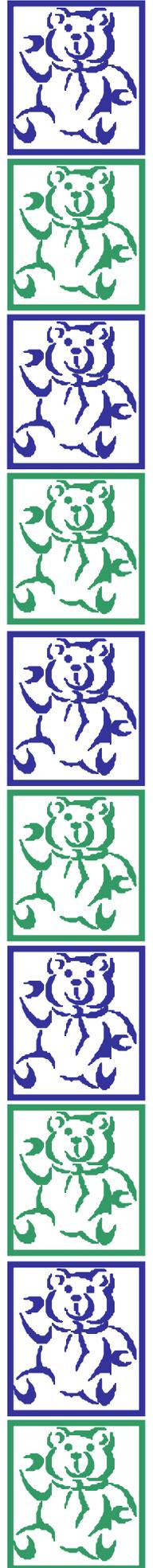


PRAMS Report 2004

Michigan Department
of Community Health



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August 2007

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Executive Summary

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey of a random sample of women who have given birth to a live-born infant in Michigan. The topics included in this survey were selected based on their relevance to maternal and infant morbidity and mortality. The following summary highlights important findings within the report:

- Almost 40% of women indicated that they had an unintended pregnancy in 2004.
- Prior to pregnancy, about 48% of women reported using contraception, with withdrawal being the most popular method (44.3%).
- Approximately 7% of infants were considered low birth weight (< 2,500 grams), of whom 83.4% were moderately low birth weight (1500-2499 grams).
- Among the 19.7% of women who reported entering prenatal care after the first trimester or not at all, 40% reported at least two or more barriers to on time PNC entry.
- Approximately 30% of women did not even initiate breastfeeding.
- The most frequently cited reasons for not breastfeeding were “Thought was not producing enough milk” (34%), “Breastmilk did not satisfy infant” (33.6%), and “Infant had difficulty nursing” (29.3%).
- Approximately 81% of women reported not smoking in the last three months of pregnancy.
- Less than 10% of women indicated that they drank alcohol during their pregnancy.
- Over 90% of respondents reported receiving information about placing their baby on his or her back to sleep. Almost 31% of women reported placing their infant to sleep on either the stomach or side.
- More than 20% of women stated that their infant always/almost always bed shared. The baby’s doctor was the main source (68%) of sleep information.
- A small percent of women indicated experiencing physical abuse during pregnancy. Among these women, their husband/partner was named the abuser 60% of the time.
- About 68% of women reported receiving prenatal HIV counseling, 75.5% of whom went on to be screened for HIV during pregnancy.
- About 56% of women were aware and instructed by a health care provider about the benefits of folic acid. In addition, 29.6% of all respondents indicated they consumed a multivitamin daily in the month before pregnancy.
- Among the income eligible women, 86.5% of their infants used WIC services.
- Less than half of women indicated that they went to a dentist during their pregnancy.
- Of women who indicated that they needed to see a dentist during pregnancy, 44% did not seek care.

Introduction

The Michigan Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing population-based survey of postpartum mothers who delivered live births in Michigan. PRAMS is part of a Centers for Disease Control and Prevention (CDC) initiative to reduce infant mortality, low birth weight, and other adverse birth outcomes by providing information for developing, implementing, and evaluating maternal and infant health intervention programs. This data is used to monitor improvement in both national and state pregnancy-related health objectives, including the increase of infants with positive birth outcomes. Furthermore, PRAMS is used to identify and monitor selected self-reported maternal behaviors and experiences that occur before, during, and after pregnancy among women who deliver live-born infants. This report covers a variety of topics, including, but not limited to, low birthweight, contraceptive use, pregnancy intention, health insurance, prenatal care, breastfeeding, alcohol and tobacco use, violence against women, folic acid awareness, and WIC participation.

From a frame of eligible birth certificates, over 2000 postpartum women were selected to be surveyed in 2004. PRAMS is a combination mail/telephone survey in which women are contacted and surveyed initially via mail. If no response to the original mailing, additional mailings plus telephone contacts are made.

Throughout this report, selected maternal and child health indicators are presented graphically with detailed explanations. PRAMS data are intended to be representative of Michigan women residents 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 2004 (see Appendix A for further information on weighting). Since PRAMS only surveys women with a live birth, caution is advised when interpreting and generalizing the results to all pregnant women and does not include pregnancies that end in abortion or miscarriage. 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 both the birth file while data such as income and pre-pregnancy insurance status were gathered from 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, approximately 37% of live births were to women less than 25 years of age (Figure #1). White, Non-Hispanic women made up about three-quarters of the study population in 2004 (75.2%). The most prevalent minority was Non-Hispanic Blacks (15.9%) followed by Hispanics (5.8%), and then Asian/Pacific Islanders (2.5%) (Figure #2). Having at least high school/GED was reported by 32% of the women sampled and having at least a college degree by over a quarter (27.3%) (Figure #3). The vast majority of women (63.5%) were identified as being married (Figure #4). Prior to pregnancy, 16% of women reported receiving Medicaid, 21% were classified as being 'uninsured' and 63% of women responded that they had private health insurance (Figure #5).

