

PRAMS Report 2006

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of Community Health*



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Executive Summary

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey of mothers of live born infants delivered in 2006; mothers are selected at random to participate in the survey and results are intended to be generalizable to Michigan resident mothers of live born infants overall. The topics included in this survey were selected based on their relevance to maternal and infant morbidity and mortality.

Key PRAMS Findings:

- 41% of women indicated that they had an unintended pregnancy in 2006.
- Prior to pregnancy, 55% of women reported using contraception, with condoms being the most popular method (48%).
- Approximately 7% of infants were of low birth weight (<2,500 grams), of whom 24% were very low birth weight (<1,500 grams).
- One out of five women reported entering prenatal care after the first trimester or not at all; the most common barriers to first trimester prenatal care entry included 'could not get an earlier appointment', 'could not pay for appointment' and 'did not have Medicaid card'.
- Approximately 31% of women did not initiate breastfeeding.
- 31% of women breastfed for longer than one week but had discontinued by time of survey; common reasons cited for stopping breastfeeding include mothers thinking that they were not producing enough milk (38.9%), that their milk did not satisfy their infant (38.0%) or that their infant had difficulty nursing (24.4%).
- One in six women reported smoking during the last three months of pregnancy.
- Nearly 7% of women indicated that they drank alcohol during pregnancy.
- While 94% of women reported receiving information about placing their babies to sleep on their backs, only 74% reported doing so.
- Approximately one in five women reported always/often sharing their bed with their baby. The majority of women (70%) cited the hospital nurse as their primary source of sleep information.
- Over 5% of women reported experiencing physical abuse during pregnancy; the named abuser was primarily the woman's husband/ex-husband or partner/ex-partner (72%).
- Nearly 85% of women reported receiving prenatal HIV counseling, 77% of whom went on to be screened for HIV during pregnancy.
- 25% of women were unaware of the benefits of prenatal folic acid supplementation; 29% of the respondents indicated that they consumed a multivitamin daily in the month prior to pregnancy.
- 87% of income-eligible mothers enrolled in WIC services.

- While 27% of women indicated they needed dental care during pregnancy, 58% actually sought care.

Introduction

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance program conducted in collaboration between the Centers for Disease Control and Prevention (CDC) and state health departments. In Michigan, PRAMS is an ongoing population-based survey of Michigan resident postpartum mothers who delivered live births. The state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy collected by PRAMS are used to develop, implement, and evaluate maternal and infant health intervention programs intended to reduce the rates of infant mortality, low birth weight, and other adverse birth outcomes. The data are also used to monitor progress towards both national and state pregnancy-related health objectives, including increasing the rate of prenatal care in the first trimester to 90% and reducing maternal smoking during pregnancy. This report addresses a variety of topics, including, but not limited to, low birthweight births, contraceptive use, pregnancy intention, health insurance, prenatal care (PNC), breastfeeding, alcohol and tobacco use, violence against women, folic acid awareness, and participation in the Women, Infants and Children Food Supplementation Program (WIC).

More than 2,000 postpartum Michigan resident women were surveyed at random in 2006. While PRAMS initially consists of a mailed survey, if there is no response to the original or subsequent mailings then telephone contacts are made and a phone questionnaire conducted.

Throughout this report, selected maternal and child health indicators are presented graphically with detailed explanations. PRAMS data are intended to be representative of Michigan resident women whose pregnancies resulted in a live birth. Therefore, all results presented have been weighted to provide estimates that are reflective of women who had a live birth in 2006 (see Appendix A for further information on weighting). Since PRAMS only surveys women with a live birth and does not include pregnancies that end in fetal death, abortion or miscarriage, caution is advised when interpreting and generalizing the results to all pregnant women. Results with their 95% confidence intervals (CI) are also presented along with demographic characteristic breakdowns in appended tables (see Appendix B).

Maternal Demographics

Definition:

Information about maternal demographic characteristics (maternal age, race/ethnicity, education and marital status) was obtained from the birth file while data such as income and pre-pregnancy insurance status were gathered via the PRAMS questionnaire. Two questions regarding pre-pregnancy insurance status were asked of all respondents:

Question #1: Just before you got pregnant, did you have health insurance? (Do not count Medicaid)

No
 Yes

Question #2: Just before you got pregnant, were you on Medicaid?

No
 Yes

Women who answered 'Yes' to question #1 and 'No' to question #2 were classified as having private insurance prior to pregnancy. Women who answered 'Yes' to question #2 were classified as participating in Medicaid prior to pregnancy. Women who answered 'No' to both questions #1 and #2 were classified as having no insurance prior to pregnancy.

Results:

In Michigan, the largest proportion of births was to women 25-29 years of age (Figure #1). White non-Hispanic women accounted for nearly 74% of the study population in 2006. Non-Hispanic blacks (18.6%) were the most prevalent minority group followed by Hispanics (4.8%) (Figure #2). Approximately 32% of women had a high school education, while some college education and a college degree or beyond was reported in 24% and 28%, respectively (Figure #3). At the time of the survey, the majority of women reported being married (61.8%) (Figure #4). Prior to pregnancy, about one in five women (21.4%) reported being uninsured and 17% responded that they were on Medicaid (Figure #5).

Public Health Implications:

In 2006, nearly 1 in 6 women delivering a live birth in Michigan had an education less than a high school diploma/GED. This underscores the need for programs to target all women during adolescence to educate them about pregnancy, including areas outside of a scholastic atmosphere. It is also indicative of the need to disseminate educational materials of an appropriate reading comprehension.

Slightly more than one in five women had no health insurance prior to becoming pregnant (this is actually ~1% lower than in 2005). Thus, access to prenatal care remains an important issue and strategies must be developed to not only identify these women early and refer them accordingly, but to also inform them of services and programs they can use.

Reference Table: #1

(See Appendix)

Maternal Demographics

Figure 1:
Prevalence of maternal age,
2006 MI PRAMS

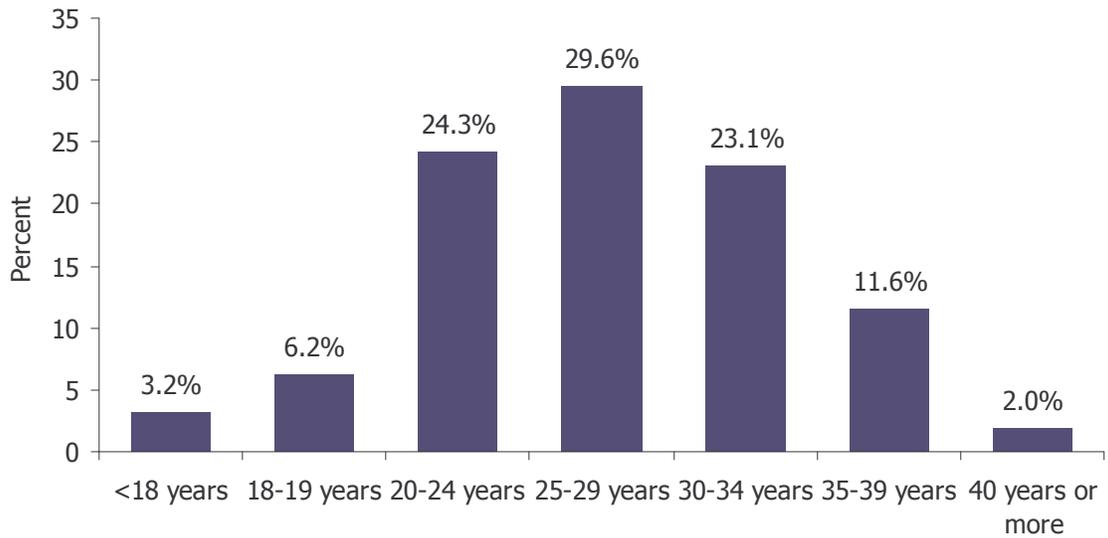
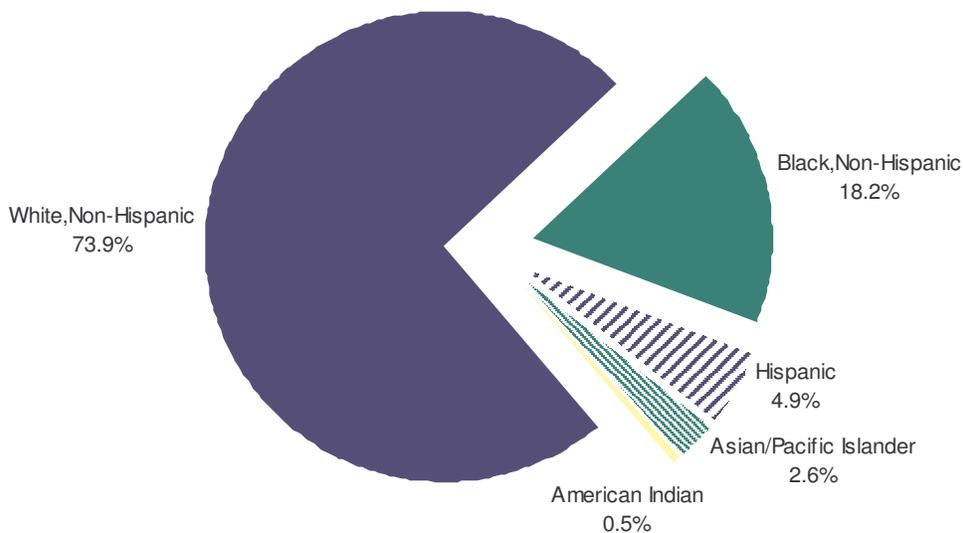


Figure 2:
Prevalence of maternal race/ethnicity,
2006 MI PRAMS



Maternal Demographics

Figure 3:
Prevalence of maternal education,
2006 MI PRAMS

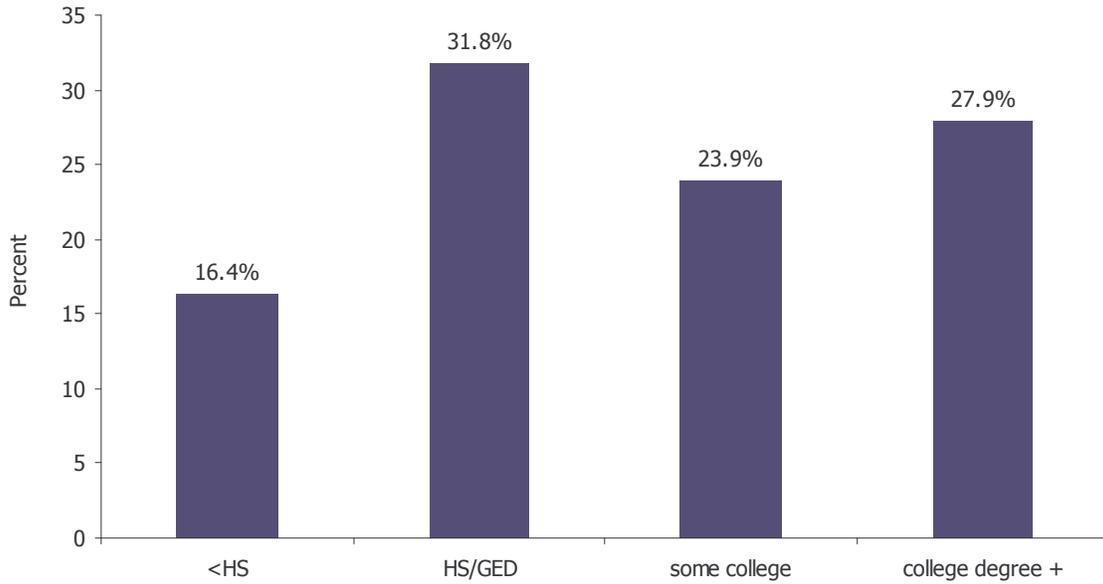
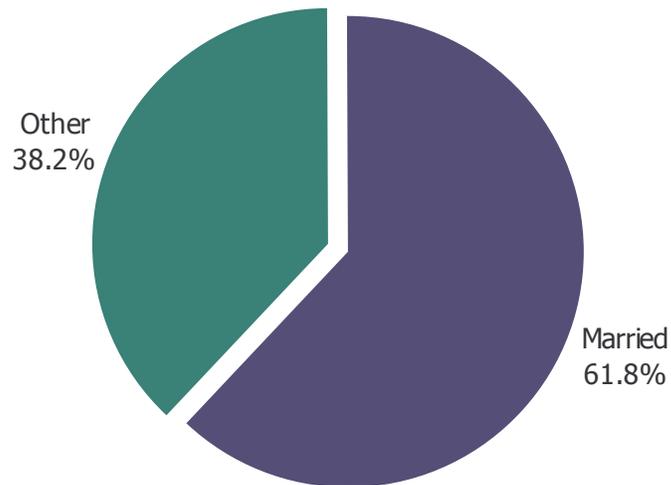
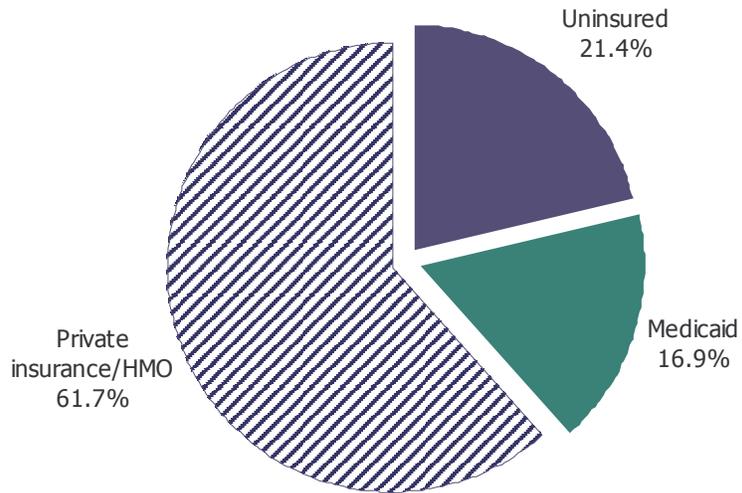


Figure 4:
Prevalence of marital status,
2006 MI PRAMS



Maternal Demographics

Figure 5:
Prevalence of insurance status prior to pregnancy,
2006 MI PRAMS



Unintended Pregnancy

Definition:

Information regarding pregnancy intention was derived from the following question:

Question #10: Thinking back to just before you got pregnant, how did you feel about becoming pregnant?

- _I wanted to be pregnant sooner*
- _I wanted to be pregnant later*
- _I wanted to be pregnant then*
- _I didn't want to be pregnant then or at any time in the future*

An intended pregnancy was one in which the mother answered that she wanted to be pregnant then or sooner. Women who wanted to be pregnant later or not at all were classified as having an unintended pregnancy. Unintended pregnancy is further subdivided into two categories: mistimed pregnancies or unwanted pregnancies. Mistimed pregnancies are those in which the mother wanted to be pregnant later than the time she became pregnant. Unwanted pregnancies were those in which the mother did not want to be pregnant then or anytime in the future.

Results:

In 2006, 41% of women who delivered a live birth reported that they had an unintended pregnancy, with 74% of those reporting their pregnancy was mistimed (Figure #6). When stratified by race/ethnicity, unintended pregnancy was found to be most prevalent in non-Hispanic blacks (61.7%), followed by Hispanics (49.7%) and non-Hispanic whites (35.0%) (Figure #7). Both maternal age and educational status are directly proportional to pregnancy intendedness. Intended pregnancy was nearly four times greater among women age 30 years or greater (73.4%) compared to women less than 18 years of age (15.5%) (Figure #8).

In addition, women with a college education had the highest prevalence of intended pregnancy (77.4%) while those with less than a high school education had the lowest prevalence (35.8%) (Figure #9). Uninsured women were the least likely to report an intended pregnancy (40.9%) followed by women on Medicaid (44.0%) when compared to women with private insurance (Figure #10). Of the 48% of women with an unintended pregnancy who reported not using contraception, over 72% indicated that they had a mistimed pregnancy (Figure #11). Of the 52% of women who had an unintended pregnancy and reported using contraception, the methods most frequently associated with contraceptive failure were withdrawal (40.8%), condoms (23.7%), and birth control pills (12.7%) (Figure #12).

Public Health Implications:

Socio-economically vulnerable groups of women including those under the age of 25 years, racial/ethnic minorities, those with limited education (<high school), and women with no health insurance or those on Medicaid experienced higher rates of unintended pregnancy. Nearly half (47%) of the women with an unintended pregnancy reported not using contraception, underscoring the need for education about family planning and the benefits of contraceptive use.

Considering that those with an unintended pregnancy used three of the most common methods of contraception, withdrawal, condoms, and birth control pills, we can conclude that both women and their partners were either uninformed or misunderstood the proper use of these methods. Of particular note is the significant proportion of unintended pregnancies resulting

from use of 'withdrawal' as a method of contraception (41%). Sex education programs need to stress that utilization of withdrawal as a method of contraception may increase the risk of both pregnancy and contracting sexually-transmitted diseases if used alone. Careful consideration of the most appropriate method(s) for an individual needs to be addressed through educational materials and health care provider interaction. Furthermore, family planning services must be available to socio-economically vulnerable women at greatest risk of unintended pregnancies.

In Michigan, several strategies have been implemented under the **Blueprint for Preventing Unintended Pregnancies** initiative. **Plan First!** is a program initiated in July of 2006 where MDCH expands access to family planning for women age 19-44 years. It covers women with an income up to 185% of the poverty level who are not eligible for Medicaid and would otherwise not have medical coverage for these services. **Talk Early, Talk Often** is a program aimed at parents of middle school-aged children; it consists of no-cost 90 minute workshops providing parents the necessary skills to facilitate conversation with their children about abstinence and sexuality. The program began in October of 2005 and surveys from participating parents have been overwhelmingly positive. The Governor has also called upon the legislature to require health plans that cover prescription drugs to also cover contraceptives in an initiative called **Contraceptive Equity**. Lastly, the **Clinical Guideline for Preventing Unintended Pregnancy in Adults** challenges health care providers to engage their male and female patients of childbearing age in the crucial issue of family planning, while offering support through user-friendly resources.

Reference Tables: #2 - #5

Unintended Pregnancy

Figure 6:

Prevalence of intended and unintended pregnancies and types of unintended pregnancies, 2006 MI PRAMS

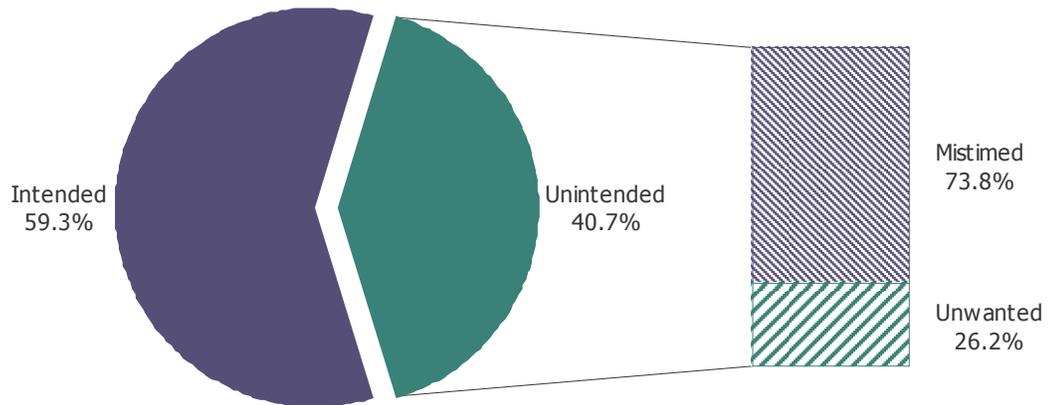
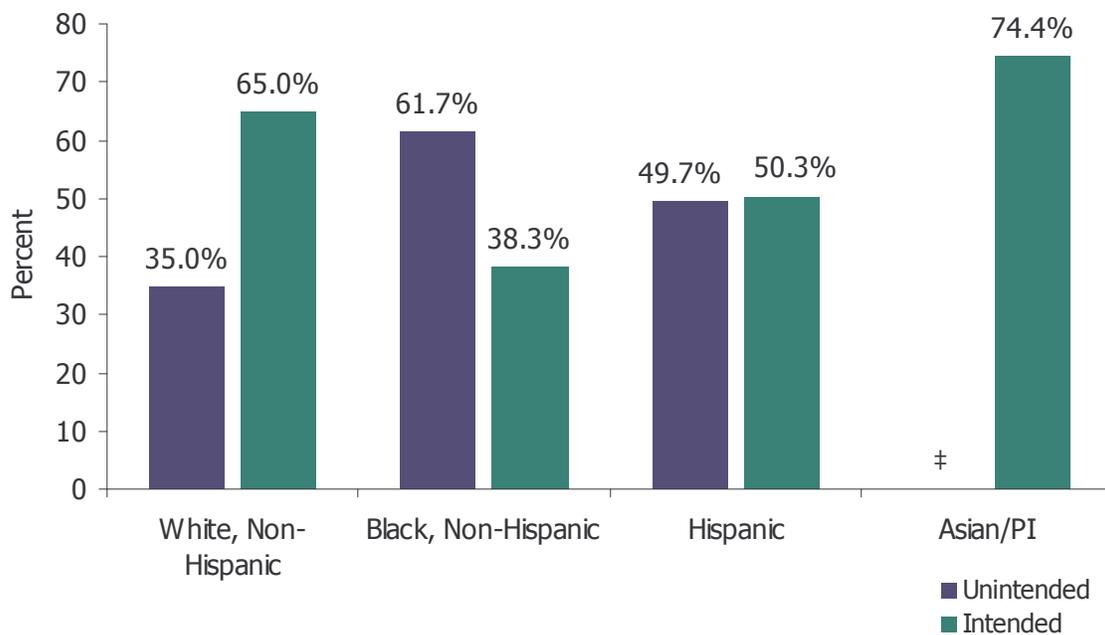


Figure 7:

Prevalence of intended and unintended pregnancies by maternal race/ethnicity, 2006 MI PRAMS



Unintended Pregnancy

Figure 8:

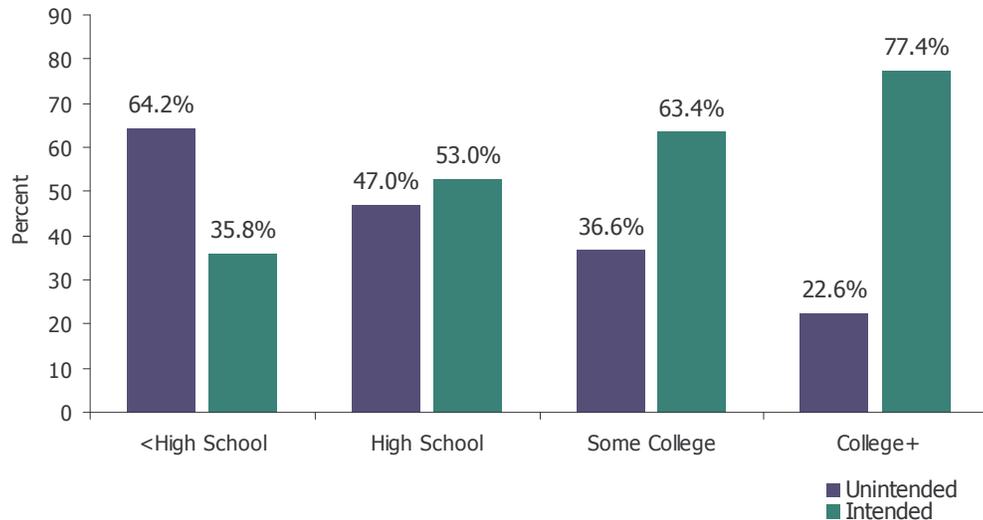
Prevalence of intended and unintended pregnancies by maternal age, 2006 MI PRAMS



‡ Data not shown due to small sample sizes

Figure 9:

Prevalence of intended and unintended pregnancies by maternal education, 2006 MI PRAMS



Unintended Pregnancy

Figure 10:

Prevalence of intended and unintended pregnancies by maternal pre-pregnancy insurance status, 2006 MI PRAMS

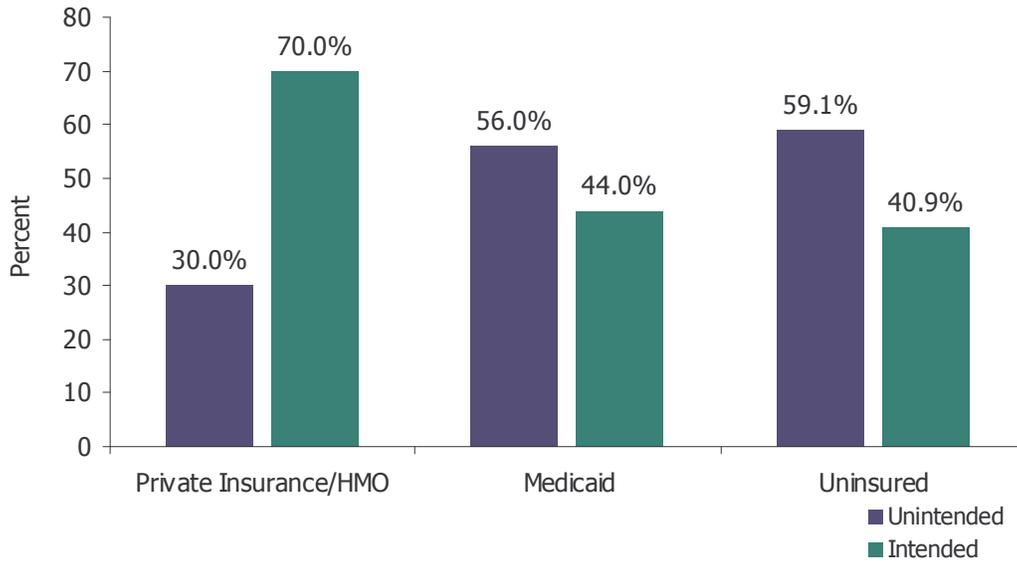
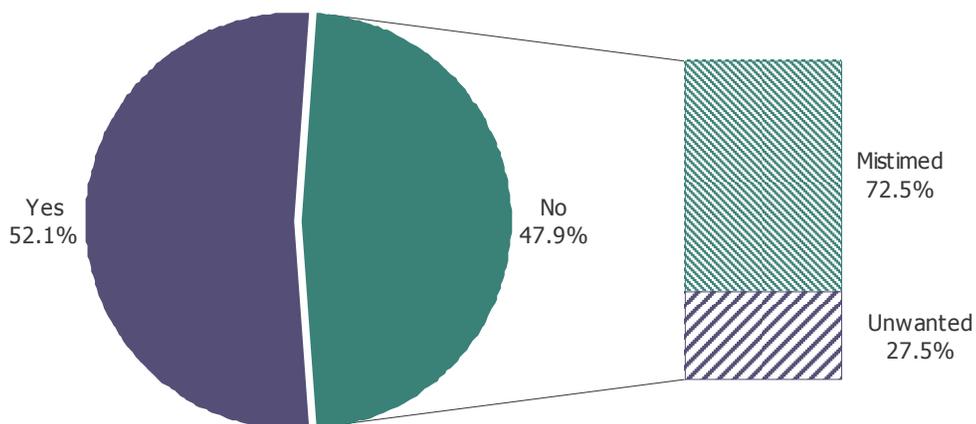


Figure 11:

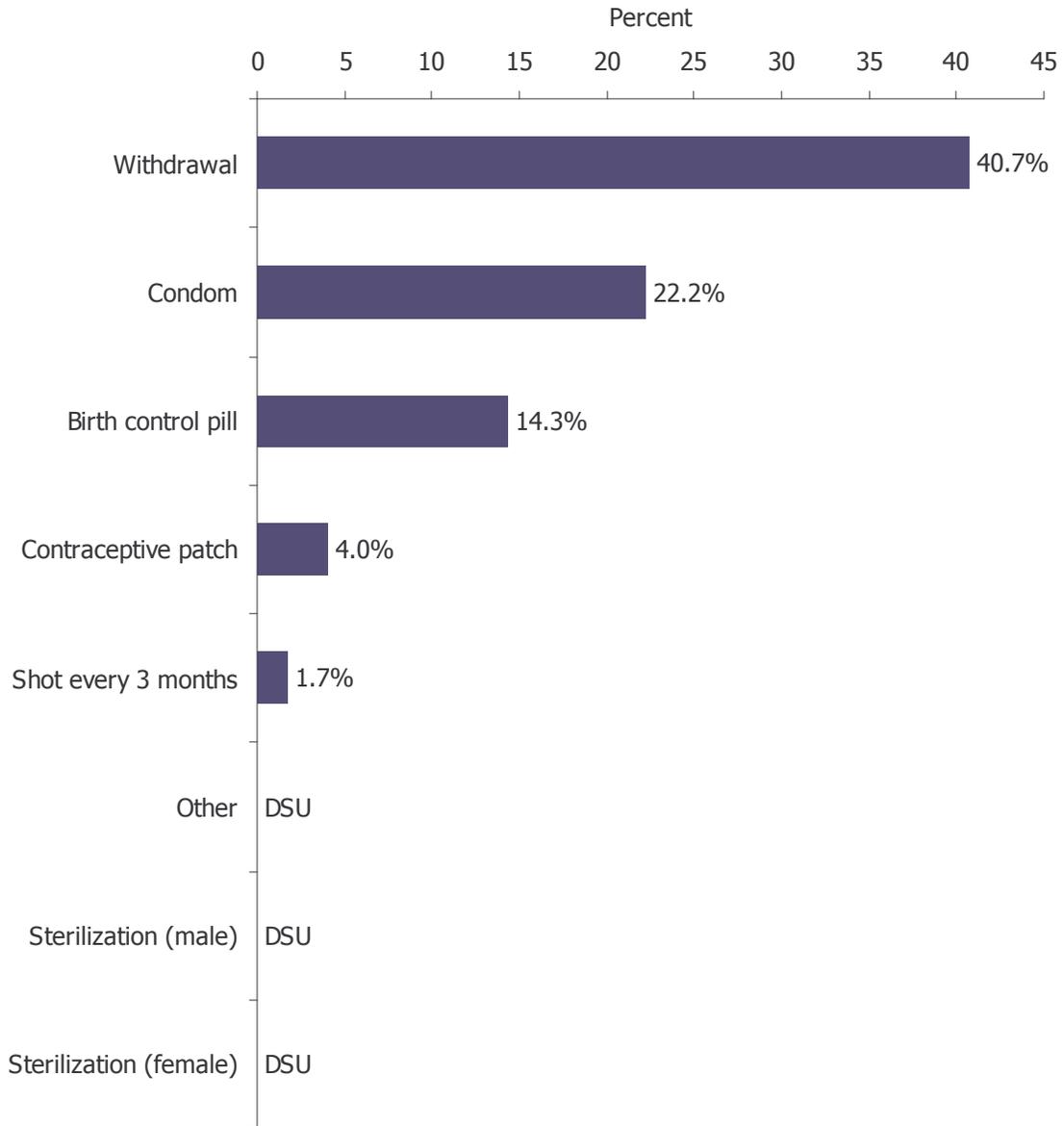
Prevalence of pre-pregnancy contraception use among women with an unintended pregnancy, 2006 MI PRAMS



Unintended Pregnancy

Figure 12:

Method of pre-pregnancy contraception among women with an unintended pregnancy,
2006 MI PRAMS



‡ Data not shown due to small sample sizes

Contraception

Definition:

Women were asked several questions regarding their use of contraception prior to and following their pregnancy. All women surveyed were asked the following question:

Question #12: When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?

- No
- Yes

Those who answered 'No' to question #12 were asked question #13:

Question #13: What were you or your husband or partner's reasons for not doing anything to keep from getting pregnant?

- I didn't mind if I got pregnant
- I thought I could not get pregnant at that time
- I had side effects from the birth control method I was using
- I had problems getting birth control when I needed it
- I thought my husband or partner was sterile
- My husband or partner didn't want to use anything
- Other

Those who answered 'Yes' to question #12 skipped question #13 and answered question #14:

Question #14: When you got pregnant with your new baby, what were you or your husband or partner doing to keep from getting pregnant?

- Tubes tied or closed (female sterilization)
- Vasectomy (male sterilization)
- Pill
- Condoms
- Shot once a month (Lunelle®)
- Shot once every 3 months (Depo-Provera®)
- Contraceptive patch (OrthoEvra®)
- Diaphragm, cervical cap, or sponge
- Cervical ring (NuvaRing® or others)
- IUD (including Mirena®)
- Rhythm method or natural family planning
- Withdrawal (pulling out)
- Not having sex (abstinence)
- Other

To gather information on the use of postpartum contraception, respondents were asked, the following:

Question #58: Are you, your husband or partner doing anything now to keep from getting pregnant?

- No
- Yes

Women who answered 'No' were asked an additional question:

Question #59: What are you and your husband or partner's reasons for not doing anything to keep from getting pregnant now?

- I am not having sex
- I want to get pregnant
- I don't want to use birth control
- My husband or partner doesn't want to use anything
- I don't think I can get pregnant
- I can't pay for birth control
- I am pregnant now
- Other

Results:

More than half of the 2006 respondents (55.3%) reported using contraception prior to pregnancy (Figure #13). Women below the age of 18 had the highest prevalence of contraceptive use (49.7%) while women age 30-35 years had the lowest prevalence (41.4%) (Figure #14). Black non-Hispanic women had an almost equal prevalence as Hispanic women for contraceptive use (48.7% vs. 48.1%, respectively). The majority (57.9%) of non-Hispanic white women reported not using contraception prior to pregnancy (Figure #15). The rate of contraceptive use was greatest among college-educated women (49.6%) and those with private insurance (44.4%); conversely, the rate of contraception use was lowest among women with less than a high school education (41.6%) or those lacking insurance (44.4%) (Figure #16).

