 6-1: PRENATAL CARE IN FIRST TRIMESTER BY YEAR, RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers initiating prenatal care in the first trimester was 86.6%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with initiating prenatal care in the first trimester included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were aged 30 or older (92.6%), white (90.3%), non-Hispanic (88.7%), married (93.2%), had more than 12 years of education (92.0%), had private health insurance (94.0%), and did not participate in the WIC program (93.0%) had a higher prevalence of initiating prenatal care in the first trimester compared with their counterparts.

FIGURE 6-2: PRENATAL CARE IN FIRST TRIMESTER: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011

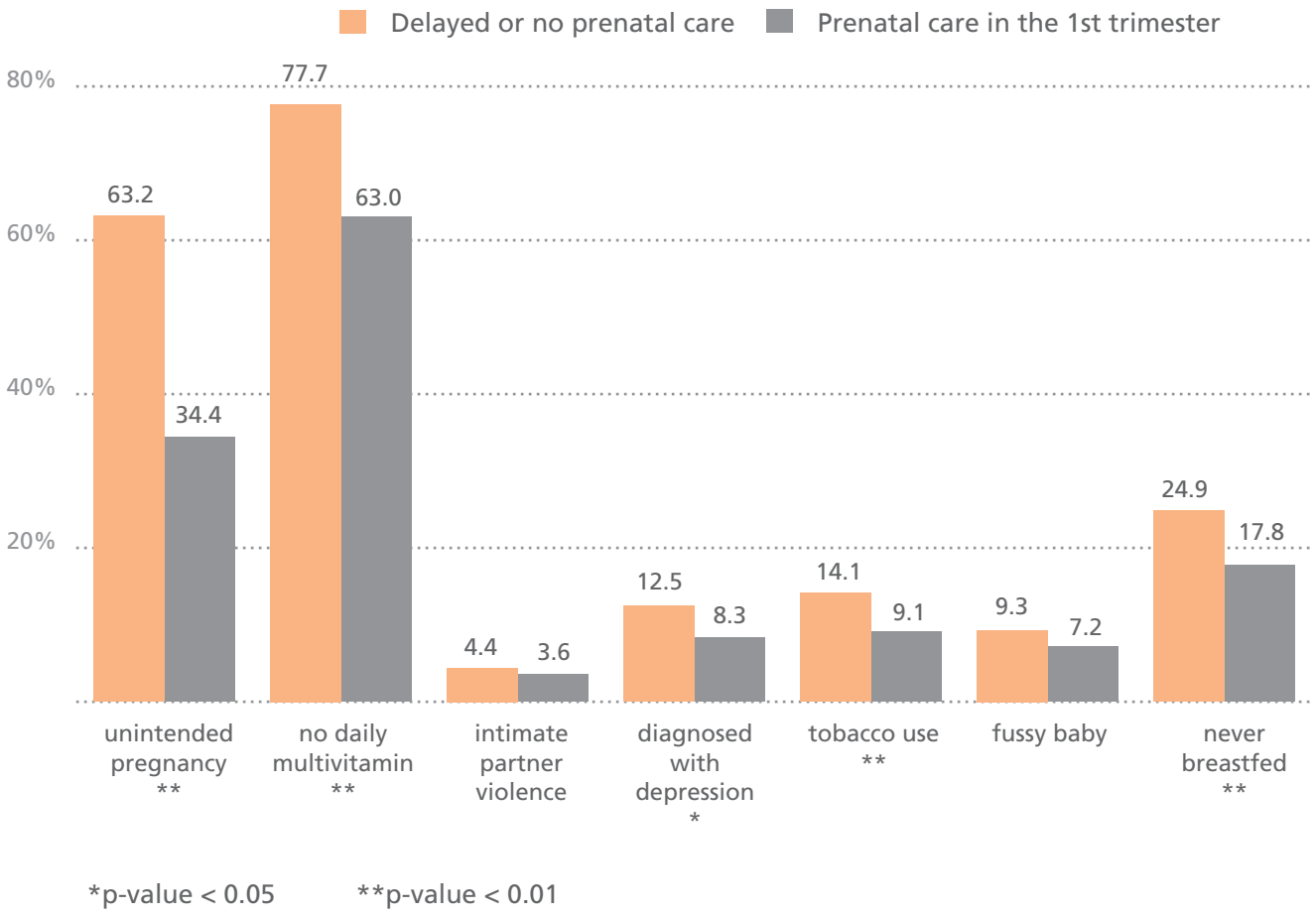


Risk Behaviors and Outcomes by Prenatal Care Initiation, 2009-2011

Mothers who had delayed or no prenatal care, compared to mothers who initiated prenatal care in the first trimester, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (63.2% vs. 34.4%).
- They did not take multivitamins daily prior to pregnancy (77.7% vs. 63.0%).
- They were diagnosed with depression during their pregnancy (12.5% vs. 8.3%).
- They smoked during their pregnancy (14.1% vs. 9.1%).
- They never breastfed their baby (24.9% vs. 17.8%).

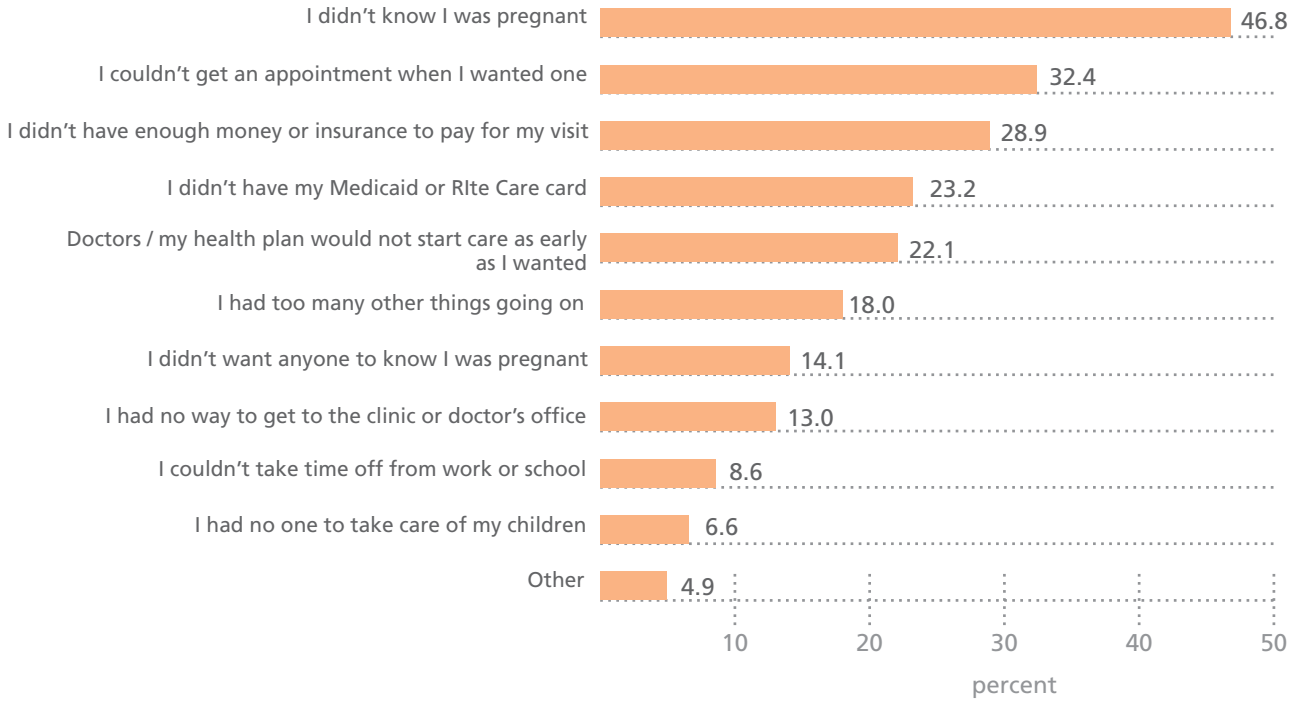
FIGURE 6-3: RISK BEHAVIORS AND OUTCOMES BY PRENATAL CARE INITIATION RHODE ISLAND, 2009-2011



Barriers to Getting Prenatal Care, 2009-2011

In 2009-2011, a small proportion of Rhode Island mothers (0.4%) reported they did not want prenatal care during their most recent pregnancy. Of those mothers who wanted prenatal care but did not receive prenatal care as early as desired, 46.8% reported they did not know they were pregnant; 32.4% reported they couldn't get an appointment when they wanted one; and 28.9% reported not having enough money or insurance to pay for their visits.

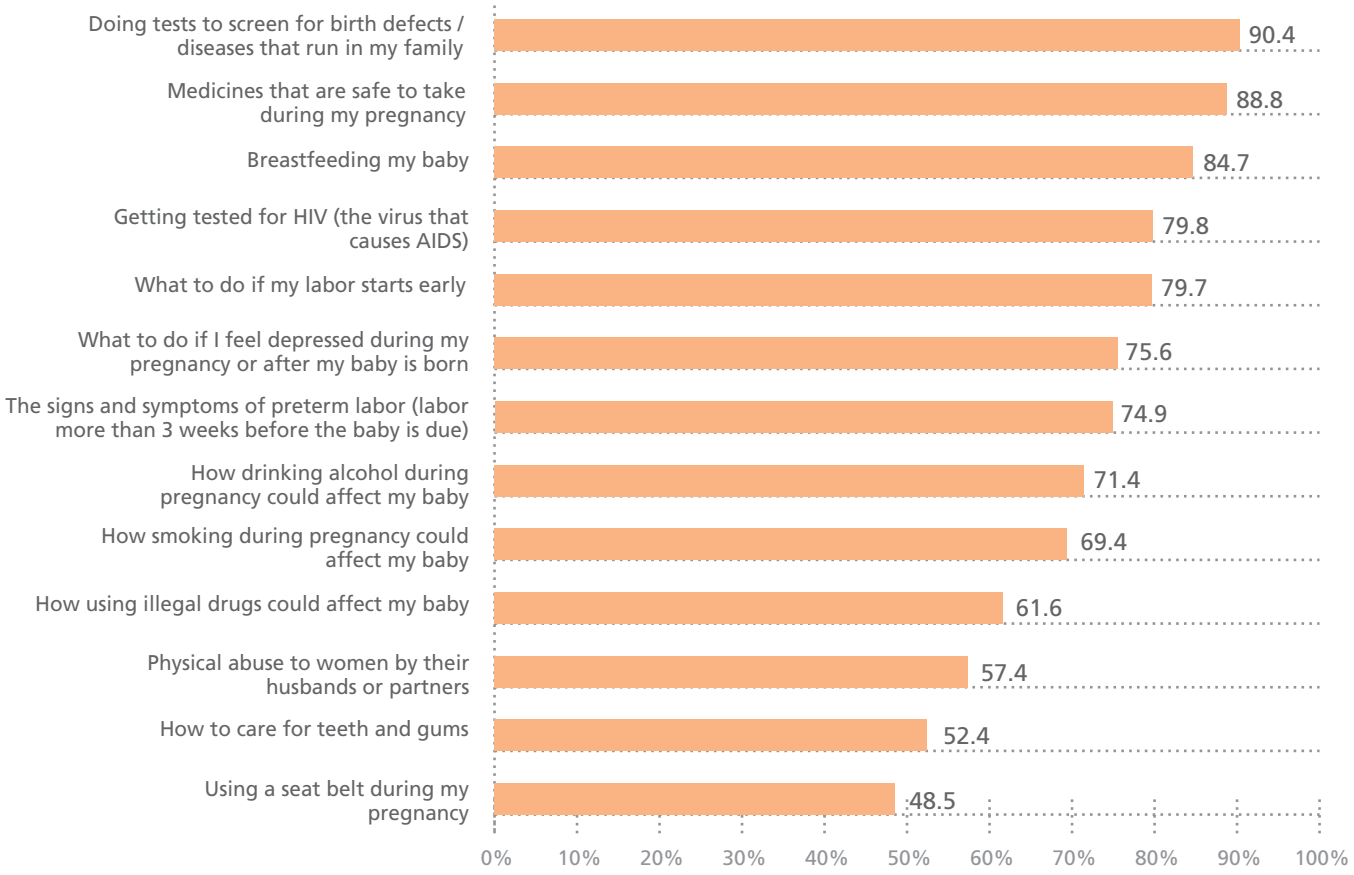
FIGURE 6-4: BARRIERS TO GETTING PRENATAL CARE, RHODE ISLAND, 2009-2011



Discussions During Prenatal Care, 2009-2011

The PRAMS survey asks mothers about what kinds of health topics their healthcare providers talked with them during their prenatal care visits. The most frequently discussed health topics were: doing tests to screen for birth defects or diseases that run in their family (90.4%), medicines that are safe to take during pregnancy (88.8%), and breastfeeding their baby (84.7%). However, only 48.5% of the mothers reported discussions about using a seat belt during pregnancy.

FIGURE 6-5: DISCUSSIONS WITH HEALTHCARE PROVIDERS DURING PRENATAL CARE VISITS, RHODE ISLAND, 2009-2011



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Yang M, Kim H, Cain R, Viner-Brown S. Discussion of Health Topics during Prenatal Care in Rhode Island. *Medicine & Health / Rhode Island*, Vol. 95 (No. 2):63-65, February 2012. Available from: http://rimed.org/medhealthri/2012-02/2012-02-63.pdf

Giang L, Gjelsvik A, Cain R, Paine V. Gestational Diabetes in Rhode Island. *Rhode Island Medical Journal*, 45-48, April 2013. Available from: www.rimed.org/rimedicaljournal/2013/04/2013-04-45-health-diabetes.pdf

7. SEASONAL INFLUENZA (FLU) VACCINATION DURING PREGNANCY

Definition and Significance

Pregnant women have increased morbidity and mortality from flu infection, likely due to the physiological changes associated with pregnancy.[1] Pregnant women with the flu also have an increased risk of developing health problems for their unborn baby, including premature labor and delivery.[1] Flu vaccination during pregnancy is safe and the most effective way to protect pregnant women, their unborn babies, and their infants from flu infection and its complications. Research has shown that vaccination during pregnancy significantly reduces flu illness among infants up to six months of age who are too young to be vaccinated.[2] Therefore, the Centers for Disease Control and Prevention (CDC) recommend that all pregnant women, regardless of trimester of pregnancy, get a flu vaccination during the flu season. The Rhode Island PRAMS survey includes two standard questions regarding flu vaccination, which ask mothers 1) whether their healthcare provider offered a flu vaccination or told them to get one at any time during their pregnancy, and 2) whether they got a flu vaccination during their pregnancy.

Healthy People 2020 Target

IID-12.10: Increase the percentage of pregnant women who are vaccinated against seasonal influenza to 80.0%.[3]

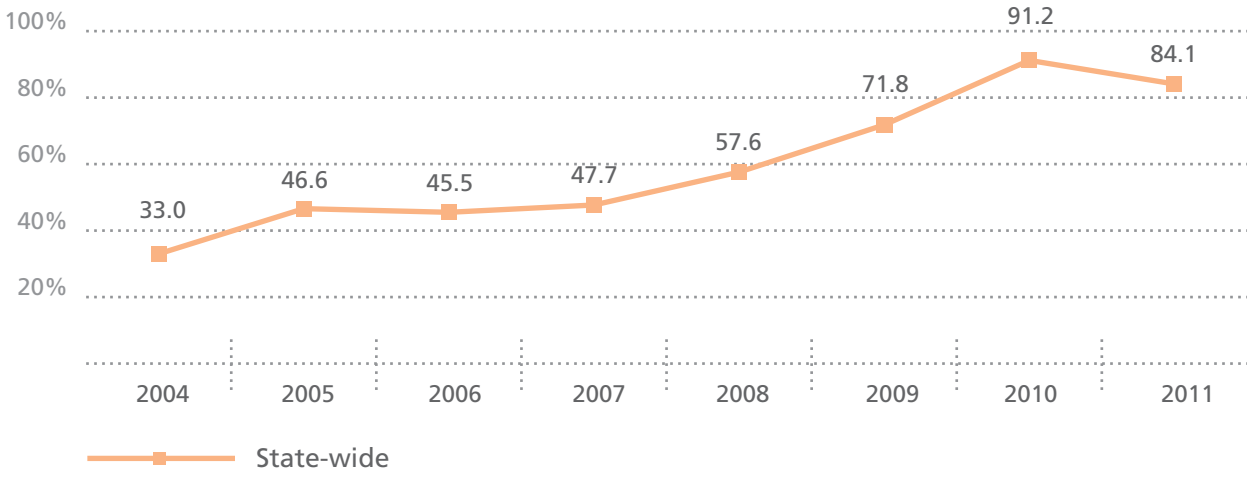
Rhode Island Compared to Other PRAMS Sites, 2009-2010 Flu Season

According to the PRAMS CPONDER report, in the 2009-2010 flu season the prevalence of women offered or recommended seasonal flu vaccination by their healthcare provider during pregnancy ranged from 87.0% (best) to 52.9%. Of the 26 PRAMS sites reported in the CPONDER, Rhode Island ranked 2nd (1st is the best) with 85.7% of women receiving an offer or a recommendation.[4] The prevalence of women receiving seasonal flu vaccination during their pregnancy ranged from 71.2% (best) to 32.1% (worst), and Rhode Island ranked 3rd (1st is best) with a 66.8% prevalence.[4] (The trend data shown in Figures 7-1 and 7-2 represent the calendar year data, which are not comparable with CPONDER data.)