Public Health Implications:

In 2004, almost half of the women delivering live births in Michigan have a high school diploma or less, highlighting the need for all organizations serving women of childbearing age to tailor all outreach efforts and materials to an appropriate level of reading and comprehension. Just over one in five women did not have health insurance prior to becoming pregnant. Access to care remains a challenging issue, therefore methods need to be developed to identify and refer women as soon as possible in their pregnancies. A higher proportion of women, delivering live births in Michigan, were less than 25 years of age. Policies aimed at providing pre-conception services to those less than 25 years of age remains very important.

Reference Table: #1

Maternal Demographics

Figure 1:
Prevalence of maternal age,
2004 MI PRAMS

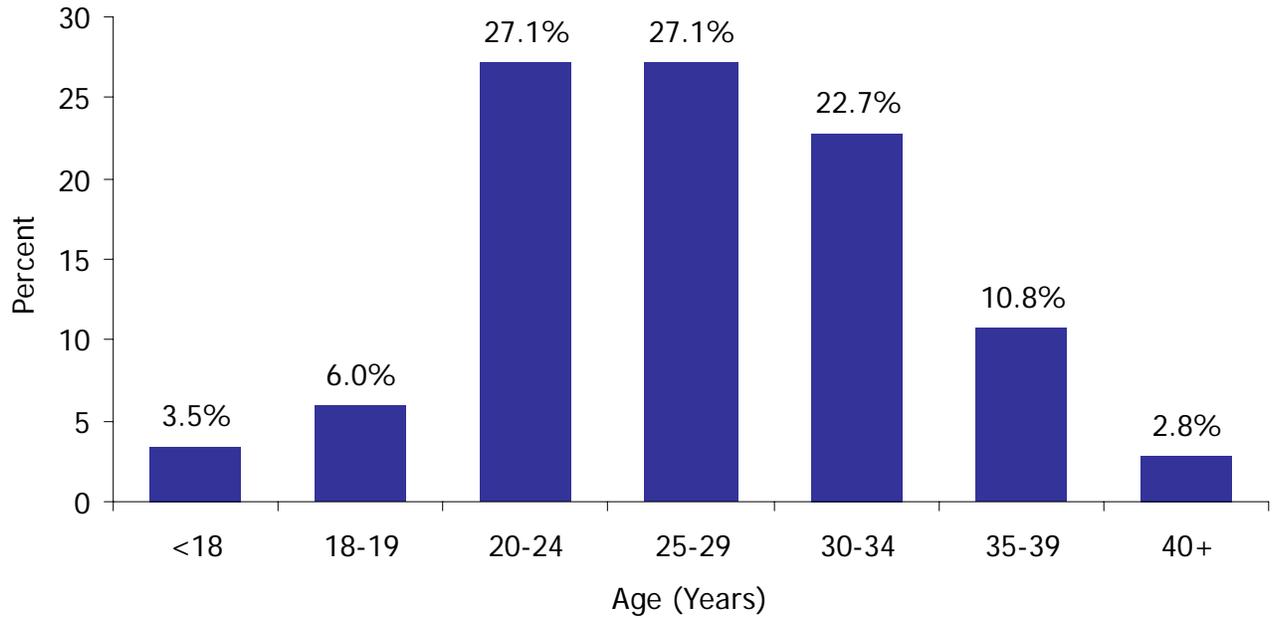
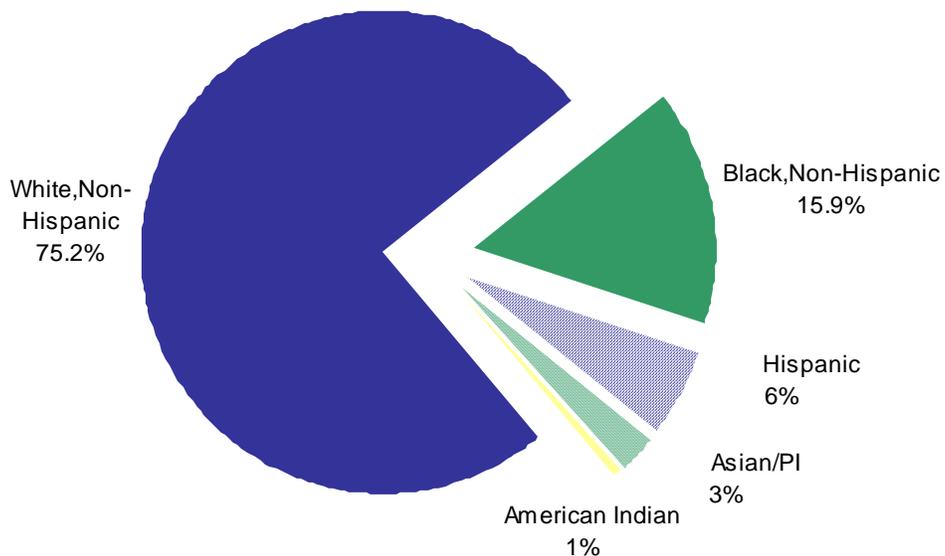