Among women who reported using contraceptives prior to pregnancy, the most popular methods were condoms (47.6%), withdrawal (41.4%), and birth control pills (25.1%) (Figure #18). The three most commonly cited reasons for non-usage were 'Didn't mind getting pregnant' (44.4%), 'Thought could not get pregnant' (21.2%), and 'Other' (17.5%) (Figure #19).

During the postpartum period, 86.2% of women reported contraceptive use (Figure #20). Contraceptive use was highest among women under the age of 18 (88.9%; Figure #21) and did not vary appreciably among race/ethnicity with rates ranging from nearly 80% to slightly more than 86% (Figure #22). Postpartum contraceptive use was highest among women with some college education (88.7%) and lowest among those with less than a high school education (83.6%) (Figure #23).

Women who did not receive counseling regarding postnatal contraceptive use during prenatal care were more likely to be non-contraceptive users (17.8%) compared to those who received counseling by a healthcare professional (12.5%) (Figure #24). The most commonly cited reasons for contraceptive non-use in the postpartum period were 'did not want to use birth control' and 'other', which accounted for nearly 60% of the postpartum contraception non-users (Figure #25).

Public Health Implications:

Postpartum contraceptive use increased from 84% in 2005 to 86% in 2006. Of note, the highest rate was seen among women under the age of 18 years. The highest rates of contraceptive non-use prior to pregnancy and postpartum were seen among women with less than a high school education. Health care professionals have the unique opportunity to teach women during the prenatal period about the value of postpartum contraceptive use and PRAMS results indicate the importance of such efforts. Providing family planning counseling on the choice and proper use

of contraceptive method is very important, leading to the prevention of short inter-pregnancy intervals that are associated with adverse maternal and infant health outcomes. Women who received counseling about contraceptive use postpartum from a healthcare provider were more likely to use contraceptives.

These results suggest that contraceptive counseling offered by health care providers during both the prenatal and postpartum periods is important to prepare and support women for the use in the postpartum period. Discussions about birth spacing and contraceptive use by health care providers at the appropriate times (prenatal, postpartum/interconception) may help address these issues.

Reference Tables: #6 - #10

Contraception

Figure 13:
Prevalence of contraceptive use prior to pregnancy,
2006 MI PRAMS

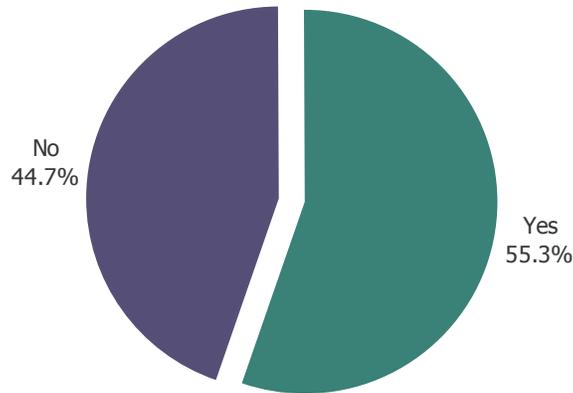
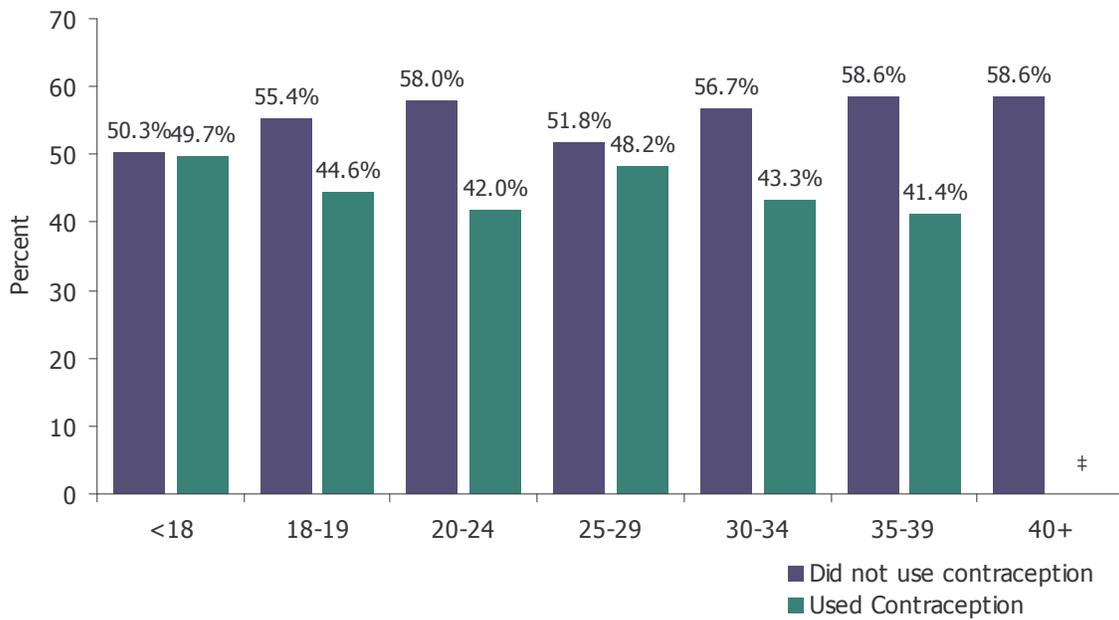


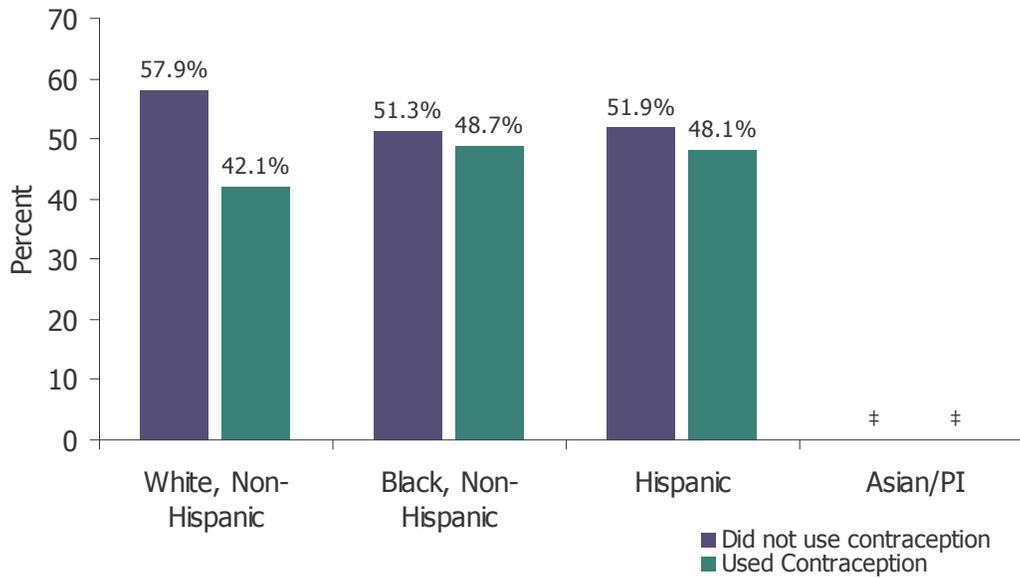
Figure 14:
Prevalence of contraceptive use prior to pregnancy by maternal age,
2006 MI PRAMS



Contraception

Figure 15:

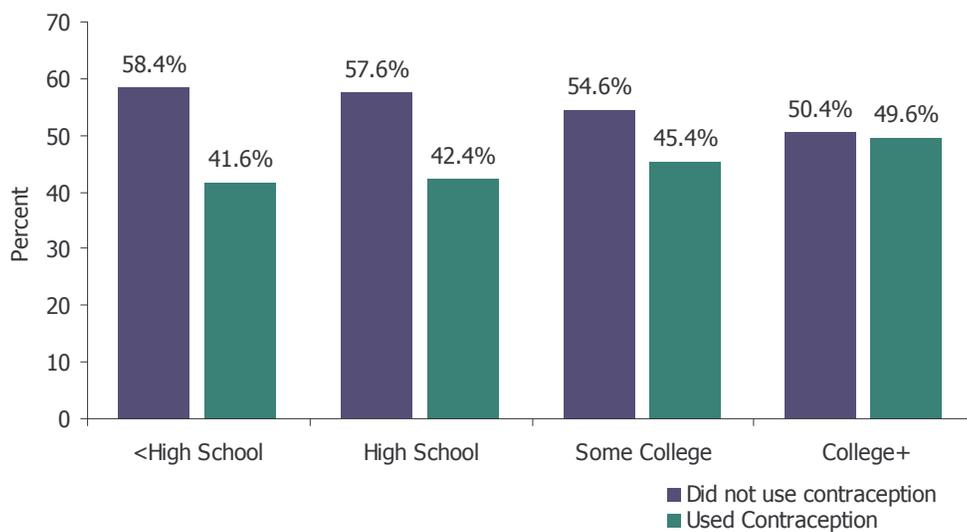
Prevalence of contraceptive use prior to pregnancy by maternal race/ethnicity**,
2006 MI PRAMS



**Statistics for 'American Indian/Alaskan Native' and 'Asian/PI' omitted due to small sample sizes

Figure 16:

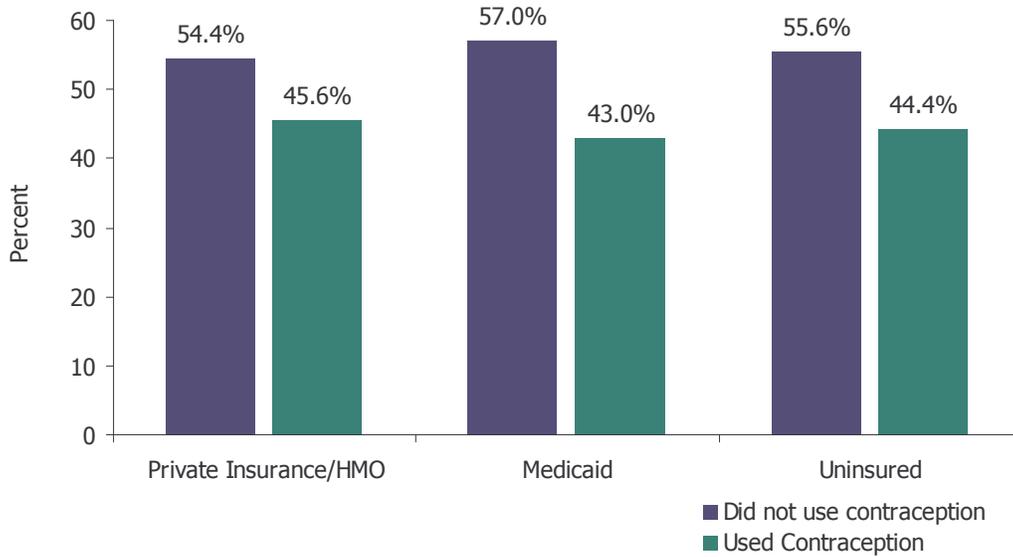
Prevalence of contraceptive use prior to pregnancy by maternal education,
2006 MI PRAMS



Contraception

Figure 17:

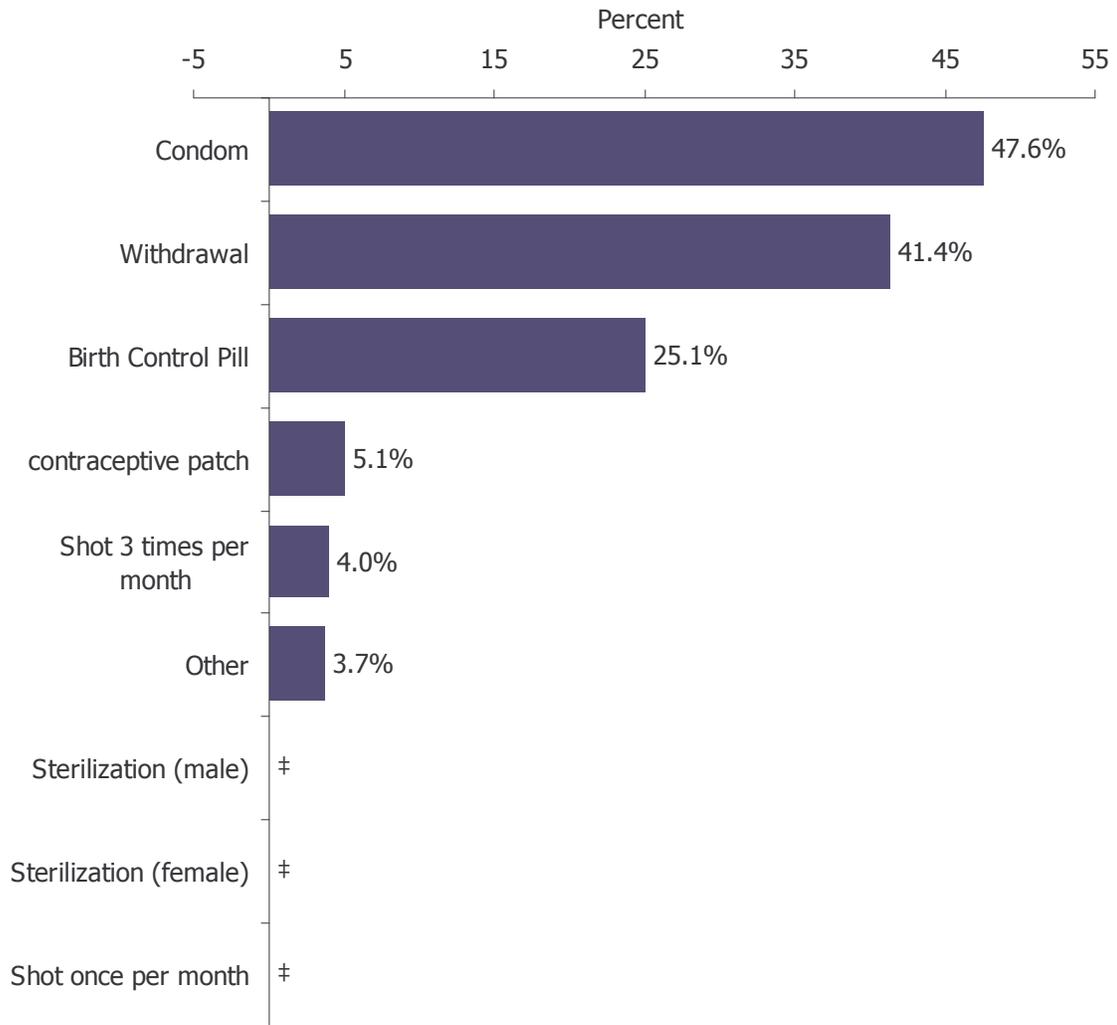
Prevalence of contraceptive use prior to pregnancy by insurance status,
2006 MI PRAMS



Contraception

Figure 18:

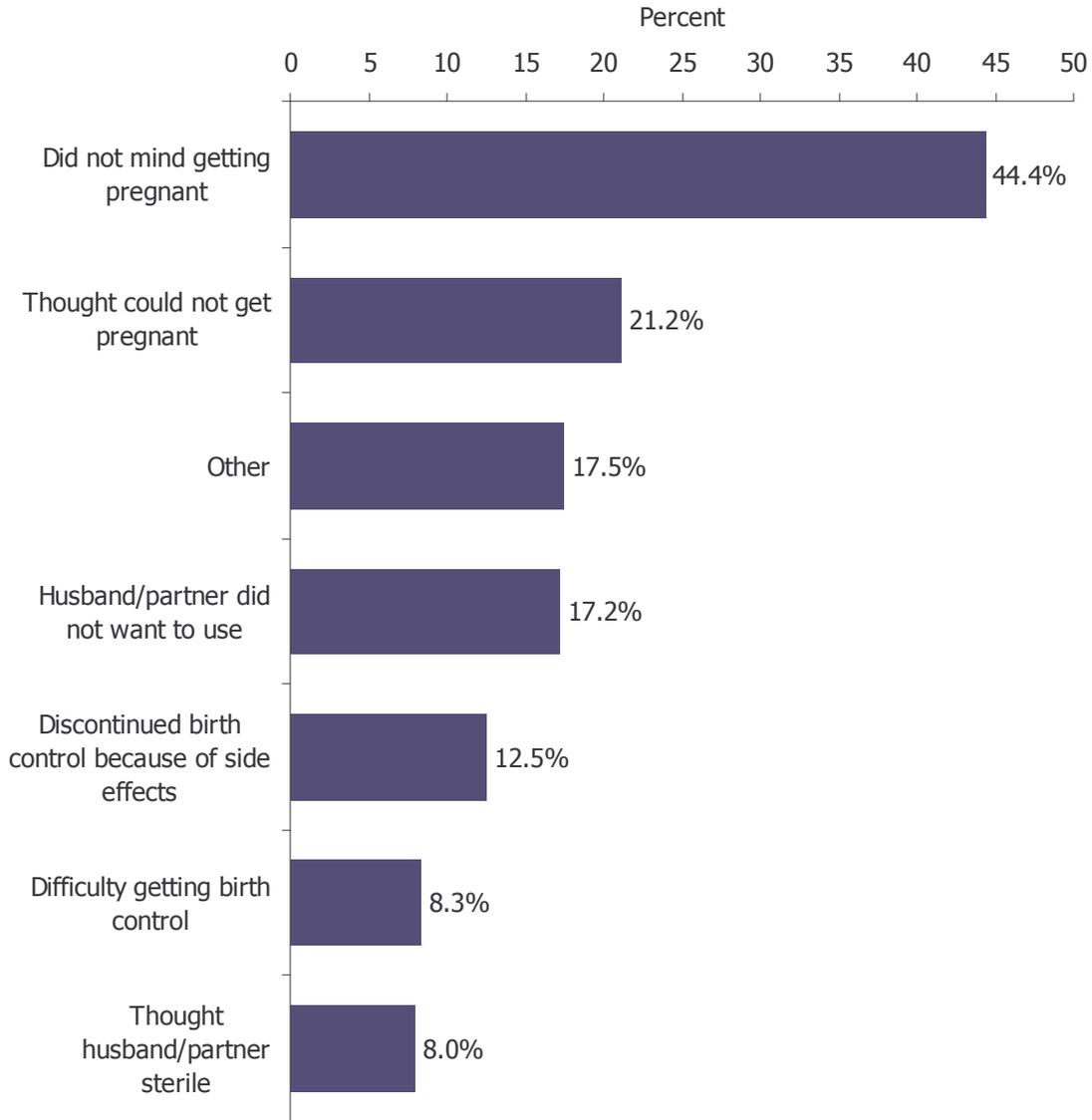
Method of contraception among women prior to pregnancy,
2006 MI PRAMS



‡ Data not shown due to small sample sizes

Contraception

Figure 19:
Reasons for not using a contraceptive method prior to pregnancy,
2006 MI PRAMS

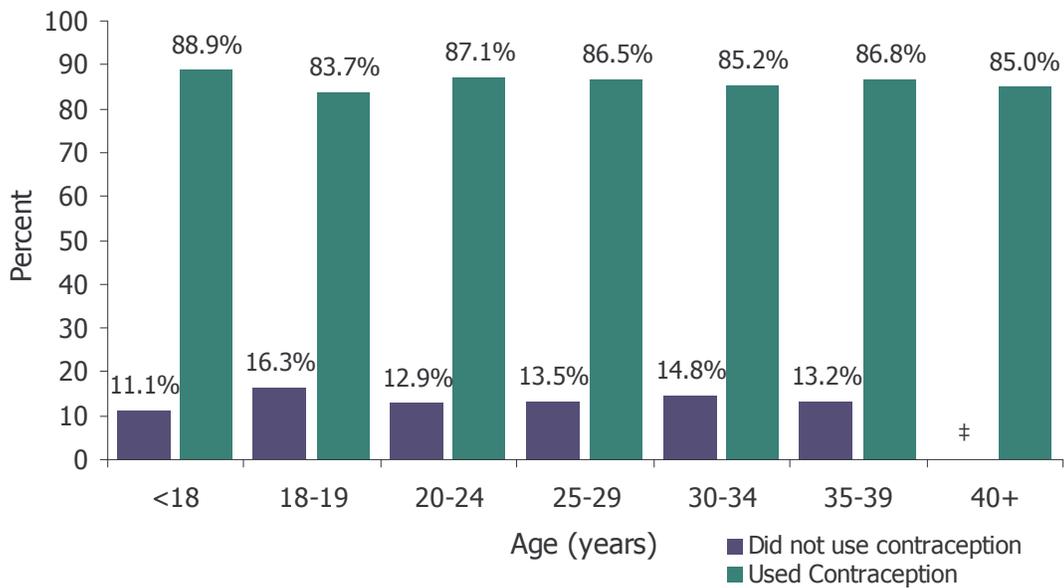


Contraception

Figure 20:
Prevalence of contraception use during the postpartum period
2006 MI PRAMS



Figure 21:
Prevalence of contraception use during the postpartum period by maternal age,
2006 MI PRAMS

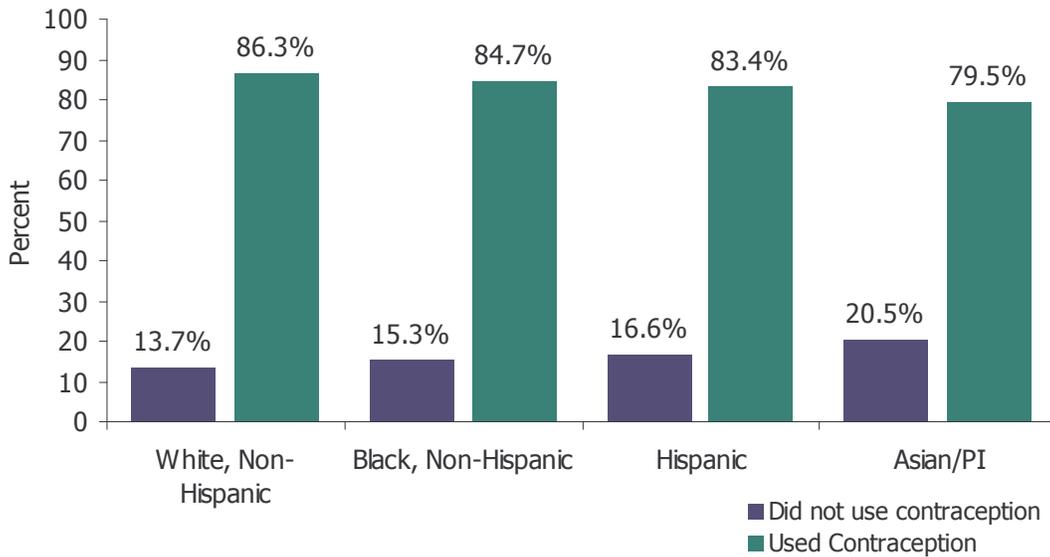


†Data statistically unreliable

Contraception

Figure 22:

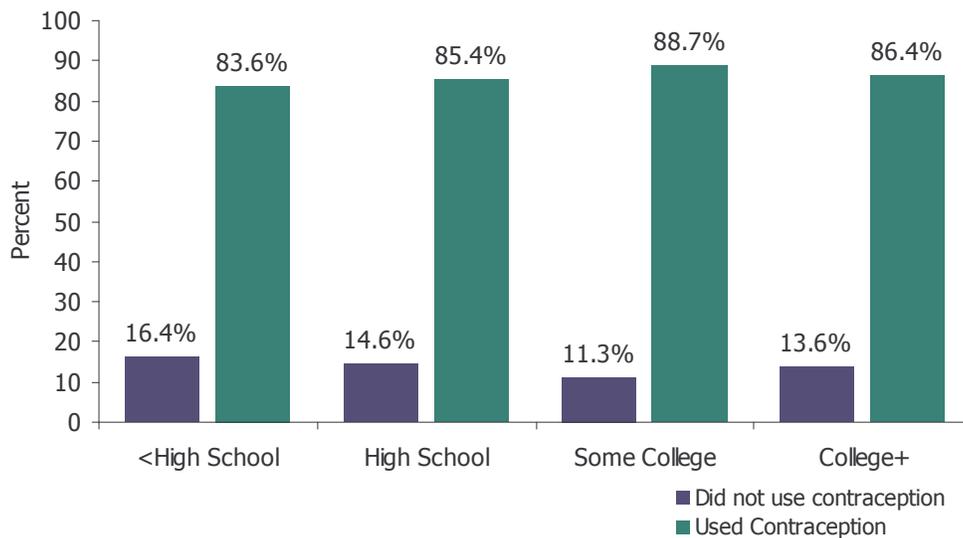
Prevalence of contraception use during the postpartum period by maternal race/ethnicity, 2006 MI PRAMS



**Statistics not shown for 'American Indian/Alaskan Native' due to small sample size

Figure 23:

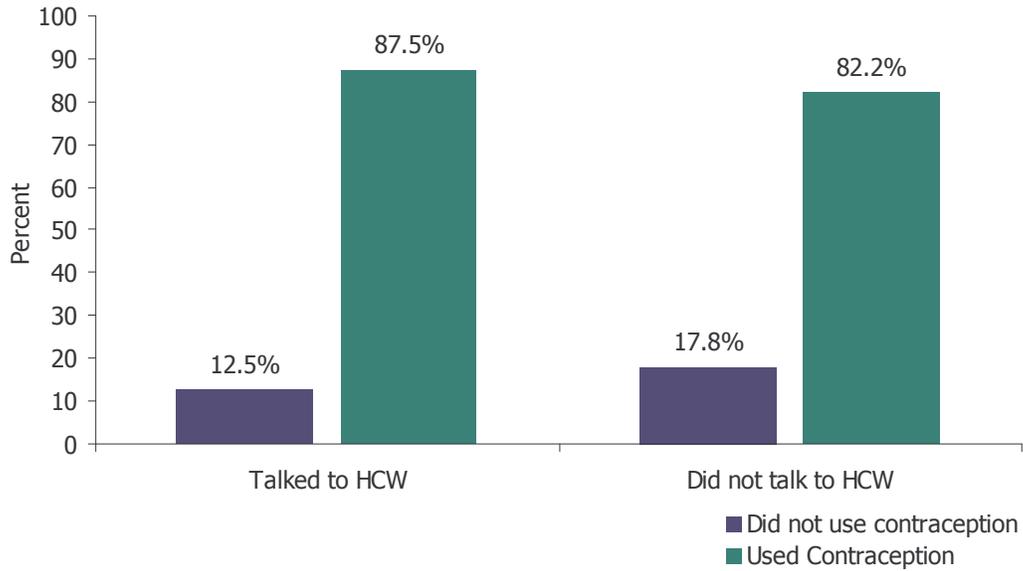
Prevalence of contraception use during the postpartum period by maternal education, 2006 MI PRAMS



Contraception

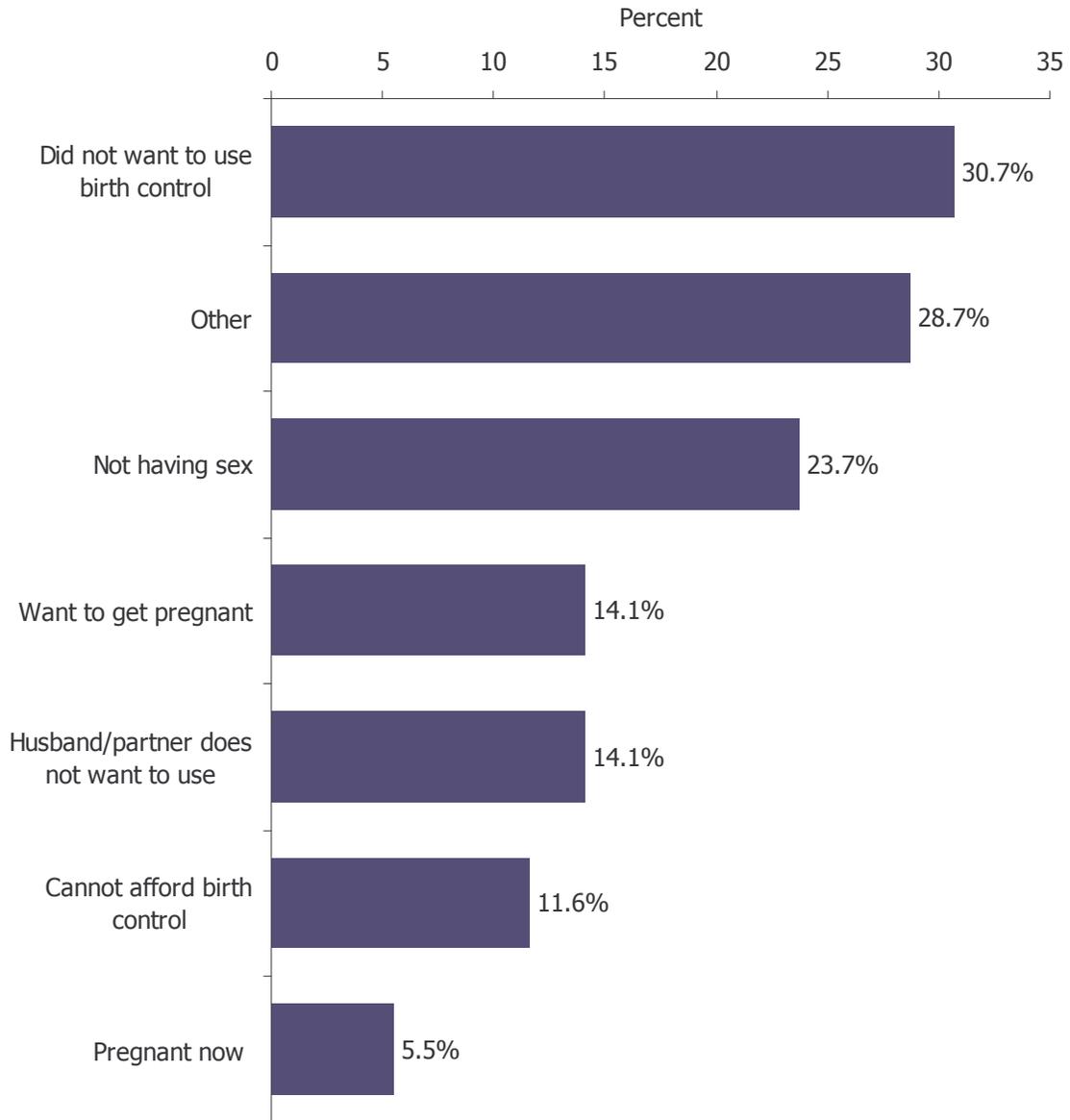
Figure 24:

Use of contraception during postpartum by discussion with health care worker during prenatal care, 2006 MI PRAMS



Contraception

Figure 25:
Reasons for not using a contraceptive method postpartum
2006 MI PRAMS



Low Birthweight

Definition:

Birthweight data was derived from information on the birth certificate; infants were classified as 'low birthweight' if they weighed less than 2500 grams (5.51 lbs) at birth and as 'normal birth weight' if they weighed 2500 grams or more at birth. Low birth weight infants were further subdivided into 'moderate low birthweight' (weight=1500-2499 grams or 3.31-5.51 lbs at birth) or 'very low birth weight' (weight <1500 grams or 3.31 lbs at birth).

Results:

Among the 123,646 live births in 2006 (PRAMS weighted estimate), over 7% weighed less than 2,500 grams (low birthweight) of which 76% were of moderate low birthweight (1,500-2,499 grams) and 24% were of very low birthweight (<1,500 grams) (Figure #26). The prevalence of low birthweight infants varied by selected maternal characteristics. Specifically, the highest rate of was seen in the women who were less than 18 years of age while the lowest rate was seen in women 35-39 years of age (Figure #27). The prevalence of low birthweight infants was highest among non-Hispanic black women (13.8%), which was more than double the rate in non-Hispanic white women (6.0%). Hispanic women had the lowest rate of low birthweight infants (5.8%) (Figure #28). Women with less than a high school education reported the highest prevalence of low birthweight infants (9.3%); the rate of low birthweight births decreased with increasing educational attainment (Figure # 29). Medicaid recipients reported the highest prevalence of low birthweight births (14.1%) followed by women who were uninsured (6.6%) (Figure #30). Of note, over 73% of low birthweight infants were preterm (less than 37 weeks gestation) (Figure #31).

Other known risk factors for having a low birthweight infant, such as pregnancy intention and smoking status, were analyzed. Women who had an unintended pregnancy had a similar proportion of low birthweight infants as women with an intended pregnancy (7.5% vs. 7.4%) (Figure #32). The prevalence of low birthweight was higher among the unwanted pregnancies versus the mistimed pregnancies (Figure #33). Women who reported smoking during pregnancy had a significantly higher proportion of low birthweight infants (9.5%) when compared to non-smokers (6.9%) (Figure #34).

Public Health Implications:

The women at the greatest risk for delivering a low birthweight infant were less than 18 years of age, non-Hispanic black race, had less than a high school education, and were of low socio-economic status as measured by being a Medicaid recipient. Efforts targeted at reducing early labor and low birthweight infants through increased counseling about the risks associated with these issues are necessary, especially for socio-economically vulnerable populations. Education about preventive measures that can be taken to avoid these issues, such as quitting smoking during pregnancy, should also be addressed.