Prevalence and Trends: Flu Vaccine Offered / Recommended, 2004-2011

The proportion of Rhode Island mothers who were offered a seasonal flu vaccination or told to get one by their healthcare providers during pregnancy increased significantly from 33.0% in 2004 to 91.2% in 2010 (p-value less than 0.001), then dropped to 84.1% in 2011.

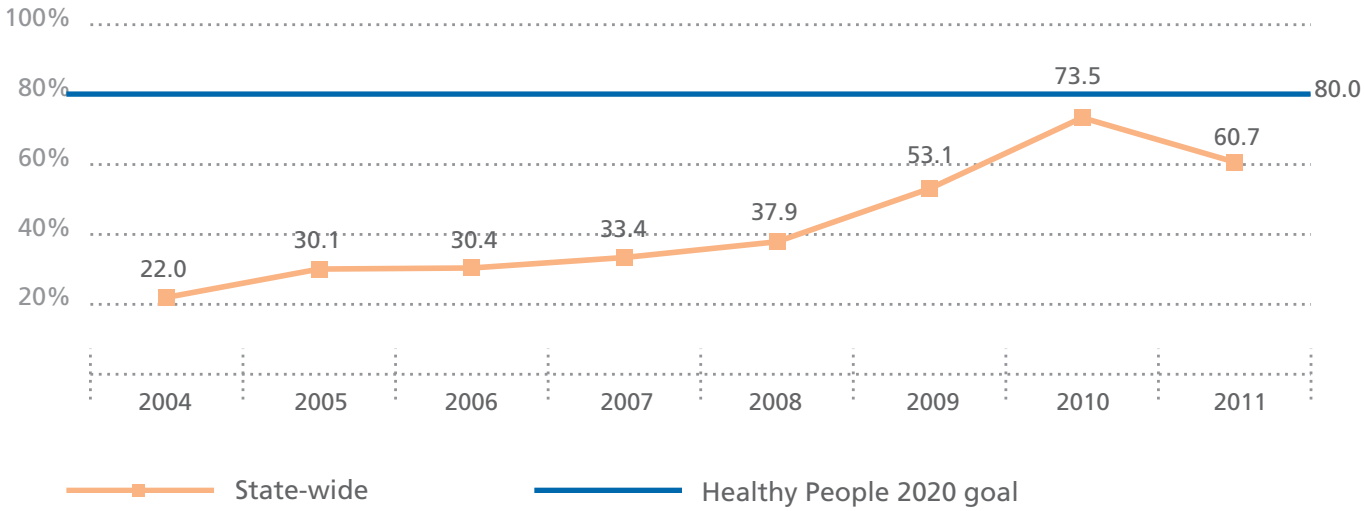
FIGURE 7-1: FLU VACCINE OFFERED / RECOMMENDED DURING PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Prevalence and Trends: Flu Vaccine Received, 2004-2011

The proportion of Rhode Island mothers who received a seasonal flu vaccination during their pregnancy increased significantly from 22.0% in 2004 to 73.5% in 2010 (p-value less than 0.001), then dropped to 60.7% in 2011. The Healthy People 2020 goal of increasing the proportion of pregnant women who are vaccinated against seasonal influenza to 80.0%[3] was not achieved.

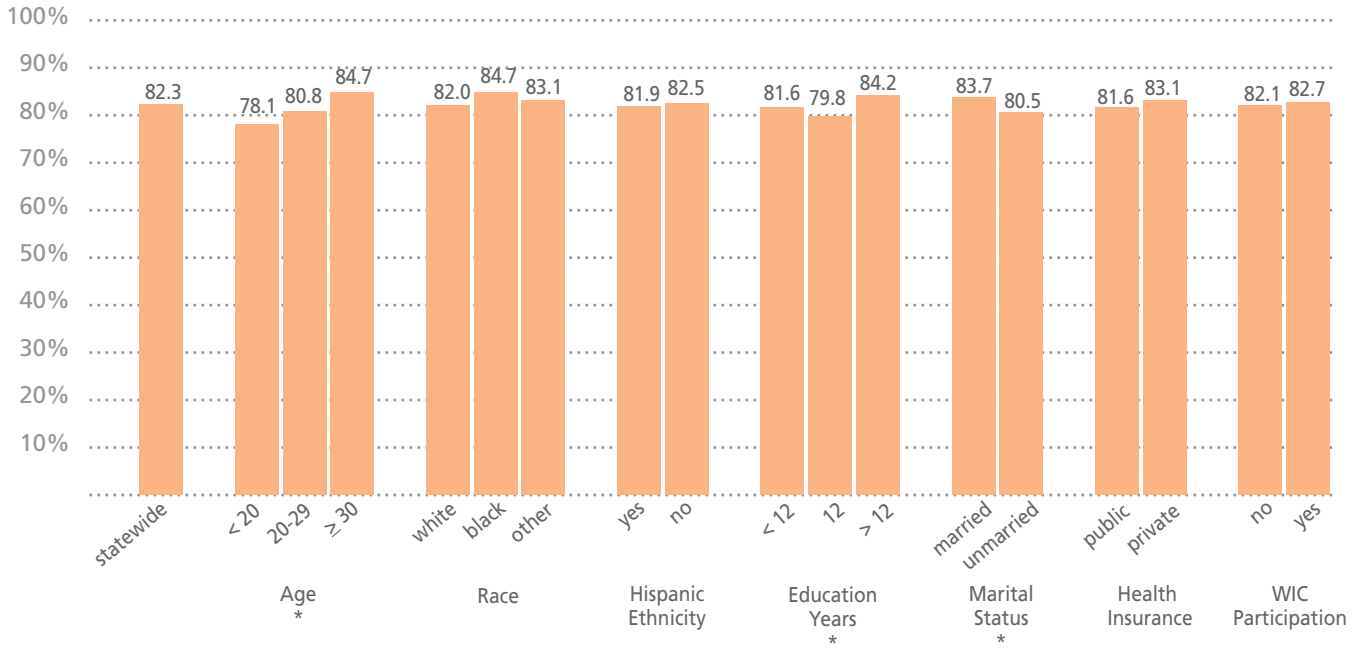
FIGURE 7-2: FLU VACCINE RECEIVED DURING PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics: Flu Vaccine Offered / Recommended, 2009-2011

- The overall prevalence of Rhode Island mothers being offered a seasonal flu vaccination or told to get one by their healthcare providers during pregnancy was 82.3%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with receiving advice on seasonal flu vaccination during pregnancy included age, education level, and marital status.
  - Mothers who were aged 30 or older (84.7%), married (83.7%), and had more than 12 years of education (84.2%) had a higher prevalence of receiving advice on seasonal flu vaccination during pregnancy compared with their counterparts.

FIGURE 7-3: FLU VACCINE OFFERED / RECOMMENDED: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011

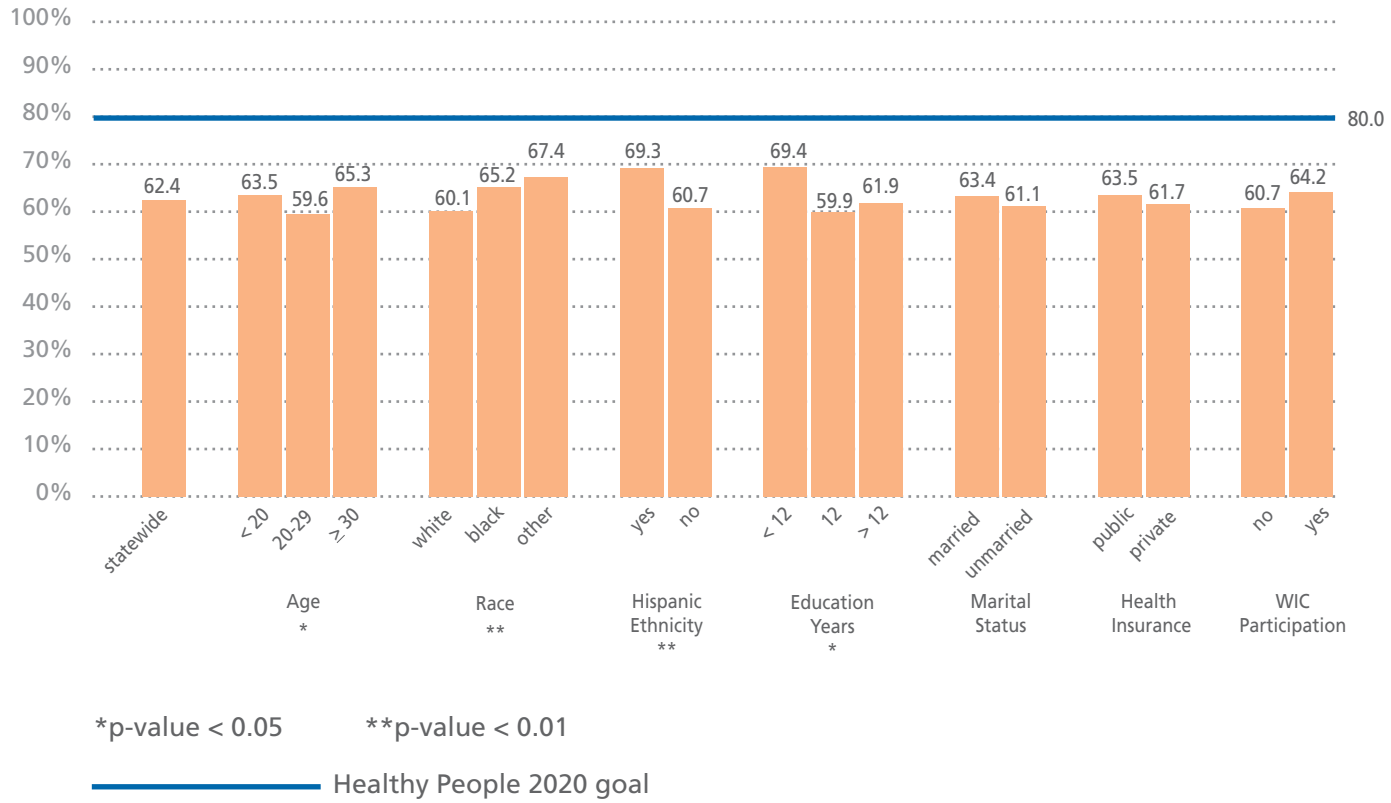


*p-value < 0.05 **p-value < 0.01

Demographic Characteristics: Flu Vaccine Received, 2009-2011

- The overall prevalence of Rhode Island mothers receiving a seasonal flu vaccination during their pregnancy was 62.4%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with receiving a seasonal flu vaccination during pregnancy included age, race, ethnicity, and education level.
  - Mothers who were aged 30 or older (65.3%), other than white or black (67.4%), Hispanic (69.3%), and had less than 12 years of education (69.4%) had a higher prevalence of receiving a seasonal flu vaccination during their pregnancy, compared with their counterparts.

FIGURE 7-4: FLU VACCINE RECEIVED DURING PREGNANCY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011

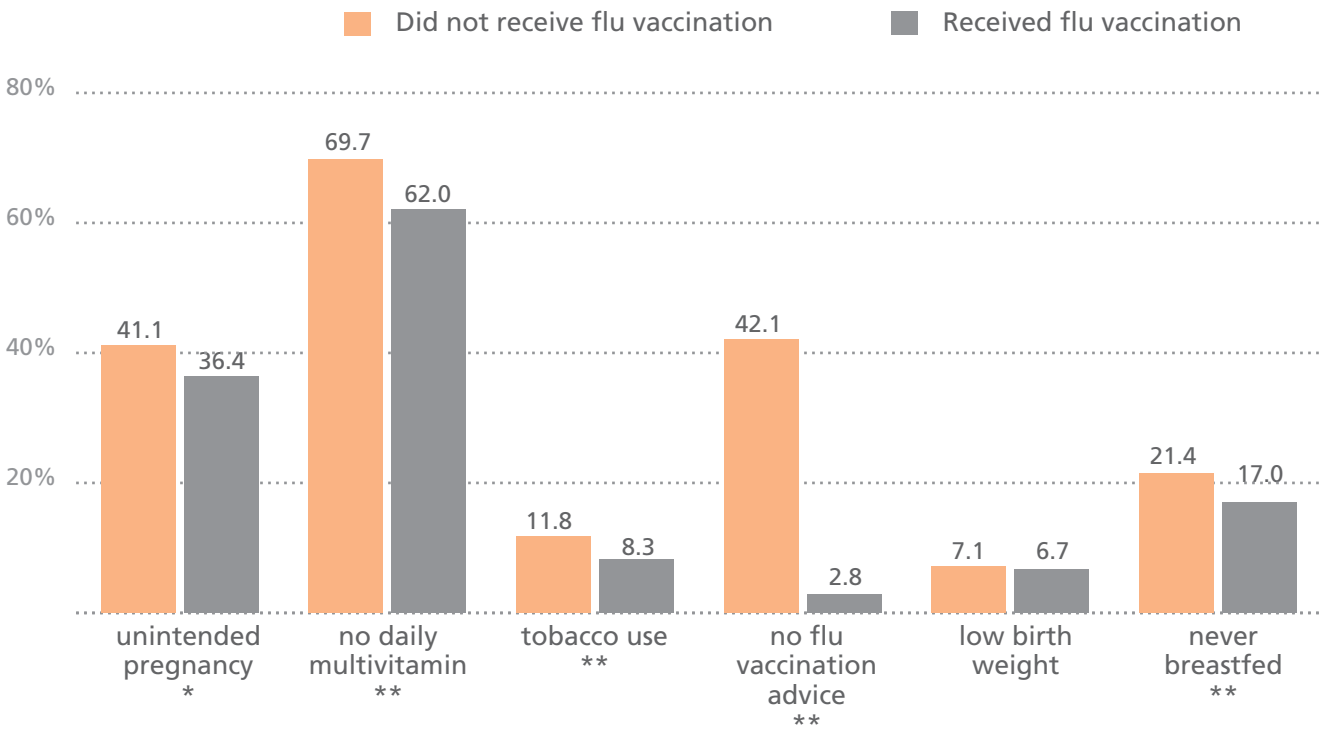


Risk Behaviors and Outcomes by Flu Vaccination During Pregnancy, 2009-2011

Mothers who did not receive a flu vaccination during their pregnancy, compared to mothers who received a flu vaccination, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (41.1% vs. 36.4%).
- They did not take multivitamins daily prior to pregnancy (69.7% vs. 62.0%).
- They smoked during their pregnancy (11.8% vs. 8.3%).
- They were not offered a flu vaccination or not told to get one by their healthcare providers during pregnancy (42.1% vs. 2.8%).
- They never breastfed their baby (21.4% vs. 17.0%).

FIGURE 7-5: RISK BEHAVIORS AND OUTCOMES BY FLU VACCINATION DURING PREGNANCY, RHODE ISLAND, 2009-2011



* p-value < 0.05 **p-value < 0.01

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2. Zaman K, Roy E, Arifeen S, et al. Effectiveness of maternal influenza immunization in mothers and infants. New England Journal of Medicine; 359:1555-1564.