Figure 2:
Prevalence of maternal race/ethnicity,
2004 MI PRAMS



Maternal Demographics

Figure 3:
Prevalence of maternal education,
2004 MI PRAMS

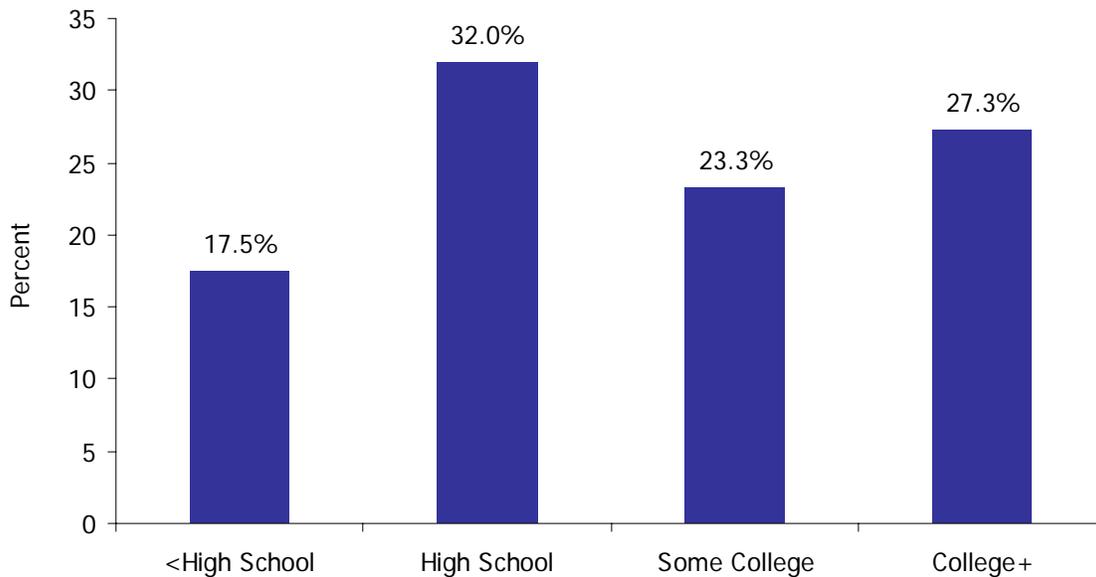
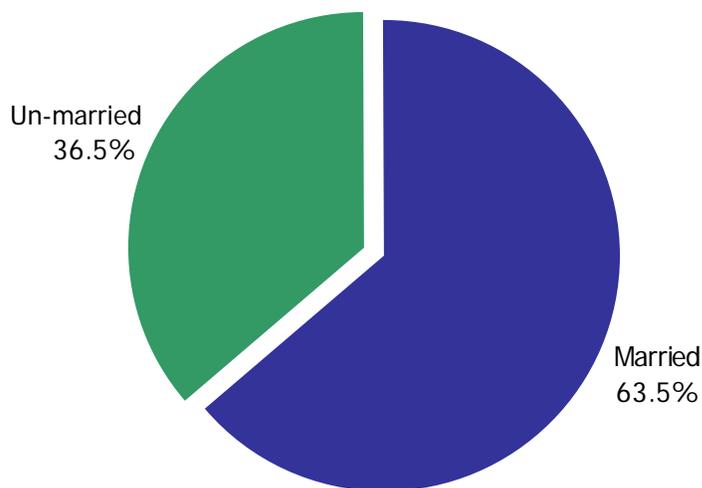
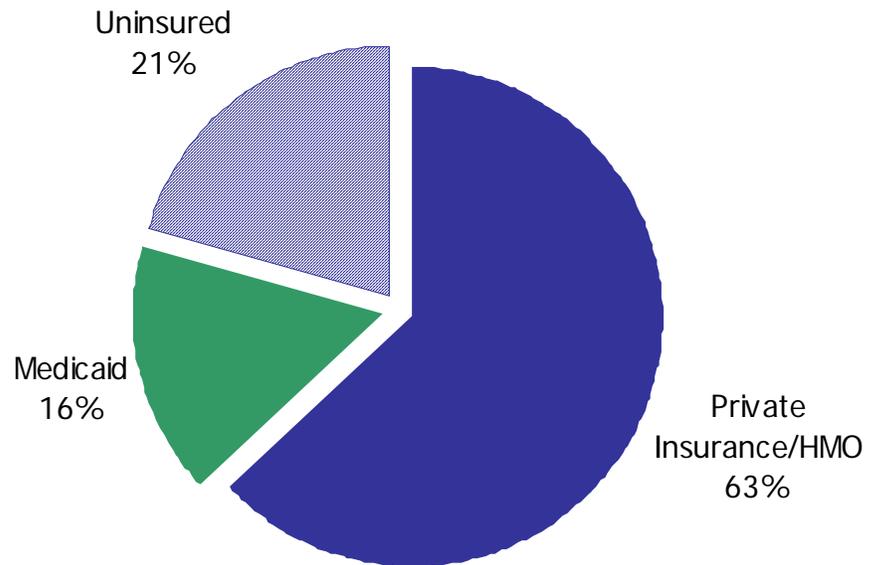