Reference Tables: #11- #14

Low Birthweight

Figure 26:

Prevalence of infant birthweight and types of low birthweight,
2006 MI PRAMS

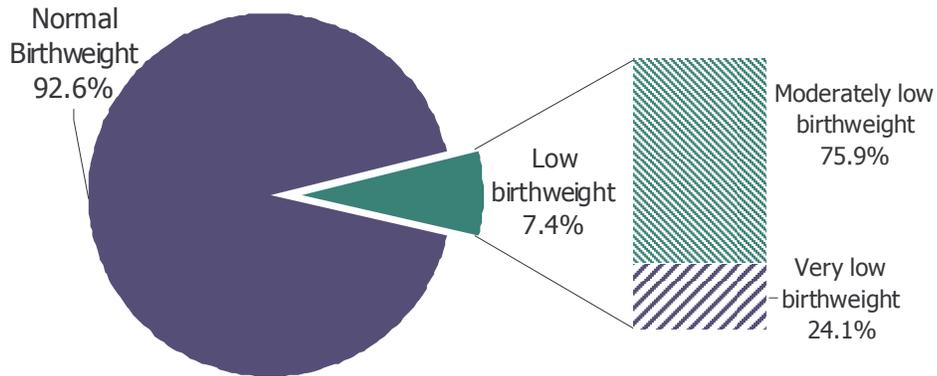
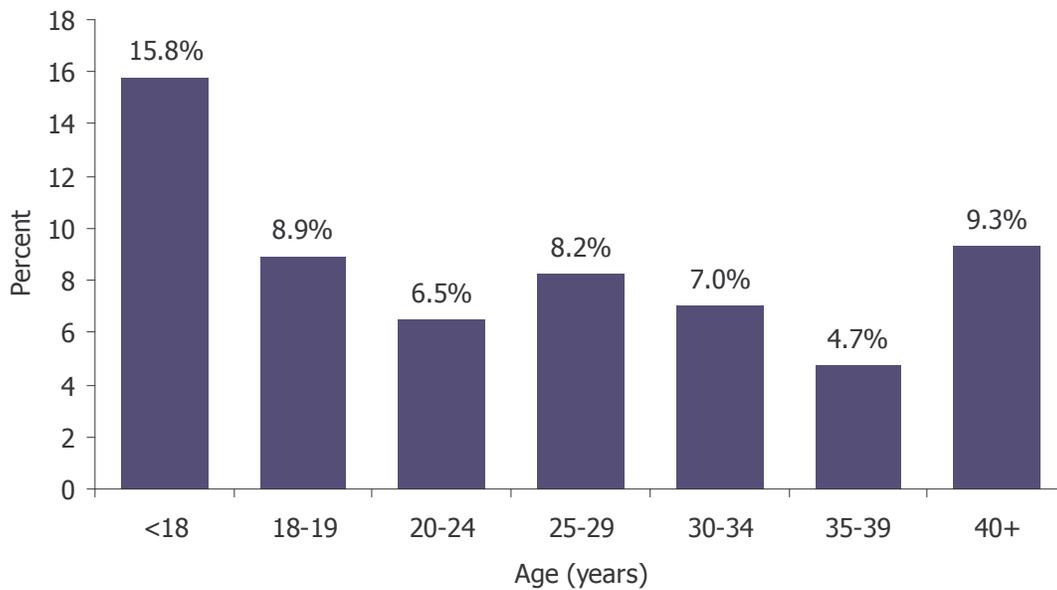


Figure 27:

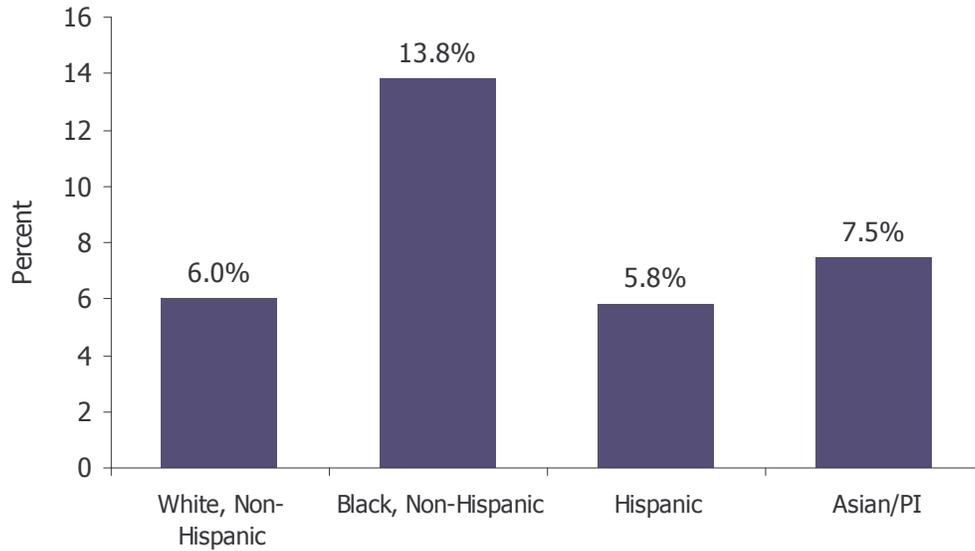
Prevalence of low birthweight by maternal age,
2006 MI PRAMS



Low Birthweight

Figure 28:

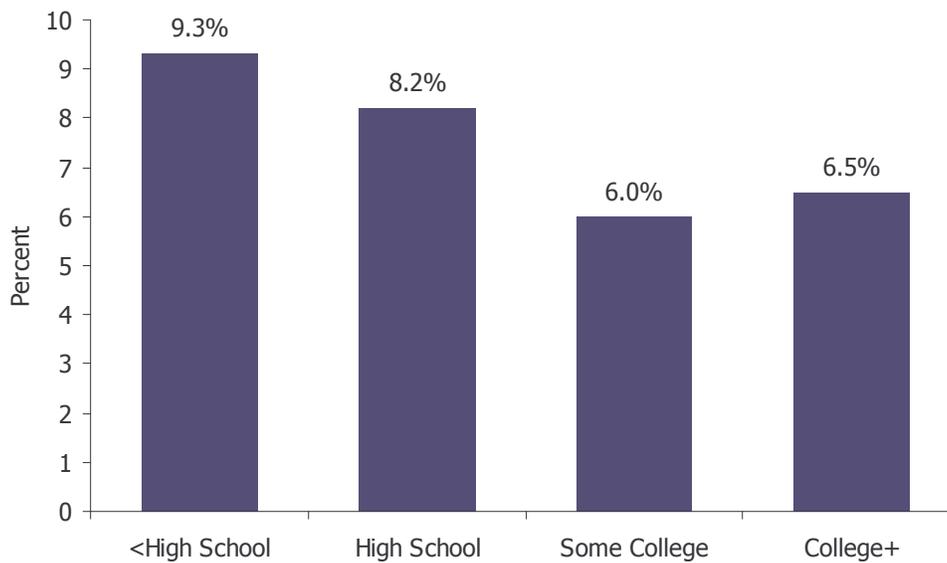
Prevalence of low birthweight by maternal race/ethnicity,
2006 MI PRAMS



**Statistics not shown for 'American Indian/Alaskan Native' due to small sample size

Figure 29:

Prevalence of low birthweight by maternal education,
2006 MI PRAMS



Low Birthweight

Figure 30:

Prevalence of low birthweight by maternal pre-pregnancy insurance status, 2006 MI PRAMS

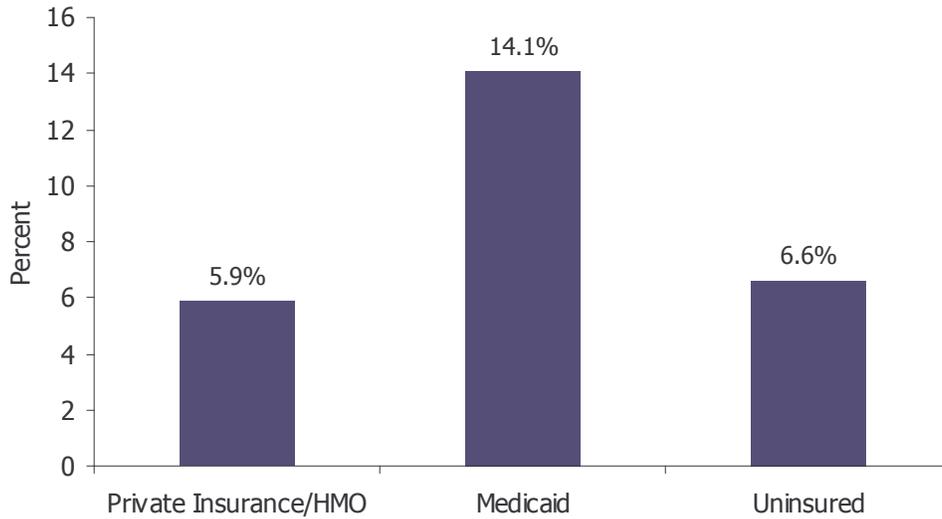
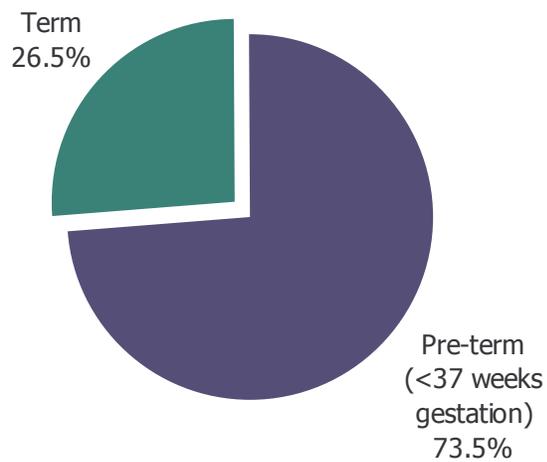


Figure 31:

Prevalence of low birthweight by gestational age, 2006 MI PRAMS



Low Birthweight

Figure 32:
Prevalence of low birthweight by pregnancy intention
2006 MI PRAMS

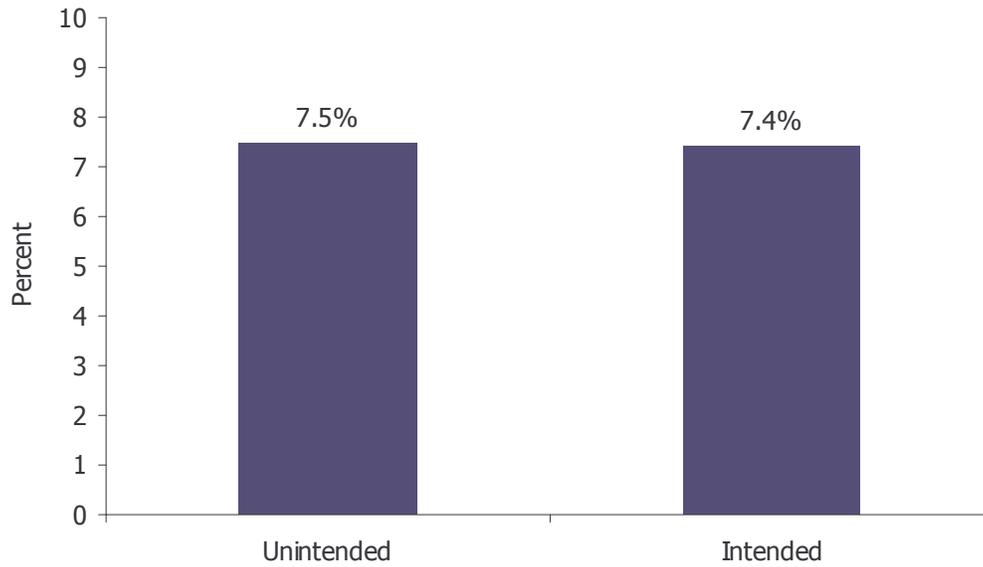
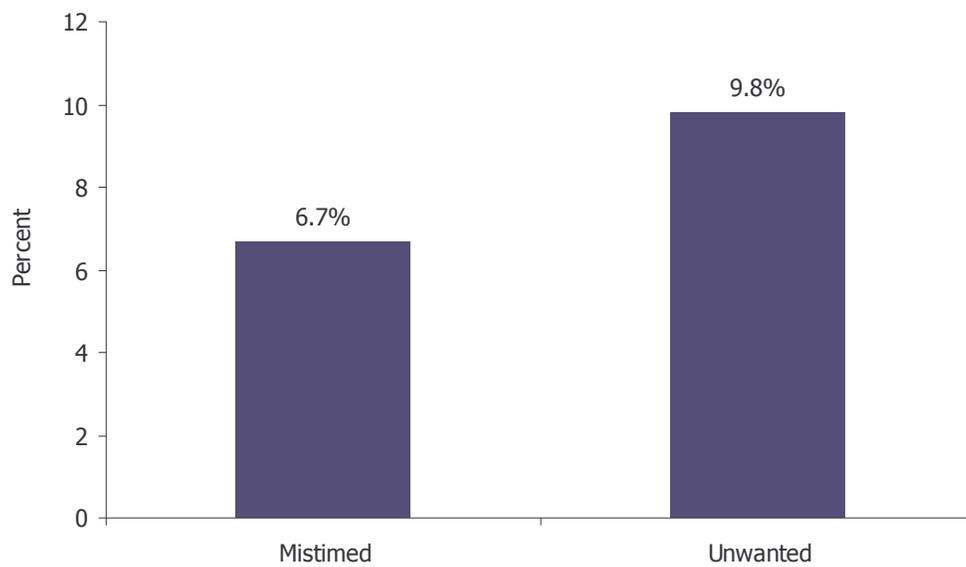
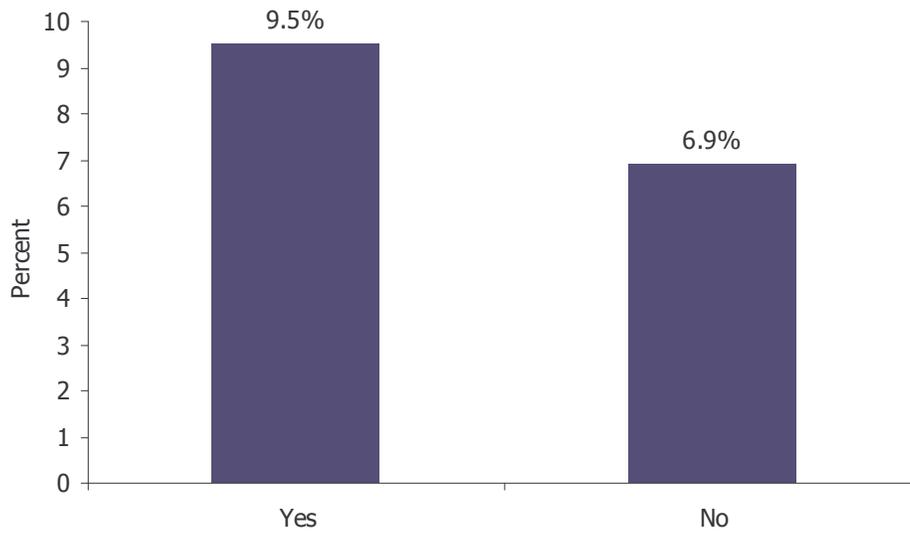


Figure 33:
Prevalence of low birthweight by pregnancy intention type,
2006 MI PRAMS



Low Birthweight

Figure 34:
Prevalence of low birthweight by smoking status during pregnancy,
2006 MI PRAMS



Prenatal Care

Definition:

Several questions in the PRAMS questionnaire are devoted to the topic of prenatal care (PNC). The first question ascertains when care was initiated.

Question #16: How many weeks or months pregnant were you when you had your first visit for prenatal care? (Do not count a visit that was only for a pregnancy test or only for WIC [the special supplemental nutrition program for Women, Infants, and Children].)

- weeks
- months
- I did not go for prenatal care

Women who indicated that they entered prenatal care by the twelfth week (by the end of the third month) of their pregnancy were coded as initiating care in the first trimester. Those who entered care between the thirteenth and twenty-fourth week (fourth through sixth month) of their pregnancy were coded as entering care in the second trimester. Women entering PNC after their twenty-fourth week (seventh month), entered care in their third trimester. Women who were coded as having 'No PNC' indicated they did not go for prenatal care during their pregnancy. Women surveyed for PRAMS were also asked about their satisfaction with the time they entered care.

Question #17: Did you get prenatal care as early in your pregnancy as you wanted?

- No
- Yes
- I did not want prenatal care

Women who responded 'No' were said to have entered care later than they desired and those who answered 'Yes' as early as they desired. Those women who entered PNC after their first trimester and who entered later than they desired were asked to identify barriers they felt prevented them from obtaining care when they desired.

Question #18: Here is a list of problems some women can have getting prenatal care. For each item, circle Y (Yes) if it was a problem for you during your most recent pregnancy or circle N (No) if it was not a problem or did not apply to you.

- I couldn't get an appointment when I wanted one
- I didn't have enough money or insurance to pay for my visits
- I had no way to get to the clinic or doctor's office
- I couldn't take time off from work
- The doctor or my health plan would not start care as early as I wanted
- I didn't have my Medicaid card
- I had no one to take care of my children
- I had too many other things going on
- I didn't want anyone to know I was pregnant
- Other

Information on method of payment for care, among women who obtained care, was gleaned from responses to question #19:

Question# 19: How was your prenatal care paid for?

- Medicaid or Medicaid HMO
- Personal Income (cash, check, or credit card)
- Health insurance or HMO
- Other

Information regarding health education during prenatal care visits was derived from question #20, which asked women to indicate the topics they discussed with a healthcare professional during any of their visits.

Question #20: During any of your prenatal care visits, did a doctor, nurse, or health care worker talk with you about any of the things listed below? (Please count only discussions, not reading materials or videos)

- How smoking during pregnancy could affect your baby
- Breastfeeding your baby
- How drinking alcohol during pregnancy could affect your baby
- Using a seatbelt during your pregnancy
- Birth control methods to use after your pregnancy
- Medicines that are safe to take during your pregnancy
- How using illegal drugs could affect your baby
- Doing tests to screen for birth defects or diseases that run in your family
- What to do if your labor starts early
- Getting your blood tested for HIV (the virus that causes AIDS)
- Physical abuse to women by their husbands or partners

Results:

In 2006, nearly 80% of women reported entering prenatal care in the first trimester (Figure #35). However, women less than 18 years old and women aged 18-19 years had the lowest rates of first trimester entry into prenatal care (58.3% and 41.4%, respectively) (Figure #36). Non-Hispanic black women had the highest rate of entry into prenatal care after the first trimester or not at all (37.8%), followed by Hispanic women (32.1%) (Figure #37). Entry into prenatal care during the first trimester was directly related to maternal education; those reporting at least a college education reported the highest rate of first trimester PNC (94.6%), while women reporting less than a high school education had the lowest rate (55.5%) (Figure #38). Furthermore, women who were uninsured and those who were Medicaid recipients had lower rates of first trimester prenatal care entry (64.3% and 66.2%, respectively) when compared to women with private insurance (88.7%) (Figure #39). Women reporting an intended pregnancy entered prenatal care in the first trimester at a higher rate than those reporting an unintended pregnancy (88.0% vs. 67.3%, respectively) (Figure #40).

The majority of women (81.5%) reported being satisfied with their time of entry into PNC (Table #18, page B14). However, it is known that women face barriers that may affect the time of entry into prenatal care. Among the women who entered prenatal care later than desired, over 31% reported one barrier to entry, over 24% reported two barriers to entry, and 12% reported three barriers to entry. The three most frequently cited barriers to PNC entry were 'could not get an earlier appointment' (9.5%), 'could not pay for an appointment' (8.0%), and 'did not have Medicaid card' (7.1%) (Figure #41).

The most common payer source for prenatal care reported by PRAMS respondents was private insurance (61.7%), followed by Medicaid (40.2%), and personal income (15.7%) (Figure #42).

Prenatal care visits present an opportunity for healthcare professionals to educate and advise women about various health and pregnancy related issues. Over 80% of women reported the following topics being discussed with them during at least one of their prenatal care visits: safe medications, HIV/AIDS testing, early labor, and breastfeeding. The least likely topics discussed were illegal drug use during pregnancy and domestic abuse (Figure #43).

Public Health Implications:

Although the majority of women sought prenatal care in the first trimester, those who entered later or not at all are of concern. The top three reasons for starting care after the first trimester or not at all were 'Could not get earlier appointment', 'Could not pay for appointment', and 'Did not have Medicaid card'. The latter two reasons are barriers that may be addressed through community-based interventions that could be effective in developing and/or improving access to care. The top reason may reflect the limited capacity providers' practices may have to take on new patients or more appointments or possibly have conflicts with particular payment sources/insurance types. This is of great concern because maternal morbidities may not be identified or managed in a timely manner. Also, education of pregnant women on important issues related to their pregnancy may be delayed or missed altogether. Continued collaboration is needed between public health professionals and health care providers to explore and improve access to care during the first trimester of pregnancy.

Reference Tables: #15-#22

Prenatal Care

Figure 35:
Trimester of entry into prenatal care,
2006 MI PRAMS

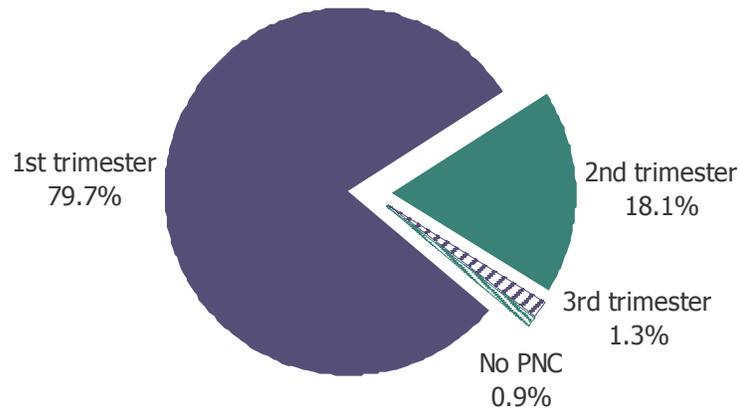
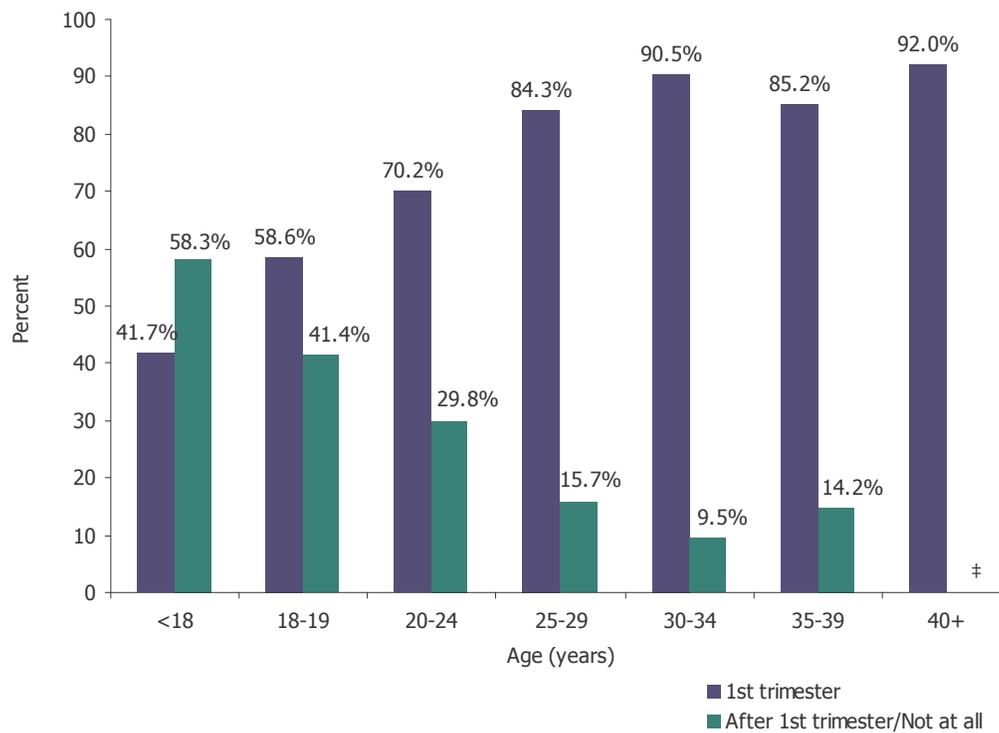


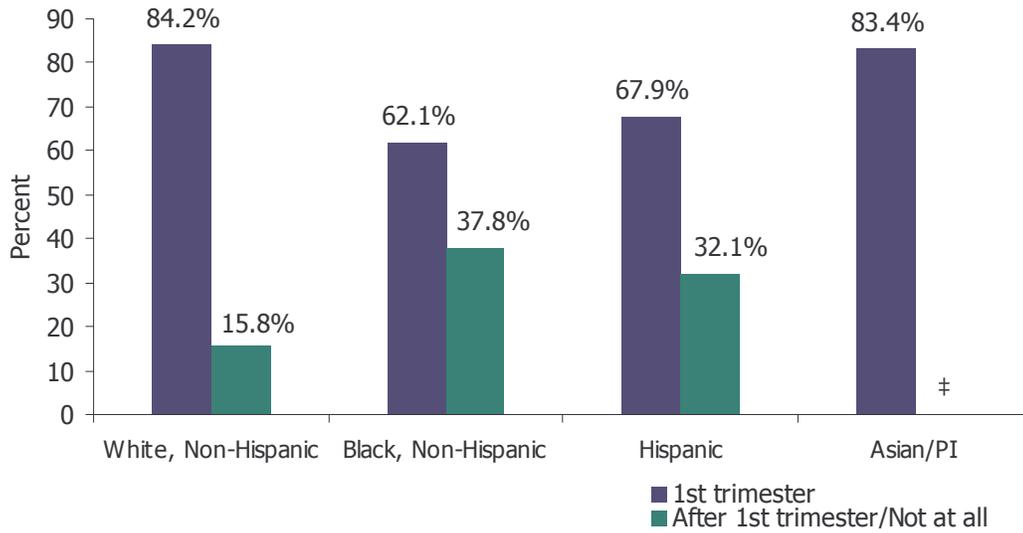
Figure 36:
Entry into prenatal care after the first trimester or not at all by maternal age,
2006 MI PRAMS



Prenatal Care

Figure 37:

Entry into prenatal care after the first trimester or not at all by maternal race/ethnicity, 2006 MI PRAMS

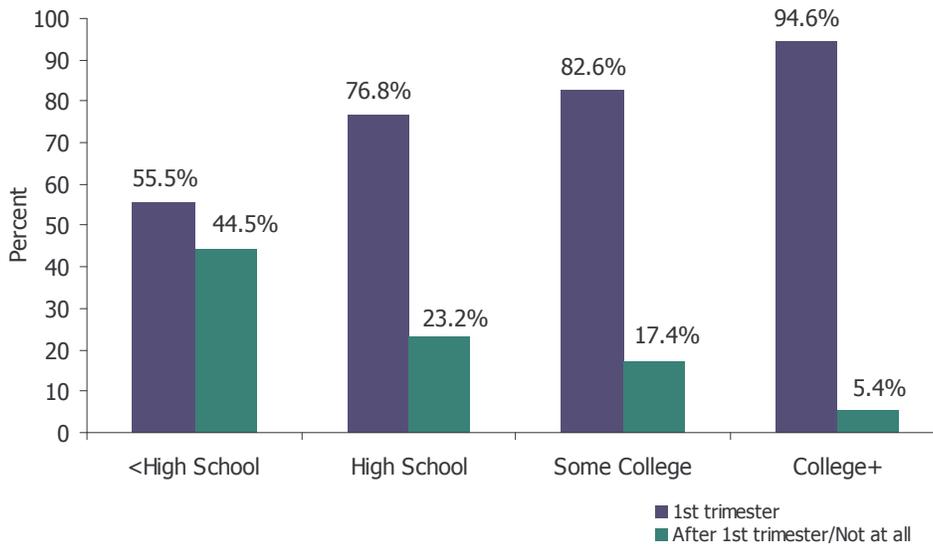


‡Data not shown due to small sample sizes

**Statistics not shown for 'American Indian/Alaskan Native' due to small sample size

Figure 38:

Entry into prenatal care after the first trimester or not at all by maternal education, 2006 MI PRAMS



Prenatal Care

Figure 39:

Entry into prenatal care after the first trimester or not at all by pre-pregnancy insurance status, 2006 MI PRAMS

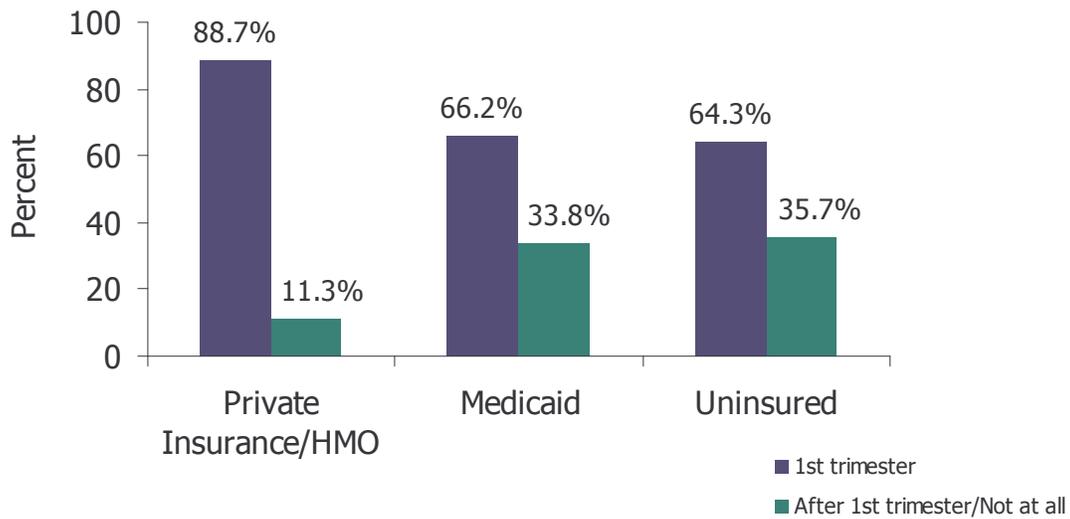
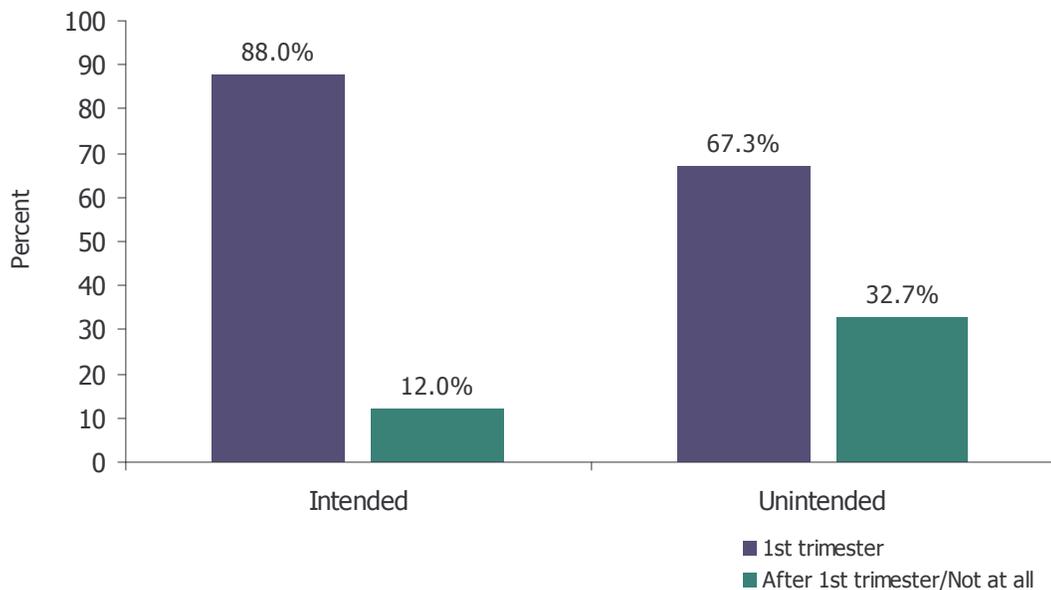


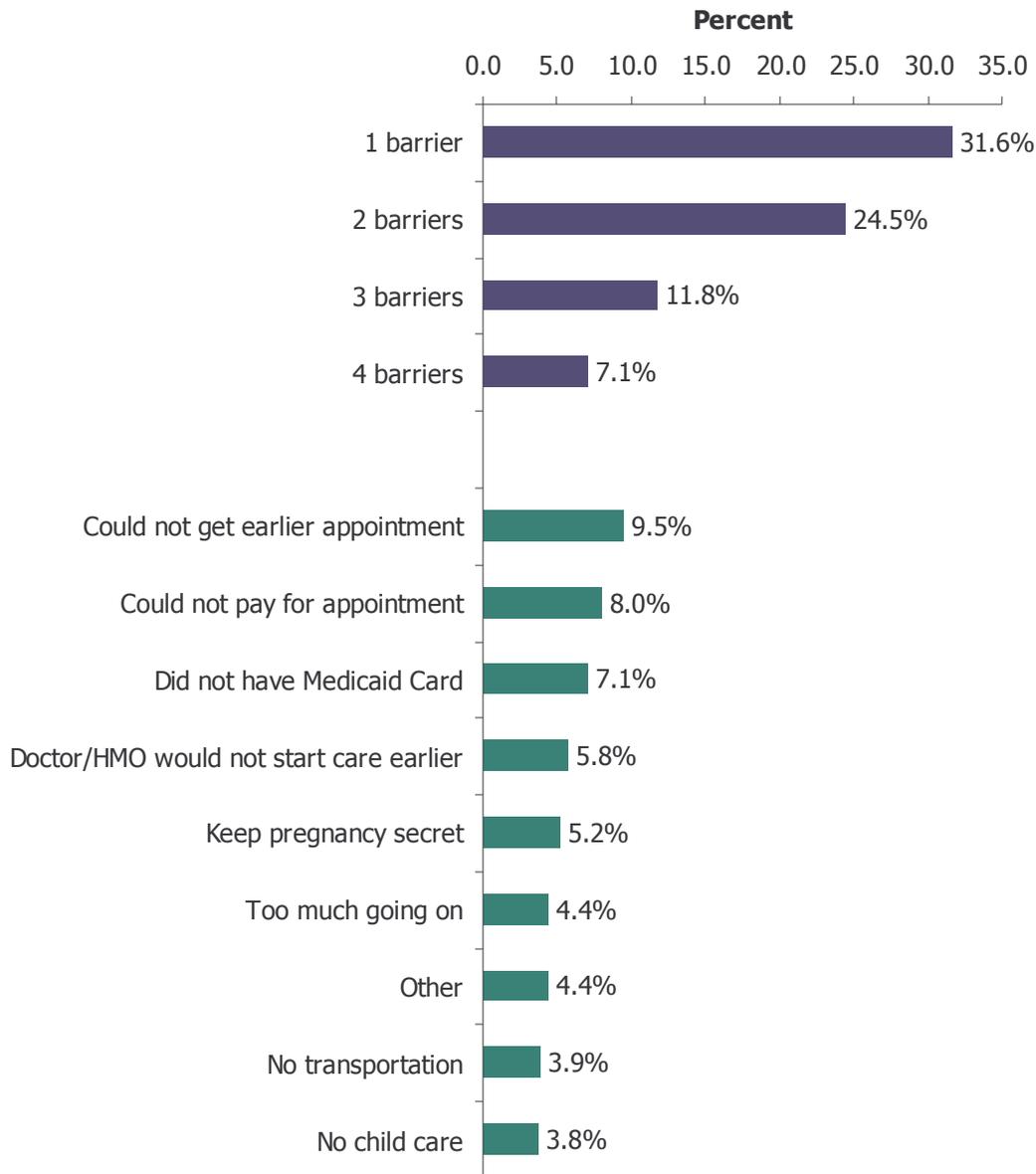
Figure 40:

Entry into prenatal care by pregnancy intention, 2006 MI PRAMS



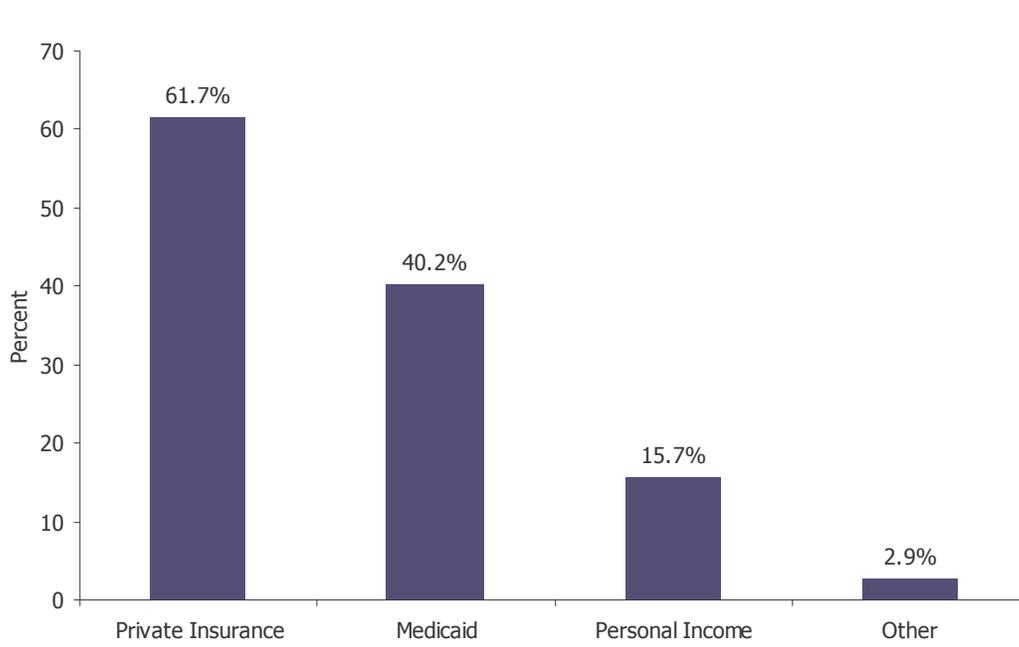
Prenatal Care

Figure 41:
Number and type of barriers to prenatal care,
2006 MI PRAMS



Prenatal Care

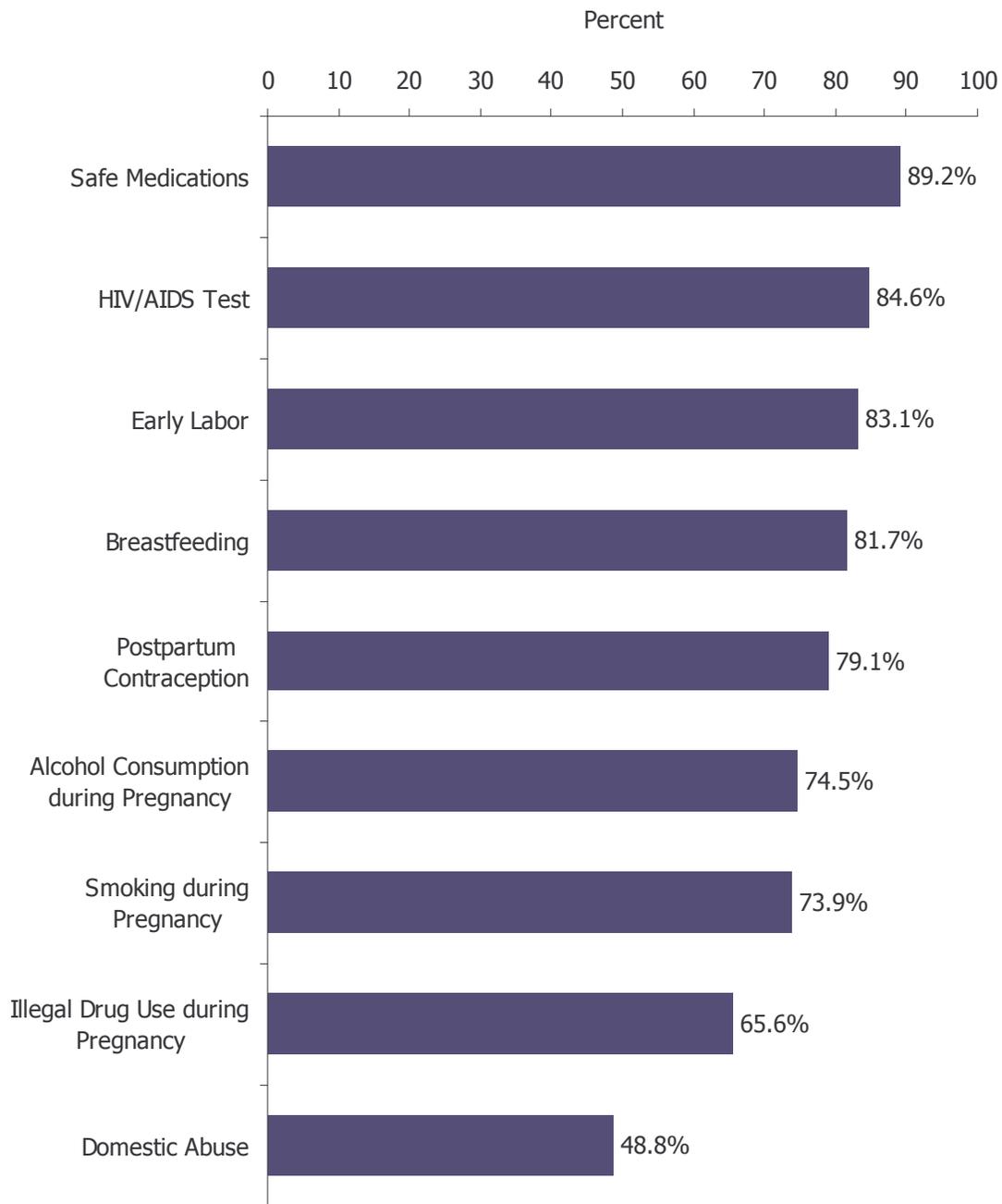
Figure 42:
Sources of payment for prenatal care,
2006 MI PRAMS



Prenatal Care

Figure 43:

Topics discussed with a health care professional during prenatal care,
2006 MI PRAMS



Breastfeeding

Definition:

Seven questions in the Phase 5 PRAMS questionnaire address the topic of breastfeeding. The following question gathers information on breastfeeding intention:

Question #44: During your most recent pregnancy, what did you think about breastfeeding your new baby?

- I knew I would breastfeed*
- I thought I might breastfeed*
- I knew I would not breastfeed*
- I didn't know what to do about breastfeeding*

Women who responded that they knew they were going to breastfeed were considered, “intending to breastfeed.” Women who responded that they were not going to breastfeed were classified as, “intending not to breastfeed.” Women who either thought they may breastfeed or didn't know what to do about breastfeeding were classified as being “unsure about breastfeeding”.

Information regarding breastfeeding initiation and duration was derived from questions #45 to #47, and #49.

Question #45: Did you ever breastfeed or pump breast milk to feed your new baby after delivery?

- No*
- Yes*

Those who answered Yes to question #45 were asked:

Question #46: Are you still breastfeeding or feeding pumped breast milk to your new baby?

- No*
- Yes*

Those who answered No to question #46 were asked:

Question #47: How many weeks or months did you breastfeed or pump breast milk to feed your baby?

- # weeks*
- # months*
- Less than 1 week*

Question #48: What were your reasons for stopping breastfeeding?

- My baby had difficulty nursing*
- Breast milk alone did not satisfy my baby*
- I thought my baby was not gaining enough weight*
- My baby became sick and could not breastfeed*
- My nipples were sore, cracked, or bleeding*
- I thought I was not producing enough milk*
- I had too many household duties*
- I felt it was the right time to stop breastfeeding*

- _ I got sick and could not breastfeed*
- _ I went back to work or school*
- _ I wanted or needed someone else to feed the baby*
- _ My baby was jaundiced (yellowing of the skin or whites of the eyes)*
- _ Other*

Question #49: How old was your baby the first time you fed him or her anything besides breast milk (Include formula, baby food, juice, cow's milk, water, sugar water, or anything else you feed your baby)?

- _ # weeks*
- _ # months*
- _ My baby was less than a week old*
- _ I have not fed my baby anything besides breastmilk*

Results:

Before delivering their baby, the majority of women planned on breastfeeding (56.2%), while 17% thought that they may breastfeed, and over 23% planned not to breastfeed (Figure # 45). At the time surveyed (two to six months postpartum), only 33% of women were still breastfeeding their infant. Women who breastfed for more than one week but had stopped breastfeeding at the time of survey accounted for 31% of the respondents, while 31% reported not breastfeeding at all (Figure #46).

Breastfeeding was directly correlated with maternal age and education. Nearly half (48.9%) of the women under the age of 18 reported breastfeeding, while over 70% of the women over the age of 25 years reported breastfeeding (Figure #47). Non-Hispanic black women were the least likely (68.3%) to report ever breastfeeding (Figure #48). Women with a college degree or higher reported the highest rate of breastfeeding at over 85%. Conversely, women without a high school diploma reported the lowest rate at slightly over 52% (Figure #49).

Among women who breastfed their infants, those <18 years of age breastfed for an average of 4.2 weeks while those in the median age group of 25-29 years where the highest proportion of births occurred breastfed an average of 6.7 weeks (Figure #50). Breastfeeding duration did not significantly vary by racial/ethnic group (Figure #51). In addition, women with a college degree or higher reported breastfeeding their infants for the longest period (7.6 weeks) (Figure #52). The most frequently reported barriers to breastfeeding continuation were the mother 'thought she was not producing enough milk' (38.9%), 'breastmilk did not satisfy infant (38.0%), and 'infant had difficulty nursing (28.8%) (Figure #53).

Public Health Implications:

The UNICEF in collaboration with the World Health Organization launched the Baby-Friendly Hospital Initiative in 1991, which consists of ten steps a birthing center can take to help promote exclusive breastfeeding. Information can be found at the UNICEF website at http://www.unicef.org/nutrition/index_24806.html. As of March 2002, the United States had 25 centers receive Baby-Friendly designation.

A novel randomized clinical trial by Michael Kramer and colleagues* in Belarus showed that women whose hospital was randomized to the breastfeeding intervention that followed the UNICEF initiative breastfed exclusively for a significantly longer duration and their infants had a significant reduction in risk of gastrointestinal tract infections and of atopic eczema.

Health care providers should stress the benefits of breastfeeding to pregnant women prenatally and postnatally, especially those populations where breastfeeding is less prevalent such as younger women and those of non-Hispanic black race. The WIC program, available to low-income women, strongly encourages breastfeeding by providing feeding specialists to answer questions and breastfeeding peer counselors to make home visits if needed. This type of support should be made available to all new mothers in the hospital to give assistance and discuss the common barriers of breastfeeding, which may increase the number of women initiating breastfeeding and increase the duration of breastfeeding.

*Kramer MS et al. Promotion of Breastfeeding Intervention Trial (PROBIT): A randomized trial in the Republic of Belarus. *JAMA* 2001; 285 (4): 413-20.

Reference Tables: #23- #28

Breastfeeding

Figure 45:
Pre-delivery breastfeeding planning,
2006 MI PRAMS

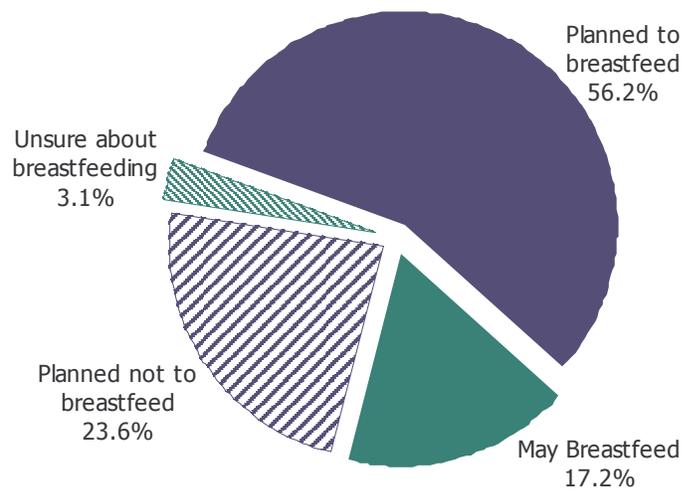
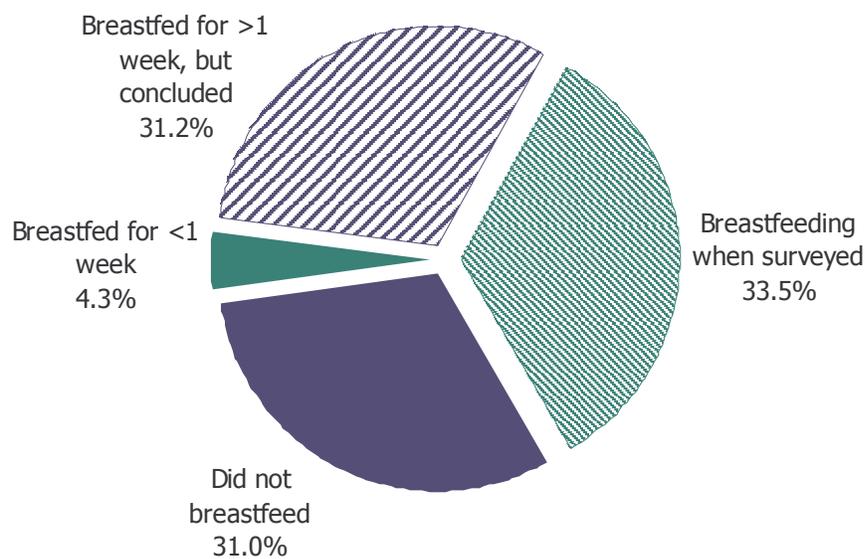


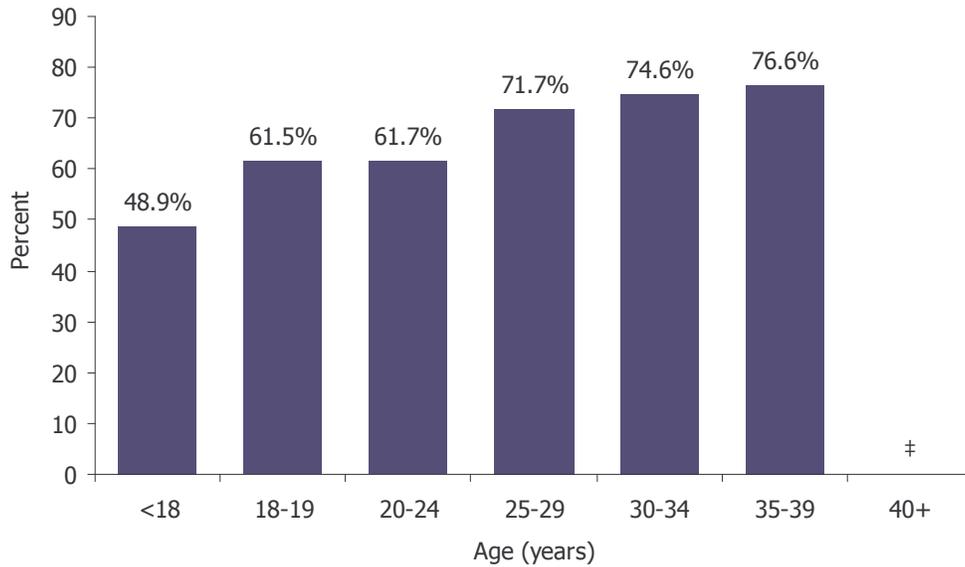
Figure 46:
Prevalence of breastfeeding behavior,
2006 MI PRAMS



Breastfeeding

Figure 47:

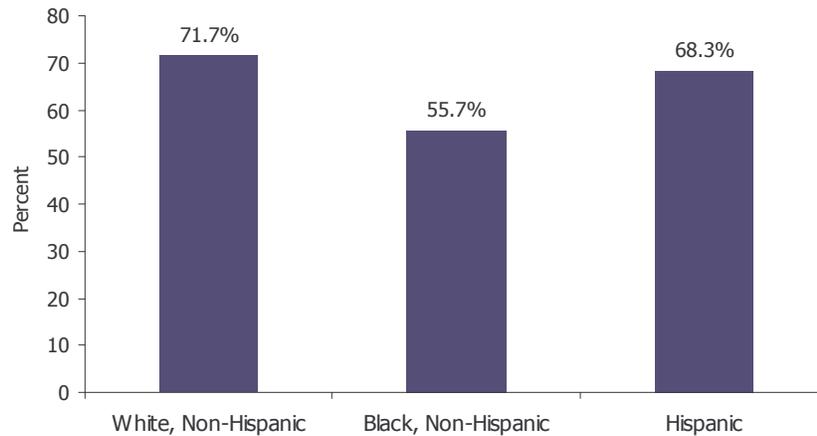
Prevalence of women who breastfed ever by maternal age,
2006 MI PRAMS



‡Data not shown due to small sample sizes

Figure 48:

Prevalence of women who breastfed ever by maternal race,
2006 MI PRAMS



**Statistics not shown for 'American Indian/Alaskan Native' and 'Asian/PI' due to small sample size

Breastfeeding

Figure 49:

Prevalence of women who ever breastfed by maternal education, 2006 MI PRAMS

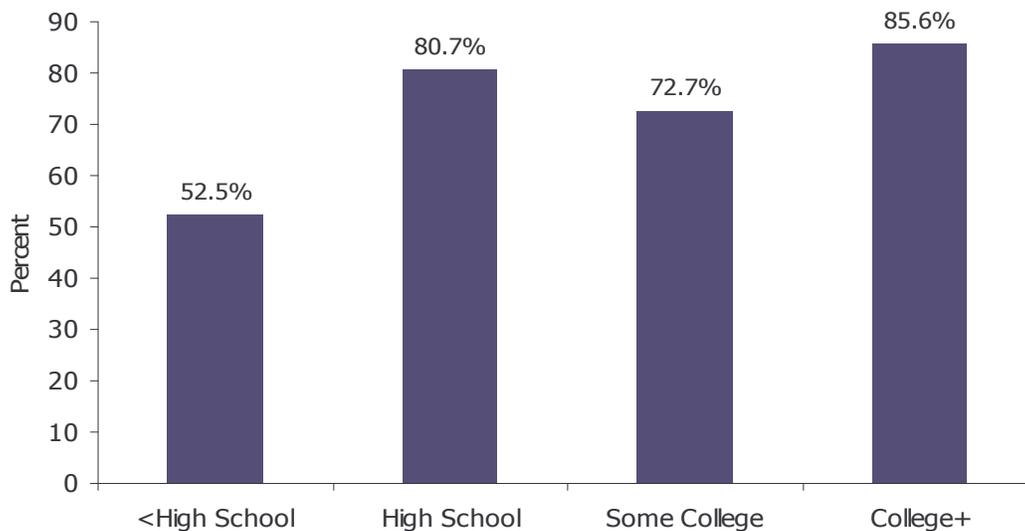
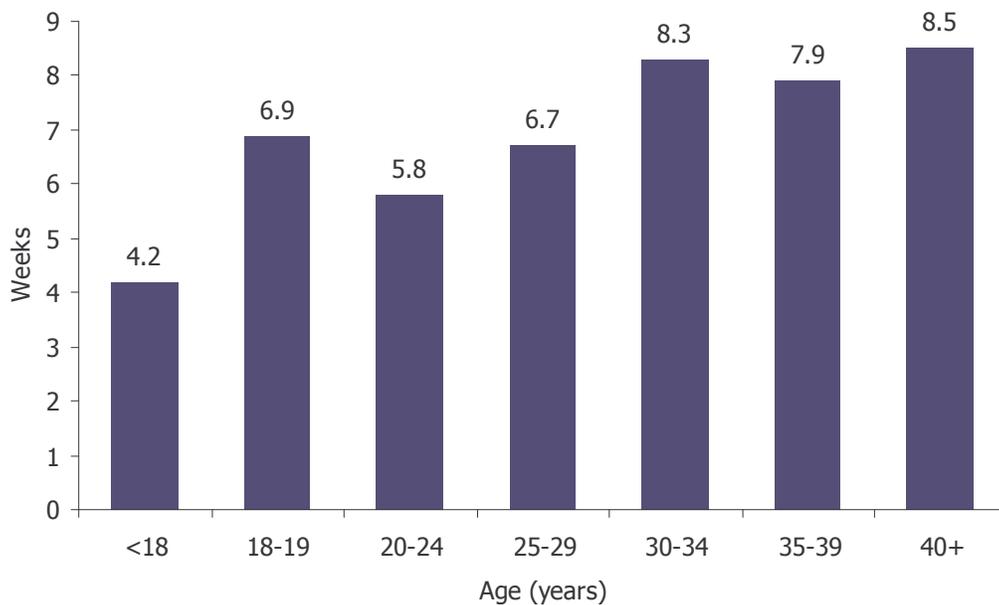


Figure 50:

Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed (2 to 4 months after delivery) by maternal age, 2006 MI PRAMS



Breastfeeding

Figure 51:

Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed, by maternal race/ethnicity,

2006 MI PRAMS

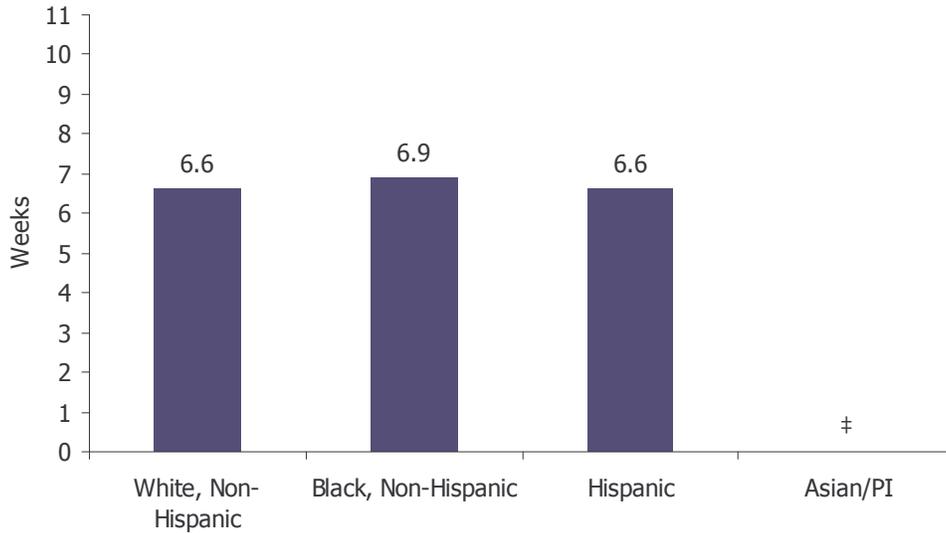
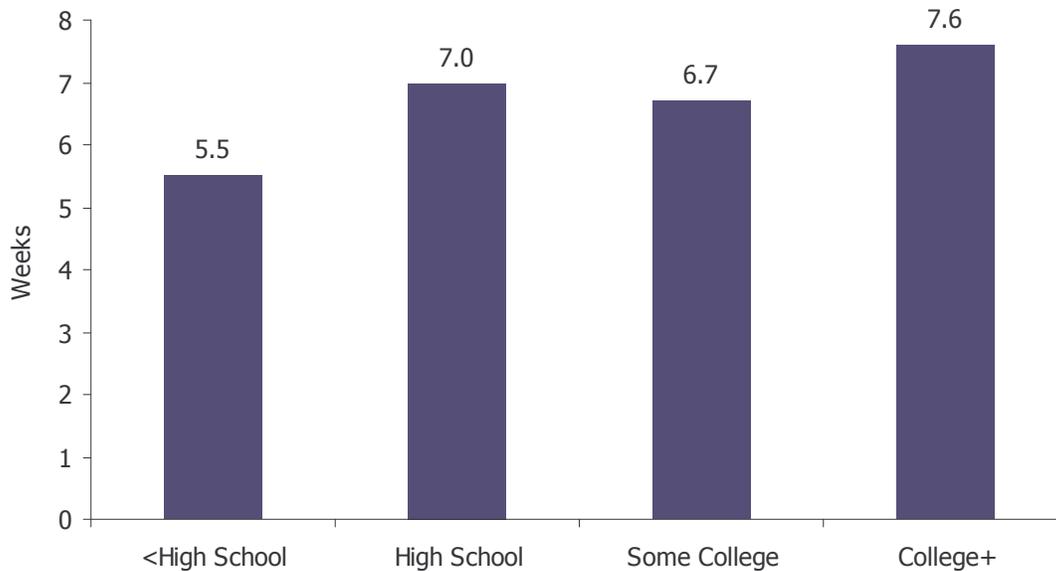


Figure 52:

Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed, by maternal education,

2006 MI PRAMS

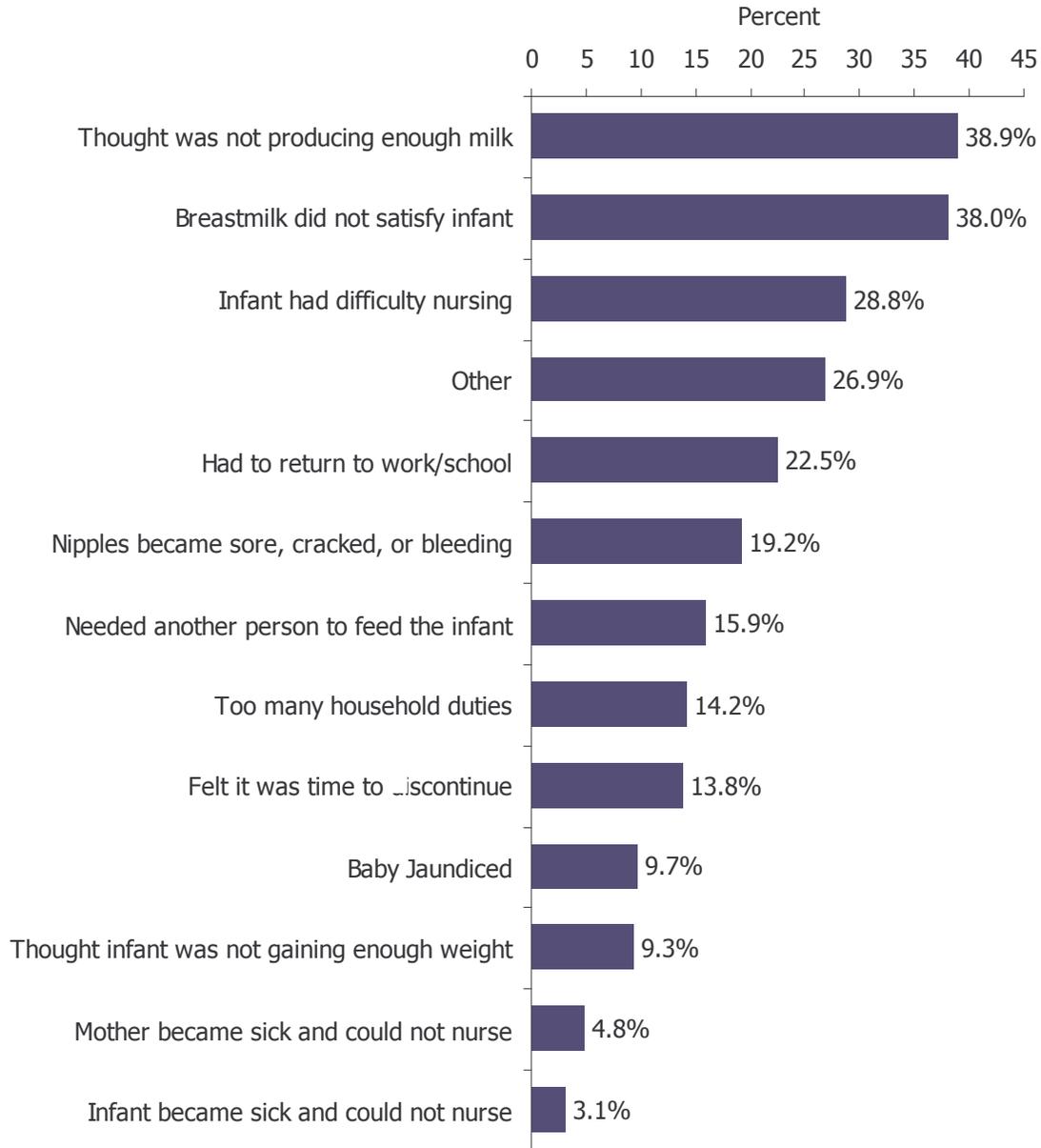


Breastfeeding

Figure 53:

Barriers to breastfeeding continuation among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed,

2006 MI PRAMS



Substance Abuse: Tobacco

Definition:

An initial question, question #25, was asked to differentiate women who have recently smoked and women who had not.

Question #25: Have you smoked at least 100 cigarettes in the past 2 years?

- No
- Yes

Women who answered 'No' to question #25 skipped the rest of the maternal smoking questions. Women who answered 'Yes' to question #25 were asked the following three questions:

Question #26: In the 3 months before you got pregnant, how many cigarettes did you smoke on an average day? (a pack has 20 cigarettes)

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- None (0 cigarettes)

Question #27: In the last 3 months of your pregnancy, how many cigarettes did you smoke on an average day?

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- None (0 cigarettes)

Question #28: How many cigarettes or packs of cigarettes do you smoke on an average day now?

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- None (0 cigarettes)

A nonsmoker is defined as a woman who was not smoking during either period of time including women who answered no to question #25. A smoker who quit was a woman who indicated that she smoked during the initial time period, but was not smoking during the second time period. A smoker (reduced # cigarettes) was a woman who indicated that she smoked during the initial time period, but reduced the number of cigarettes in the second period. A smoker (# cigarettes same or more) is defined as a woman who indicated that she smoked during the initial time period, but maintained or increased the number cigarettes in the second period. Nonsmoker

who began smoking was a woman who reported not smoking during the first time period, but who indicated smoking in the second. When analyzing women who smoked in the last three months of their pregnancy, women who indicated that they did not smoke then or who indicated that they did not smoke at all were categorized as not smoking in the last three months of their pregnancy. Women who reported smoking cigarettes, regardless of the amount, were classified as smokers. Smoking behaviors were compared as such: during pregnancy with behavior before pregnancy, postpartum behavior with smoking during pregnancy, or postpartum behavior with pre-pregnancy behavior.

Results:

A significant percentage of PRAMS respondents reported not smoking prior to pregnancy (69%). Among the women who reported smoking prior to pregnancy, nearly 14% had quit, 12% had reduced the number of cigarettes smoked, and 5% smoked the same or more cigarettes during pregnancy (Figure #55). Maternal age was directly related to the risk of smoking in the last three months of pregnancy. Women 20-24 years of age had the highest rate of tobacco use during pregnancy (31.3%), while women age 35-39 years had the lowest rate (6%) (Figure #56). Non-Hispanic white women were more likely to report smoking during the last three months of pregnancy (18.3%) compared to non-Hispanic black women (15.0%). The numbers for Hispanics, Asian/Pacific Islanders, and American Indians were too small to report the rate of tobacco use during pregnancy (Figure #57). Like many of the other risk factors analyzed in this report, smoking rates had a dose-dependent inverse association with maternal education: women without a high school diploma had the highest prevalence of smoking in the last three months of pregnancy (42.1%), while women with a college degree had the lowest rate (3.0%) (Figure #58). In addition, women who were ever on Medicaid had a higher prevalence of smoking than women who were never on Medicaid (30.0% vs. 7.5%) (Figure #59).

Smoking reduction during pregnancy does not appear to be associated with a permanent decline. While the majority of women remained non-smokers after pregnancy, over 16% reported that they smoked the same number or more cigarettes after their pregnancy when compared to their pre-pregnancy behavior. Further, the percentage of smokers who quit was reduced from 13.7% (Figure #55) during pregnancy to only 6.7% after pregnancy (Figure #60); the percentage of women that reduced the number of cigarettes smoked during pregnancy also declined from 12.1% to 7.9%.