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4. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

Related Publications

Kim H, Raymond R, Paine V, Cain R, Viner-Brown S. Seasonal Influenza Vaccination Coverage among Pregnant Women in Rhode Island. *Medicine & Health / Rhode Island*, Vol. 92 (No. 10):345-347, October 2009. Available from: www.rimed.org/medhealthri/2009-10/2009-10-345.pdf

Kim H, Raymond R, Paine V, Cain R. Seasonal Influenza Vaccination among Pregnant Women in Rhode Island, 2002-2011. *Medicine & Health / Rhode Island*, Vol. 95 (No. 9):296-299, September 2012. Available from: www.rimed.org/medhealthri/2012-09/2012-09-296.pdf

8. HUMAN IMMUNODEFICIENCY VIRUS (HIV) TESTING

Definition and Significance

In the United States, one in four people living with HIV infection are women and only about 40% of women who are diagnosed with HIV have it under control.[1] HIV can be transmitted from HIV positive mothers to their babies during pregnancy, at the time of child delivery, or through breast-feeding.[2] The chance that HIV infection is transmitted from an HIV positive mother to her baby can be reduced to less than 1% if the mother is treated.[2] Therefore, getting a test for HIV before pregnancy or as early as possible during pregnancy is important to prevent newborn babies from contracting HIV.[2] The PRAMS survey asks mothers about whether they were tested for HIV at any time during their pregnancy or delivery. Three response options are included: "yes," "no," and "I do not know." Since a large proportion of mothers do not know whether they had an HIV test during their pregnancy, all three response options were included in the analyses, which is consistent with the PRAMS CPONDER report.

Healthy People 2020 Target

HIV-14.3: Increase the proportion of pregnant women who have been tested for HIV in the past 12 months to 79.2%.[3]

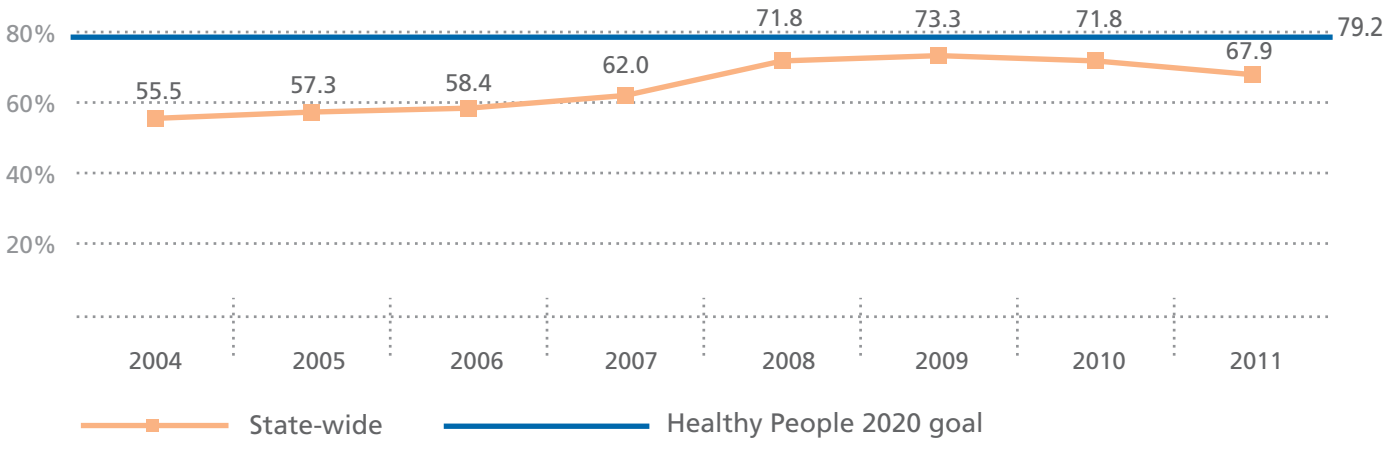
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of getting a test for HIV at any time during pregnancy or delivery ranged from 79.5% (best) to 34.2% (worst) in 2011.[4] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 5th (1st is the best) with 67.9% of mothers having had a test for HIV.[4]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who were tested for HIV at any time during pregnancy or delivery ranged from 55.5% to 73.3% during 2004-2011. The trend of prevalence represents a significant increase during the period (p-value less than 0.001). The Healthy People 2020 goal of increasing the proportion of pregnant women tested for HIV to 79.2%[3] was not achieved.

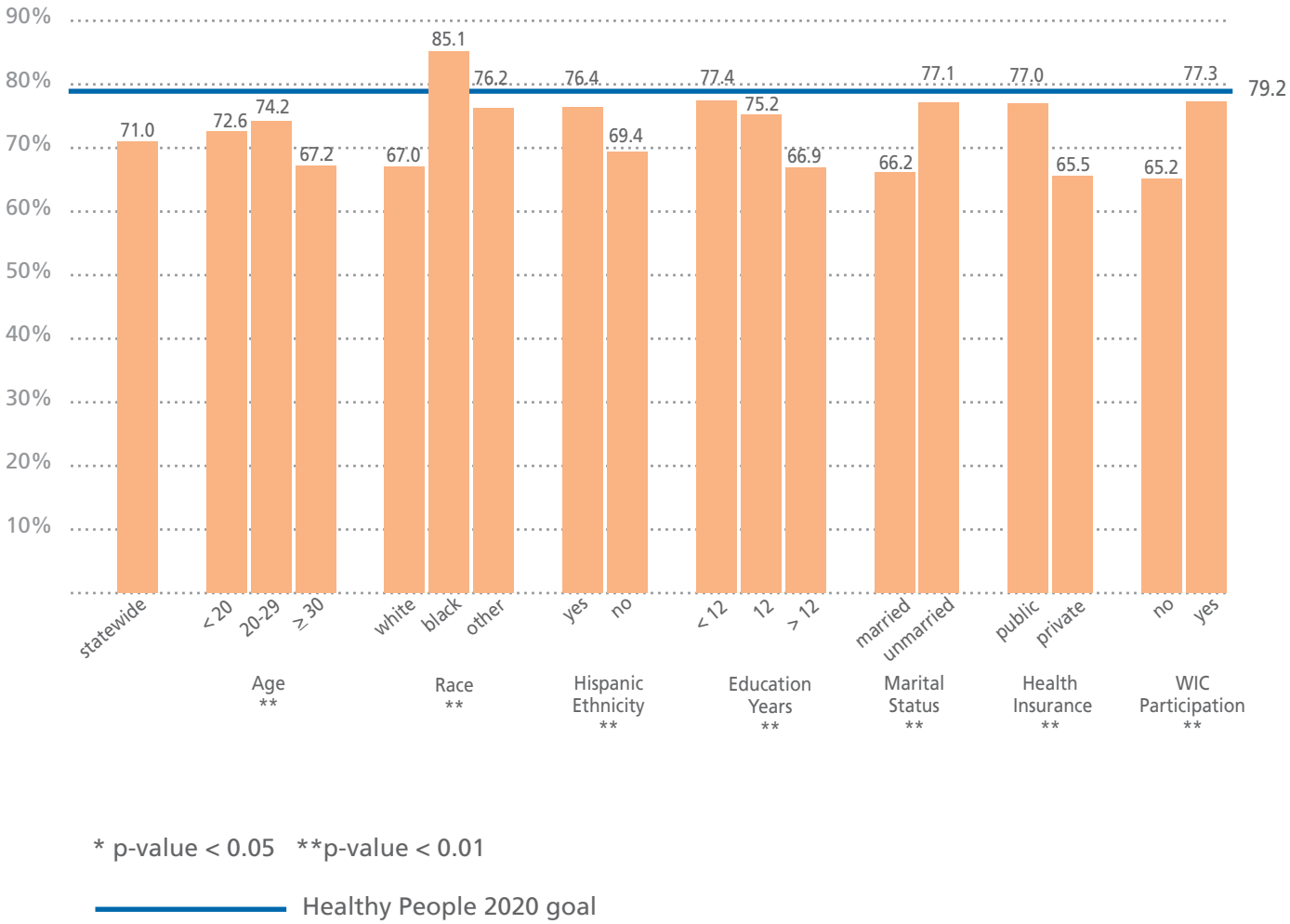
FIGURE 8-1: TESTED FOR HIV DURING PREGNANCY OR DELIVERY BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers getting an HIV test at any time during pregnancy or delivery was 71.0%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with getting an HIV test at any time during pregnancy or delivery included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were 20-29 years of age (74.2%), black (85.1%), Hispanic (76.4%), unmarried (77.1%), had less than 12 years of education (77.4%), had public health insurance (77.0%), and participated in the WIC program (77.3%) had a higher prevalence of getting an HIV test during their pregnancy or delivery, compared with their counterparts.

FIGURE 8-2: TESTED FOR HIV DURING PREGNANCY OR DELIVERY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011



* p-value < 0.05 **p-value < 0.01

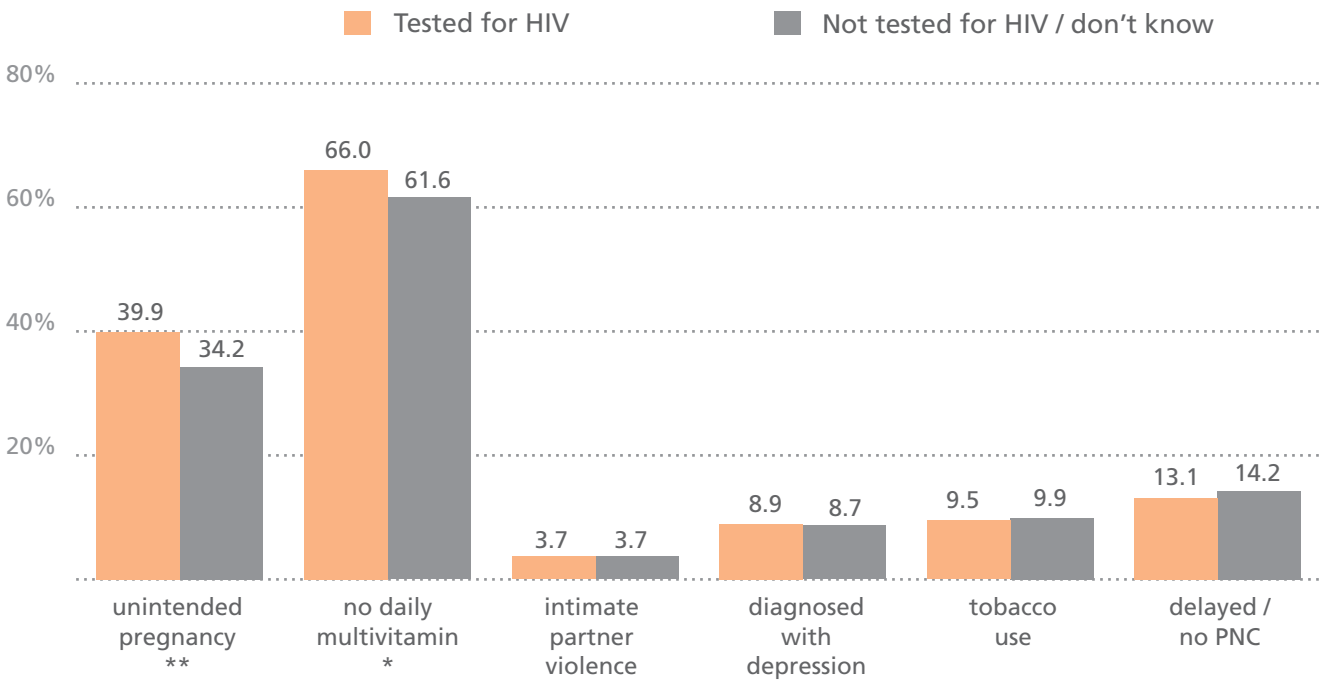
Healthy People 2020 goal

Risk Behaviors and Outcomes by HIV Testing During Pregnancy or Delivery, 2009-2011

Mothers who were tested for HIV at any time during pregnancy or delivery, compared to mothers who were not tested for HIV, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (39.9% vs. 34.2%).
- They did not take multivitamins daily prior to pregnancy (66.0% vs. 61.6%).

FIGURE 8-3: RISK BEHAVIORS AND OUTCOMES BY HIV TESTING DURING PREGNANCY OR DELIVERY, RHODE ISLAND, 2009-2011



* p-value < 0.05 **p-value < 0.01

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2. Centers for Disease Control and Prevention (CDC). HIV Among Pregnant Women, Infants, and Childbirth. Available from: www.cdc.gov/hiv/risk/gender/pregnantwomen/facts/index.html

3. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2020, HIV. Available from: www.healthypeople.gov/2020/topics-objectives/topic/hiv/objectives

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9. DENTAL VISIT DURING PREGNANCY

Definition and Significance

The American College of Obstetricians and Gynecologists (ACOG) and the American Dental Association (ADA) recommend all pregnant women obtain counseling on oral healthcare and dental hygiene, preventive services, and treatment needed during their prenatal care period.[1] Controlling oral diseases and improving oral health during pregnancy not only enhance women's overall health but also contribute to improving the oral health of their children. The PRAMS survey asks mothers 1) whether they went to a dentist or dental clinic, and 2) whether a dental or other healthcare professional discussed how to care for teeth and gums, during the most recent pregnancy.

Healthy People 2020 Target

OH-7: Increase the proportion of children, adolescents, and adults who used the oral healthcare system in the past year to 49%.[2]

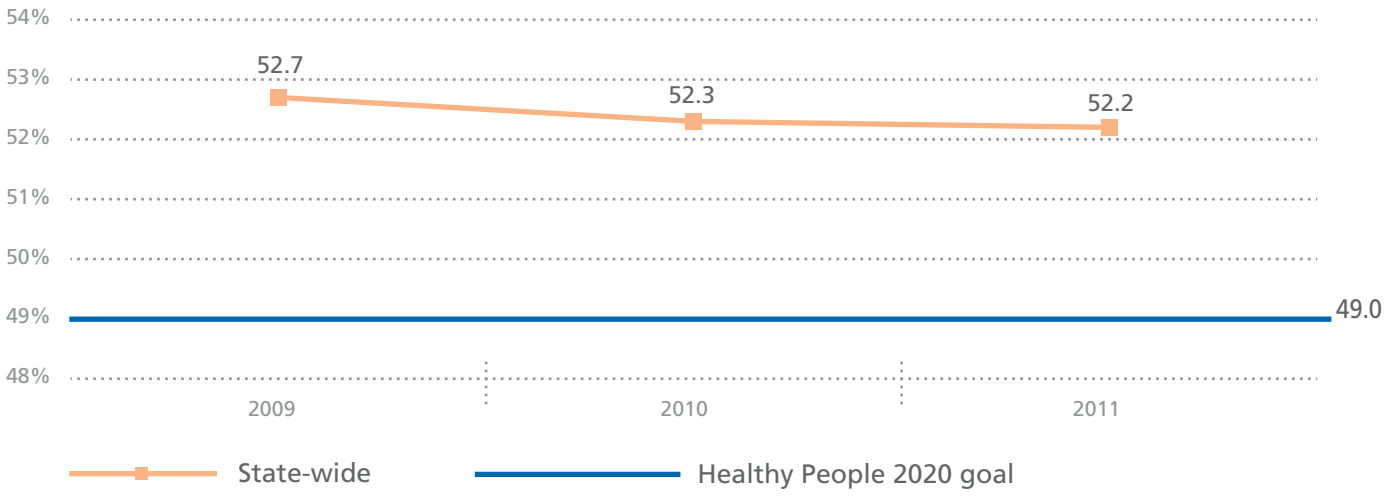
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the proportion of women who visited a dentist or dental clinic during their most recent pregnancy ranged from 56.8% (best) to 38.1% (worst) in 2011.[3] Of the 14 PRAMS sites reported in the CPONDER, Rhode Island ranked 7th (1st is the best) with 52.2% of women having a dental visit during pregnancy.[3]

Prevalence and Trends, 2009-2011

The proportion of Rhode Island women who went to a dentist or dental clinic during the most recent pregnancy ranged from 52.2% to 52.7% during 2009-2011. However, the linear trend is not statistically significant during the period. The Healthy People 2020 goal of increasing the proportion of individuals who used the oral heathcare system to 49%[2] has been achieved. The dental visit questions were included in the Phase 6 survey for the first time, so the previous year data are not available and not reported here.