Figure 4:
Prevalence of marital status,
2004 MI PRAMS



Maternal Demographics

Figure 5:
Prevalence of insurance status,
2004 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 can be 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 2004, 39.6% of women who delivered a live birth reported that they had an unintended pregnancy, with 76.6% of those reporting their pregnancy as mistimed (Figure #6). When stratified by race/ethnicity, unintended pregnancy was found to be the highest in Non-Hispanic Black and Asian/ Pacific Islanders (60% and 39.5.0% respectively), followed by Hispanic and Non-Hispanic Whites (38.1% and 34.9%, respectively) (Figure #7). Furthermore, both maternal age and educational status are directly proportional to pregnancy intendedness. Women ages 35 years or over had an over three times higher proportion of intended pregnancy (81.8%) compared to those less than 18 years of age (Figure #8). In addition, women with a college degree had the highest prevalence of intended pregnancy (80.4%) while those with less than a high school education had the lowest prevalence (43%) (Figure #9). Women with either Medicaid or no insurance were less likely to report an intended pregnancy when compared to women with private insurance (Figure #10). Of the 47.7% of women with an unintended pregnancy who reported not using contraception, 80.8% indicated that they had a mistimed pregnancy. Among the 52.3% of this 'unintended' group (Figure #11), the methods most frequently associated with contraceptive failure were withdrawal (45.9%), condoms (21.6%), and birth control pills (14.9%) (Figure #12).

Public Health Implications:

Unintended pregnancies are more likely to occur in socio-economically vulnerable groups: women under the age of 20, uninsured, low income (Medicaid participation as a proxy), and racial/ethnic minorities. Over half of women experiencing an unintended pregnancy indicated using a contraceptive method at the time they became pregnant. The three most popular contraceptive reported by these women are withdrawal, condoms, and birth control pills respectively. This suggests that women are either not informed or misunderstand information regarding the effective use of contraceptive methods to prevent pregnancy. In addition, contraceptive services may not be available to the women who need them the most. Tailored family planning services to women who never gave birth, are unmarried, or are enrolled in Medicaid along with education on appropriate contraceptive use postpartumly are needed for the reduction of unintended pregnancies. Almost all women of reproductive age are at risk for unintended pregnancy therefore improving family planning services to better meet the needs of these women is one of the public health priorities in Michigan.

Reference Tables: #2 - #5

Unintended Pregnancy

Figure 6:
Prevalence of intended and unintended pregnancies and types of unintended pregnancies,
2004 MI PRAMS