Public Health Implications:

It is well known that smoking during pregnancy has been associated with many adverse pregnancy outcomes. Providers should identify pregnant women who smoke and offer resources and information about smoking cessation programs like the Michigan guide 'Planning to Quit: Quit Kit', which can be found at <http://www.michigan.gov/tobacco>. These programs should also target women who are more likely to smoke such as those less than 25 years of age, non-Hispanic white women, and women with less than a high school education as well as smokers who plan to conceive.

Smoking cessation also seems to be temporary. The proportion of smokers who quit during pregnancy decreased significantly during the postpartum period. Discussions with health care providers about the effects of smoking on newborns should continue through the postpartum period and permanent smoking cessation should be encouraged.

Reference Tables: #29- #34

Substance Abuse: Tobacco

Figure 55:

Prevalence of smoking behavior during pregnancy (compared with pre-pregnancy behavior),
2006 MI PRAMS

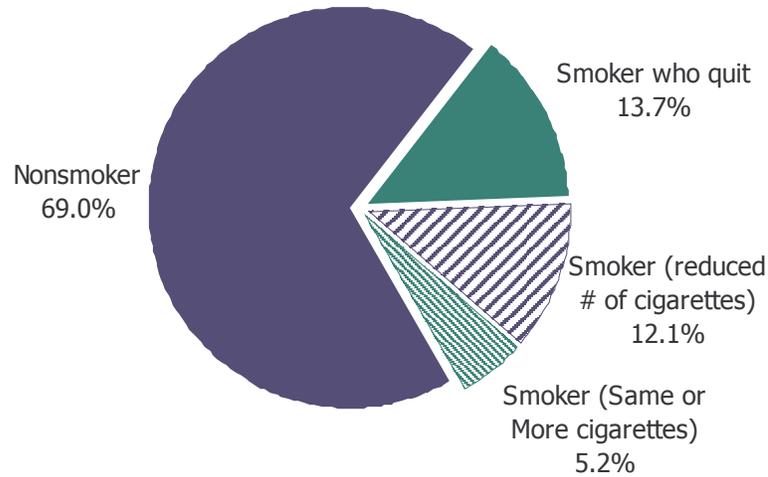
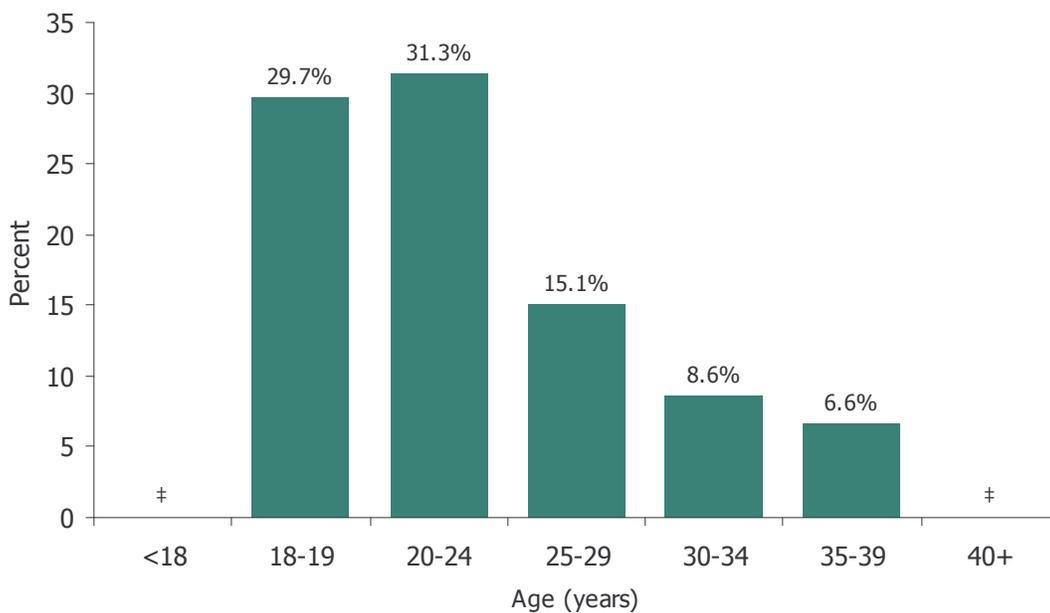


Figure 56:

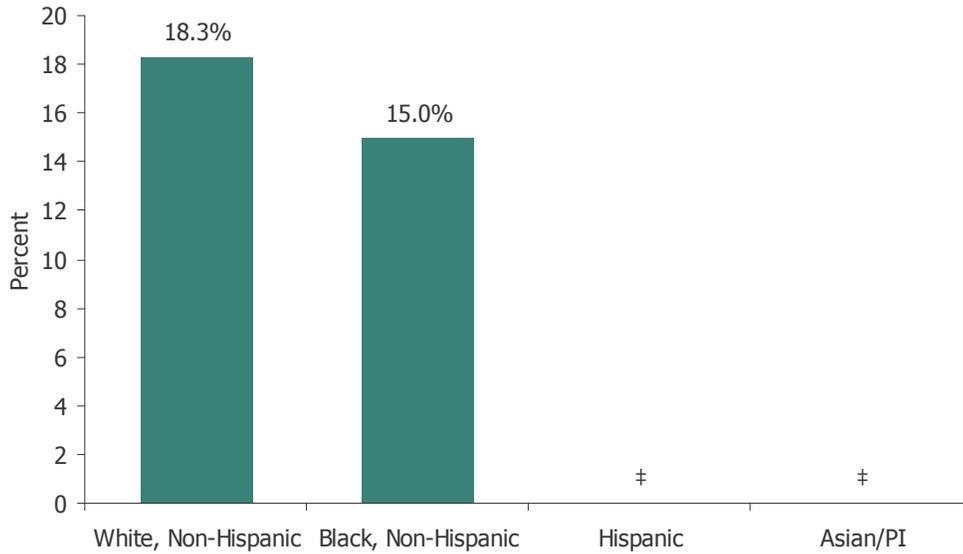
Prevalence of smoking status in the last three months of pregnancy by maternal age,
2006 MI PRAMS



Substance Abuse: Tobacco

Figure 57:

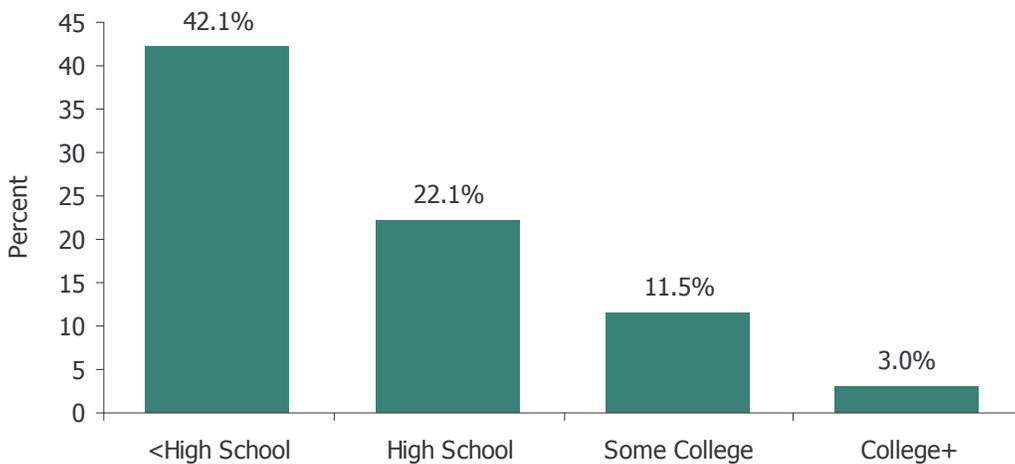
Prevalence of smoking behavior in the last three months of pregnancy by maternal race/ethnicity**, 2006 MI PRAMS



‡Data not shown due to small sample sizes

Figure 58:

Prevalence of smoking behavior in the last three months of pregnancy by maternal education, 2006 MI PRAMS



Substance Abuse: Tobacco

Figure 59:

Prevalence of smoking in the last three months of pregnancy by Medicaid participation, 2006 MI PRAMS

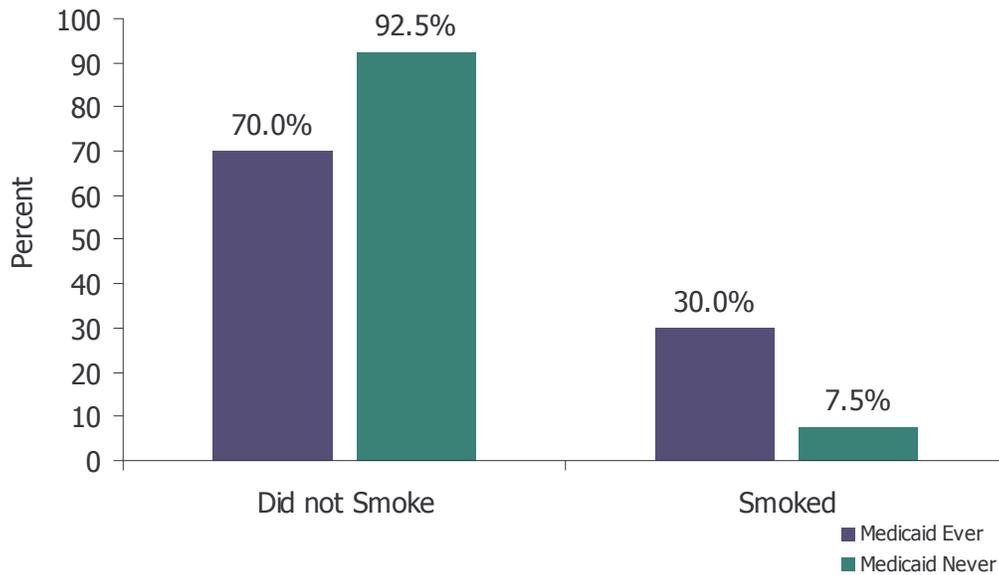
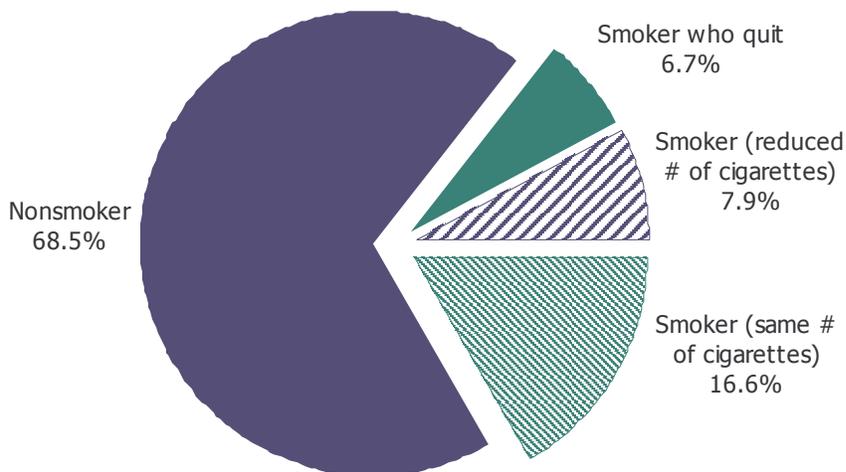


Figure 60:

Prevalence of smoking behavior in the postpartum period (compared with pre-pregnancy behavior), 2006 MI PRAMS



**Nonsmoker who began smoking not shown*

Alcohol Use

Definition:

Information on alcohol consumption and binge drinking are the focus of five questions on the PRAMS questionnaire. Question #29 was used to screen for drinking behavior.

Question #29: Have you had any alcoholic drinks in the past 2 years? (a drink is one glass of wine, wine cooler, can or bottle of beer, shot of liquor, or mixed drink)

- No
- Yes

Women who responded 'No' to that question skipped the rest of the alcohol consumption questions. Women who responded 'Yes' were asked the following questions:

*Question #30a: **During the 3 months before** you got pregnant, how many alcoholic drinks did you have in an average week?*

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then

*Question #30b: **During the 3 months before** you got pregnant, how many times a week did you drink 5 alcoholic drinks or more in one sitting?*

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 5 drinks or more in 1 sitting
- I didn't drink then

*Question #31a: **During the last 3 months** of your pregnancy, how many alcoholic drinks did you have in an average week?*

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then

*Question #31b: **During the last 3 months** of your pregnancy, how many times a week did you drink 5 alcoholic drinks or more in one sitting?*

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 5 drinks or more in 1 sitting
- I didn't drink then

Results:

During pregnancy, 40% of women reported being non-drinkers and nearly 7% reported drinking alcohol. More than half (53.1%) of the women reported quitting drinking during pregnancy. Among women who reported drinking during pregnancy, nearly 4% reduced the number of drinks while nearly 3% consumed the same number of drinks or more (Figure #61).

Public Health Implications:

Although a small proportion of women reported drinking during pregnancy, these fetuses are exposed to the risk of Fetal Alcohol syndrome (FAS) at birth due to any alcohol consumption. Health care providers should continue to screen all women for alcohol consumption. Also, continuing to educate women during prenatal care about this syndrome and provide support may help in reducing the number of women who continue to drink alcohol during pregnancy despite the warnings.

The Michigan Department of Community Health's Fetal Alcohol Syndrome (FAS) program strives to reduce the number of children born in Michigan with FAS. The program has three main components: 1) five multidisciplinary teams called Centers of Excellence diagnose children and provide initial care planning; 2) eleven community projects provide community outreach and education; and 3) training and consultation to assist collaborative agencies in their work. This work is guided and assisted by FAS steering committees and community networking to increase awareness of FAS and the importance of its prevention, do outreach, screening and referrals to diagnostic services, and assist with providing therapeutic and social supportive services to families and children with FAS.

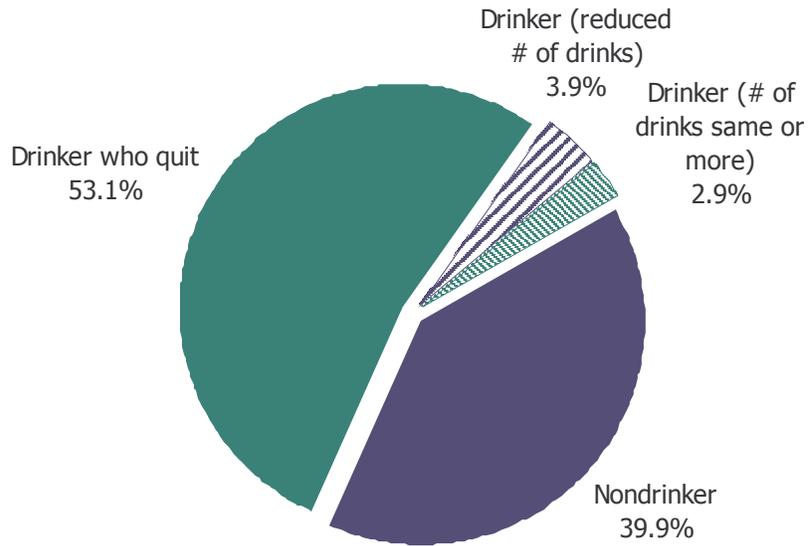
A state Fetal Alcohol Spectrum Disorders (FASD) Task Force was formed in 2005 to advise the program. Strategic planning was done in 2006 and the task force has met quarterly since then to implement goals and objectives of the plan. Task Force members consist of representatives from Michigan's Department of Community Health, Department of Education, Department of Human Services, Corrections, various advocacy organizations and parents.

Reference Tables: #35

Substance Abuse: Alcohol

Figure 61:

Prevalence of alcohol consumption during pregnancy (compared with pre-pregnancy behavior),
2006 MI PRAMS



Infant Sleep

Definition:

Information regarding infant sleeping behavior is captured by two questions: one addresses sleeping position and the other addresses bed sharing. Bed sharing is defined as infants sharing the same sleep surface as another person. Question #54, asks women whose infants were alive at the time the survey was administered:

Question #51: How do you most often lay your baby down to sleep now?

- On his or her side*
- On his or her back*
- On his or her stomach*

Details on bed sharing practice were also asked of women whose infants were alive at the time surveyed. This topic is addressed by the following:

Question #52: How often does your new baby sleep in the same bed with you or anyone else?

- Always*
- Often*
- Sometimes*
- Rarely*
- Never*

Infants were classified as “Rarely/never bed shared” if mother responded that they never/rarely slept in the same bed with someone else. Mothers, who indicated that their infant sometimes bed shared, were classified as, “sometimes bed shared.” Mothers of infants classified as “Always/Often,” indicated that their infant always or often slept in the same bed with someone else.

Information on the nature and source of infant sleep information was obtained by the following questions.

Question #74. During your most recent pregnancy or after your new baby was born, did you receive any information or advice on the following?

- Placing your baby in a crib or portable crib to sleep*
- Placing your baby on his or her back to sleep*
- Placing your baby on a firm mattress*
- Placing your baby to sleep without pillows, bumper pads, plush blankets, or stuffed toys*
- I did not receive any information on where, how, or on what my new baby should sleep*

Respondents who selected any option except the last, were then asked:

Question #75. From whom or where did you get the information or advice that you received?

- Your mother*
- Your grandmother*
- Other family member or friend*

- _TV or radio*
- _A home health visitor*
- _Your hospital nurse*
- _Your obstetrician or midwife*
- _Your baby's doctor*
- _Other*

Results:

During 2006, 74% of women reported placing their infant to sleep on their back, 16% on their stomach, and 10% on their side (Figure #62). Women 18-19 years of age were the most likely to report placing their infants to sleep on their stomach/prone (Figure #63). Non-Hispanic black women were the least likely to report placing their infant to sleep on their back (57.2%). The prevalence of 'back sleeping' position was at or above 75% for non-Hispanic whites and Asian/Pacific Islanders (Figure #64). The prevalence of back sleeping position was lower among less educated women (Figure #65). Women who had never been on Medicaid reported a higher rate of placing infants in the back sleeping position when compared to women who had ever been on Medicaid (Figure #66).

Approximately 22% of the PRAMS respondents reported always or often sharing their bed with their infant (Figure #67). Women less than 18 years of age were most likely to engage in bed sharing (47.3%) (Figure #68). When stratified by race/ethnicity, both Asian/Pacific Islanders and non-Hispanic black women had the highest rates of always/often bed sharing at 56% and 40.0%, respectively (Figure #69). Further, non-Hispanic white women had the lowest prevalence with 16% indicating always/often bed sharing (Figure #70).

Nearly all (93.4%) of the respondents reported receiving information on placing their baby on their back to sleep (Figure #71). Approximately 2% reported not receiving any infant sleep related information. Among women who reported receiving infant sleep information, approximately 67% reported their hospital nurse as the source of such information (Figure #72).

Public Health Implications:

In November of 2005, the American Academy of Pediatrics (AAP) published its revised recommendations on Infant Safe Sleep Practices, based on the Task Force findings on Sudden Infant Death Syndrome. The AAP recommends a separate but proximal sleep environment for infants under the age of one. The Academy recognized that "the evidence is growing that bed-sharing, as practiced in the United States and other Western Countries, is more hazardous than the infant sleeping on a separate sleep surface . . . Infants may be brought into bed for nursing or comforting but should be returned to their own crib or bassinet when the parent is ready to return to sleep." In addition to the recommendation for no bed-sharing, the Academy reinforced its position on exclusive back sleeping, firm sleep surface with no extra bedding or soft objects in the crib, no smoking during pregnancy or around the infant, and avoid overheating infants as measures to reduce SIDS and Sudden Unexpected Infant deaths. The AAP further stressed that public education should be intensified for secondary caregivers (child care providers, grandparents, foster parents and babysitters), and that health professionals need to implement these recommendations at every possible encounter with expectant and new parents.

A recent study by Fern Hauk explored the reasons that mothers choose or not choose to bring their infant to bed with them throughout the first year of life. The authors found the three most common reasons that mothers cited for bringing the infant into bed were to calm a fussy infant, to help the infant and/or the mother sleep, and to facilitate breastfeeding. "Health providers need to engage in discussions with their patients to better understand the reasons for the choices they are making with regard to sleeping practices and to ensure that they understand the risks and benefits associated with these practices," conclude the authors.

Although safe sleep practices should be encouraged among all women, the Michigan PRAMS data suggests that educational messages should be directed more to those least likely to place their infant to sleep on their back (less than 20 year old and non-Hispanic Black) and those most likely to report always/often bed sharing (less than 25 year old, non-Hispanic Black, with less than a high school education).

* Pediatrics, Vol 116, No 5, Nov. 2005 AAP Policy Statement: The Changing Concept of Sudden Infant Death Syndrome: Diagnostic Coding Shifts, Controversies Regarding the Sleep Environment, and New Variables to consider in Reducing Risk.

Hauk F, Signore C, Fein SB, et al. 2008. Infant sleeping arrangements and practices during the first year of life. Pediatrics 122(Supplement 2):S113-S120.

Reference Tables: #36- #39b

Infant Sleep

Figure 62:
Prevalence of infant sleep position,
2006 MI PRAMS

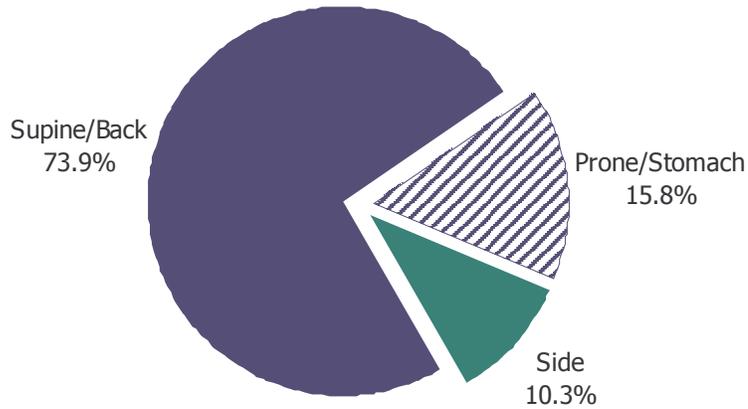
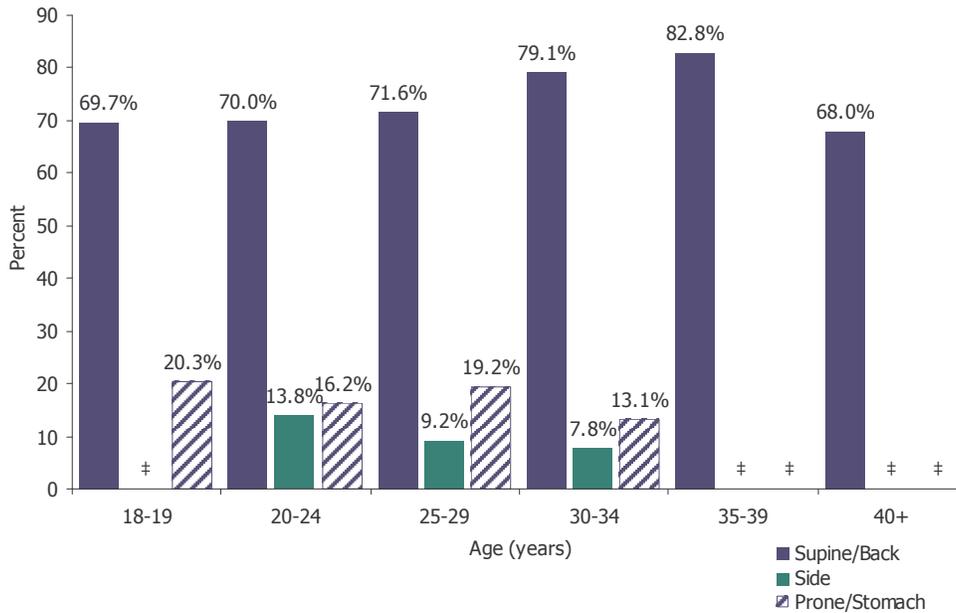


Figure 63:
Prevalence of infant sleep position by maternal age,
2006 MI PRAMS



‡Data not shown due to small sample sizes

Infant Sleep

Figure 64:

Prevalence of infant sleep position by maternal race/ethnicity,
2006 MI PRAMS

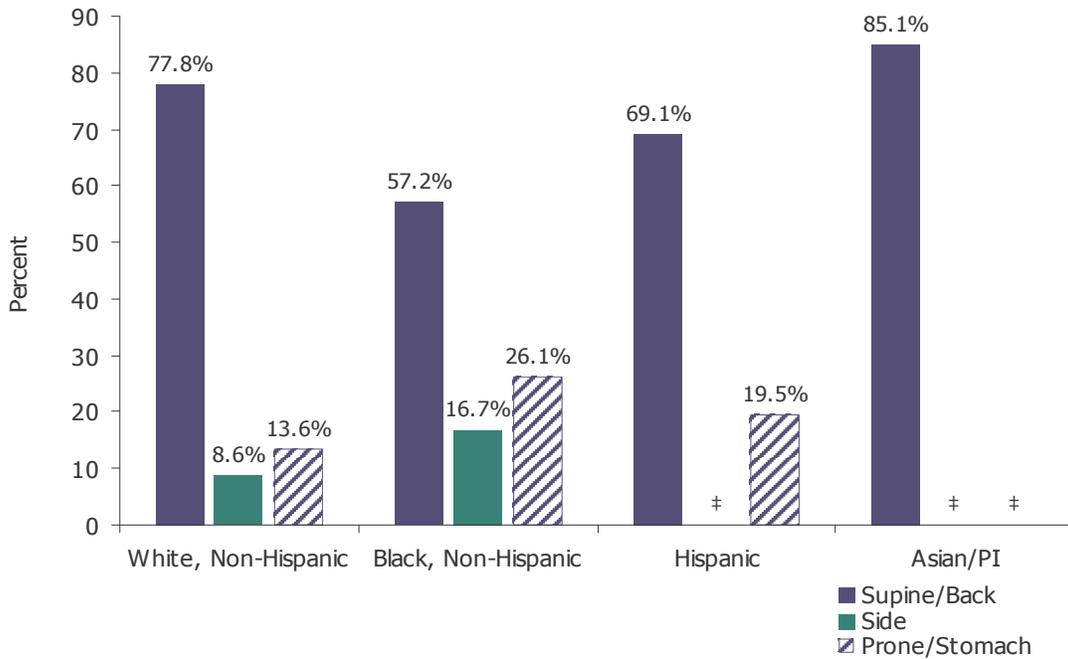
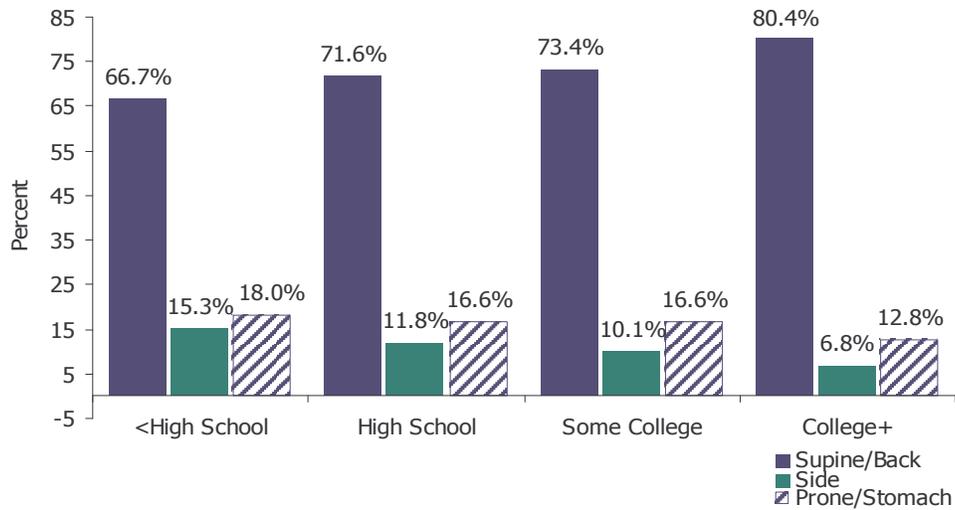


Figure 65:

Prevalence of infant sleep position by maternal education,
2006 MI PRAMS



Infant Sleep

Figure 66:
Prevalence of infant sleep position by maternal insurance status,
2006 MI PRAMS

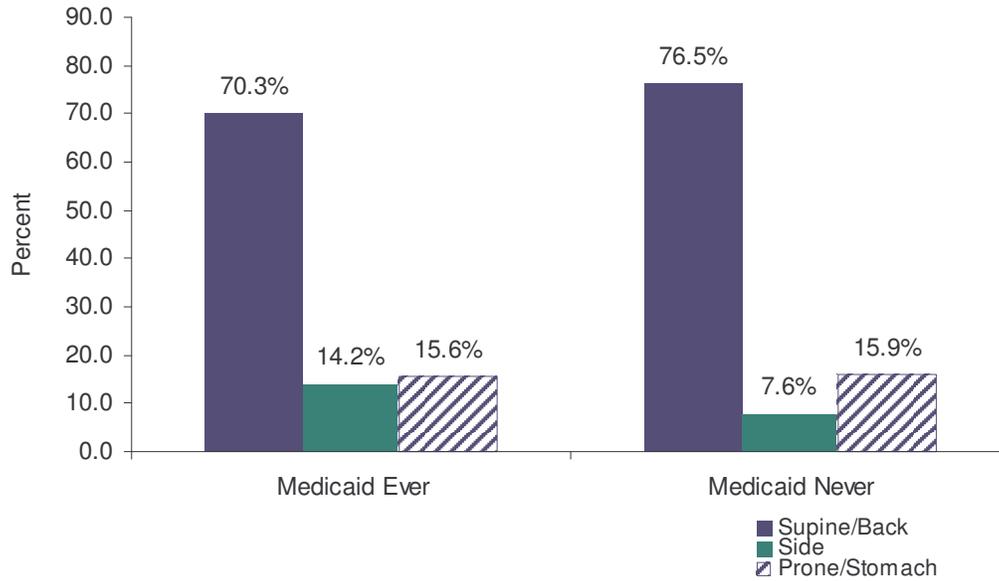
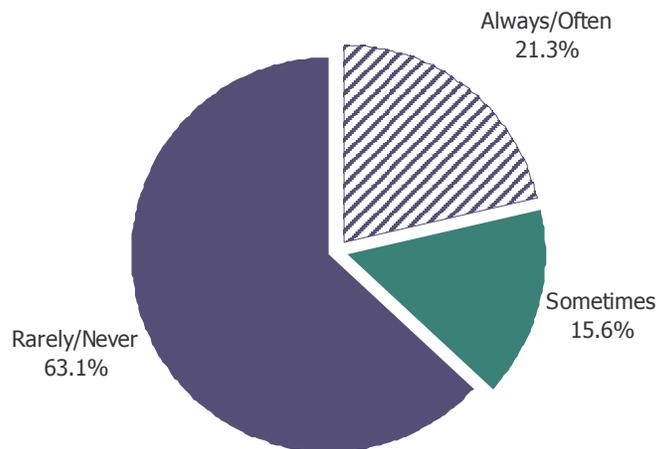


Figure 67:
Prevalence of infant bed sharing,
2006 MI PRAMS



Infant Sleep

Figure 68:
Prevalence of infant bed sharing by maternal age,
2006 MI PRAMS

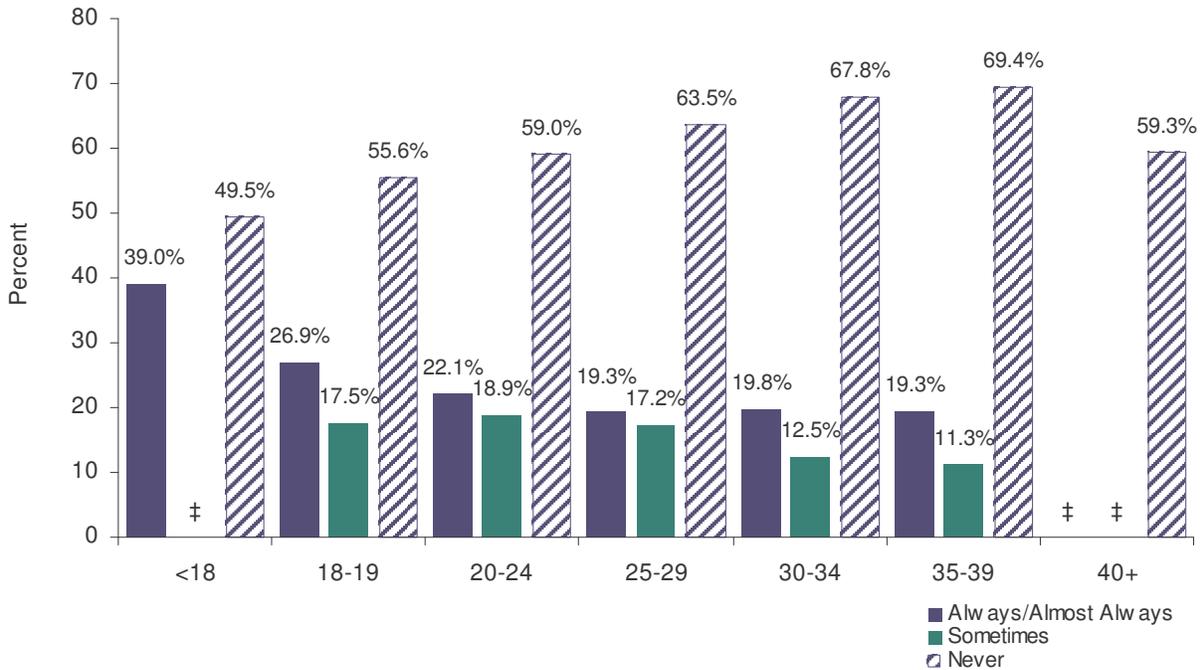
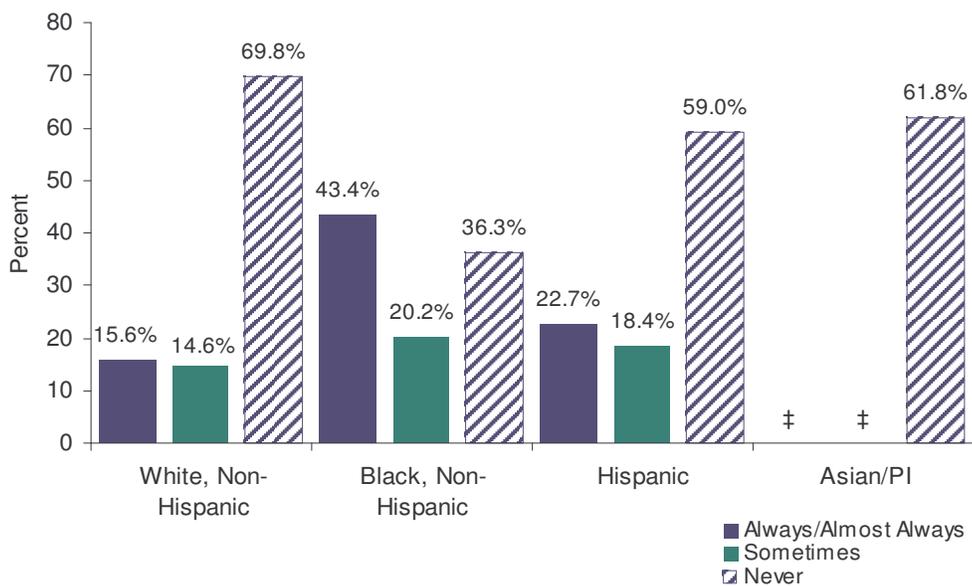