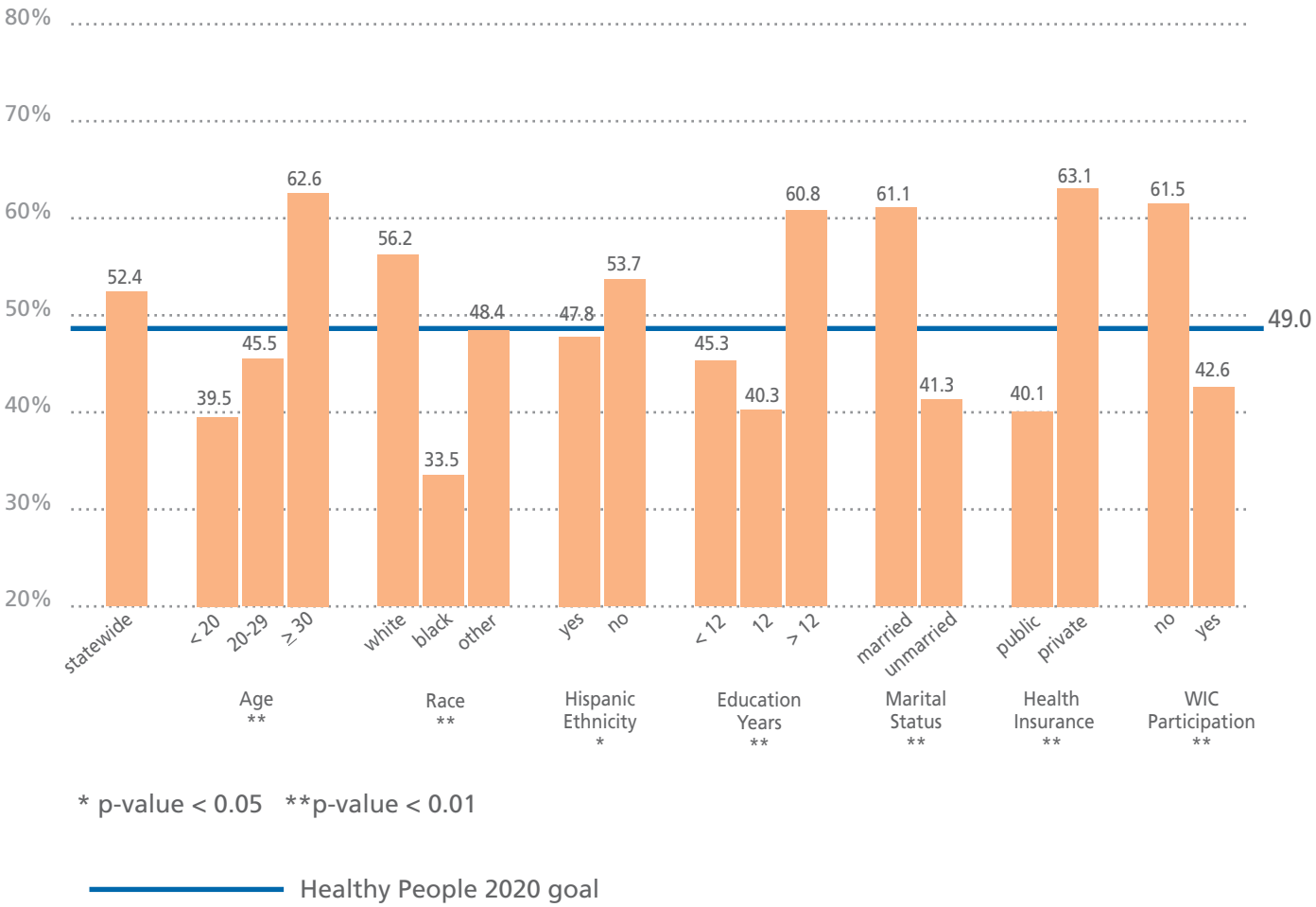
FIGURE 9-1: DENTAL VISIT DURING PREGNANCY BY YEAR, RHODE ISLAND, 2009-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island women visiting a dentist or dental clinic during the most recent pregnancy was 52.4%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with receipt of dental care during pregnancy included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were aged 30 or older (62.6%), white (56.2%), non-Hispanic (53.7%), married (61.1%), had more than 12 years of education (60.8%), had private insurance (63.1%), and did not participate in the WIC program (61.5%) had a higher prevalence of a dental visit during pregnancy compared with their counterparts.

FIGURE 9-2: DENTAL VISIT DURING PREGNANCY: DEMOGRAPHC CHARACTERISTICS, RHODE ISLAND, 2009-2011

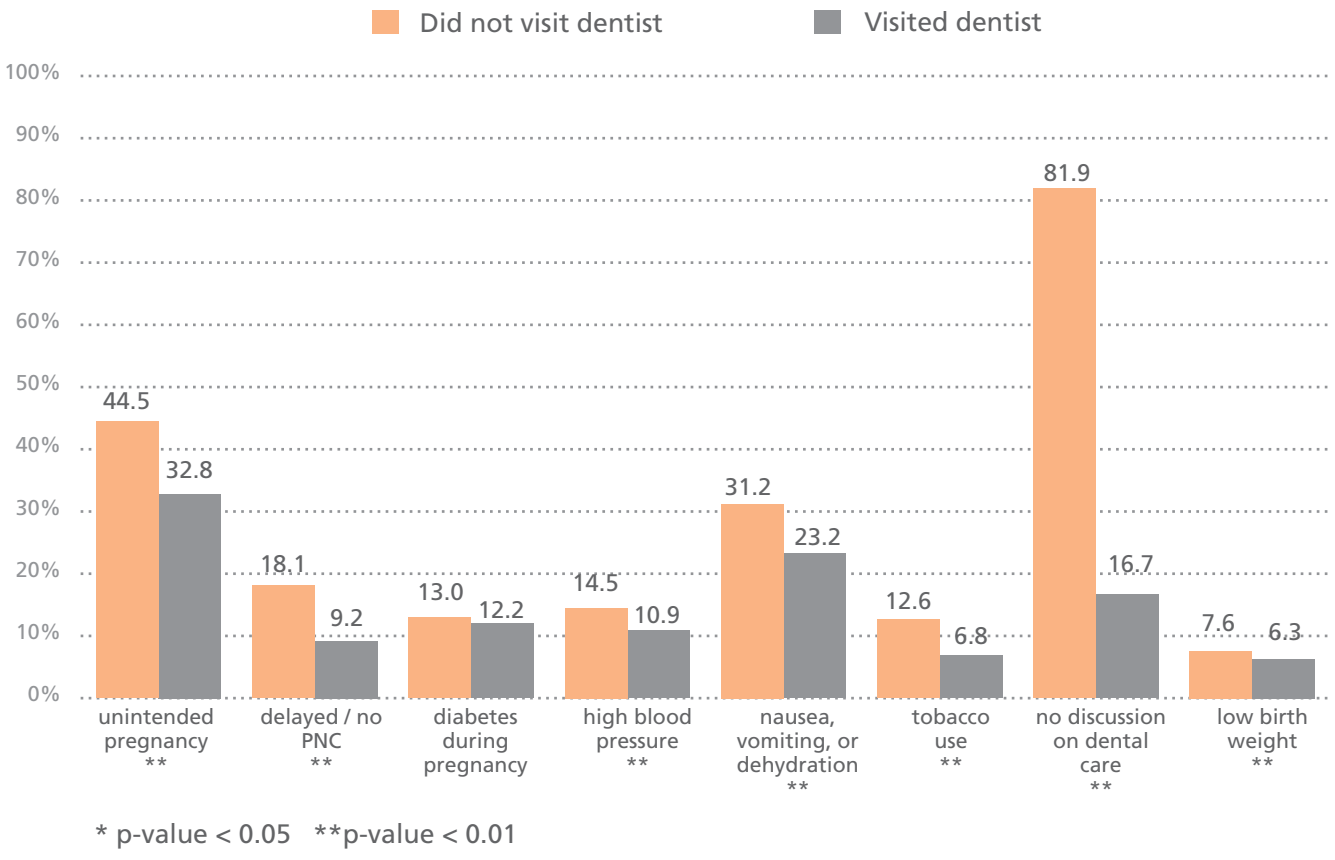


Risk Behaviors and Outcomes by Dental Visit During Pregnancy, 2009-2011

Mothers who did not visit a dentist or dental clinic during pregnancy, compared to mothers who visited, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (44.5% vs. 32.8%).
- They had delayed or no prenatal care (PNC) (18.1% vs. 9.2%).
- They had high blood pressure, hypertension (including pregnancy-induced hypertension), preeclampsia, or toxemia during their pregnancy (14.5% vs. 10.9%).
- They had severe nausea, vomiting, or dehydration during pregnancy (31.2% vs. 23.2%).
- They smoked during their pregnancy (12.6% vs. 6.8%).
- Their dental or healthcare professional did not discuss how to care for teeth and gums (81.9% vs. 16.7%).
- They had a low birth weight baby (7.6% vs. 6.3%).

FIGURE 9-3: RISK BEHAVIORS AND OUTCOMES BY DENTAL VISIT DURING PREGNANCY, RHODE ISLAND, 2009-2011



Oral Health Counseling Compared with Discussions on Other Prenatal Care Topics During Pregnancy, 2009-2011

Only half (52.4%) of Rhode Island pregnant women received oral health counseling from dental and other healthcare professionals during pregnancy. Oral healthcare (how to care for teeth and gums) was not as frequently discussed with women as other prenatal care issues, such as safe medicine uses (88.8%), breastfeeding (84.7%), HIV testing (79.8%), maternal depression (75.6%), alcohol consumption (71.4%), and smoking (69.4%) (See Page 39, Figure 6-5: Discussions with Healthcare Providers during Prenatal Care Visits, Rhode Island, 2009-2011.)

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2. US Department of Health and Human Services, Office of Disease Prevention and Health Promotion Healthy People 2020, Oral Health. Washington, DC: US Department of Health and Human Services. Available at www.healthypeople.gov/2020/topics-objectives/topic/oral-health/objectives

3. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

Related Publication

Oh J, Leonard L, Fuller D, Miller K. Less Than Optimal Oral Health Care during Pregnancy in Rhode Island Women: Oral Health Care as a Part of Prenatal Care. *Medicine & Health / Rhode Island*, Vol. 94 (No. 5):141-143, May 2011. Available from: http://rimed.org/medhealthri/2011-05/2011-05-141.pdf

10. PERINATAL DEPRESSION

Definition and Significance

Depressive symptoms may include a sad mood, loss of interest in many activities, feelings of worthlessness, problems in thinking or concentrating, and changes in eating or sleep.[1] Depression during or after pregnancy (postpartum depression) may affect a woman's ability to perform daily activities or to take care of her infant.[1,2] The Rhode Island PRAMS survey includes a CDC standard question that asks mothers whether their doctor, nurse, or other healthcare worker diagnosed them with **depression at any time during their pregnancy**. The PRAMS survey also asks mothers a question to determine **postpartum depression**, which includes the following 3 sub-questions: "Since your new baby was born, a) how often have you felt down, depressed, or sad?" b) "How often have you felt hopeless?" and c) "How often have you felt slowed down?" Each sub-question includes 5 response categories with the possible score of 1-5: (1) never, (2) rarely, (3) sometimes, (4) often, and (5) always. Mothers who scored at least 10 from these three sub-questions (the highest possible score is 15) were classified as experiencing postpartum depressive symptoms (PDS). Since the question regarding depression during pregnancy was an optional question, the CDC PRAMS Program did not report the data in CPONDER.

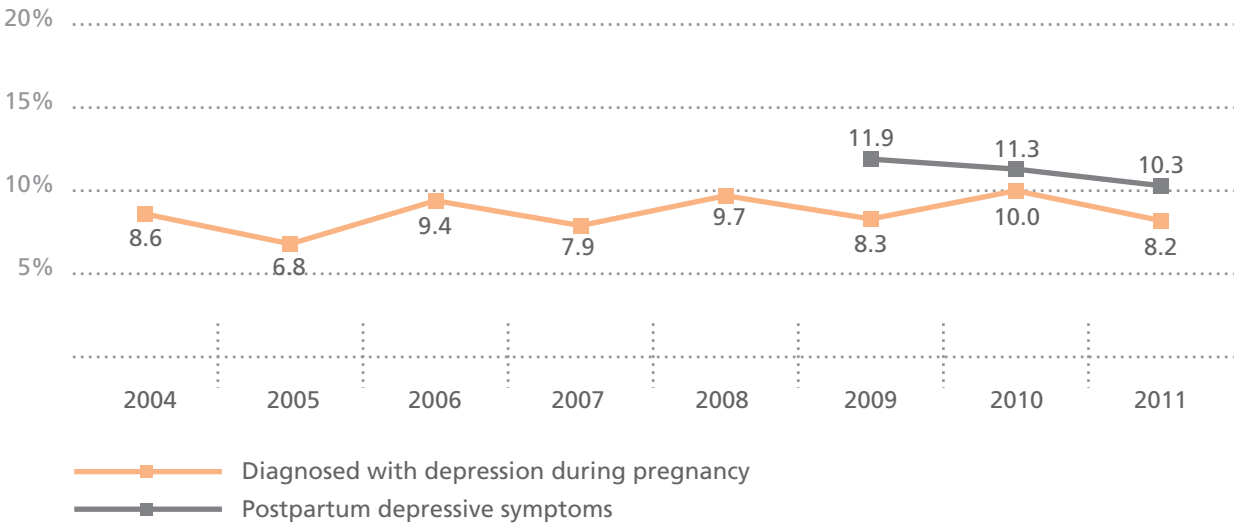
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of mothers with frequent postpartum depressive symptoms (PDS) ranged from 6.9% (best) to 18.0% (worst) in 2011.[3] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 12th (1st is the best) with 10.3% of mothers experiencing frequent PDS.[3]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who were **diagnosed with depression during pregnancy** ranged from 6.8% to 10.0% during 2004-2011. The proportion of Rhode Island mothers who reported **postpartum depressive symptoms** (PDS) ranged from 10.3% to 11.9% during 2009-2011. However, the linear trends for both being diagnosed with depression during pregnancy and reporting postpartum depressive symptoms were not statistically significant. The postpartum depression questions were changed in Phase 6, so the 2004-2008 data are not comparable with the 2009-2011 data and not reported here.

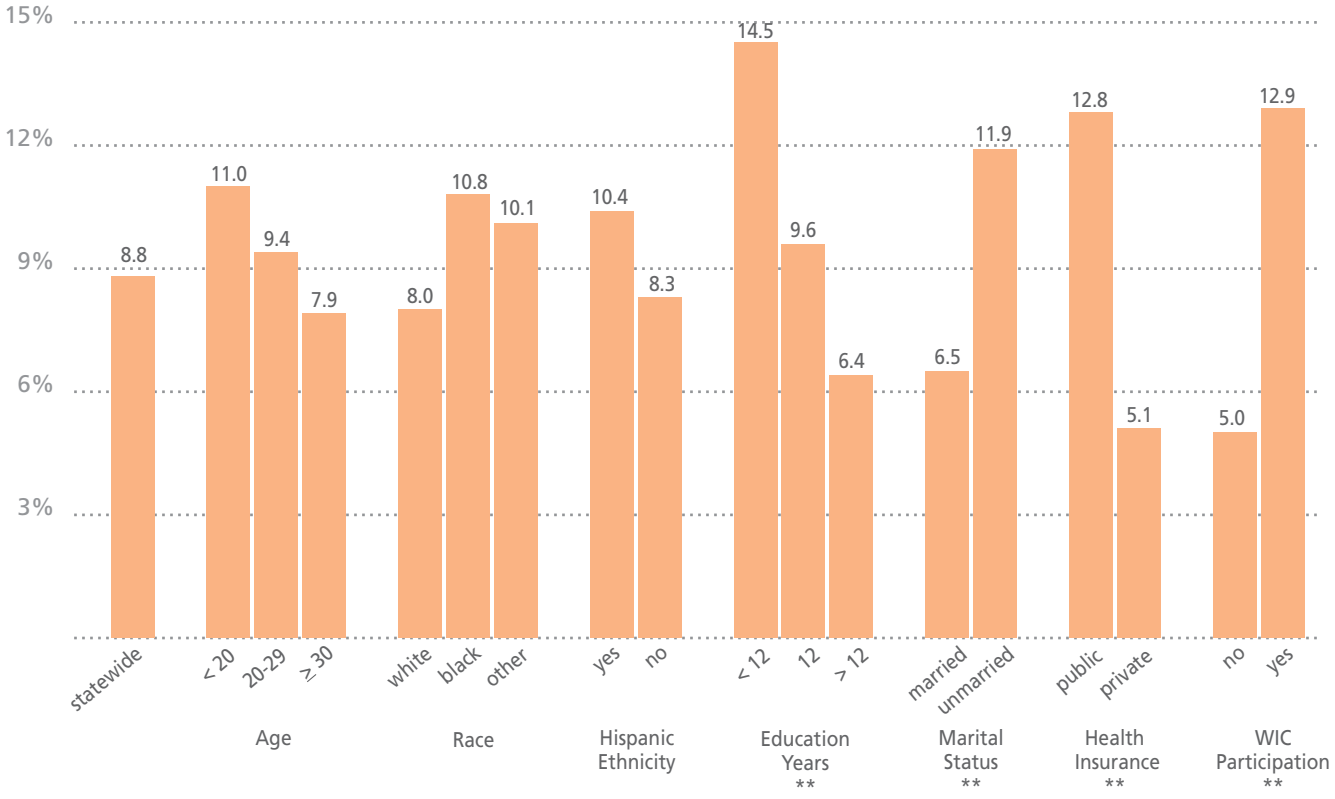
FIGURE 10-1: DEPRESSION DURING AND AFTER PREGNANCY BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics: Depression During Pregnancy, 2009-2011

- The overall prevalence of Rhode Island mothers diagnosed with depression during pregnancy was 8.8%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with being diagnosed with depression during pregnancy included education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were unmarried (11.9%), had less than 12 years of education (14.5%), had public health insurance (12.8%), and participated in the WIC program (12.9%) had a higher prevalence of being diagnosed with depression during pregnancy, compared with their counterparts.