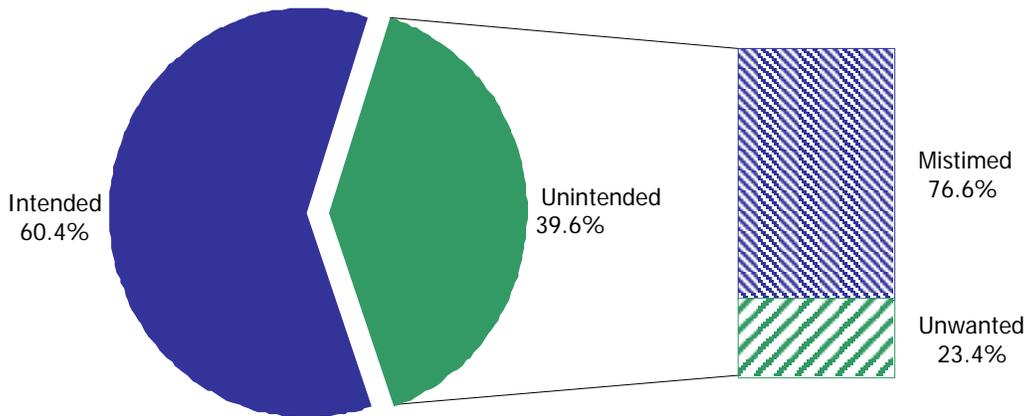
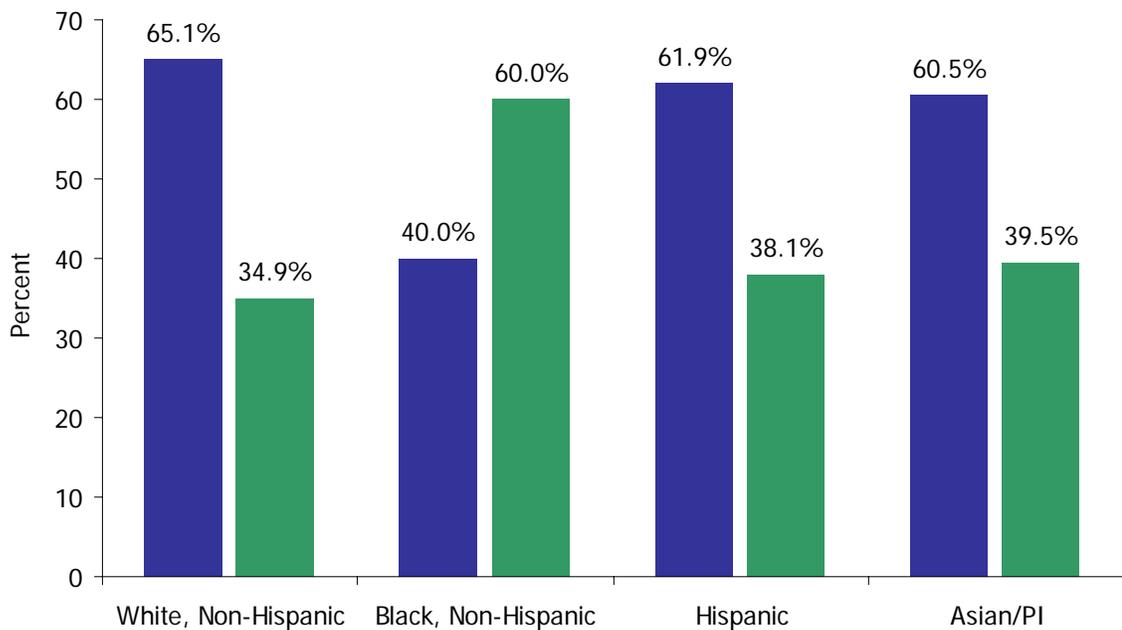


Figure 7:
Prevalence of intended and unintended pregnancies by maternal race/ethnicity;
2004 MI PRAMS



** Statistics for 'American Indian/Alaskan Native' omitted due to small sample size.

■ Intended
■ Unintended

Unintended Pregnancy

Figure 8:

Prevalence of intended and unintended pregnancies by maternal age,
2004 MI PRAMS

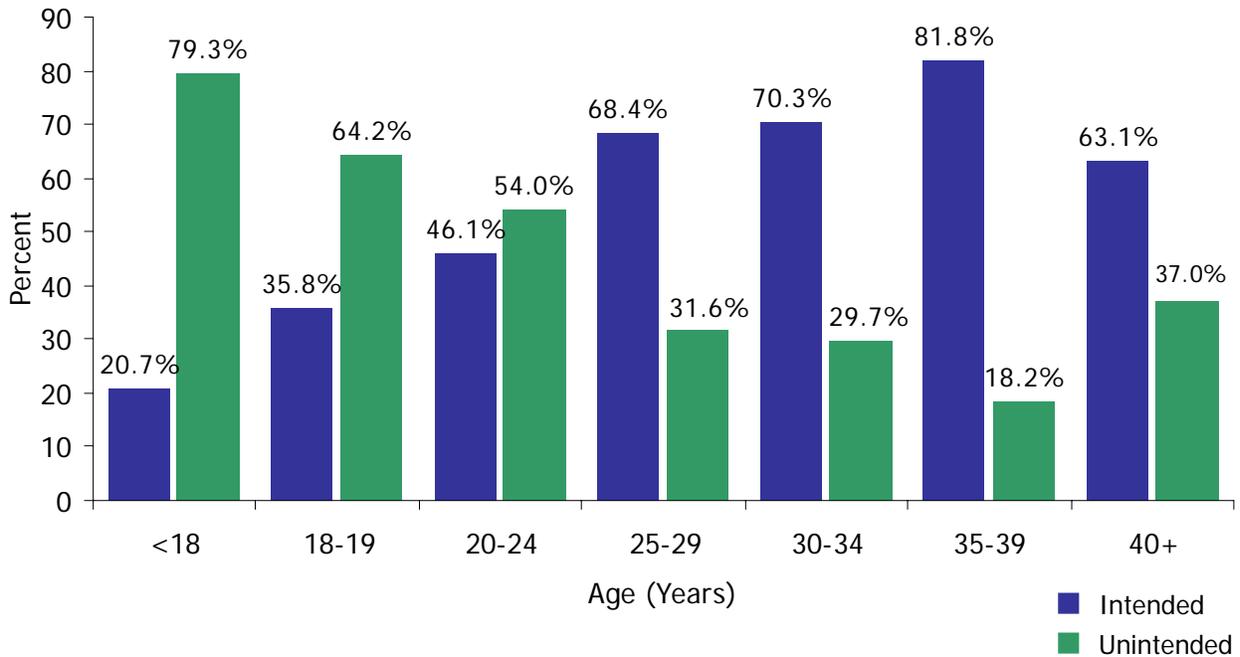
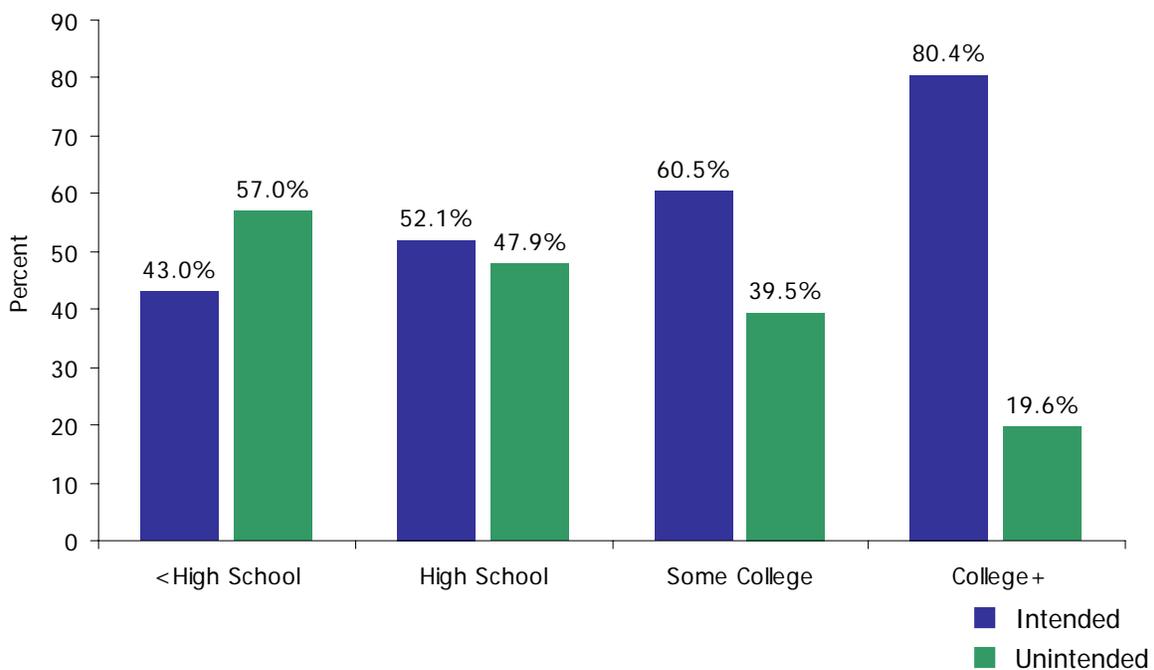


Figure 9:

Prevalence of intended and unintended pregnancies by maternal education,
2004 MI PRAMS



Unintended Pregnancy

Figure 10:

Prevalence of intended and unintended pregnancies by maternal pre-pregnancy insurance status, 2004 MI PRAMS