Figure 69:
Prevalence of infant bed sharing by maternal race/ethnicity,
2006 MI PRAMS



‡ Data not shown due to small sample sizes

Infant Sleep

Figure 70:
Prevalence of infant bed sharing by maternal education,
2006 MI PRAMS

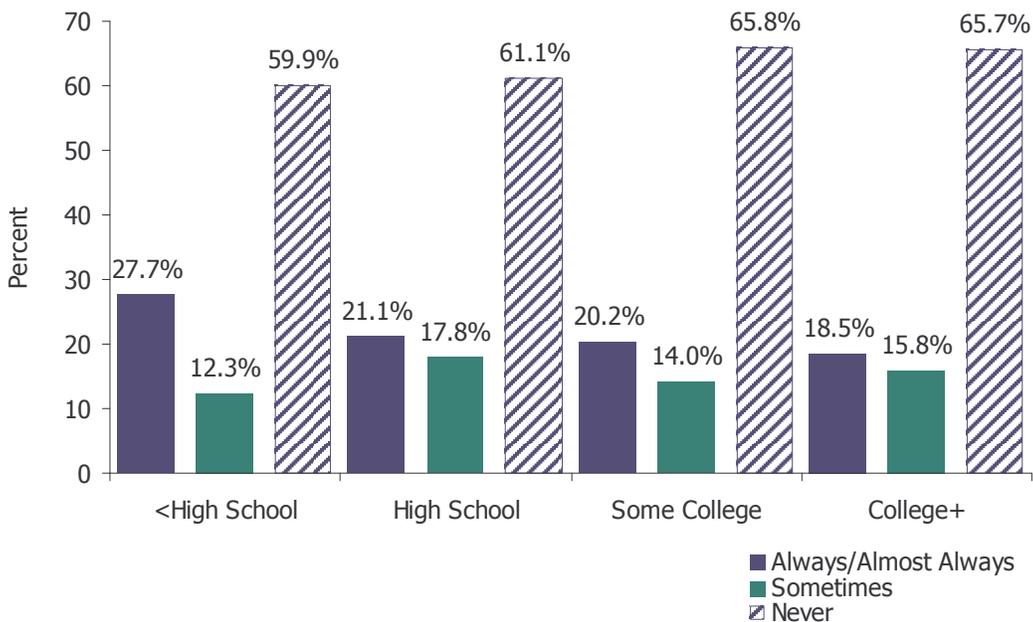


Figure 71:
Prevalence of infant sleep information,
2006 MI PRAMS

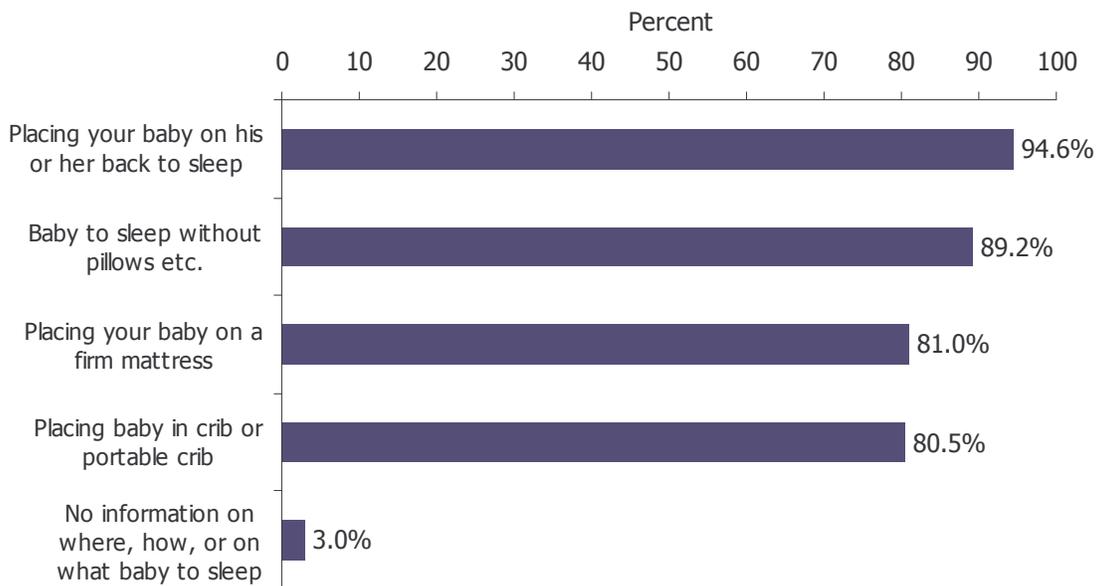
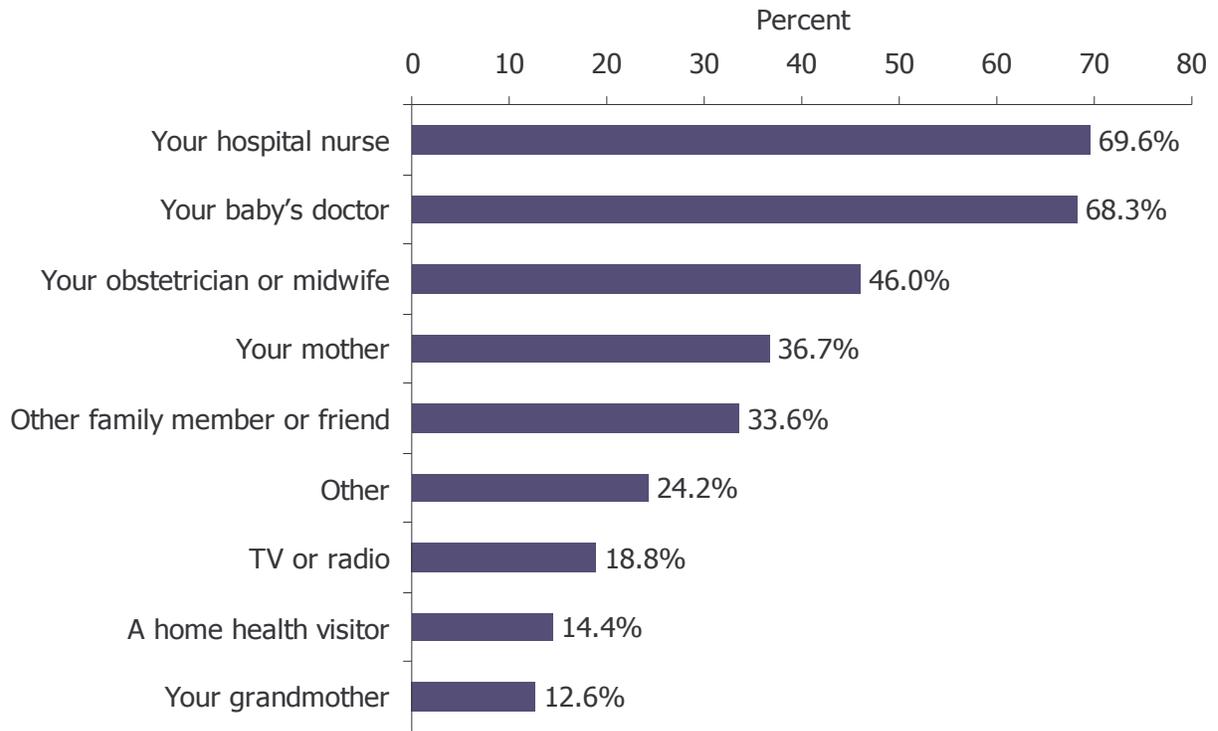


Figure 72:
Source of infant sleep information,
2006 MI PRAMS



Violence Against Women

Definition:

Information regarding abuse, both physical and verbal, was derived from six questions asked of all women surveyed for PRAMS.

Women classified as being abused prior to pregnancy responded 'Yes' to either Questions #33a or #33b, which ask:

Question #33a: During the 12 months before you got pregnant, did your husband or partner push, hit, slap, kick, choke, or physically hurt you in any other way?

No
 Yes

Question #33b: During the 12 months before you got pregnant, did anyone else push, hit, slap, kick, choke, or physically hurt you in any other way?

No
 Yes

Women classified as being abused during pregnancy responded 'Yes' to either Questions #34a or #34b, which ask:

Question #34a: During your most recent pregnancy, did your husband or partner push, hit, slap, kick, choke, or physically hurt you in any other way?

No
 Yes

Question #34b: During your most recent pregnancy, did anyone else push, hit, slap, kick, choke, or physically hurt you in any other way?

No
 Yes

The issue of verbal abuse was addressed in question #73. Women were classified as experiencing verbal abuse or not experiencing verbal abuse depending on their response to option 'f':

Question #67: This question is about things that may have happened during the 12 months before your new baby was born.

g. You were repeatedly called names, told you were worthless, ugly, or verbally threatened by your partner or someone important to you.

No
 Yes

Results:

Among PRAMS respondents, 5.5% reported experiencing physical abuse in the year prior to pregnancy with the woman's husband/ex-husband/partner/ex-partner being named the abuser in nearly 65% of the cases (Figure #73). A similar picture was presented during pregnancy, with 3.6% of women reporting being physically abused (Figure #74). In addition, approximately 6.4% of women reported being verbally abused in the year prior to pregnancy (Figure #75).

Public Health Implications:

A small, yet unacceptable, percentage of women reported physical or verbal abuse. While the rate of physical or verbal abuse has remained somewhat steady since 2004 ranging from 5% to 6%, the proportion of named abusers being the husband/ex-husband/partner/ex-partner has significantly increased since 2004 from 48.1% to 59.6% in 2005 and 64.7% in 2006. Thus, the intervention efforts aimed towards domestic abuse prevention should be enhanced to thus reduce the rate of violence during pregnancy. Standardized screening tools used by providers during prenatal care for all women would help identify women who are victims of abuse. These women can then be referred to appropriate services.

Reference Tables: #40- #44

Violence Against Women

Figure 73:
Prevalence of pre-pregnancy physical abuse and abuser,
2006 MI PRAMS

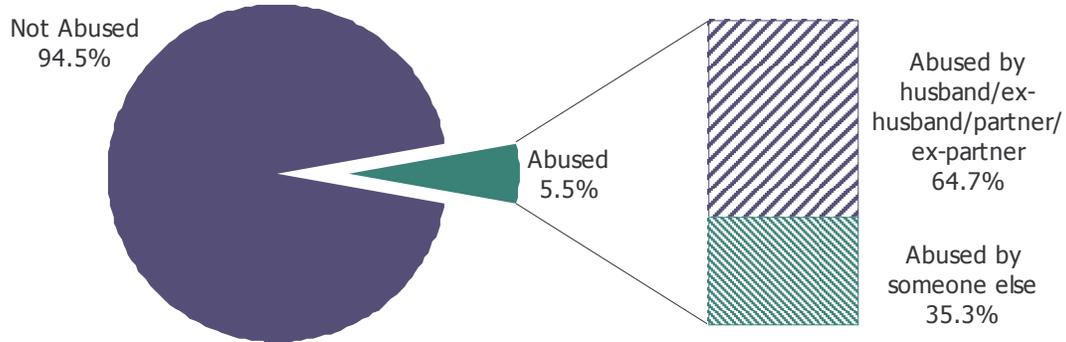
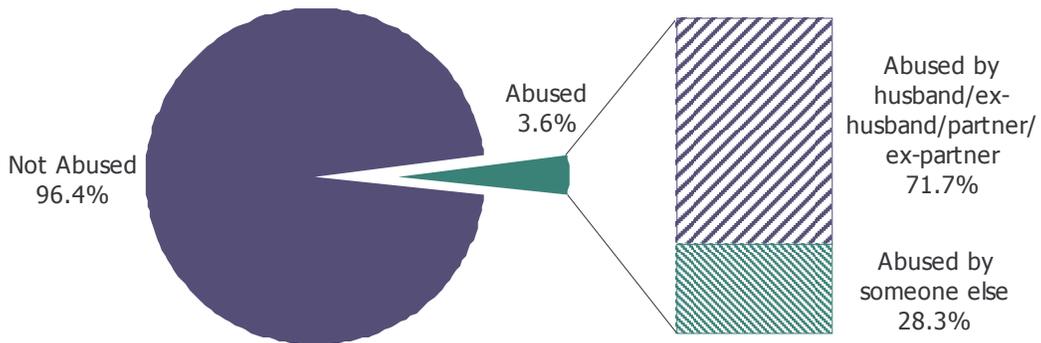
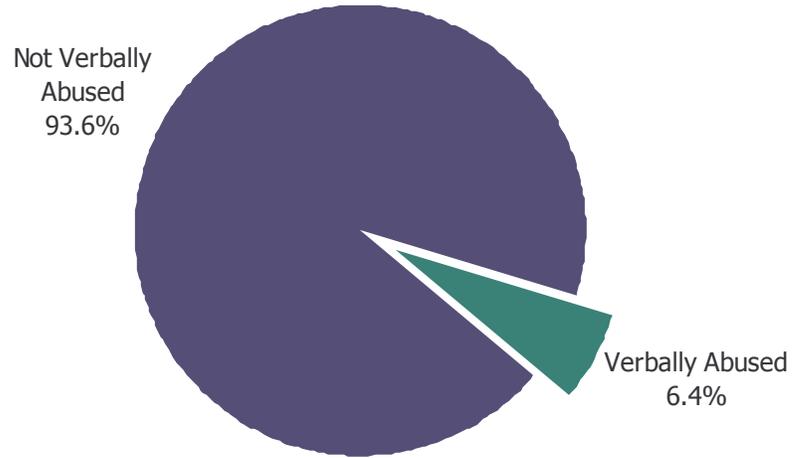


Figure 74:
Prevalence of physical abuse during pregnancy and abuser,
2006 MI PRAMS



Violence Against Women

Figure 75:
Prevalence of verbal abuse in the year prior to delivery,
2006 MI PRAMS



HIV

Definition:

Treating HIV-infected pregnant women and their infants can reduce the risk for perinatal transmission by two thirds. In 1995, the US Public Health Service recommended routine HIV counseling and voluntary testing of pregnant women*. Two questions in the PRAMS questionnaire gather information on HIV counseling and testing:

Question #20: During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below?
j. Getting tested for HIV (the virus that causes AIDS)

Question #21. At any time during your most recent pregnancy or delivery, did you have a test for HIV (the virus that causes AIDS)?

Results:

In 2006, over 84% of women reported receiving HIV counseling during prenatal care (Figure #76). Among these respondents, 76.5% reported actually being tested for HIV. Figure #77 shows that HIV testing was greatest (91.1%) among women less than 20 years of age while 56% of women aged 35 years or more were tested. Non-Hispanic black women were more likely (90.2%) to have HIV testing done (Figure #78) while their non-Hispanic white counterparts were least likely (63.4%). Women with less than a high school education had the highest proportion (87.2%) of HIV testing done followed by those with some college education (65.1%) and those with a college degree or higher (72.1%) (Figure #79). Women with Medicaid coverage also had the highest proportion of HIV testing done (Figure #80).

Public Health Implications:

Over 15% of women reported not having a discussion about HIV testing during prenatal care, which highlights the need for healthcare workers to engage in discussion about this topic with all women.

Further, similar proportions of those counseled and not counseled went on to be tested. Counseling by healthcare providers about prenatal HIV testing should be having an impact on the rate of women going on to be tested. Further research is needed on the content of healthcare provider discussions on this topic and the other factors that may motivate women to be tested.

In 2006, the CDC released revised recommendations for HIV testing in pregnant women which included HIV testing to be a mandatory part of prenatal screening, notifying patients that testing will be done and allowing pregnant women to opt-out rather than asking for consent, not requiring a written consent to perform testing, and repeat screening in the third trimester for areas with elevated rates of HIV infection.* Working toward implementing these recommendations into policies would help to prevent vertical transmission of HIV by identifying infected women and starting them on a timely treatment regimen.

* Branson B., Handsfield H., Lampe M., et al., Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR 2006; 5, RR-14.

HIV

Figure 76:
Prevalence of prenatal HIV counseling and testing,
2006 MI PRAMS

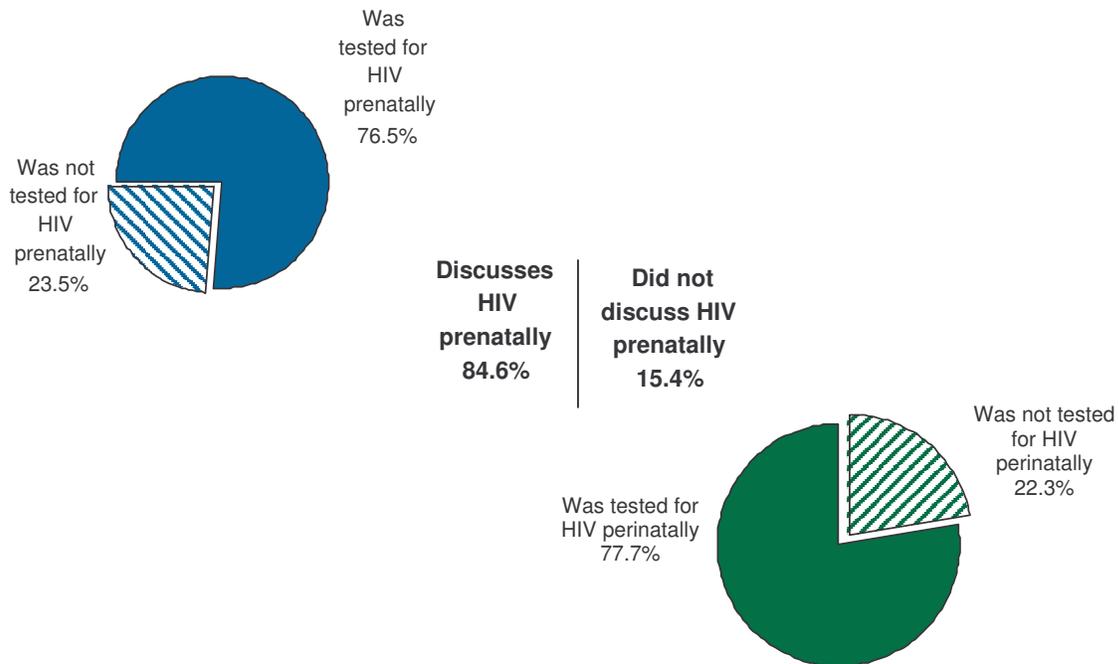
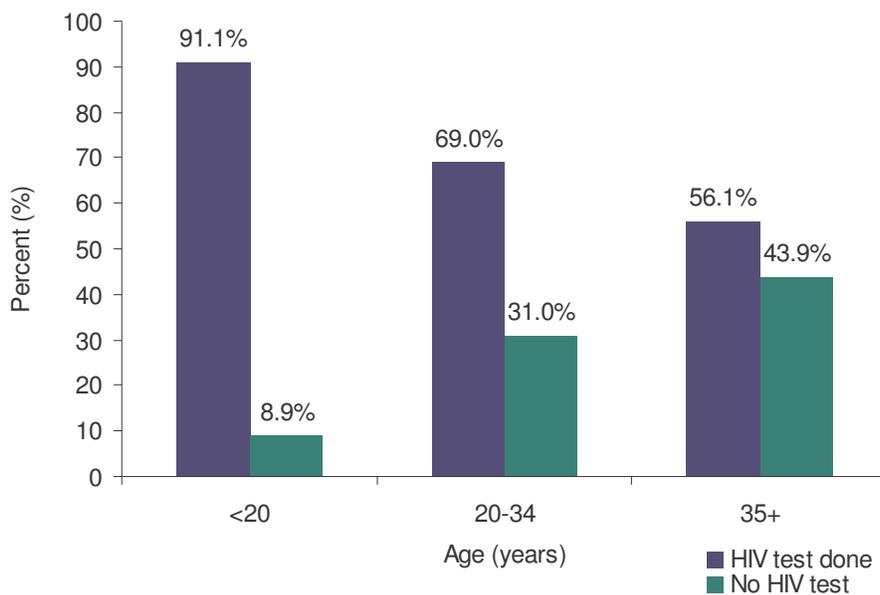


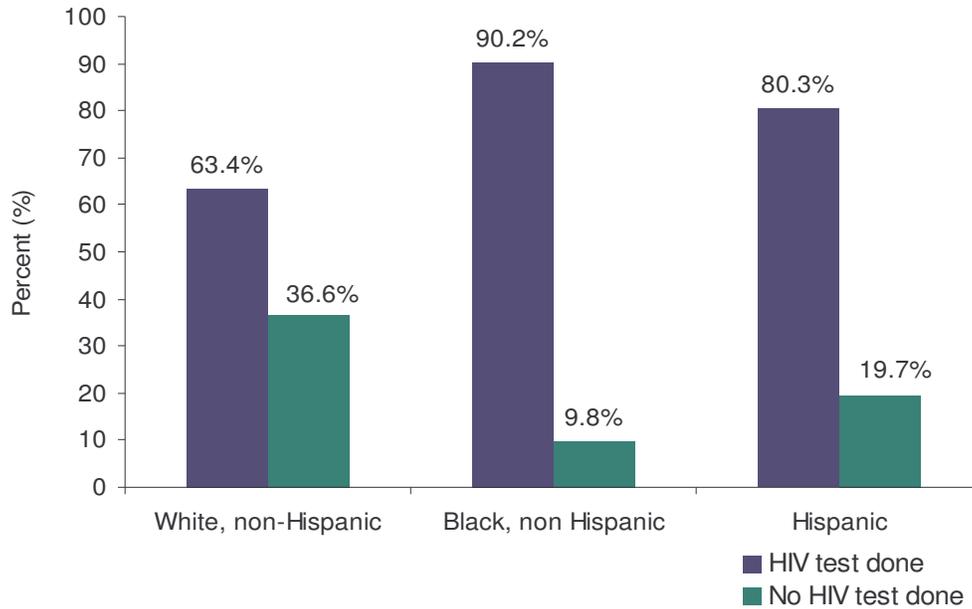
Figure 77:
Prevalence of prenatal HIV test status by maternal age,
2006 MI PRAMS



HIV

Figure 78:

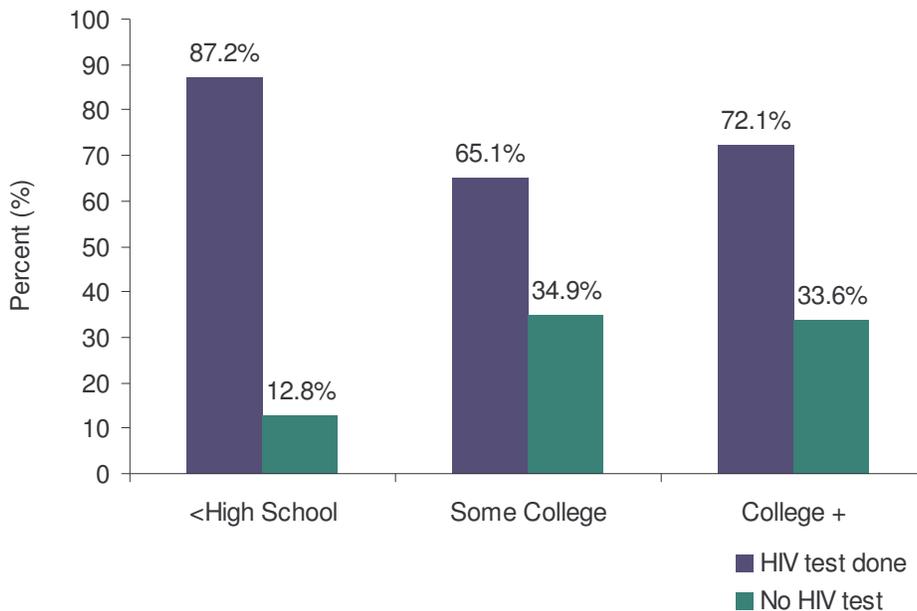
Prevalence of prenatal HIV test status by maternal race/ethnicity, 2006 MI PRAMS



‡Data for American Indian/Alaska Native and Asian not shown due to small sample sizes

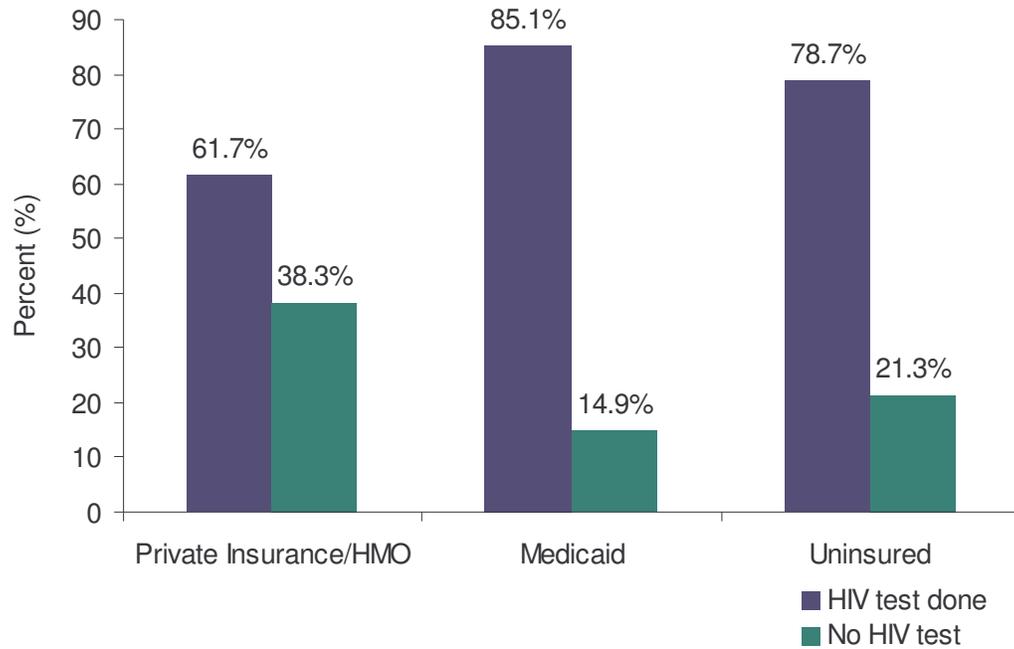
Figure 79:

Prevalence of prenatal HIV test status by maternal education, 2006 MI PRAMS



HIV

Figure 80:
Prevalence of prenatal HIV test status by maternal pre-pregnancy insurance status,
2006 MI PRAMS



Folic Acid Awareness

Definition:

Folic acid deficiency has been shown to increase the risk of birth defects, particularly neural tube defects. One question in the PRAMS questionnaire asked about the respondents' awareness of the benefits of folic acid prior to pregnancy:

Question #64: Before you became pregnant with your new baby, did either of the following things happen?

- _ You heard or read that taking the vitamin folic acid or foods that contain it (orange juice, citrus fruits, broccoli, green leafy vegetables, and fortified cereal) could prevent some birth defects.*
- _ Your doctor or nurse instructed you on how to get enough folic acid*

The respondent was considered having an awareness of the benefits of folic acid if she responded "Yes" to either situation. Only if she responded "Yes" when asked whether she was instructed by a doctor or nurse about folic acid, was she considered knowledgeable of the benefits and the appropriate amount of folic acid to consume. Although no question directly addresses the consumption of folic acid, question #3 of the survey was used to approximate folic acid consumption.

Question #3: During the month before you got pregnant with your new baby, how many times a week did you take a multivitamin or a prenatal vitamin? These are pills that contain many different vitamins and minerals?

- _ I didn't take a multivitamin or a prenatal vitamin at all*
- _ 1-3 times a week*
- _ 4-6 times a week*
- _ Every day of the week*

Women who indicated that they took a multivitamin everyday were classified as having, "consumed an appropriate amount." Those women who took a multivitamin 1-6 times a week were considered as having, "consumed less than appropriate amount of folic acid" and those who did not take any multivitamin were categorized as having, "consumed no folic acid."

Results:

When both folic acid awareness and instruction are combined, 58.1% of women were aware and reported being instructed by a healthcare professional about the importance of folic acid in reducing the risk for birth defects. Another 16.4% were aware but received no instruction, 20.3% were neither aware nor instructed, and the final 5.2% of women did not have any prior awareness but were instructed on folic acid by their healthcare provider (Figure #81).

Over fifty-four percent of women reported that they did not take multivitamins in the month prior to pregnancy while approximately 28.5% reported taking a daily multivitamin (Figure #82). The prevalence of daily multivitamin consumption was highest (35.9%) among women who reported to be both aware and instructed by a healthcare professional about the benefits of folic acid. Of note, among women who were not aware of the benefits of folic acid, instruction about consumption by a health care provider increased daily multivitamin use by only 1.1%. Among women who were aware of the benefits of folic acid, instruction about consumption by a healthcare provider increased daily multivitamin use by 10.3% (Figure #83).

Public Health Implications:

The recommended dose of folic acid is 400 µg/day. The majority of women reported being aware, being instructed, or both about the benefits of folic acid, but the largest proportion of these groups reported not taking a daily multivitamin. Continued education and more encouragement from health care providers about the importance of receiving the recommended dose of folic acid through daily multivitamin consumption is needed. More research is also needed to better understand the reasons/beliefs/barriers of why women of reproductive age fail to take multivitamins.

Reference Tables: #45- #49b

Folic Acid Awareness

Figure 81:

Prevalence of folic acid awareness and/or instruction,
2006 MI PRAMS

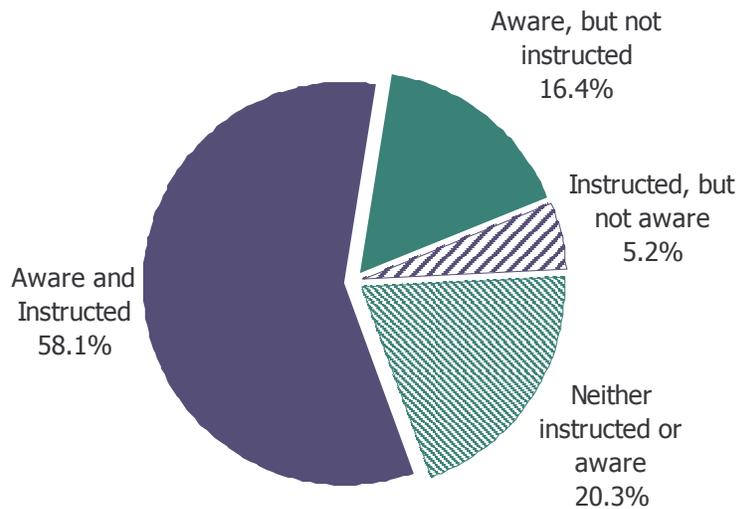
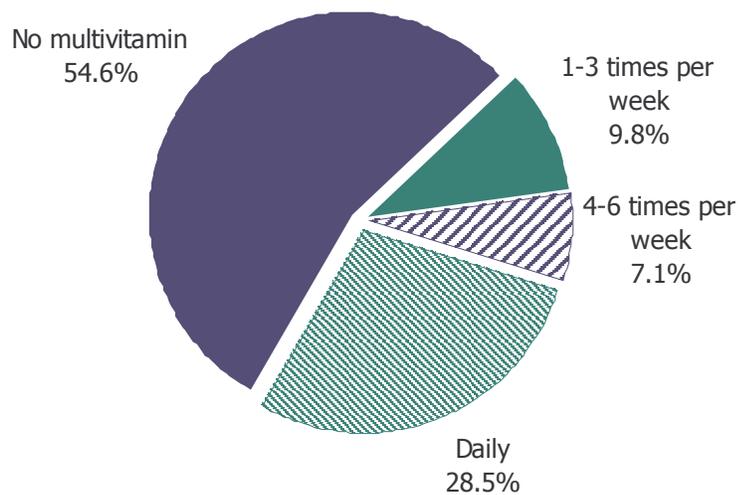


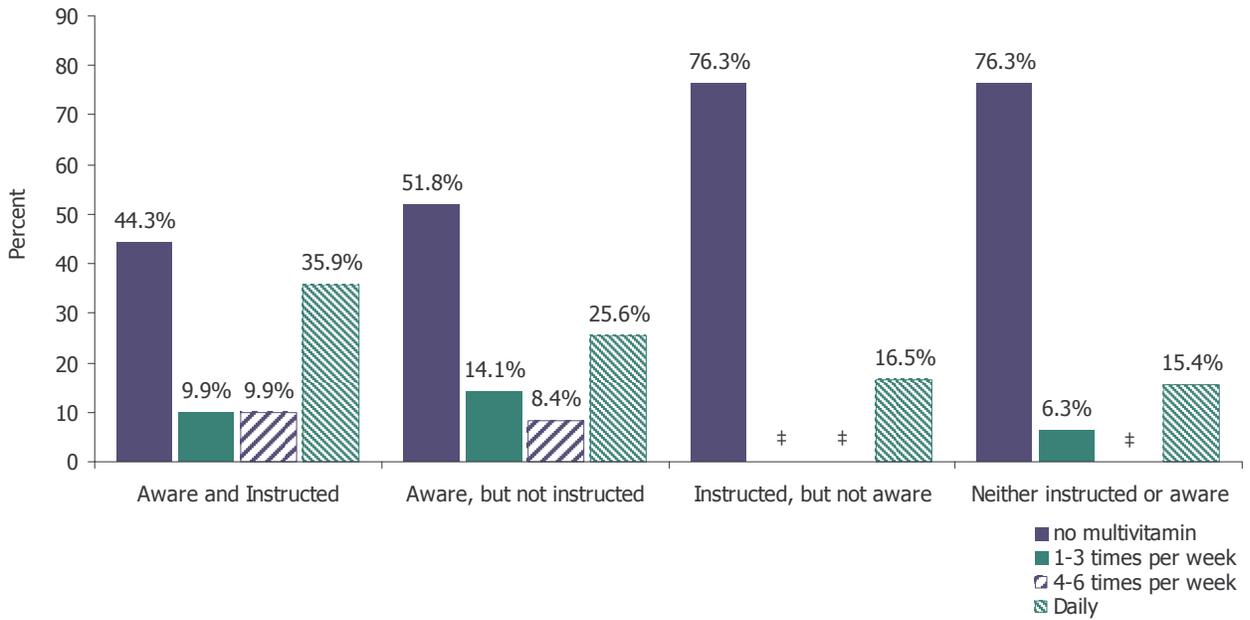
Figure 82:

Frequency of consumption of a multivitamin in the month prior to pregnancy,
2006 MI PRAMS



Folic Acid Awareness

Figure 83:
Consumption of a multivitamin in the month before pregnancy by awareness of / instruction about folic acid, 2006 MI PRAMS



WIC Participation

Definition:

Three questions regarding the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were asked of women completing the PRAMS survey. The first of these questions (Question #22) identifies women who participated in WIC during their pregnancy.