FIGURE 10-2: DIAGNOSED WITH DEPRESSION DURING PREGNANCY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011

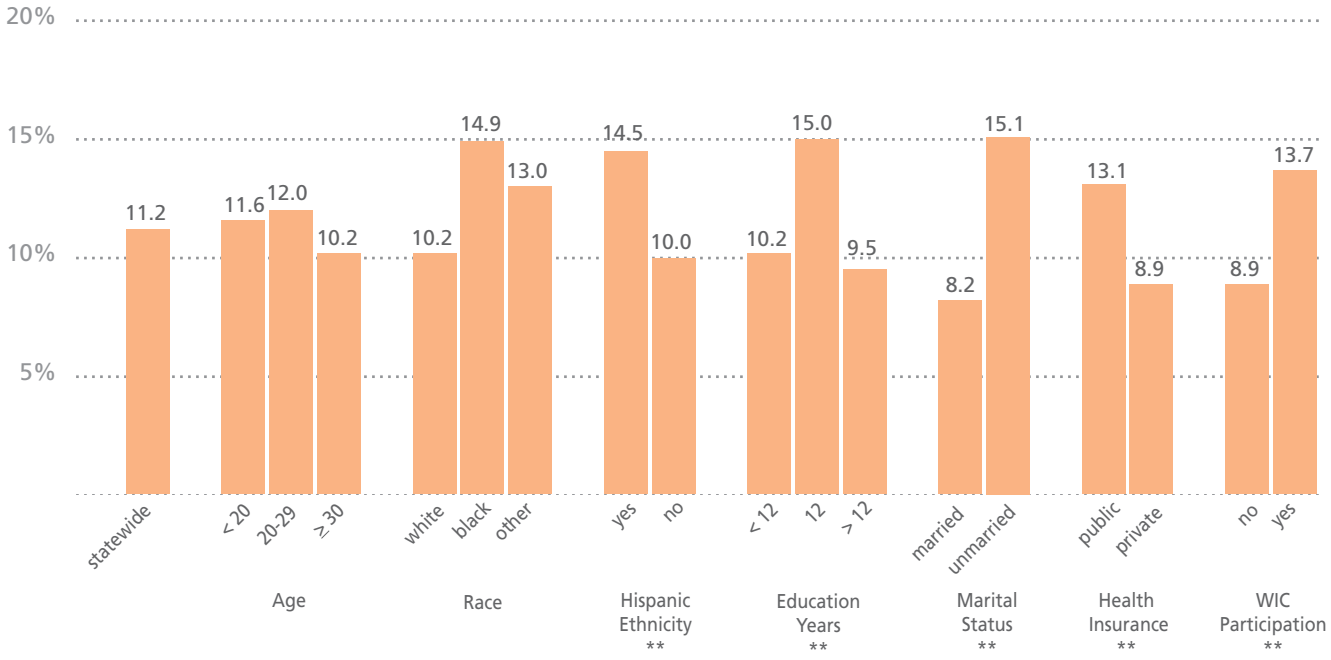


* p-value < 0.05 **p-value < 0.01

Demographic Characteristics: Postpartum Depressive Symptoms, 2009-2011

- The overall prevalence of Rhode Island mothers reporting postpartum depressive symptoms (PDS) was 11.2%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with PDS included ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were Hispanic (14.5%), unmarried (15.1%), had 12 years of education (15.0%), had public health insurance (13.1%), and participated in the WIC program (13.7%) had a higher prevalence of PDS compared with their counterparts.

FIGURE 10-3: POSTPARTUM DEPRESSIVE SYMPTOMS: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011



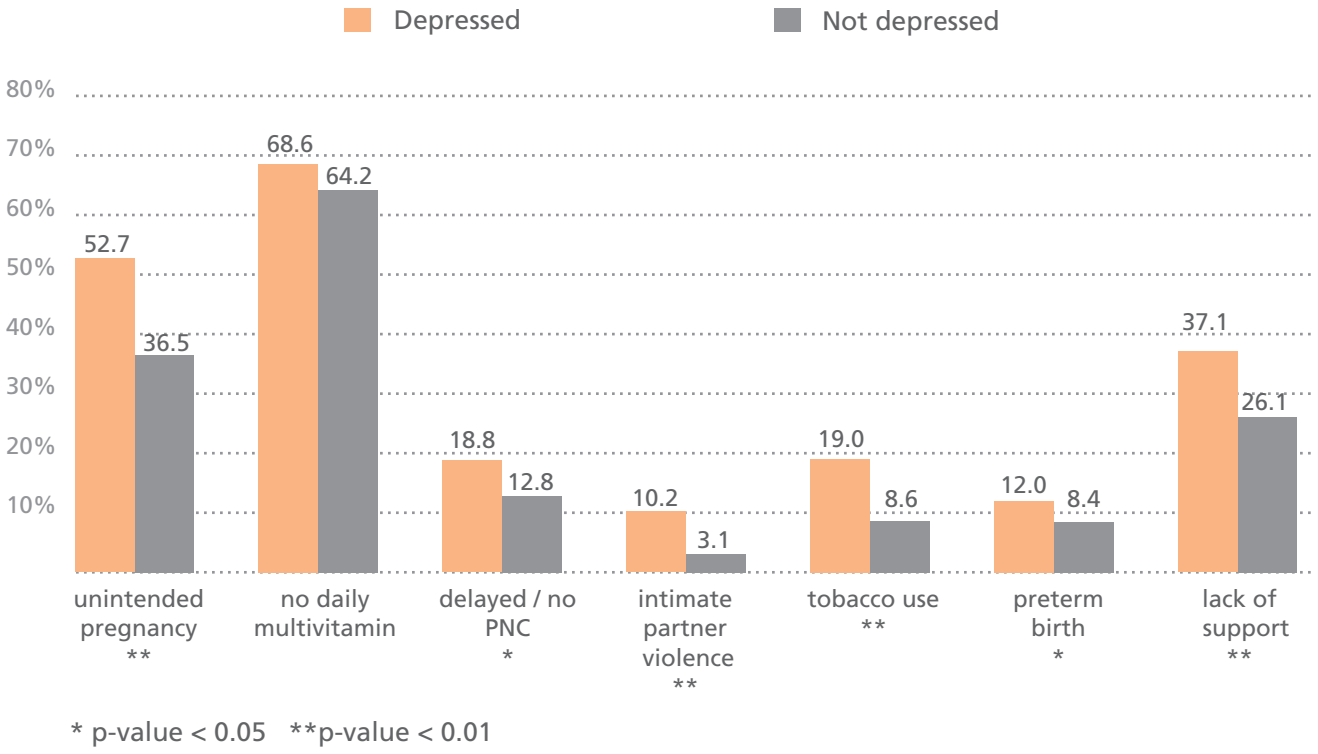
* p-value < 0.05 **p-value < 0.01

Risk Behaviors and Outcomes by Depression During Pregnancy, 2009-2011

Mothers diagnosed with depression during pregnancy, compared to mothers not diagnosed with depression, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (52.7% vs. 36.5%).
- They had delayed or no prenatal care (PNC) (18.8% vs. 12.8%).
- They experienced intimate partner violence during the 12 months before pregnancy or during pregnancy (10.2% vs. 3.1%).
- They smoked during their pregnancy (19.0% vs. 8.6%).
- They had a preterm birth (12.0% vs. 8.4%).
- They lacked some social support since delivery (37.1% vs. 26.1%).

FIGURE 10-4: RISK BEHAVIORS AND OUTCOMES BY DEPRESSION DURING PREGNANCY, RHODE ISLAND, 2009-2011



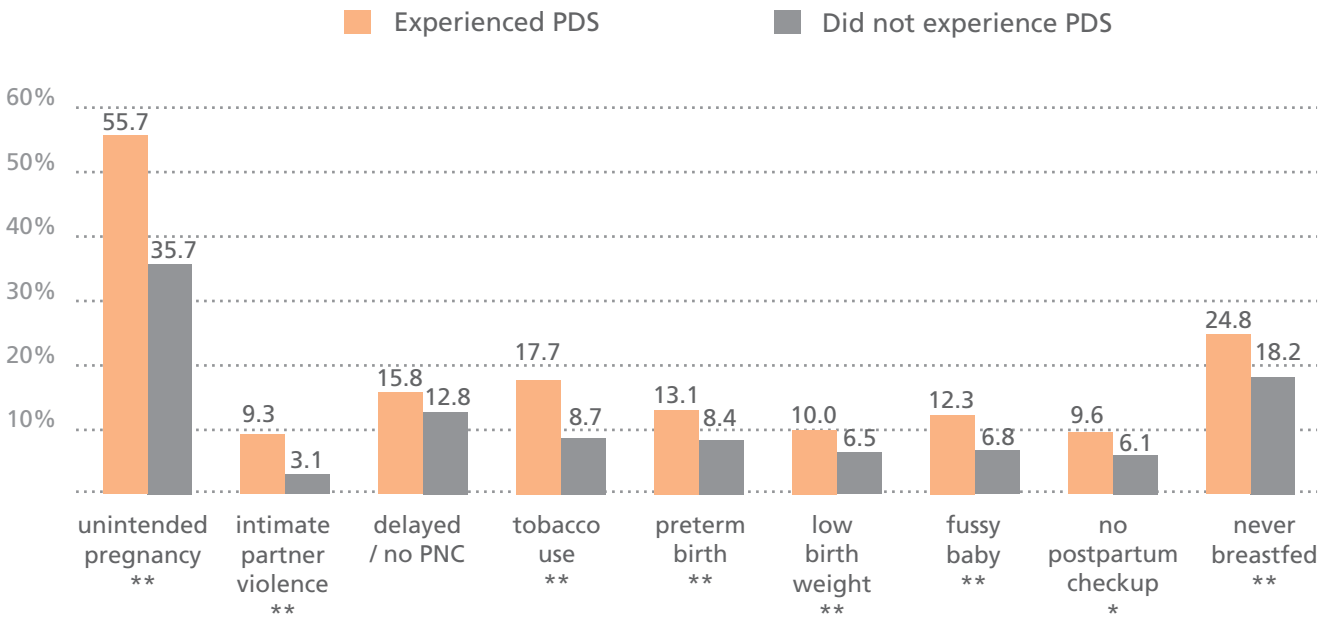
* p-value < 0.05 **p-value < 0.01

Risk Behaviors and Outcomes by Postpartum Depressive Symptoms, 2009-2011

Mothers who experienced postpartum depressive symptoms (PDS), compared to mothers who did not experience PDS, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (55.7% vs. 35.7%).
- They experienced intimate partner violence during the 12 months before pregnancy or during pregnancy (9.3% vs. 3.1%).
- They smoked during their pregnancy (17.7% vs. 8.7%).
- They had a preterm birth (13.1% vs. 8.4%).
- They had a low birth weight baby (10.0% vs. 6.5%).
- They had a fussy baby (12.3% vs. 6.8%). (This question refers to a mother's perception about how easy it is to calm her baby when the baby is crying or fussing.)
- They did not have a postpartum checkup since the new baby was born (9.6% vs. 6.1%).
- They never breastfed their baby (24.8% vs. 18.2%).

FIGURE 10-5: RISK BEHAVIORS AND OUTCOMES BY POSTPARTUM DEPRESSIVE SYMPTOMS (PDS), RHODE ISLAND, 2009-2011



*p-value < 0.05 ** p-value < 0.01

References

1. Centers for Disease Control and Prevention (CDC). Reproductive Health, Depression Among Women of Reproductive Age. Available from: www.cdc.gov/reproductivehealth/Depression/index.htm

2. Centers for Disease Control and Prevention (CDC). Reproductive Health, Pregnancy Complications. Available from: www.cdc.gov/reproductivehealth/MaternalInfantHealth/PregComplications.htm

3. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

Related Publication

Viner-Brown S, Kim H, Cain R. Perinatal Depression in Rhode Island. *Medicine & Health / Rhode Island*, Vol. 90 (No. 10): 328-329, October 2007.

11. LOW BIRTH WEIGHT

Definition and Significance

Babies born weighing less than 5 pounds 8 ounces (2,500 grams) are considered low birth weight.[1,2] Low birth weight is a major determinant of mortality, morbidity, and disability in infancy and childhood.[2,3] It also has a long-term effect on health outcomes in adult life.[3] Low birth weight affects 1 in every 12 babies in the United States.[1] Two main reasons for low birth weight babies are premature birth and fetal growth restriction.[1] The birth weight of an infant in the PRAMS yearly file is collected from the state's Office of Vital Records and used to determine the low birth weight status of the infant.[d]

Healthy People 2020 Target

MICH-8.1: Reduce low birth weight (LBW) to 7.8% of live births.[4]

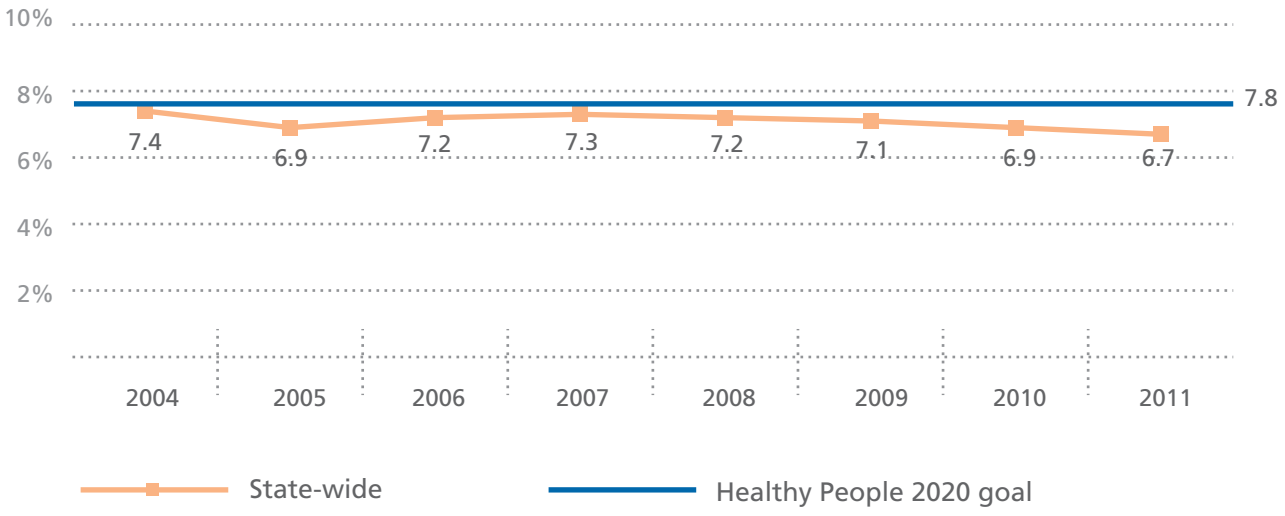
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of mothers with a low birth weight baby ranged from 4.5% (best) to 8.6% (worst) in 2011.[5] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 9th (1st is the best) with 6.7% of mothers having a low birth weight baby.[5]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who had a low birth weight baby decreased significantly from 7.4% in 2004 to 6.7% in 2011 (p-value less than 0.001). The Healthy People 2020 goal of reducing low birth weight to 7.8% of live births[4] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

FIGURE 11-1: MOTHERS WITH A LOW BIRTH WEIGHT BABY BY YEAR RHODE ISLAND, 2004-2011

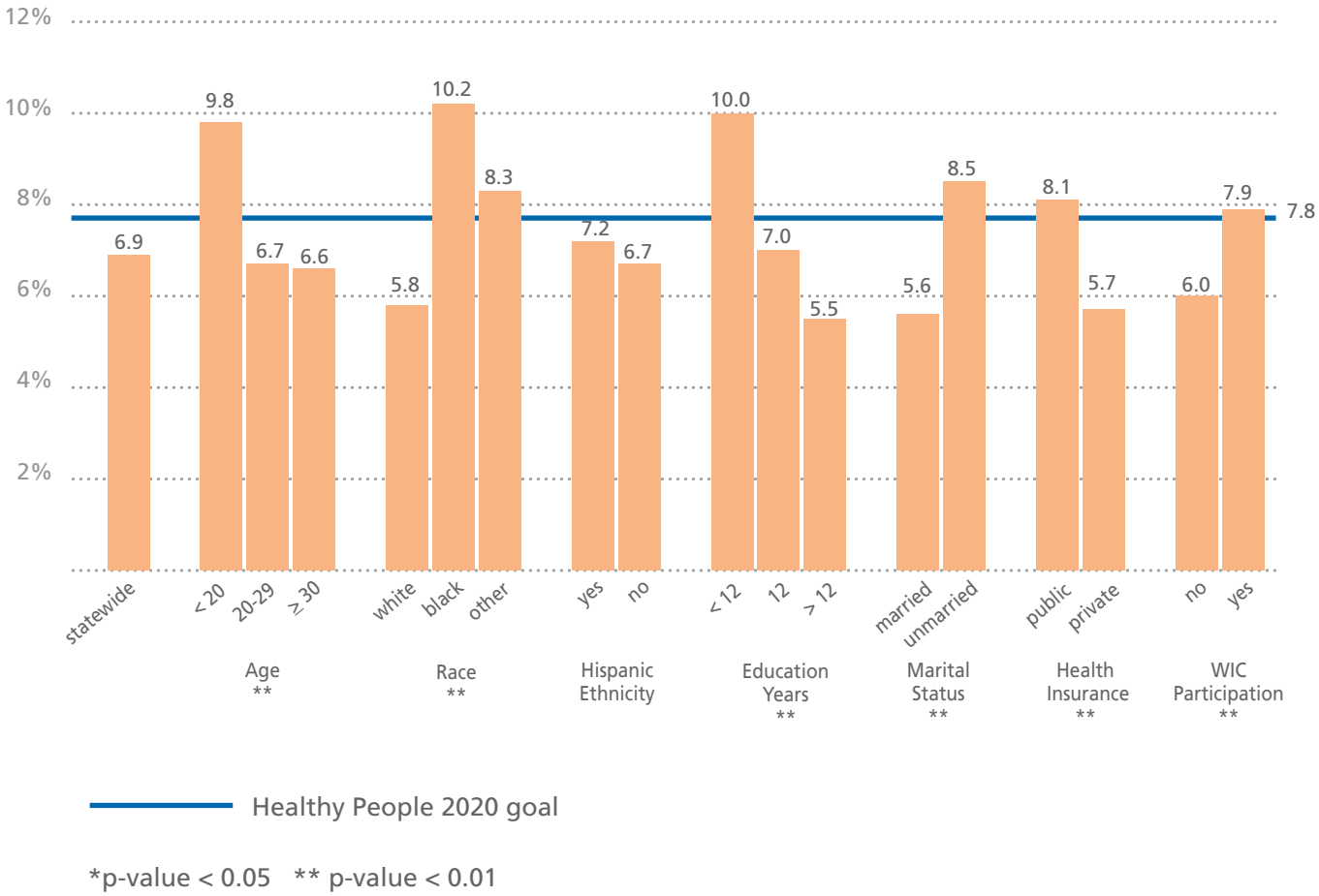


[d] The data shown here reflect the proportion of mothers with a low birth weight baby, which differs from the proportion of low birth weight babies reported in the Rhode Island Vital Records data. For example, a woman who delivers multiples (twins, triplets) is counted once in the PRAMS data file, and information on low birth weight and other measures is collected for only one of her babies. In Vital Records, all individual infants are included.

Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers having a low birth weight baby was 6.9%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with having a low birth weight baby included age, race, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were younger than 20 years of age (9.8%), black (10.2%), unmarried (8.5%), had less than 12 years of education (10.0%), had public health insurance (8.1%), and participated in the WIC program (7.9%) had a higher prevalence of having a low birth weight baby, compared with their counterparts.

FIGURE 11-2: MOTHERS WITH A LOW BIRTH WEIGHT BABY: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011



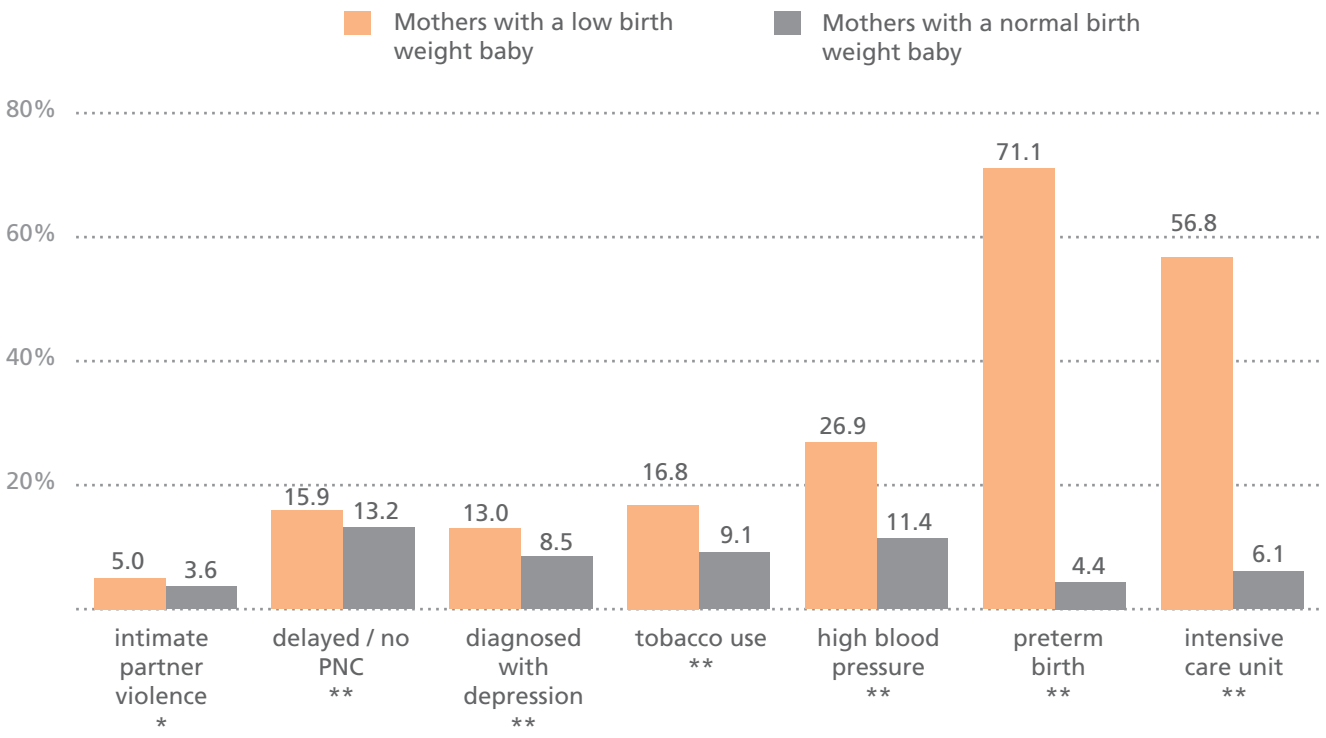
*p-value < 0.05 ** p-value < 0.01

Risk Behaviors and Outcomes by Birth Weight Status, 2009-2011

Mothers who had a low birth weight baby, compared to mothers who had a normal birth weight baby, were significantly (p-value less than 0.05) more likely to report that:

- They experienced intimate partner violence during the 12 months before pregnancy or during pregnancy (5.0% vs. 3.6%).
- They had delayed or no prenatal care (PNC) (15.9% vs. 13.2%).
- They were diagnosed with depression during their pregnancy (13.0% vs. 8.5%).
- They smoked during their pregnancy (16.8% vs. 9.1%).
- They had high blood pressure, hypertension (including pregnancy-induced hypertension), preeclampsia, or toxemia during their pregnancy (26.9% vs. 11.4%).
- They had a preterm birth (71.1% vs. 4.4%).
- Their baby was put in an intensive care unit after the baby was born (56.8% vs. 6.1%).

FIGURE 11-3: RISK BEHAVIORS AND OUTCOMES BY BIRTH WEIGHT STATUS RHODE ISLAND, 2009-2011



*p-value < 0.05 ** p-value < 0.01

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5. Centers for Disease Control and Prevention (CDC), CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

12. PRETERM BIRTH

Definition and Significance

Preterm birth is the birth of an infant that occurs before 37 weeks of gestation.[1,2] Preterm babies are at an increased risk of death in the first few days of life, and of several adverse health outcomes including visual and hearing impairments, and intellectual and learning disabilities.[1,2] The Centers for Disease Control and Prevention (CDC) has reported that preterm-related deaths account for more than one third of all infant deaths during the first year of life.[1] The most significant risk factor for a preterm birth is a previous preterm pregnancy.[1] In the United States, preterm birth occurs in about 12 percent of all pregnancies.[2] The PRAMS dataset includes the physician's estimate of gestational age of the infant, which is collected from the state's Office of Vital Records and used to determine preterm birth in this data book.[e]

Healthy People 2020 Target

MICH-9.1: Reduce preterm births to 11.4% of live births.[3]

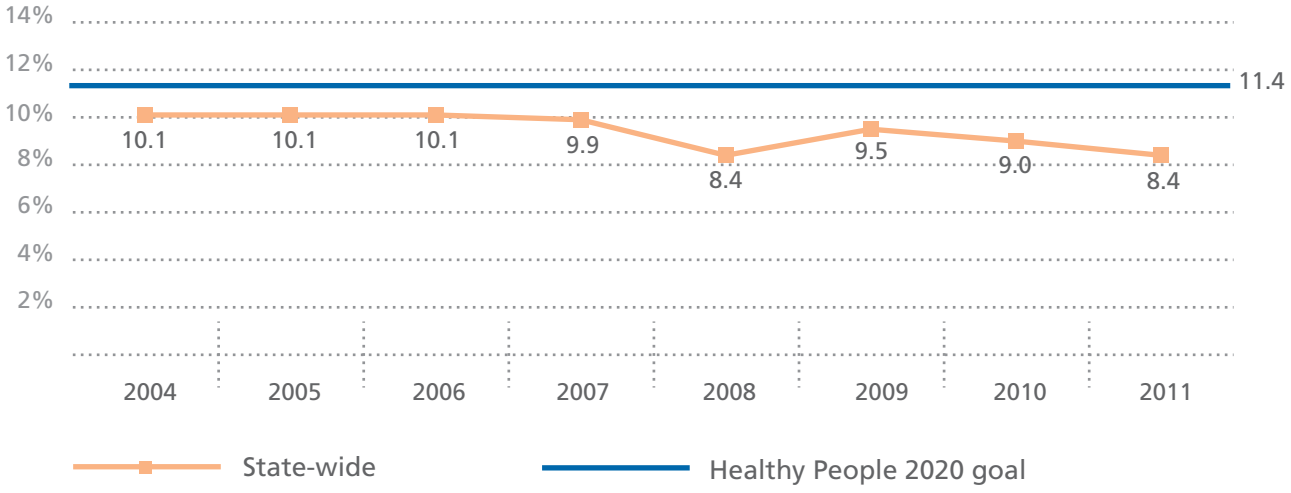
Rhode Island Compared to Other PRAMS Sites, 2011

Preterm birth data are not available in the PRAMS CPONDER report.[4]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who had a preterm birth decreased significantly from 10.1% in 2004 to 8.4% in 2011 (p-value less than 0.05). The Healthy People 2020 goal of reducing preterm births to 11.4% of live births[4] has been achieved since 2002, when Rhode Island started to collect the PRAMS data.

FIGURE 12-1: MOTHERS WITH A PRETERM BIRTH BY YEAR RHODE ISLAND, 2004-2011



[e] The data shown here reflect the proportion of mothers with a preterm birth, which differs from the proportion of preterm babies reported in the Rhode Island Vital Records data. For example, a woman who delivers multiples (twins, triplets) is counted once in the PRAMS data file, and information on prematurity and other measures is collected for only one of her babies. In Vital Records, all individual infants are included.

Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers having a preterm birth was 9.0%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with having a preterm birth included education level, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who had less than 12 years of education (11.8%), had public health insurance (10.0%), and participated in the WIC program (10.0%) had a higher prevalence of having a preterm birth, compared with their counterparts.

FIGURE 12-2: MOTHERS WITH A PRETERM BIRTH: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011

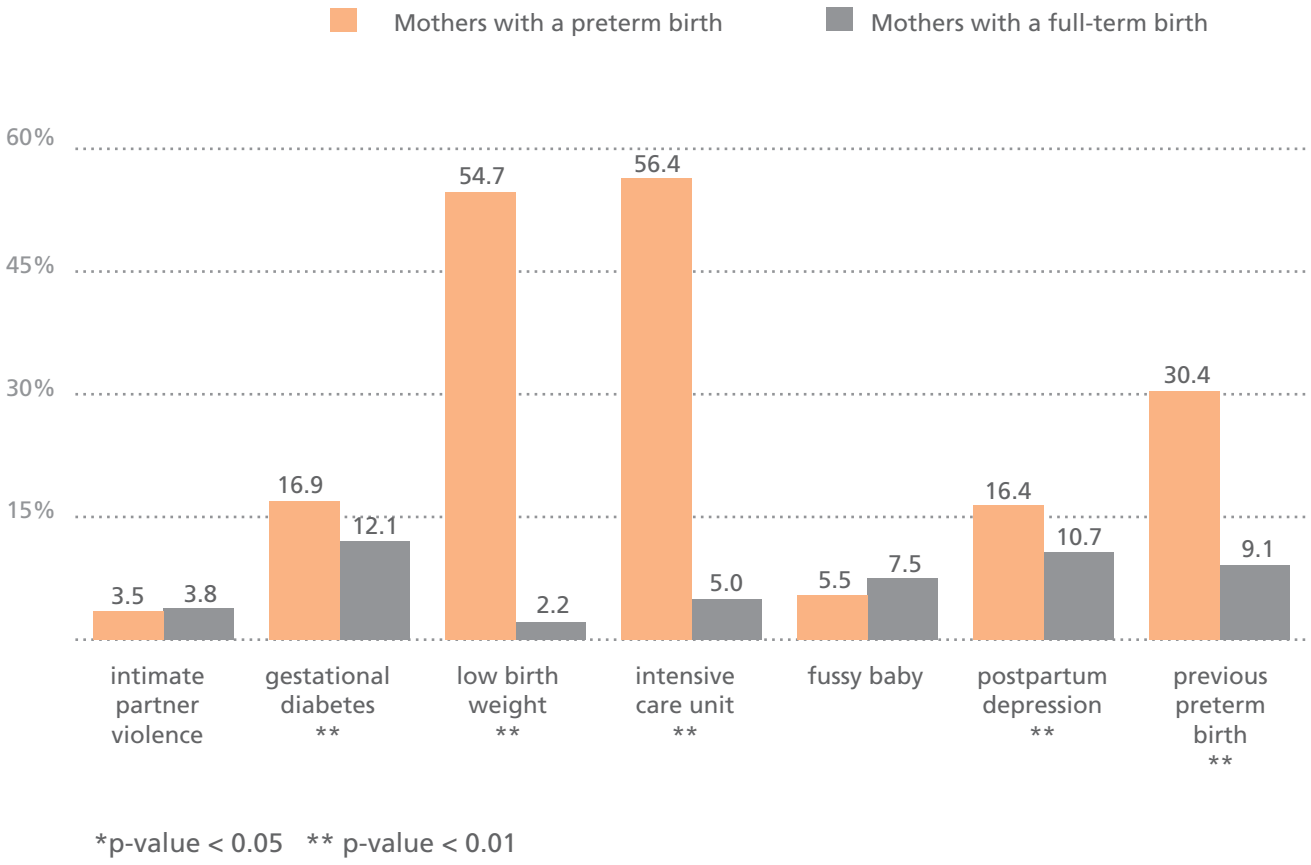
*p-value < 0.05 ** p-value < 0.01

Risk Behaviors and Outcomes by Birth Term Status, 2009-2011

Mothers who had a preterm birth, compared to mothers who had a full-term birth, were significantly (p-value less than 0.05) more likely to report that:

- They had high blood sugar (diabetes) that started during this pregnancy (gestational diabetes) (16.9% vs. 12.1%).
- They had a low birth weight baby (54.7% vs. 2.2%).
- Their baby was put in an intensive care unit after the baby was born (56.4% vs. 5.0%).
- They had postpartum depressive symptoms (16.4% vs. 10.7%).
- Their previous baby born just before this new one was a preterm birth (30.4% vs. 9.1%).