Question #22: During your pregnancy, were you on WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)?

- No
- Yes

Women were categorized as either participating in WIC during pregnancy or not participating in WIC during their pregnancy. Regardless of their answer, however, all women were asked an additional WIC question. Information on infant's participation in WIC was gathered from answers to question #76:

Question #76: Since your new baby was born, have you used WIC services for your new baby?

- No
- Yes

Only women who responded 'No' to #76 were asked question #77.

Question #77: Why wasn't your new baby enrolled in WIC?

- My baby was not eligible
- I didn't know about WIC
- I didn't want to enroll my baby
- Other

Not every pregnant and postpartum woman surveyed by PRAMS is eligible to participate in WIC. There are income and nutritional risks criteria for enrollment in Michigan's WIC: participants must be a pregnant or postpartum woman, reside in Michigan, and be at or below 185% of the Poverty Income Guideline or participate in another state-administered program that utilizes the same income guideline and be classified by a health professional as "nutritionally at risk." While income criteria can be defined, the nutritional risk could not be ascertained by using the PRAMS questionnaire. Therefore, this analysis was restricted to women who participated in Medicaid prior to pregnancy, had Medicaid-paid prenatal care, Medicaid-paid delivery, or received federal assistance as part of their income in the year prior to delivery as income criteria to identify those who were potentially eligible for WIC.

Results:

Among women who met the WIC income requirements, 21.9% did not participate in WIC during their pregnancy (Figure #84). During the postpartum period, 12.8% of women reported that they did not use WIC services for their new baby (Figure #85). Most women (33.4%) reported 'Do not want to enroll infant' as their reason for not participating in WIC followed by 'Other' as the second most prevalent (27.1%) reason for not enrolling their infant (Figure #86).

Public Health Implications:

Based on the PRAMS survey, Michigan's WIC program serves more than three quarters of women who were identified as potentially eligible. These data should be used with caution as the information obtained from the PRAMS questionnaire is limited to self-reporting and the method PRAMS utilizes to define eligibility does not include the full eligibility criteria used by the WIC program. Private and public health care providers provide referrals to WIC and the program itself continues efforts in outreach activities to reach the most at-risk populations. Further assessment of women who reported 'Other' as their reason for not participating in WIC may help develop more effective programs to reach this group. A similar recommendation is proposed for the sub-group who reported 'Do not want to enroll infant.'

|
Reference Tables: #50- #52

WIC Participation

Figure 84:

Participation in WIC during pregnancy among income eligible women,
2006 MI PRAMS

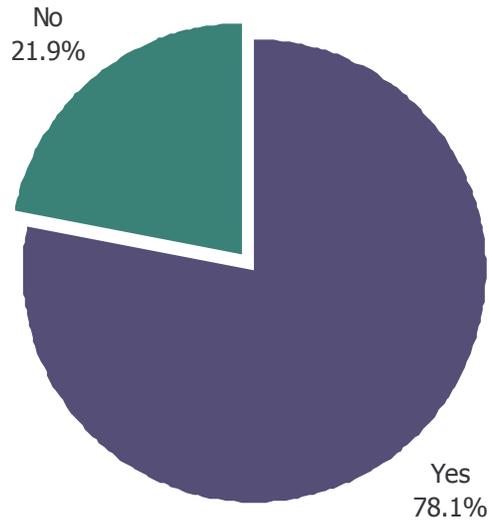
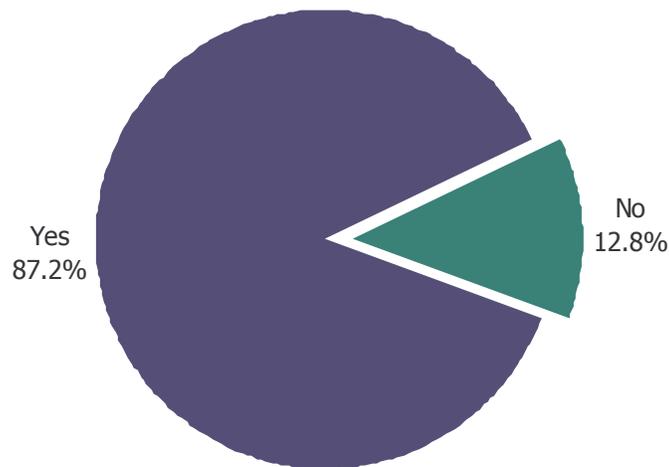


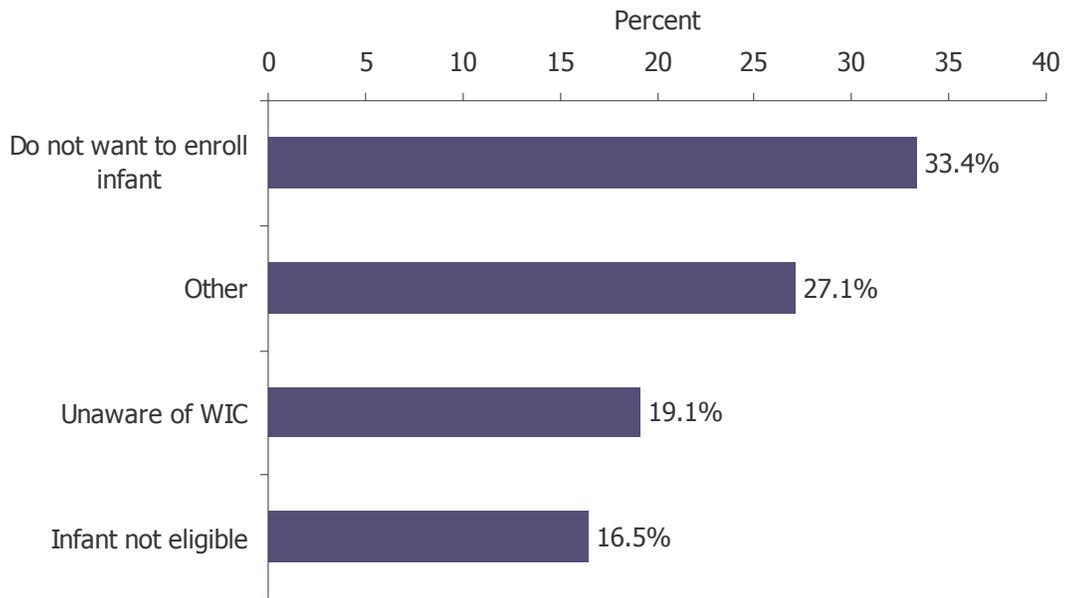
Figure 85:

Prevalence of WIC usage for infants among income eligible women,
2006 MI PRAMS



WIC Participation

Figure 86:
Reasons for infant non-participation in WIC among income eligible women,
2006 MI PRAMS



Oral Health

Definition:

Three questions were used to assess the oral health of women completing the PRAMS survey. The first of these questions (Question #78) asked about women's care of their teeth during their most recent pregnancy.

Question #78: This question is about the care of your teeth during your most recent pregnancy.

I needed to see a dentist for a problem

I went to a dentist or dental clinic

A dental or other health care worker talked with me about how to care for my teeth and gums

Women were then asked:

Question #79: Have you ever had your teeth cleaned by a dentist or dental hygienist?

No

Yes

Only women who responded 'Yes' to #79 were asked:

Question #80: When did you have your teeth cleaned by a dentist or dental hygienist?

Before my most recent pregnancy

During my most recent pregnancy

After my most recent pregnancy

Results:

Over a quarter (27.1%) of all women surveyed indicated a need for dental care during their most recent pregnancy (Figure #87). Among those who reported that they needed care, 42.1% did not seek dental care. Results for respondents' lifetime prevalence for ever/never having had their teeth cleaned are presented in Figures #88 and #89. Women who were uninsured were more likely (9.8%) to report that they NEVER had their teeth cleaned followed by those on Medicaid (5.9%) (Figure #88). Of note, women with private insurance were over three times (2.7%) less likely to report that they NEVER had their teeth cleaned compared to those who were uninsured. Women with a college degree or higher were over two times (2.9%) less likely to report that they NEVER had their teeth cleaned compared to their peers who had less than a high school education (8.6%) (Figure #89).

Public Health Implications:

In 2006, over 42% of the women reporting a need for dental care did not seek it, indicating that there are significant barriers to dental care. The women most likely to not seek needed care were socio-economically disadvantaged. Oral health programs should be aimed at those without private health insurance and further assessment of the barriers to oral health care are needed.

Oral Health

Figure 87:
Prevalence of dental care need and dental care sought,
2006 MI PRAMS

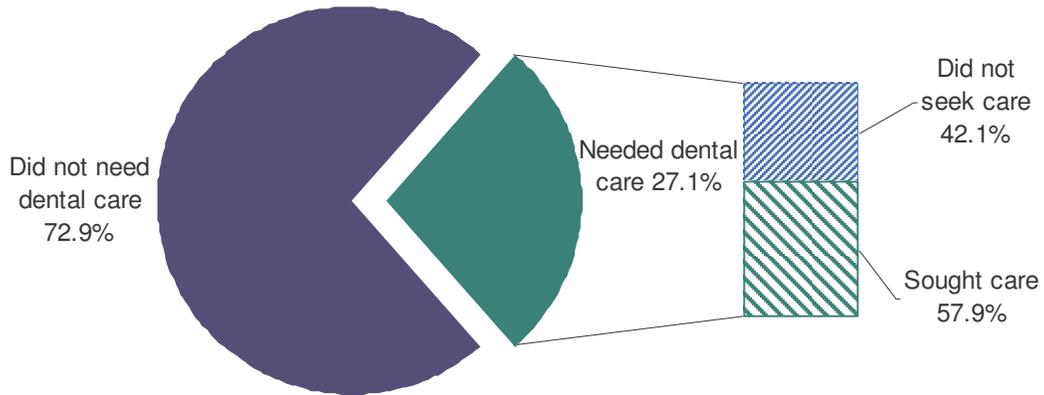
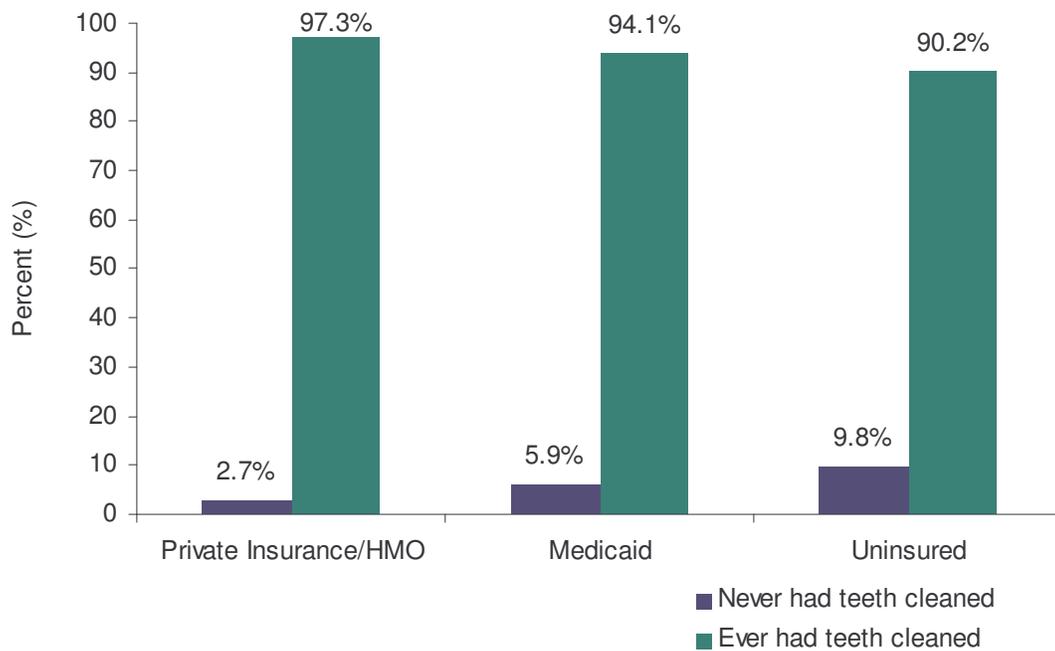


Figure 88:
Prevalence of dental care NEVER/EVER by maternal pre-pregnancy insurance status,
2006 MI PRAMS



Oral Health

Figure 89:
Prevalence of dental care NEVER/EVER by maternal education,
2006 MI PRAMS

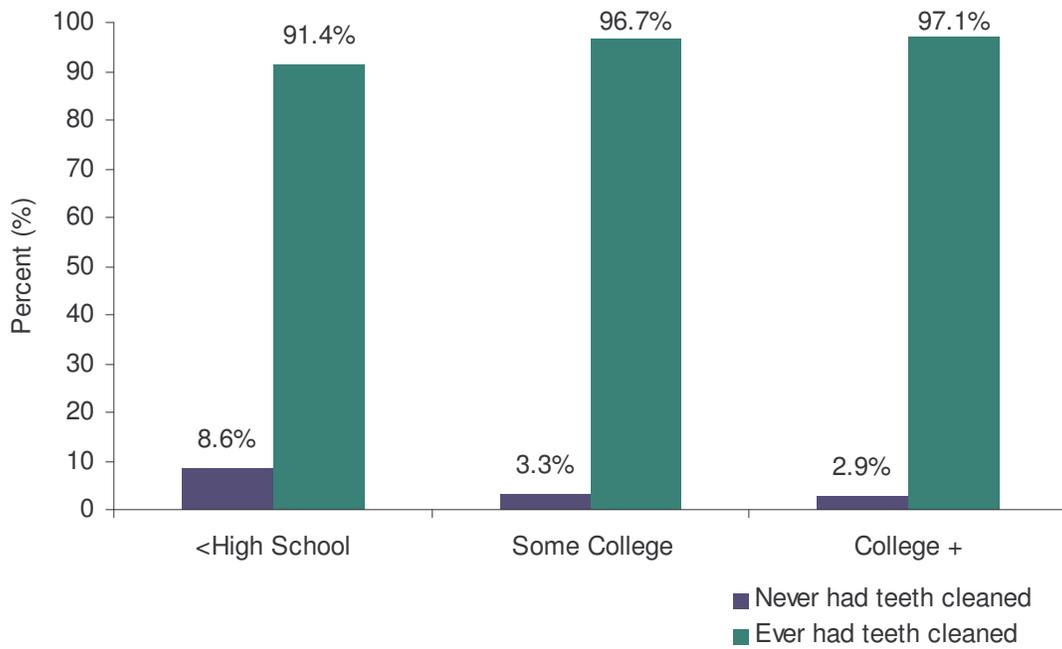


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Methodology

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey that is part of the Centers for Disease Control and Prevention (CDC) initiative to reduce infant mortality and low birthweight births. The Michigan Department of Community Health (MDCH), under the auspices of the CDC, conducted the data collection for the 2006 Michigan PRAMS. Software developed by the CDC was used to manage the sample, enforce protocol, and enter data.

PRAMS surveys mothers who have delivered a live born infant within a calendar year. Natality information, collected by Michigan's Office of Vital Records and Health Statistics, is the most complete single source of information regarding the live births of Michigan residents and serves as the sampling frame from which PRAMS selects survey respondents. Mothers who had delivered a live born infant who subsequently died are included in the sampling frame. Also, only one infant of a multiple gestation is included in the sampling frame unless the gestation includes four or more siblings. In that instance, all of the infants are excluded from the sampling frame. Other exclusions include: out-of-state births to residents, in-state births to nonresidents, missing information, delayed or early processing of birth certificates, adopted infants, and surrogate births. Oversampling is utilized to gather a sufficient number of responses among small subpopulations within the state. For 2006, Michigan oversampled for women who had delivered low birthweight infants.

PRAMS is a stratified random sample. Stratification permits both separate estimates of subgroups of interest and permits comparisons across these subgroups. In 2006, the sample was stratified by infant birthweight (Low or Normal) and geographic region (SE Region, Other Urban Areas (populations >25,000), All Other Areas). Each calendar month a sample is drawn from the births recorded in the month prior. Once the sample has been identified, the information is forwarded to the Michigan State University (MSU) Office of Survey Research, which is subcontracted by MDCH to conduct the survey.

PRAMS utilizes a mixed-mode methodology in order to gather information from women selected to participate in the survey. This combination mail/telephone survey methodology, based on the research of Don Dilman, is utilized in order to maximize response rates. Women are first notified of the PRAMS survey and then sent the questionnaire, via mail. If the mother has not responded after three attempts by mail, she is then contacted by telephone and has the opportunity to participate in the PRAMS survey via telephone. From a total of 2,742 women

who were selected from the sampling frame to participate, 1,658 (60.5%) women were surveyed. The demographic characteristics of these women are depicted in the section entitled, 'Maternal Demographics'.

The questionnaire consists of two parts. First, there are core questions, developed by the CDC, that appear on all states' surveys. Second, there are state-added questions that are tailored to each state's needs. Topics addressed in the PRAMS core questionnaire include barriers to and content of prenatal care, obstetric history, maternal use of alcohol and tobacco, physical abuse, contraception, economic status, maternal stress, and early infant development and health status. Some state-added questions provide additional insight on topics already addressed in the core questionnaire, including content of prenatal care, contraception, and physical abuse. Other questions address different topics, including social support and services, mental health, and injury prevention. Topics addressed by the new state-added include: racism, mental health, mental/emotional abuse, and pre-pregnancy contraception.

Weighting

After the data collection is concluded, mothers' responses are linked to their corresponding birth certificate data. The linked PRAMS response/birth certificate dataset is then sent to the CDC for weighting. Weighting allows public health professionals and researchers to estimate the statistics for the entire state's population of women who delivered a live born infant from data gathered from a sample of mothers in that population. In PRAMS there are three weighting components that adjusted for: sample design, nonresponse, and omissions in the sampling frame. Nonresponse adjustment factors attempt to compensate for the tendency of women having certain characteristics (such as being unmarried or of lower education) to respond at lower rates than women without those characteristics. The rationale for applying nonresponse weights is the assumption that nonrespondents would have provided similar answers to respondents' answers for that stratum and adjustment category.

Interpretation of Results

As with all surveys, PRAMS is not free of sampling error. The 95% confidence intervals are included in order to quantify this error and to clarify the degree of certainty in the estimates.

As stated earlier, the 2006 Michigan sample was stratified by infant birthweight (Low or Normal) and geographic region (SE region and All Other Areas). The information in this report was weighted to estimate the characteristics for the entire cohort of women delivering a live born infant in 2006. The overall response rate was 60.5%. The response rate for each of the strata is as follows:

- All LBW: 61.9%
- Southeast Region/Black/Non-LBW: 48.9%
- Southeast Region/Non-Black/Non-LBW: 67.9%
- All Other Regions/Black/Non-LBW: 51.3%
- All Other Regions/Non-Black/Non-LBW: 74.9%

Only the sample from All Other Regions, Non-Black race, normal birthweight had a response rate above the 70% that the CDC regards as the epidemiologically valid threshold for PRAMS. Analysis to the other strata may result in potentially biased estimates. Consequently, the information regarding these strata must be viewed with caution.

Appendix B: Detailed Tables

Table 1:
Selected demographic characteristics,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,660	123,646	100.0		
Maternal age (years)					
<18	78	3,992	3.2	2.3	4.2
18-19	122	7,625	6.2	4.8	7.5
20-24	410	30,081	24.3	21.8	26.8
25-29	479	36,621	29.6	27.0	32.2
30-34	362	28,521	23.1	20.7	25.5
35-39	178	14,310	11.6	9.7	13.4
40+	31	2,496	2.0	1.2	2.8
Race/Ethnicity					
White, Non-Hispanic	849	87,840	73.5	71.3	75.7
Black, Non-Hispanic	679	22,194	18.6	16.9	20.2
Hispanic	51	5,686	4.8	3.4	6.1
American Indian	36	3,273	2.7	1.8	3.7
Asian/Pacific Islander	4	514	0.4	0.0	0.9
Maternal Education					
<HS	285	20,049	16.4	14.1	18.6
HS/GED	542	38,927	31.8	29.1	34.5
some college	398	29,332	23.9	21.5	26.4
college degree +	419	34,189	27.9	25.3	30.5
Marital Status					
Married	887	76,397	61.8	59.1	64.6
Un-married	772	47,144	38.2	35.4	40.9
Pre-Pregnancy Insurance Status					
Private Insurance/HMO	323	26,338	21.4	18.9	23.8
Medicaid	410	20,923	17.0	15.0	19.0
Uninsured	922	76,076	61.7	58.9	64.5
2006 MI PRAMS					

Table 2:
Prevalence of intended and unintended pregnancies,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,639	122,051	100.0	--	--
Intended	735	49,646	40.7	37.8	43.5
Unintended*	904	72,405	59.3	56.5	62.2

2006 MI PRAMS

*Unintended Pregnancy: Wanted to become pregnant later or did not want to be pregnancy at all

Table 3:
Prevalence of types of unintended pregnancies,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	735	49,646	100.0	--	--
Type of Unintended Pregnancy					
Mistimed*	524	36,648	73.8	70.0	77.7
Unwanted**	211	12,998	26.2	22.3	30.0

2006 MI PRAMS

*Mistimed: Wanted to become pregnant later

**Unwanted: Did not want to be pregnant then or in the future

Table 4:
Prevalence of contraceptive use and methods among unintended pregnancies,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	680		100.0	--	--
Contraceptive Use					
Yes	328	22,244	52.1	47.4	56.7
No	352	24,172	47.9	43.3	52.6
Contraceptive Method					
Withdrawal	152	10,805	40.8	34.8	46.9
Condom	96	6,273	23.7	18.5	28.9
Birth Control Pill	38	3,349	12.7	8.4	16.9
Other	16	1,106	4.2	1.7	6.7
Shot 3 times per month	16	564	2.1	0.8	3.4
contraceptive patch	14	899	3.4	1.2	5.6
Sterilization (male)	2	‡	‡	‡	‡
Sterilization (female)	2	‡	‡	‡	‡
Shot once per month	-	-	-	-	-

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 5:
Prevalence of pregnancy intention by maternal demographic characteristics,
2006 MI PRAMS

	Unintended Pregnancy					Intended Pregnancy				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	735	49,646	40.7	37.8	43.5	904	72,405	59.3	56.5	62.2
Maternal age (years)										
<18	63	3,320	84.5	74.3	94.8	13	607	15.5	5.2	25.7
18-19	84	5,061	67.2	56.3	78.1	36	2,469	32.8	21.9	43.7
20-24	242	17,183	58.1	52.2	63.9	163	12,411	41.9	36.1	47.8
25-29	180	12,471	34.4	29.4	39.4	294	23,760	65.6	60.6	70.6
30-34	106	7,492	26.6	21.4	31.8	252	20,715	73.4	68.2	78.6
35-39	54	3,701	26.1	18.7	33.5	122	10,488	73.9	66.5	81.3
40+	6	‡	‡	‡	‡	24	1,954	82.3	66.6	98.1
Race/Ethnicity										
White, Non-Hispanic	272	30,410	35.0	31.5	38.6	567	56,412	65.0	61.4	68.5
Black, Non-Hispanic	412	13,482	61.7	57.6	65.7	258	8,385	38.3	34.3	42.4
Hispanic	25	2,703	49.7	34.5	65.0	24	2,733	50.3	35.0	65.5
American Indian	1	DSU	DSU	DSU	DSU	3	DSU	DSU	DSU	DSU
Asian/Pacific Islander	7	DSU	DSU	DSU	DSU	29	2,434	74.4	58.0	90.7
Maternal Education										
<High School	190	12,763	64.2	56.9	71.5	91	7,126	35.8	28.5	43.1
High School	272	17,887	47.0	47.8	52.1	260	20,202	53.0	47.9	58.2
Some College	165	10,668	36.6	31.1	42.1	231	18,454	63.4	57.9	68.9
College+	98	7,634	22.6	18.1	27.1	316	26,168	77.4	72.9	81.9
Marital Status										
Married	232	19,330	25.7	22.4	29.0	642	55,893	74.3	71.0	77.6
Other	503	30,316	64.9	60.6	69.2	261	16,407	35.1	30.8	39.4
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	296	22,566	30.0	26.6	33.5	615	52,563	70.0	66.5	73.4
Medicaid	245	11,608	56.0	49.7	62.4	160	9,112	44.0	37.6	50.3
Uninsured	192	15,385	59.1	52.7	65.5	127	10,652	40.9	34.5	47.3

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 6:
Prevalence of contraceptive use prior to pregnancy by maternal demographic characteristics,
2006 MI PRAMS

	Did Not Use Contraception					Used Contraception				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	408	27,804	44.7	40.7	48.7	497	34,404	55.3	51.3	59.3
Maternal age (years)										
<18	34	1,711	50.3	33.6	67.1	30	1,689	49.7	32.9	66.4
18-19	49	3,201	55.4	42.5	68.2	45	2,581	44.6	31.8	57.5
20-24	158	11,496	58.0	50.8	65.2	118	8,320	42.0	34.8	49.2
25-29	122	8,557	51.8	44.1	59.6	115	7,948	48.2	40.4	55.9
30-34	78	5,746	56.7	47.1	66.3	65	4,389	43.3	33.7	52.9
35-39	47	3,083	58.6	27.2	90.0	30	2,445	41.4	10.0	72.8
40+	9	610	58.6	27.2	90.0	5	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	216	23,171	57.9	52.5	63.3	151	16,866	42.1	36.7	47.5
Black, Non-Hispanic	250	7,958	51.3	46.4	56.3	227	7,547	48.7	43.7	53.6
Hispanic	14	1,672	51.9	31.7	72.1	14	1,549	48.1	27.9	68.3
American Indian	7	‡	‡	‡	‡	5	‡	‡	‡	‡
Asian/Pacific Islander	1	‡	‡	‡	‡	0	‡	‡	‡	‡
Maternal Education										
<High School	117	8,549	58.4	49.8	67.0	94	6,094	41.6	33.0	50.2
High School	188	12,799	57.6	51.1	64.1	152	9,439	42.4	35.9	48.9
Some College	121	7,487	54.6	46.5	62.8	88	6,219	45.4	37.2	53.4
College+	70	5,522	50.4	40.8	60.0	65	5,428	49.6	40.0	59.2
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	206	15,942	54.4	48.5	60.3	176	13,353	45.6	39.7	51.5
Medicaid	167	8,089	57.0	49.6	64.4	126	6,105	43.0	35.6	50.4
Uninsured	124	10,374	55.6	47.9	63.2	105	8,297	44.4	36.8	52.1

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 7:
Reasons for contraceptive nonuse prior to pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Reasons					
Did not mind getting pregnant	210	15,968	44.4	39.1	49.7
Thought could not get pregnant	130	7,625	21.2	17.0	25.5
Husband/partner did not want to use	81	6,301	17.5	13.4	21.6
Other	106	6,186	17.2	13.3	21.1
Discontinued birth control because of side effects	63	4,512	12.5	8.9	16.1
Difficulty getting birth control	41	3,003	8.3	5.4	11.3
Thought husband/partner sterile	49	2,868	8.0	5.2	10.8
2006 MI PRAMS					

Table 8:
Contraceptive method used prior to pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Contraceptive Method					
Condom	226	14,092	47.6	41.9	53.4
Withdrawal	180	12,254	41.4	35.7	47.1
Birth Control Pill	104	7,417	25.1	20.0	30.1
Other	25	1,521	5.1	2.6	7.6
Shot once per month	30	1,175	4.0	2.2	5.8
Shot 3 times per month	16	1,175	3.7	1.5	5.9
contraceptive patch	3	1,175	DSU	DSU	DSU
Sterilization (male)	3	DSU	DSU	DSU	DSU
Sterilization (female)	1	DSU	DSU	DSU	DSU
2006 MI PRAMS					

Table 9:
Prevalence of contraceptive use postpartum by maternal demographic characteristics,
2006 MI PRAMS

	Did not use contraception					Used contraception				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	232	16,770	13.8	11.8	15.7	1,395	105,158	86.2	84.3	88.2
Maternal age (years)										
<18	8	‡	‡	‡	‡	67	3,506	88.9	79.4	98.4
18-19	14	1,194	16.3	7.2	25.4	103	6,132	83.7	74.6	92.8
20-24	51	3,791	12.9	8.8	16.9	349	25,648	87.1	83.1	91.2
25-29	74	4,878	13.5	10.0	17.1	393	31,135	86.5	82.9	90.0
30-34	55	4,207	14.8	10.6	19.0	304	24,193	85.2	81.0	89.4
35-39	26	1,888	13.2	7.4	18.9	152	12,422	86.8	81.0	92.6
40+	4	‡	‡	‡	‡	27	2,122	85.0	70.7	99.3
Race/Ethnicity										
White, Non-Hispanic	116	11,892	13.7	11.1	16.2	726	75,215	86.3	83.8	88.9
Black, Non-Hispanic	98	3,264	15.3	12.3	18.3	556	18,116	84.7	81.7	87.7
Hispanic	8	‡	‡	‡	‡	43	4,743	83.4	71.9	95.0
Asian/Pacific Islander	10	‡	‡	‡	‡	26	2,603	79.5	65.9	93.2
American Indian	0	‡	‡	‡	‡	4	‡	‡	‡	‡
Maternal Education										
<High School	43	3,176	16.4	10.7	22.1	229	16,167	83.6	77.9	89.3
High School	75	5,588	14.6	10.9	18.3	455	32,775	85.4	81.7	89.1
Some College	54	3,285	11.3	7.8	14.9	338	25,719	88.7	85.1	92.2
College+	58	4,649	13.6	9.9	17.3	360	29,436	86.4	82.7	90.1
Prenatal Contraception Counseling										
Talked to Health Care Worker	174	11,787	12.5	10.3	14.6	1,127	82,702	87.5	85.4	89.7
Did not talk to Health Care Worker	51	4,490	17.8	12.8	22.9	245	20,695	82.2	77.1	87.2

2006 MI PRAMS

Discussed contraception with a doctor, nurse, or other health professional during prenatal care visit. Does not include educational literature or videos

‡ Data not shown due to small sample size

Table 10:
Reasons for contraceptive nonuse postpartum,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Reasons					
Did not want to use birth control	70	5,353	30.7	23.6	37.8
Not having sex	63	4,126	23.7	17.3	30.0
Other	61	4,993	28.7	21.5	35.9
Want to get pregnant	33	2,464	14.1	8.7	19.5
Husband/partner does not want to use	33	2,449	14.1	8.7	19.4
Cannot afford birth control	25	2,012	11.6	6.5	16.8
Pregnant now	12	951	5.5	1.8	9.2
Believe cannot get pregnant	12	647	3.7	0.9	6.5

2006 MI PRAMS

Table 11:
Prevalence of infant birthweight,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Prevalence by LBW					
Total	1,660	123,646			
NBW	1,377	114,495	92.6	91.7	93.5
LBW*	283	9,151	7.4	6.5	8.3
Prevalence by LBW Type					
Total	283	9,151			
mLBW**	219	6,950	75.9	70.7	81.2
vLBW***	64	2,201	24.1	18.8	29.3

2006 MI PRAMS

*LBW: Birthweight below 2500 grams

*Birthweight between 1500 to 2500 grams

**Birthweight below 1500 grams

Table 12:
Prevalence of birth weight by pregnancy intention,
2006 MI PRAMS

	Low Birthweight					Normal Birthweight				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Unintended Pregnancy										
Total	281	9,084				1,358	112,967			
Unintended	101	3,738	7.5	6.0	9.1	634	45,908	92.5	90.9	94.0
Intended	180	5,346	7.4	6.2	8.6	724	67,059	92.6	91.4	93.8
Unintended Pregnancy Type										
Total	101	3,738	7.5			634	45,908	92.5		
Mistimed	67	2,461	6.7	5.0	8.4	457	34,187	93.3	91.6	95.0
Unwanted	34	1,278	9.8	6.4	13.3	177	11,720	90.2	86.7	93.6