FIGURE 12-3: RISK BEHAVIORS AND OUTCOMES BY BIRTH TERM STATUS RHODE ISLAND, 2009-2011



*p-value < 0.05 ** p-value < 0.01

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4. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

13. BREASTFEEDING

Definition and Significance

The World Health Organization (WHO) recommends exclusive breastfeeding up to 6 months of age, with continued breastfeeding along with appropriate complementary foods up to 2 years of age or beyond.[1] It is beneficial to both mothers and their babies.[2,3] Breastfeeding reduces the risk of babies getting various infectious diseases, including ear infections and diarrhea.[3] It also reduces the risk of overweight and obesity in children. Mothers who breastfeed their babies return to their pre-pregnancy weight faster, and breastfeeding also decreases the risk of breast and ovarian cancers.[3] Moreover, breastfeeding mothers experience less postpartum bleeding.[3] According to the Centers for Disease Control and Prevention (CDC), among infants born in 2008 in the United States, 74.6% were ever breastfed, and 44.3% were being still breastfed at six months of age.[4] The PRAMS survey asks mothers whether they ever breastfed or pumped breast milk to feed their baby after delivery. It also asks mothers about whether they were still breastfeeding at the time of the survey and about the barriers to breastfeeding.

Healthy People 2020 Target

MICH-21.1: Increase the proportion of infants who are ever breastfed to 81.9%.[5]

MICH-21.2: Increase the proportion of infants who are breastfed at 6 months to 60.6%.[5]

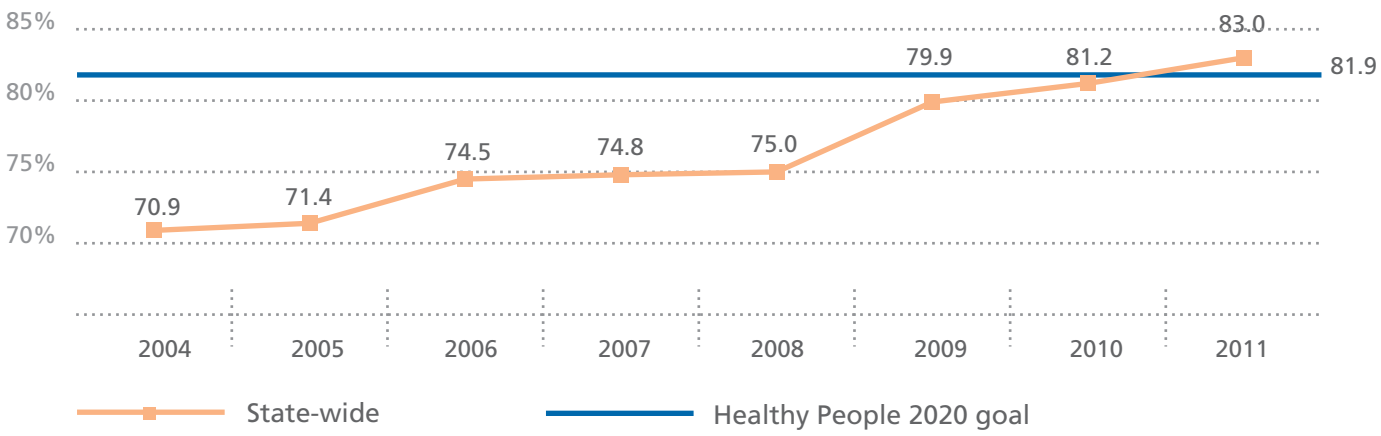
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of mothers who ever breastfed or pumped breast milk to feed their new baby after delivery ranged from 95.6% (best) to 63.1% (worst) in 2011.[6] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 16th (1st is the best) with 83.0% of mothers having ever breastfed.[6]

Prevalence and Trends: Ever Breastfed, 2004-2011

The proportion of Rhode Island mothers who ever breastfed or pumped breast milk to feed their new baby after delivery increased significantly from 70.9% in 2004 to 83.0% in 2011 (p-value less than 0.001). The Healthy People 2020 goal of increasing the proportion of infants who are ever breastfed to 81.9%[5] was achieved in 2011.

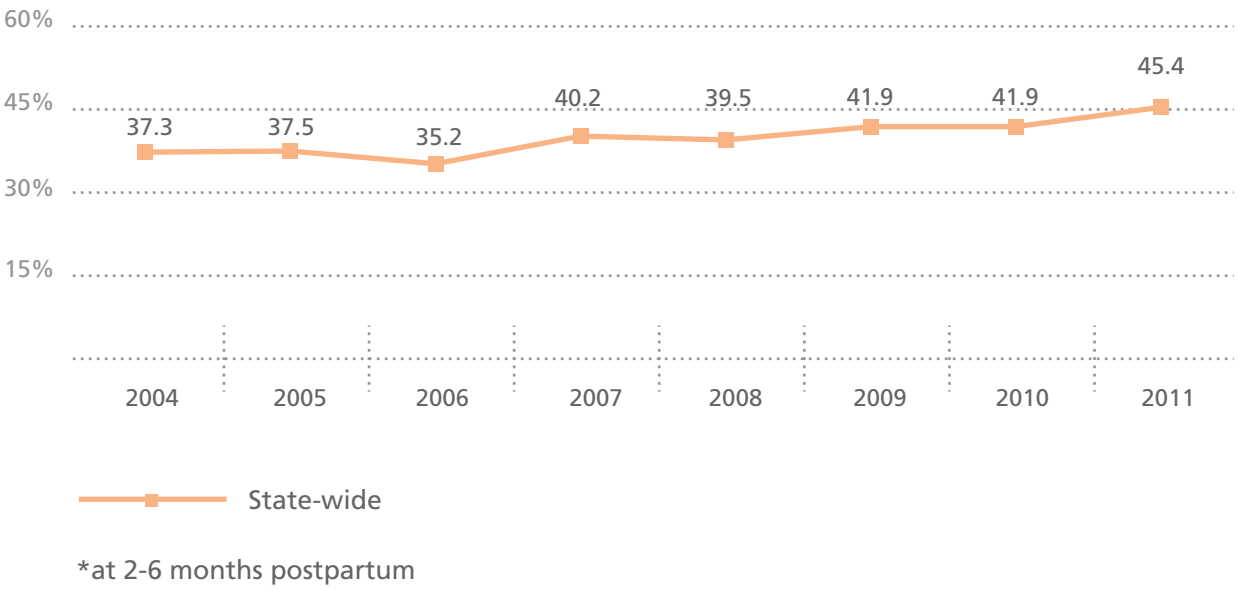
FIGURE 13-1: EVER BREASTFED BY YEAR, RHODE ISLAND, 2004-2011



Prevalence and Trends: Current Breastfeeding, 2004-2011

The proportion of Rhode Island mothers who were still breastfeeding or pumping breast milk for their new baby at the time of the survey (usually two to six months postpartum) increased significantly from 37.3% in 2004 to 45.4% in 2011 (p-value less than 0.001). (Note: The Healthy People 2020 objective of MICH-21.2 has a different time frame from our measurement, and the data in Figure 13-2 should not be compared with it.)

FIGURE 13-2: CURRENT BREASTFEEDING* BY YEAR, RHODE ISLAND, 2004-2011

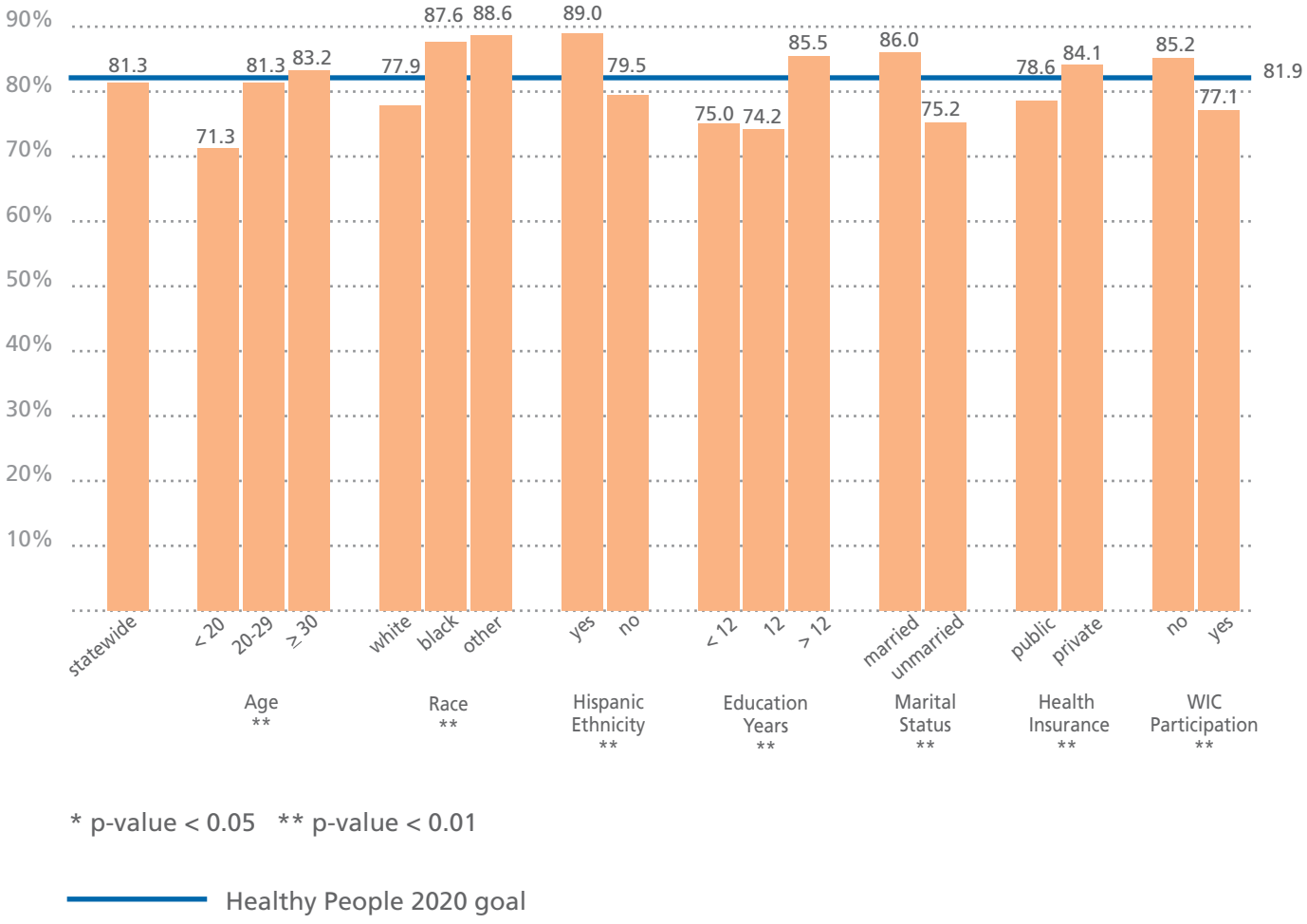


*at 2-6 months postpartum

Demographic Characteristics: Ever Breastfed, 2009-2011

- The overall prevalence of Rhode Island mothers who ever breastfed or pumped breast milk to feed their new baby was 81.3%.
- Demographic characteristics that were significantly (p-value less than 0.05) associated with ever breastfeeding included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were younger than 20 years of age (71.3%), white (77.9%), non-Hispanic (79.5%), unmarried (75.2%), had 12 years of education (74.2%), had public health insurance (78.6%), and participated in the WIC program (77.1%) had a lower prevalence of ever breastfeeding, compared with their counterparts.

FIGURE 13-3: EVER BREASTFED: DEMOGRAPHIC CHARACTERISTICS RHODE ISLAND, 2009-2011



* p-value < 0.05 ** p-value < 0.01

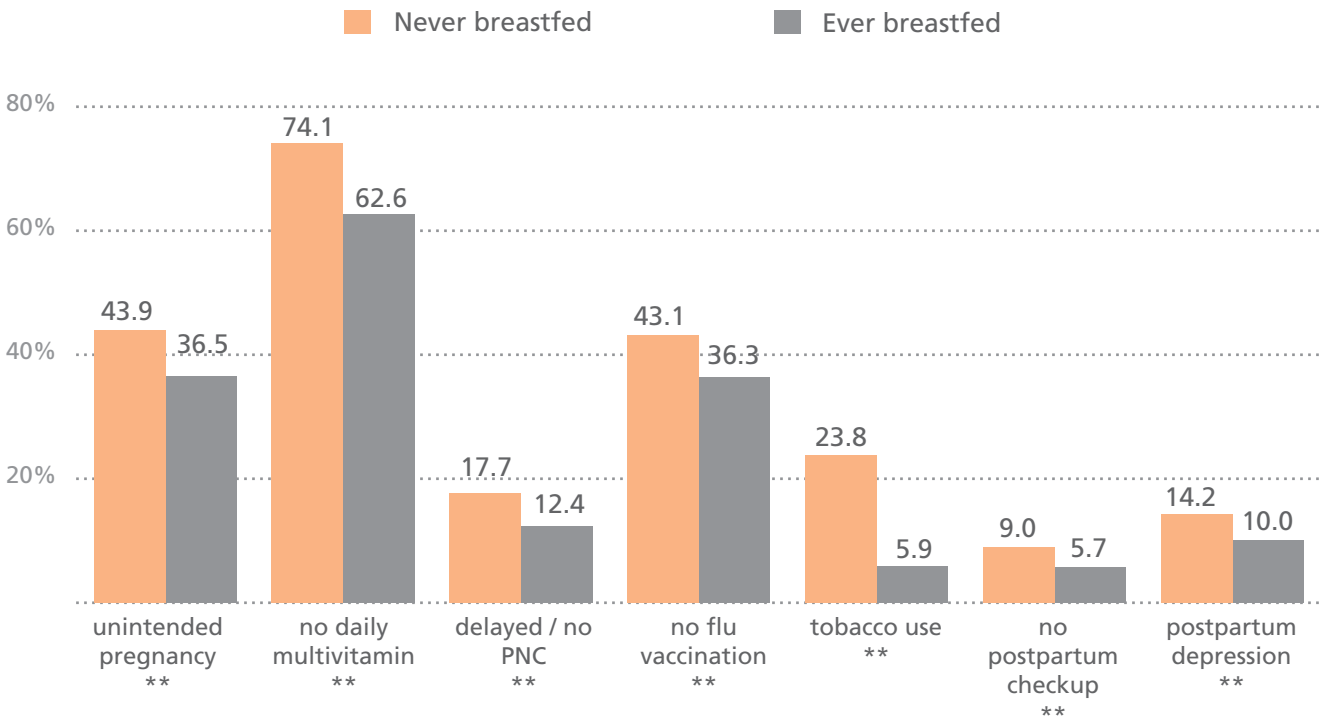
Healthy People 2020 goal

Risk Behaviors and Outcomes by Breastfeeding Status, 2009-2011

Mothers who never breastfed their new baby, compared to mothers who ever breastfed, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (43.9% vs. 36.5%).
- They did not take multivitamins daily prior to pregnancy (74.1% vs. 62.6%).
- They had delayed or no prenatal care (PNC) (17.7% vs. 12.4%).
- They did not get a flu vaccination during their pregnancy (43.1% vs. 36.3%).
- They smoked during their pregnancy (23.8% vs. 5.9%).
- They did not have a postpartum checkup since the new baby was born (9.0% vs. 5.7%).
- They had postpartum depressive symptoms (14.2% vs. 10.0%).