2006 MI PRAMS

Table 13:
Infant birthweight by maternal demographic characteristics,
2006 MI PRAMS

	Low Birthweight					Normal Birthweight				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	283	9,151				1,377	114,495			
Maternal age (years)										
<18	15	632	15.8	7.6	24.0	63	3,359	84.2	76.0	92.4
18-19	17	682	8.9	4.6	13.3	105	6,943	91.1	86.7	95.4
20-24	52	1,950	6.5	4.6	8.3	358	28,131	93.5	91.7	95.4
25-29	92	2,995	8.2	6.4	10.0	387	33,627	91.8	90.0	93.6
30-34	73	1,985	7.0	5.2	8.7	289	26,535	93.0	91.3	94.8
35-39	26	673	4.7	2.8	6.7	152	13,637	95.3	93.3	97.2
40+	8	233	9.3	2.2	16.5	23	2,263	90.7	83.5	97.8
Race/Ethnicity										
White, Non-Hispanic	182	5,269	6.0	5.0	6.9	667	82,572	94.0	93.1	95.0
Black, Non-Hispanic	76	3,066	13.8	10.9	16.7	603	19,128	86.2	83.3	89.1
Hispanic	9	327	5.8	1.7	9.8	42	5,359	94.2	90.2	98.3
Asian/Pacific Islander	9	245	7.5	2.1	13.0	27	3,027	92.5	87.0	98.0
American Indian	0	‡	‡	‡	‡	4	‡	‡	‡	‡
Maternal Education										
<High School	45	1,863	9.3	6.5	12.1	240	18,186	90.7	87.9	93.5
High School	95	3,208	8.2	6.5	10.0	447	35,719	91.8	90.0	93.5
Some College	57	1,762	6.0	4.3	7.7	341	27,570	94.0	92.3	95.7
College+	83	2,209	6.5	5.0	8.0	336	31,980	93.5	92.0	95.0
Marital Status										
Married	169	4,674	6.1	5.1	7.1	718	71,724	93.9	92.9	94.9
Un-married	114	4,477	9.5	7.7	11.3	658	42,667	90.5	88.7	92.3
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	157	4,462	5.9	4.9	6.9	765	71,613	94.1	93.1	95.1
Medicaid	77	2,952	14.1	10.9	17.4	333	17,971	85.9	82.6	89.1
Uninsured	49	1,737	6.6	4.6	8.6	274	24,601	93.4	91.4	95.4

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 14:
Prevalence of low birthweight by gestational age,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	283	9,151	7.4	6.5	8.3
Gestational Age					
Pre-term infant*	208	6,786	57.6	49.6	65.6
Term infant**	75	2,365	2.1	1.6	2.6
2006 MI PRAMS					

*Pre-term infant: Gestational age < 37 weeks

**Term infant: Gestational age >= 37 weeks

Table 15:
Trimester of entry into prenatal care,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,645	122,681			
Entry into Prenatal Care					
1st trimester	1,261	97,733	79.7	77.4	82.0
2nd trimester	334	22,251	18.1	15.9	20.3
3rd trimester	32	1,546	1.3	0.7	1.8
No PNC	18	1,151	0.9	0.4	1.5
2006 MI PRAMS					

Table 16:
Trimester of entry into prenatal care by maternal demographic characteristics,
2006 MI PRAMS

	1st Trimester					After 1st Trimester/ Not at all				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	49	1,737	79.7			274	24,601	20.3		
Maternal age (years)										
<18	29	1,555	41.7	26.3	57.1	46	2,175	58.3	42.9	73.7
18-19	69	4,449	58.6	47.5	69.7	51	3,144	41.4	30.3	52.5
20-24	282	21,040	70.2	64.8	75.7	125	8,922	29.8	24.3	35.2
25-29	384	30,565	84.3	80.6	88.0	90	5,699	15.7	12.0	19.4
30-34	318	25,639	90.5	87.1	93.9	42	2,686	9.5	6.1	12.9
35-39	151	12,188	85.2	79.0	91.3	27	2,122	14.8	8.7	21.0
40+	28	2,296	92.0	80.6	100.0	3	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	724	73,464	84.2	81.5	87.0	120	13,742	15.8	13.0	18.5
Black, Non-Hispanic	430	13,582	62.1	58.0	66.2	239	8,281	37.8	33.8	42.0
Hispanic	36	3,863	67.9	53.7	82.1	15	1,823	32.1	17.9	46.3
Asian/Pacific Islander	32	2,730	83.4	68.6	98.2	4	‡	‡	‡	‡
American Indian	3	‡	‡	‡	‡	1	‡	‡	‡	‡
Maternal Education										
<High School	146	10,839	55.5	48.0	63.0	132	8,690	44.5	37.0	52.0
High School	388	29,683	76.8	72.6	80.9	150	8,986	23.2	19.1	27.4
Some College	323	24,184	82.6	78.2	86.9	73	5,108	17.4	13.1	21.8
College+	394	32,207	94.6	92.1	97.1	23	1,835	5.4	2.9	7.9
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	801	67,000	88.7	86.3	91.1	114	8,524	11.3	8.9	13.7
Medicaid	250	13,597	66.2	60.4	72.0	153	6,928	33.8	28.0	39.6
Uninsured	207	16,913	64.3	58.0	70.5	115	9,409	35.7	29.5	42.0

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 17:
Trimester of entry into prenatal care by pregnancy intention,
2006 MI PRAMS

	1st Trimester					After 1st Trimester/Not at all				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Intended	783	63,531	88.0	85.5	90.4	117	8,679	12.0	9.6	14.5
Unintended	464	32,968	67.3	63.1	71.5	263	16,052	32.7	28.5	36.9
2006 MI PRAMS										

Table 18:
Satisfaction with trimester of entry into prenatal care,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,307	124,695	100.0		
Satisfaction with Time of Entry					
No	319	22,118	18.0	15.8	20.2
Yes	1,319	99,967	81.5	79.3	83.8
2006 MI PRAMS					

Table 19:
Number of barriers to care experienced by women who were not satisfied with the trimester of entry into prenatal care, 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	493	32,889	100.0		
Number of Barriers					
1 barrier	245	17,680	15.2	13.0	17.3
2 barriers	132	8,810	7.6	6.0	9.1
3 barriers	62	4,549	3.9	2.7	5.1
4 barriers	27	1,850	1.6	0.9	2.3
5 barriers	11	DSU	DSU	DSU	DSU
6 barriers	16	DSU	DSU	DSU	DSU

2006 MI PRAMS

DSU: Data Statistically Unreliable

Table 20:
Types of barriers to care experienced by women who were not satisfied with the trimester of entry into prenatal care, 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Types of Barriers					
Could not get earlier appointment	164	10,965	9.5	7.8	11.2
Could not pay for appointment	129	9,232	8.0	6.4	9.6
Did not have Medicaid Card	113	8,172	7.1	5.6	8.6
Doctor/HMO would not start care earlier	97	6,605	5.8	4.4	7.1
Keep pregnancy secret	111	5,971	5.2	4.0	6.4
Too much going on	81	5,084	4.4	3.3	5.6
Other	58	4,312	4.4	3.1	5.8
No transportation	89	4,467	3.9	2.9	4.9
No child care	69	4,278	3.8	2.7	4.8
No leave time	58	4,203	3.7	2.6	4.8

2006 MI PRAMS

Table 21:
Sources of payment for prenatal care,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Sources of Payment					
Private Insurance	929	75,453	61.7	58.9	64.5
Medicaid	759	49,206	40.2	37.4	43.0
Personal Income	227	19,195	15.7	13.6	17.8
Other	47	3,609	2.9	1.9	4.0
2006 MI PRAMS					

Table 22:
Topics discussed during any prenatal care visit (literature and videos excluded),
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Topics Discussed					
Screening for Birth Defects	1,439	108,513	89.5	87.7	91.3
Safe Medications	1,453	108,156	89.2	87.4	91.0
HIV/AIDS Test	1,397	102,305	84.6	82.5	86.7
Early Labor	1,351	100,552	83.1	80.9	85.3
Breastfeeding	1,364	99,294	81.7	79.4	84.0
Postpartum Contraception	1,324	95,896	79.1	76.7	81.5
Alcohol Consumption during Pregnancy	1,239	90,337	74.5	72.0	77.1
Smoking during Pregnancy	1,228	89,529	73.9	71.3	76.4
Illegal Drug Use during Pregnancy	1,116	79,305	65.6	62.8	68.4
Domestic Abuse	868	58,982	48.8	45.9	51.7
Seatbelt Use	839	57,933	47.9	45.0	50.8
2006 MI PRAMS					

Table 23:
Breastfeeding intention prior to delivery,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,595	120,630	100.1		
Plan					
Planned to breastfeed	856	67,792	56.2	53.3	59.1
May Breastfeed	289	20,715	17.2	15.0	19.4
Planned not to breastfeed	400	28,432	23.6	21.1	26.0
Unsure about breastfeeding	50	3,691	3.1	2.0	4.1
2006 MI PRAMS					

Table 24:
Breastfeeding initiation,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,596	120,738	100.0		
Breastfeeding Initiation					
Yes	1,058	83,504	69.2	66.5	71.8
No	538	37,234	30.8	28.2	33.5
2006 MI PRAMS					

Table 25:
Breastfeeding duration,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,586	120,256	100.0		
Breastfeeding Duration					
Did not breastfeed	538	37,234	31.0	28.3	33.7
Breastfed for <1 week	69	5,224	4.3	3.1	5.6
Breastfed for >1 week, but concluded	514	37,530	31.2	28.5	33.9
Breastfeeding when surveyed	465	40,268	33.5	30.7	36.3
2006 MI PRAMS					

Table 26a:
Prevalence of breastfeeding duration by maternal demographic characteristics,
2006 MI PRAMS

	Did not breastfeed					Breastfed for <1 week				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	538	37,234	100.0			69	5,224	100.0		
Maternal age (years)										
<18	40	1,962	51.1	35.4	66.9	2	‡	‡	‡	‡
18-19	51	2,820	38.5	27.4	49.5	9	‡	‡	‡	‡
20-24	158	11,256	38.3	32.4	44.1	28	2,044	6.9	3.8	10.1
25-29	142	10,004	28.3	23.5	33.1	18	1,432	4.0	1.9	6.2
30-34	90	7,090	25.4	20.1	30.6	8	‡	‡	‡	‡
35-39	47	3,271	23.4	16.2	30.5	4	‡	‡	‡	‡
40+	10	‡	‡	‡	‡	0	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	225	24,501	28.3	24.9	31.6	37	4,227	4.9	3.3	6.5
Black, Non-Hispanic	280	9,060	44.3	40.0	48.5	30	‡	‡	‡	‡
Hispanic	14	1,695	31.7	17.1	46.4	1	‡	‡	‡	‡
Asian/Pacific Islander	4	‡	‡	‡	‡	1	‡	‡	‡	‡
American Indian	3	‡	‡	‡	‡	0	-	-	-	-
Education										
<High School	141	9,038	47.5	39.8	55.2	14	1,032	5.4	1.8	9.0
High School	219	15,334	40.5	35.3	45.6	34	2,582	6.8	4.1	9.5
Some College	112	7,885	27.3	22.2	32.5	11	‡	‡	‡	‡
College+	61	4,792	14.4	10.6	18.1	9	‡	‡	‡	‡
Marital Status										
Married	183	16,380	22.0	18.8	25.1	23	1,945	2.6	1.4	3.8
Un-married	355	20,855	45.8	41.2	50.3	46	3,279	7.2	4.7	9.7

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 26b:
Prevalence of breastfeeding duration by maternal demographic characteristics,
2006 MI PRAMS

	Breastfed for >1 week, but concluded					Breastfeeding when surveyed				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	514	37,530	100.0			465	40,268	100.0		
Maternal age (years)										
<18	24	1,423	37.1	21.3	52.8	6	‡	‡	‡	‡
18-19	48	2,916	39.8	28.6	50.9	10	‡	‡	‡	‡
20-24	138	10,789	36.7	30.9	42.5	69	5,326	18.1	13.5	22.7
25-29	143	10,711	30.3	25.4	35.2	149	13,225	37.4	32.1	42.7
30-34	105	7,550	27.0	21.7	32.3	145	12,887	46.1	40.1	52.1
35-39	50	3,587	25.6	18.3	33.0	73	6,626	47.4	38.7	56.0
40+	6	13	‡	‡	‡	‡	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	265	26,224	30.3	26.9	33.6	308	31,694	36.6	33.1	40.1
Black, Non-Hispanic	212	7,499	36.6	32.4	40.9	104	3,056	14.9	12.0	17.9
Hispanic	15	1,645	30.8	16.6	45.1	18	1,873	35.1	20.5	49.7
Asian/Pacific Islander	9	‡	‡	‡	‡	20	1,907	59.2	41.2	77.1
American Indian	1	‡	‡	‡	‡	0	‡	‡	‡	‡
Education										
<High School	84	6,265	32.9	25.6	40.2	25	2,691	14.1	8.3	20.0
High School	172	12,641	33.4	28.5	38.3	91	7,324	19.3	15.1	23.6
Some College	134	9,379	32.5	27.1	37.9	126	10,728	37.2	31.5	42.9
College+	119	8,792	26.3	21.6	31.1	219	19,144	57.3	52.0	62.7
Marital Status										
Married	268	21,654	29.0	25.6	32.4	382	34,616	46.4	42.6	50.2
Un-married	245	15,772	34.6	30.3	39.0	83	5,651	12.4	9.3	15.5

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 27:
Average breastfeeding duration, in weeks, among women who breastfed for longer than 1 week, but had discontinued before being surveyed,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Average (weeks)	Lower confidence interval	Upper confidence interval
Total	514	37,530			
Maternal age (years)					
<18	24	1,423	4.2	2.5	5.9
18-19	48	2,916	6.9	5.0	8.7
20-24	138	10,789	5.8	5.0	6.5
25-29	143	10,711	6.7	5.7	7.6
30-34	105	7,550	8.3	6.8	9.7
35-39	50	3,587	7.9	6.3	9.5
40+	6	13	8.5	3.1	13.8
Race/Ethnicity					
White, Non-Hispanic	265	26,224	6.6	6.0	7.2
Black, Non-Hispanic	212	7,499	6.9	6.3	7.6
Hispanic	15	1,645	6.6	3.0	10.2
Asian/PI	9	‡	‡	‡	‡
American Indian	1	‡	‡	‡	‡
Education					
<High School	84	6,265	5.5	4.4	6.6
High School	172	12,641	7.0	6.0	8.0
Some College	134	9,379	6.7	5.8	7.7
College+	119	8,792	7.6	6.6	8.7
Marital Status					
Married	268	21,654	7.2	6.5	8.0
Un-married	245	15,772	6.2	5.6	6.9

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 28:
Barriers to breastfeeding continuation among women who had discontinued breastfeeding before being surveyed,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Barriers					
Thought was not producing enough milk	212	17,138	39	34	44
Breastmilk did not satisfy infant	214	16,697	38	33	43
Infant had difficulty nursing	168	12,713	29	24	33
Other	162	11,874	27	23	31
Had to return to work/school	136	9,927	23	19	27
Nipples became sore, cracked, or bleeding	120	8,459	19	15	23
Needed another person to feed the infant	90	7,024	16	12	20
Too many household duties	91	6,245	14	11	18
Felt it was time to discontinue	94	6,068	14	11	17
Baby Jaundiced	54	4,262	10	7	13
Thought infant was not gaining enough weight	52	4,093	9	7	12
Mother became sick and could not nurse	37	2,124	5	3	7
Infant became sick and could not nurse	23	1,389	3	2	5
					2006 MI PRAMS

Table 29:
Smoking status during pregnancy (compared with pre-pregnancy smoking),
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,631	121,775	100.0		
Smoking Status					
Nonsmoker	1,178	83,884	68.9	66.1	71.6
Smoker who quit	195	16,742	13.7	11.7	15.8
Smoker (reduced # of cigarettes)	172	14,774	12.1	10.1	14.1
Smoker (same # of cigarettes)	85	6,375	5.2	3.9	6.6
Nonsmoker Resumed	1	‡	‡	‡	‡
2006 MI PRAMS					

Table 30:
Smoking status in the last three months of pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,634	121,976	100.0		
Smoking Status					
Smoked	259	21,310	17.5	15.2	19.8
Did not smoke	1,375	100,666	82.5	80.2	84.8
2006 MI PRAMS					

Table 31:
Smoking status in the last three months of pregnancy by maternal demographic characteristics,
2006 MI PRAMS

	Did not smoke					Smoked				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,375	100,666	100.0			259	21,310	100.0		
Maternal age (years)										
<18	68	3,304	86.2	74.2	98.3	6	0	DSU	0.0	0.0
18-19	94	5,210	70.3	59.4	81.3	26	2,197	29.7	18.7	40.6
20-24	301	20,462	68.7	62.9	74.4	102	9,344	31.3	25.6	37.1
25-29	394	30,677	84.9	81.1	88.7	78	5,455	15.1	11.3	18.9
30-34	332	25,922	91.4	88.0	94.8	28	2,433	8.6	5.2	12.0
35-39	160	13,033	93.4	89.4	97.5	14	914	6.6	2.5	10.6
40+	26	2,057	82.4	66.6	98.1	5	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	694	71,045	81.7	78.8	84.6	148	15,917	18.3	15.4	21.2
Black, Non-Hispanic	569	18,340	85.0	82.0	88.0	93	3,228	15.0	12.0	18.0
Hispanic	45	5,040	91.3	82.5	100.0	4	DSU	DSU	DSU	DSU
Asian/Pacific Islander	35	3,128	95.6	87.1	100.0	1	‡	‡	‡	‡
American Indian	0	‡	‡	‡	‡	4	‡	‡	‡	‡
Education										
<High School	178	11,190	57.9	50.2	65.6	95	8,136	42.1	34.4	49.8
High School	425	29,722	77.9	73.5	82.2	106	8,443	22.1	17.8	26.5
Some College	354	25,791	88.5	84.8	92.2	41	3,355	11.5	7.8	15.2
College+	407	33,171	97.0	95.2	98.9	12	1,018	3.0	1.1	4.8
Medicaid Status										
Medicaid Ever	616	37,413	70.0	65.9	74.1	208	16,037	30.0	25.9	34.1
Medicaid Never	754	62,858	92.5	90.3	94.6	50	5,128	7.5	5.4	9.7

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 32:
 Infant birth weight by maternal smoking status in the last three months of pregnancy,
 2006 MI PRAMS

	Low Birthweight					Normal Birthweight				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	279	8,982	7.4			1,355	112,993	92.6		
Smoking Status										
Smoked	57	2,022	9.5	6.8	12.2	202	19,288	90.5	87.8	93.2
Did not smoke	222	6,960	6.9	5.9	7.9	1,153	93,705	93.1	92.1	94.1
2006 MI PRAMS										

Table 33:
 Smoking status in the postpartum period
 (compared with pre-pregnancy smoking),
 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,631	121,326			
Smoking Status					
Nonsmoker	1,173	83,434	68.5	65.8	71.2
Smoker who quit	95	8,100	6.7	5.2	8.1
Smoker (reduced # of cigarettes)	112	9,665	7.9	6.3	9.6
Smoker (same # of cigarettes)	245	20,127	16.5	14.3	18.7
Nonsmoker who began smoking	6	‡	‡	‡	‡
2006 MI PRAMS					

‡ Data not shown due to small sample size

Table 34:
Smoking status in the postpartum period
(compared with pregnancy smoking),
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,631	121,326			
Smoking Status					
Nonsmoker	1,173	83,434	68.5	65.8	71.2
Smoker who quit	95	8,100	6.7	5.2	8.1
Smoker (reduced # of cigarettes)	112	9,665	7.9	6.3	9.6
Smoker (same # of cigarettes)	245	20,127	16.5	14.3	18.7
Nonsmoker who began smoking	6	‡	‡	‡	‡
2006 MI PRAMS					

‡ Data not shown due to small sample size

Table 35:
Alcohol consumption during pregnancy
(compared with pre-pregnancy drinking),
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,629	121,915	100.0		
Alcohol Consumption					
Nondrinker	710	48,680	39.9	37.1	42.8
Drinker who quit	812	64,768	53.1	50.2	56.0
Drinker (reduced # of drinks)	53	4,767	3.9	2.8	5.0
Drinker (# of drinks same or more)	50	3,488	2.9	1.9	3.8
Nondrinker who began drinking	4	‡	‡	‡	‡
2006 MI PRAMS					

‡ Data not shown due to small sample size

Table 36:
Prevalence of infant sleep position,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,496	115,439	100.0		
Sleep Position					
Supine/Back	1,057	85,363	73.9	71.4	76.5
Prone/Stomach	257	18,131	15.8	13.6	17.8
Side	182	11,945	10.3	8.6	12.1
2006 MI PRAMS					

Table 37a:
Prevalence of infant sleep position by maternal demographic characteristics,
2006 MI PRAMS

	Supine/Back					Side				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,057	85,363	100.0			182	11,945	100.0		
Maternal age (years)										
<18	37	2,259	67.3	53.0	81.5	14	‡	‡	‡	‡
18-19	72	4,724	69.7	59.0	80.5	10	‡	‡	‡	‡
20-24	249	19,774	70.0	64.4	75.5	58	3,903	13.8	9.7	18.0
25-29	298	24,665	71.6	66.7	76.4	49	3,169	9.2	6.1	12.3
30-34	252	21,192	79.1	74.1	84.1	29	2,094	7.8	4.6	11.0
35-39	131	11,252	82.8	76.4	89.2	3	‡	‡	‡	‡
40+	18	1,496	68.0	48.1	87.8	3	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	633	65,526	77.8	74.7	80.9	70	7,216	8.6	6.5	10.7
Black, Non-Hispanic	338	10,489	57.2	52.7	61.7	95	3,069	16.7	13.4	20.1
Hispanic	32	3,695	69.1	54.9	83.2	6	‡	‡	‡	‡
Asian/Pacific Islander	28	2,640	85.1	72.6	97.7	3	‡	‡	‡	‡
American Indian	2	‡	‡	‡	‡	0	‡	‡	‡	‡
Education										
<High School	147	11,489	66.7	59.1	74.3	44	2,627	15.3	9.7	20.9
High School	326	25,673	71.6	66.8	76.3	66	4,241	11.8	8.4	15.2
Some College	258	20,606	73.4	68.3	78.5	42	2,827	10.1	6.6	13.5
College+	317	26,778	80.4	76.1	84.7	30	2,251	6.8	4.0	9.5
Medicaid Status										
Medicaid Ever	488	34,370	70.3	66.2	74.3	114	6,926	14.2	11.1	17.3
Medicaid Never	566	50,557	76.5	73.2	79.9	68	5,019	7.6	5.5	9.7

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 37b:
Prevalence of infant sleep position by maternal demographic characteristics,
2006 MI PRAMS

	Prone/Stomach				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	257	18,131	100.0		
Maternal age (years)					
<18	12	‡	‡	‡	‡
18-19	26	1,378	20.3	11.3	29.4
20-24	63	4,589	16.2	11.8	20.7
25-29	88	6,633	19.2	15.0	23.5
30-34	45	3,498	13.1	8.9	17.2
35-39	6	‡	‡	‡	‡
40+	6	‡	‡	‡	‡
Race/Ethnicity					
White, Non-Hispanic	106	11,469	13.6	11.0	16.2
Black, Non-Hispanic	132	4,780	26.1	22.0	30.1
Hispanic	10	1,045	19.5	7.5	31.6
Asian/Pacific Islander	2	‡	‡	‡	‡
American Indian	1	‡	‡	‡	‡
Education					
<High School	41	3,101	18.0	11.7	24.3
High School	89	5,957	16.6	12.7	20.5
Some College	70	4,654	16.6	12.3	20.8
College+	55	4,266	12.8	9.2	16.4
Medicaid Status					
Medicaid Ever	123	7,621	15.6	12.4	18.8
Medicaid Never	133	10,471	15.9	13.0	18.7

2006 MI PRAMS

‡ Data not shown due to small sample size

Table #38:
Prevalence of infant bed sharing,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence	Upper confidence
Total	1,660	123,645	100.0		
Bed Sharing					
Never Sleeps Alone	454	26,316	21	19	24
Sometimes Sleeps Alone	273	19,355	16	14	18
Always Sleeps Alone	933	77,974	63	60	66

2006 MI PRAMS

Table 39a:
Prevalence of infant bed sharing by maternal demographic characteristics,
2006 MI PRAMS

	Never Sleeps Alone					Sometimes Sleeps Alone				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	933	77,974	100.0			273	19,355	100		
Maternal age (years)										
<18	29	1,975	49.5	34.3	64.7	11	‡	‡	‡	‡
18-19	64	4,240	55.6	44.4	66.8	18	1,335	17.5	8.8	26.3
20-24	208	17,746	59.0	53.3	64.7	81	5,685	18.9	14.3	23.5
25-29	278	23,272	63.5	58.6	68.5	79	6,281	17.2	13.2	21.1
30-34	225	19,330	67.8	62.4	73.2	53	3,555	12.5	8.7	16.2
35-39	113	9,930	69.4	61.6	77.1	25	1,619	11.3	6.1	16.5
40+	16	1,481	59.3	40.0	78.7	6	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	595	61,308	69.8	66.5	73.1	122	12,836	14.6	12.0	17.2
Black, Non-Hispanic	258	8,065	36.3	32.4	40.3	131	4,488	20.2	16.9	23.5
Hispanic	30	3,354	59.0	44.3	73.7	10	1,044	18.4	6.7	30.0
Asian/Pacific Islander	21	2,023	61.8	44.8	78.8	5	‡	‡	‡	‡
American Indian	4	‡	‡	‡	‡	0	‡	‡	‡	‡
Education										
<High School	137	12,013	59.9	52.8	67.0	39	2,474	12.3	7.5	17.2
High School	287	23,792	61.1	56.2	66.0	99	6,938	17.8	13.9	21.7
Some College	237	19,294	65.8	60.5	71.1	62	4,115	14.0	10.2	12.8
College+	267	22,446	65.7	60.6	70.7	67	5,416	15.8	11.9	19.8
Insurance Status										
Medicaid Ever	419	31,781	58.3	54.2	62.4	145	9,444	17.3	14.1	20.5
Medicaid Never	511	45,757	66.7	63.1	70.4	127	9,872	14.4	11.7	17.1

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 39b:
Prevalence of infant bed sharing by maternal demographic characteristics,
2006 MI PRAMS

	Always Sleeps Alone				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	454	26,316	100.0		
Maternal age (years)					
<18	38	1,556	39.0	24.9	53.0
18-19	40	2,050	26.9	17.2	36.5
20-24	121	6,650	22.1	17.5	26.7
25-29	122	7,067	19.3	15.4	23.2
30-34	84	5,636	19.8	15.2	24.3
35-39	40	2,761	19.3	12.7	25.9
40+	9	‡	‡	‡	‡
Race/Ethnicity					
White, Non-Hispanic	132	13,696	15.6	13.0	18.2
Black, Non-Hispanic	290	9,641	43.4	39.3	47.6
Hispanic	11	1,288	22.7	10.3	35.1
Asian/Pacific Islander	10	‡	‡	‡	‡
American Indian	0	‡	‡	‡	‡
Education					
<High School	109	5,562	27.7	21.6	33.9
High School	156	81,997	21.1	17.2	24.9
Some College	99	5,923	20.2	15.8	24.6
College+	85	6,327	18.5	14.4	22.6
Insurance Status					
Medicaid Ever	277	13,269	24.3	21.0	27.7
Medicaid Never	173	12,924	18.9	15.8	21.9

2006 MI PRAMS

‡ Data not shown due to small sample size

Table 40:
Prevalence of physical abuse prior to pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,631	122,042			
Physically Abused					
Not Abused	1,526	115,370	94.5	93.3	95.8
Abused	105	6,672	5.5	4.2	6.7
2006 MI PRAMS					

Table 41:
Person inflicting abuse among women abused prior to pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	105	6,672	100.0		
Abuser					
Abused by husband/ex-husband/partner/ex-partner	70	4,320	64.7	53.6	75.9
Abused by someone else	35	2,352	35.3	24.1	46.4
2006 MI PRAMS					

Table 42:
Prevalence of physical abuse during pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,641	122,628	100.0		
Physically Abused					
Not Abused	1,557	118,218	96.4	95.4	97.4
Abused	84	4,410	3.6	2.6	4.6
2006 MI PRAMS					

Table 43:
Person inflicting abuse among women abused during pregnancy,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	83	4,394	100.0		
Abuser					
Abused by husband/ex-husband/partner/ex-partner	55	3,152	71.7	59.8	83.6
Abused by someone else	28	1,242	28.3	16.4	40.2
2006 MI PRAMS					

Table 44:
Prevalence of verbal abuse in the year prior to delivery,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,613	121,161	100.0		
Verbally Abused					
Not Verbally Abused	1,488	113,360	93.6	92.2	94.9
Verbally Abused	125	7,801	6.4	5.1	7.8
2006 MI PRAMS					

Table 45:
Prevalence of women hearing or reading about folic acid and its benefits,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,521	114,298	100.0		
Heard/read about folic acid					
Yes	1,084	84,764	74.2	71.6	76.8
No	437	29,534	25.8	23.2	28.4
2006 MI PRAMS					

Table 46:
Prevalence of women instructed, by a health care professional on the appropriate amount of folic acid to consume, 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,527	114,131	100.0		
Instructed by healthcare professional					
Yes	945	70,759	62.0	59.1	64.9
No	582	43,372	38.0	35.1	40.9
2006 MI PRAMS					

Table 47:
Prevalence of multivitamin consumption in the month prior to pregnancy, 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,655	123,064	100.0		
Multivitamin Consumption					
No multivitamin	914	67,202	54.6	51.7	57.5
1-3 times per week	166	12,102	9.8	8.1	11.5
4-6 times per week	110	8,734	7.1	5.6	8.6
Daily	465	35,026	28.5	25.9	31.0
2006 MI PRAMS					

Table 48:
Prevalence of folic acid awareness and/or instruction by a health care professional,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,456	109,072	100.0		
Awareness of folic acid/Instructed by healthcare professional					
Aware and Instructed	805	63,377	58.1	55.1	61.1
Aware, but not instructed	236	17,897	16.4	14.1	18.7
Instructed, but not aware	107	5,652	5.2	3.9	6.4
Neither instructed or aware	308	22,146	20.3	17.9	22.8
2006 MI PRAMS					

Table 49a:
Multivitamin consumption in the month prior to pregnancy by folic acid awareness and/or instruction by a
healthcare professional,
2006 MI PRAMS

	No multivitamin					1-3 times per week				
	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	796	58,403				139	10,194			
Awareness of folic acid/Instructed by healthcare professional										
Aware and Instructed	365	27,956	44.3	40.2	48.3	74	6,263	9.9	7.5	12.4
Aware, but not instructed	130	9,278	51.8	44.2	59.4	34	2,529	14.1	9.0	19.3
Instructed, but not aware	74	4,314	76.3	66.9	85.7	8	DSU	DSU	DSU	DSU
Neither instructed or aware	227	16,855	76.3	70.7	81.8	23	1,402	6.3	3.2	9.5
2006 MI PRAMS										

DSU: Data Statistically Unreliable

Table 49b:
Multivitamin consumption in the month prior to pregnancy by folic acid awareness and/or instruction by a healthcare professional, 2006 MI PRAMS

	4-6 times per week					Daily				
	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	104	7,747				414	31,605			
Awareness of folic acid/Instructed by healthcare professional										
Aware and Instructed	78	6,240	9.9	7.5	12.3	286	22,699	35.9	32.1	39.8
Aware, but not instructed	17	1,507	8.4	4.1	12.8	55	4,584	25.6	18.8	32.4
Instructed, but not aware	2	DSU	DSU	DSU	DSU	23	930	16.5	8.3	24.6
Neither instructed or aware	7	DSU	DSU	DSU	DSU	50	3,392	15.4	10.6	20.1
2006 MI PRAMS										

DSU: Data Statistically Unreliable

Table 50:
Prevalence of WIC participation during pregnancy among income eligible women, 2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total*	830	54,122	100.0		
WIC Participation During Pregnancy					
Yes	667	42,294	78.1	74.6	81.7
No	163	11,828	21.9	18.3	25.4
2006 MI PRAMS					

Total = Number of women found to be income eligible for WIC. Women who participated in Medicaid prior to pregnancy, had Medicaid-paid prenatal care, Medicaid-paid delivery, or received federal income assistance were classified as being income eligible for WIC.

Table 51:
Prevalence of WIC participation postpartum among income eligible women,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	791	52,522	100.0		
WIC Participation - Infant					
Enrolled	708	45,796	87.2	84.2	90.2
Not Enrolled	83	6,726	12.8	9.8	15.8
2006 MI PRAMS					

Total = Number of women found to be income eligible for WIC. Women who participated in Medicaid prior to pregnancy, had Medicaid-paid prenatal care, Medicaid-paid delivery, or received federal income assistance were classified as being income eligible for WIC.

Table 52:
Reason for nonparticipation among income eligible women, who's infant did not participate in WIC,
2006 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Reasons					
Other	26	2,302	33	22	45
Do not want to enroll infant	28	1,866	27	16	38
Infant not eligible	15	1,315	19	9	29
Unaware of WIC	13	1,113	17	7	26
2006 MI PRAMS					

Analysis restricted to women who were found to be income eligible for WIC and whose infant did not participate in WIC. Women who participated in Medicaid prior to pregnancy, had Medicaid-paid prenatal care, Medicaid-paid delivery, or received federal income assistance were classified as being income eligible for WIC.

*Michigan Department
of Community Health*



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