FIGURE 13-4: RISK BEHAVIORS AND OUTCOMES BY BREASTFEEDING STATUS RHODE ISLAND, 2009-2011

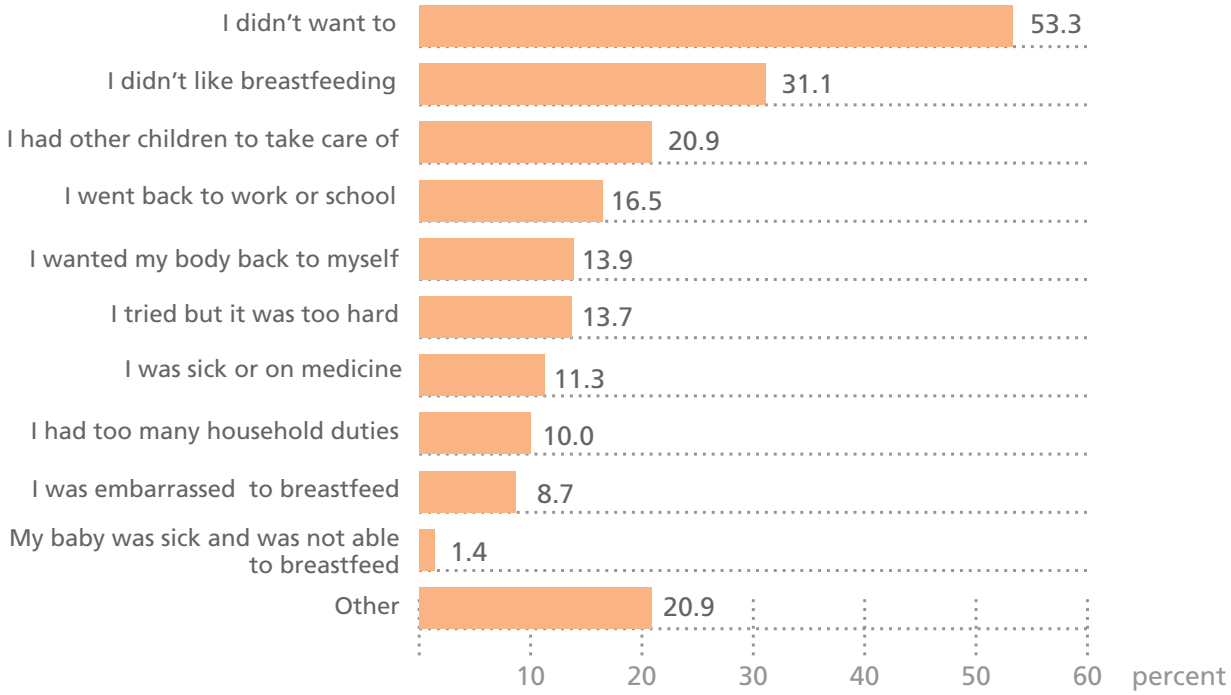


* p-value < 0.05 ** p-value < 0.01

Reasons for Not Breastfeeding, 2009-2011

The PRAMS survey asks a question about barriers to breastfeeding, which allows the mothers to select all barriers that applied. Among mothers who never breastfed, 53.3% reported that they did not want to breastfeed; 31.1% reported that they did not like breastfeeding; and 20.9% reported that they had other children to take care of.

FIGURE 13-5: REASONS FOR NOT BREASTFEEDING, RHODE ISLAND, 2009-2011



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5. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2020, Maternal, Infant, and Child Health. Available from: www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives
6. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

14. INFANT SLEEP POSITION

Definition and Significance

Positioning a baby to sleep on the back (supine) has been recommended by the American Academy of Pediatrics (AAP) since 1996 to reduce the risk of Sudden Unexpected Infant Death (SUID).[1] SUID is the leading cause of death among infants aged 1-12 months.[2] It is also the third leading cause overall of infant mortality in the United States.[2] The PRAMS survey asks mothers about which position they most often lay their baby down to sleep. The response options include side, back, and stomach, with some mothers selecting more than one option. Mothers who selected more than one option (about 4.4% of all respondents) were excluded from the analyses in this edition. However, since those mothers selecting more than one option were included for the analyses in the previous edition, the prevalence and trends of infant sleep position cannot be compared between the two editions.

Healthy People 2020 Target

MICH-20: Increase the proportion of infants who are put to sleep on their backs to 75.9%.[3]

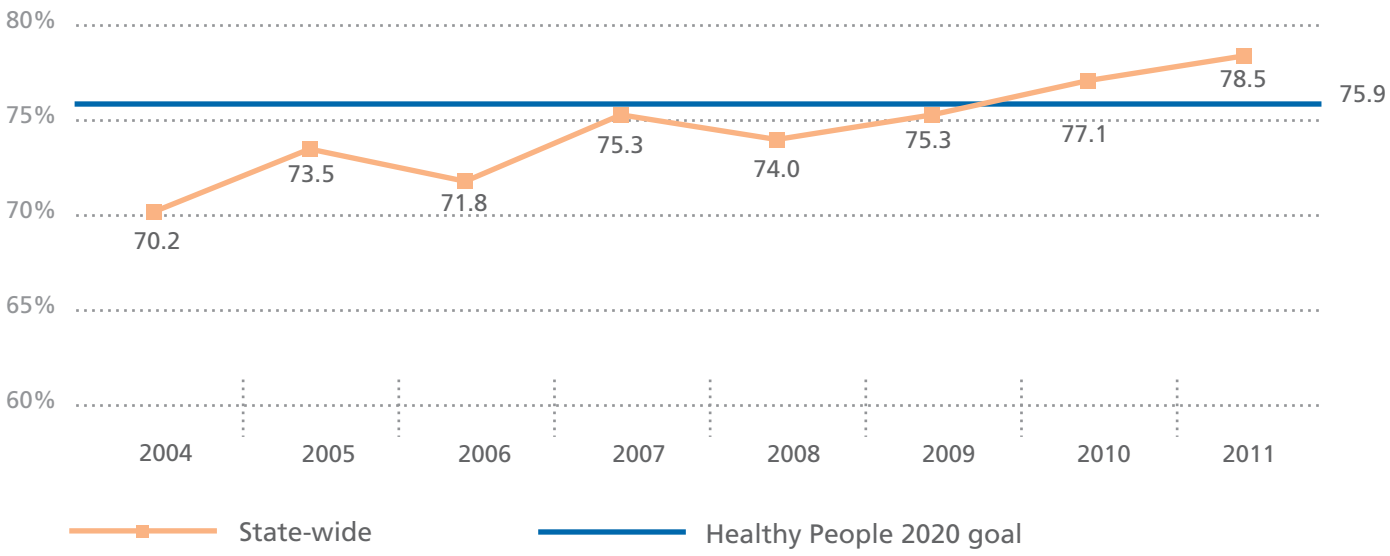
Rhode Island Compared to Other PRAMS Sites, 2011

According to the PRAMS CPONDER report, the prevalence of mothers placing their infants to sleep on their backs ranged from 85.9% (best) to 62.1% (worst) in 2011.[4] Of the 24 PRAMS sites reported in the CPONDER, Rhode Island ranked 16th (1st is the best) with 78.5% of mothers placing their infants to sleep on their backs.[4]

Prevalence and Trends, 2004-2011

The proportion of Rhode Island mothers who placed their infants to sleep only on their backs increased significantly from 70.2% in 2004 to 78.5% in 2011 (p-value less than 0.001). The Healthy People 2020 goal of increasing the proportion of infants who are put to sleep on their backs to 75.9%[3] has been achieved since 2010.

FIGURE 14-1: INFANTS LAID TO SLEEP ON THEIR BACKS BY YEAR RHODE ISLAND, 2004-2011



Demographic Characteristics, 2009-2011

- The overall prevalence of Rhode Island mothers placing their infants to sleep on their backs was 76.9%.
- Demographic characteristics that were significantly (p-value less than 0.001) associated with placing infants to sleep on their backs included age, race, ethnicity, education level, marital status, health insurance type, and participation in the Women, Infants, and Children (WIC) program.
  - Mothers who were aged 30 or older (82.5%), white (82.3%), non-Hispanic (79.9%), married (82.4%), had more than 12 years of education (81.8%), had private health insurance (83.1%), and did not participate in the WIC program (83.0%) had a higher prevalence of placing infants to sleep on their backs compared with their counterparts.

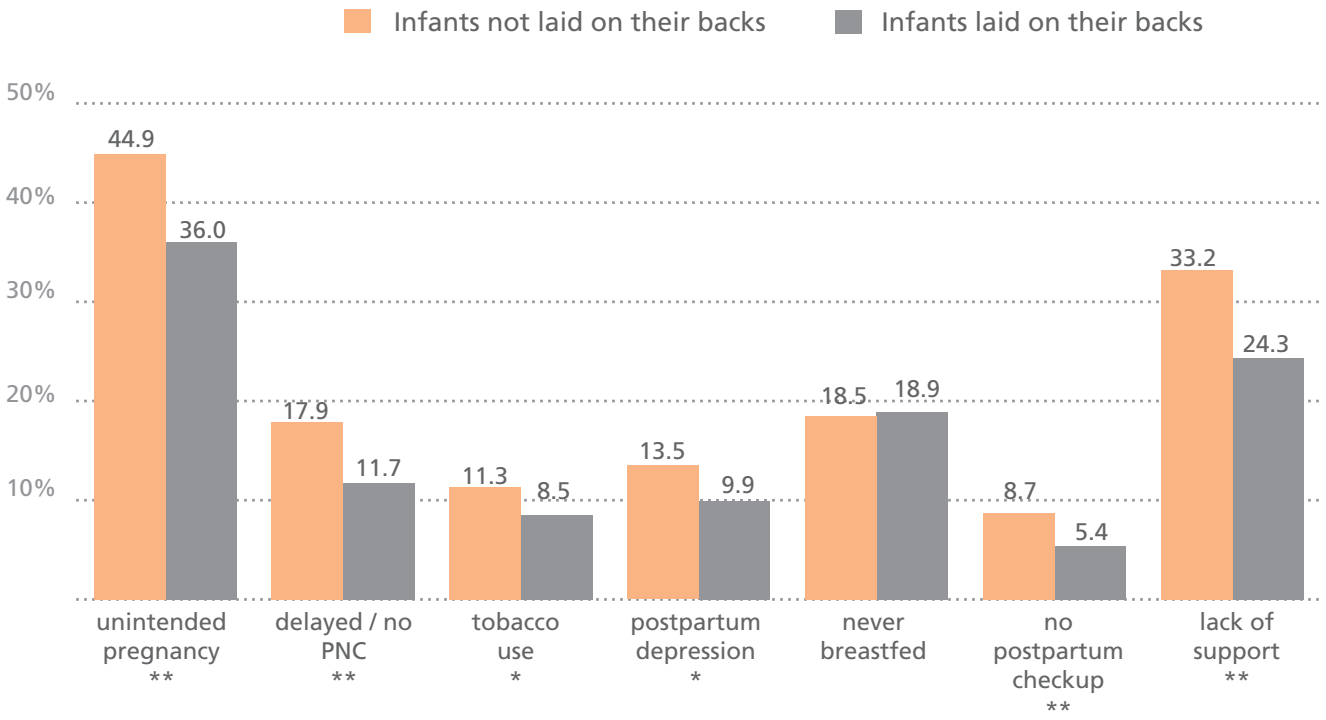
FIGURE 14-2: INFANTS LAID TO SLEEP ON THEIR BACKS: DEMOGRAPHIC CHARACTERISTICS, RHODE ISLAND, 2009-2011

Risk Behaviors and Outcomes by Infant Sleep Position, 2009-2011

Mothers who did not place their infants to sleep on their backs, compared to mothers who placed their infants to sleep on their backs, were significantly (p-value less than 0.05) more likely to report that:

- Their pregnancy was unintended (44.9% vs. 36.0%).
- They had delayed or no prenatal care (PNC) (17.9% vs. 11.7%).
- They smoked during their pregnancy (11.3% vs. 8.5%).
- They had postpartum depressive symptoms (13.5% vs. 9.9%).
- They did not have a postpartum checkup since the new baby was born (8.7% vs. 5.4%).
- They lacked some social support since delivery (33.2% vs. 24.3%).

FIGURE 14-3: RISK BEHAVIORS AND OUTCOMES BY INFANT SLEEP POSITION RHODE ISLAND, 2009-2011



* p-value < 0.05 ** p-value < 0.01

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4. Centers for Disease Control and Prevention (CDC). CPONDER—CDC's PRAMS On-line Data for Epidemiologic Research. Available from: http://apps.nccd.cdc.gov/cPONDER

Related Publication

Kim H, Cain R, Viner-Brown S, Campagna K, Roach C. Racial Disparities in Infant Sleep Position in Rhode Island. *Rhode Island Medical Journal*, 53-55, March 2014. Available from: www.rimed.org/rimedicaljournal/2014/03/2014-03-53-health-sleep-position.pdf

APPENDICES

A. Rhode Island PRAMS Population, 2011

	POPULATION*		PRAMS SURVEY		
CHARACTERISTIC	SIZE	PERCENT	RESPONDENTS	WEIGHTED PERCENT	95% CI
Total	10,469	100	1,252	100	---
Age, Years					
Younger than 20	823	7.9	88	7.5	5.8-9.5
20-24	2,151	20.5	241	19.8	17.4-22.6
25-34	5,789	55.3	695	55.9	52.8-59.1
35 or older	1,705	16.3	228	16.8	14.6-19.2
Race / Ethnicity					
White Non-Hispanic	6,158	60.1	757	63.4	60.7-66.1
Black Non-Hispanic	689	6.7	84	6.0	4.7-7.7
Hispanic	2,374	23.2	251	21.2	18.9-23.8
American Indian	51	0.5	6	0.3	0.1-1.1
Asian / Pacific Islander	477	4.7	70	4.5	3.4-6.0
Other / Mixed	504	4.9	57	4.5	3.3-6.0
Hispanic Ethnicity					
Yes	2,374	23.2	251	21.2	18.9-23.7
No	7,873	76.8	982	78.8	76.3-81.1
Education, Years					
Less than 12	1,551	15.9	170	14.7	12.4-17.2
12	2,614	26.8	301	25.8	23.0-28.9
Greater than 12	5,574	57.2	698	59.5	56.3-62.6
Marital Status					
Married	5,735	54.8	730	56.4	53.2-59.4
Unmarried	4,734	45.2	522	43.6	40.6-46.8
Birth Weight					
Low Birth Weight (< 2500 g)	700	6.7	461	6.7	6.6-6.8
Normal Birth Weight (≥ 2500 g)	9,768	93.3	791	93.3	93.2-93.4
Parity					
1st birth	4,424	43.1	561	43.4	40.2-46.6
2nd or later	5,844	56.9	661	56.6	53.4-59.8

*Data Source: Rhode Island Vital Records Birth File, 2011

B. Data Details

The PRAMS survey questionnaire and detailed data tables are hyperlinked below in the electronic version of this data book. Click on a name to go to the questionnaire or tables. Please note that each data table appears on a separate sheet in the hyperlinked worksheet. You can click the tabs at the bottom of the worksheet to move between tables.

- Rhode Island PRAMS Phase 6 Questionnaire
  http://www.health.ri.gov/data/pregnancyriskassessment/surveys/2009.pdf
- Detailed Data Tables for Each Topic
  www.health.ri.gov/data/prams

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www.health.ri.gov/prams

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