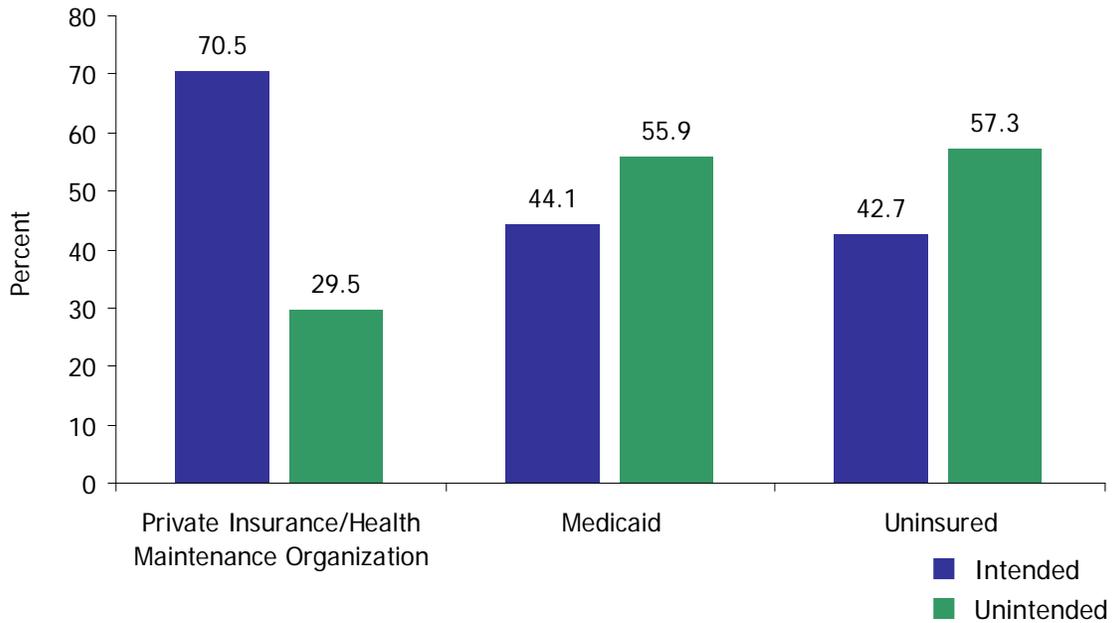
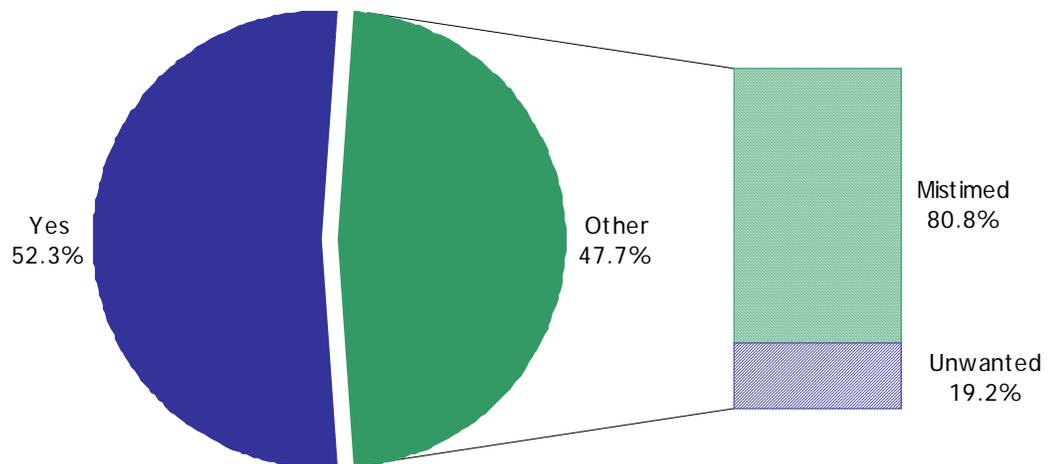


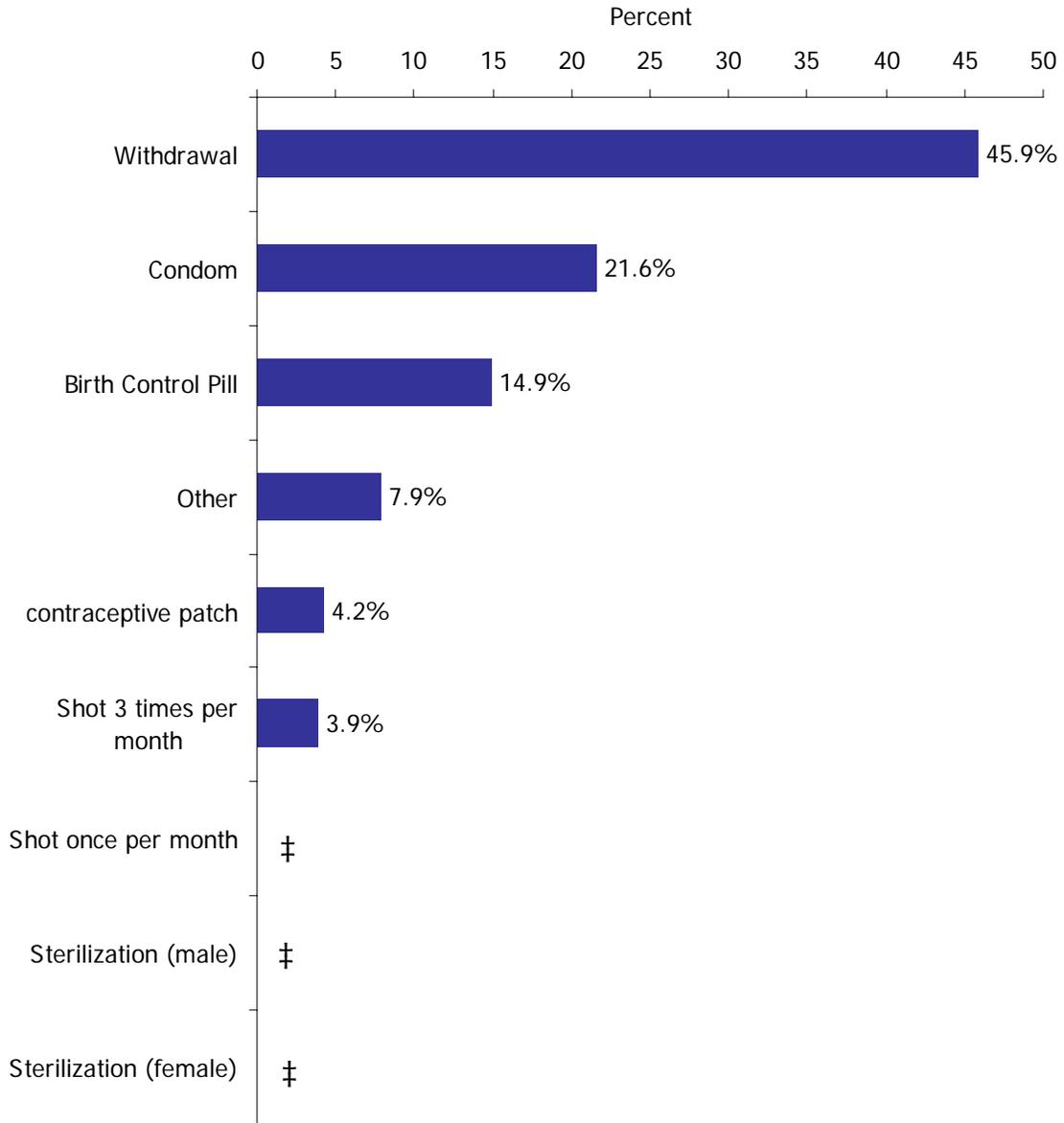
Figure 11:

Prevalence of pre-pregnancy contraception use among women with an unintended pregnancy, 2004 MI PRAMS



Unintended Pregnancy

Figure 12:
Method of pre-pregnancy contraception among women with an unintended pregnancy,
2004 MI PRAMS



‡ Estimates not shown due to small sample size

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 familyplanning*
- 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:

Less than half of the 2004 respondents reported using contraception prior to pregnancy (Figure #13). There is no statistically significant difference in the prevalence of contraceptive use by maternal age (Figures #14). Women 18-19 reported the highest prevalence of contraception utilization 52.1% while their less than 18-year-old counterpart reported the lowest prevalence (36.2%) (Figure #14). White, non-Hispanic women were the most likely to report contraception use (50.7%; Figures #15) in contrast to Hispanic women (35.7%). Women with some college education reported the highest proportion of contraceptive use (53.1%). Conversely, women with less than a high school level of education reported the least proportion (44.3%) (Figures #16). Respondents without medical insurance had the highest prevalence of contraceptive use (52.2%) followed by women with private insurance (50.3%; Figure #17).

Among women who reported using contraception, the most popular methods were withdrawal (44.3%) followed by condoms (23.0%) and birth control pills (16.7%; Figure #18). The three most commonly cited reasons for non-usage were "Didn't mind getting pregnant" (41.5%), "Thought could not get pregnant" (23.5%) and "Husband or partner did not want to use birth control" (20.8%; Figure #19).

During the postpartum period, 85.4% of women reported contraceptive use (Figure #20) with similar prevalence rates reported across age, race/ethnicity, and education. Utilization of contraceptives postpartum did not vary greatly by mother's age, with over 80% of women reporting utilization in all age groups (Figure #21). In addition, a similar high use of postpartum contraception methods was reported across all race/ethnic groups, with Hispanic women having the highest rate at 85.9% and Asian/Pacific Islander having the lowest rate at 72.4% (Figure #22). The proportion of contraceptors was similar across educational levels, ranging from the highest among women with some college education (88.5%) to the lowest of 80.8% among those with less than a high school education (Figure #23).

Health care professionals have the unique opportunity of teaching women during the prenatal period about the value of postpartum contraceptive use and PRAMS data shows the importance of this practice. Women who, during prenatal care, did not receive counseling regarding postnatal contraceptive use were more likely to be non-contraceptors compared to those who received counseling by a healthcare professional (Figure #24). The most commonly cited reason for contraceptive non-use in the postpartum period was "did not want to use birth control" (Figure #25).

Public Health Implications:

Postpartum contraceptive use is highest among women under the age of twenty. Of note, , this group also had the highest rates of unintended pregnancy. Therefore, providing family planning counseling on the choice and proper use of contraceptive method is very important, leading to prevention of very short inter-pregnancy intervals that are associated with various adverse maternal and infant health outcomes. Women who received counseling from a health care provider about contraceptive use during the prenatal period were more likely to use contraceptives during the postpartum period. The reasons cited for not using a contraceptive method postpartum were “not wanting to use a birth control method, not having sex, husband/partner does not want to use, and wants to get pregnant”. These data suggest that contraceptive counseling offered by health care professionals during the prenatal period is important to prepare women for the use in the postpartum period. Stressing the importance of spacing births and discussing contraceptive use at the appropriate time may help address these issues.

Reference Tables: #6 - #10

Contraception

Figure 13:
Prevalence of contraceptive use prior to pregnancy,
2004 MI PRAMS

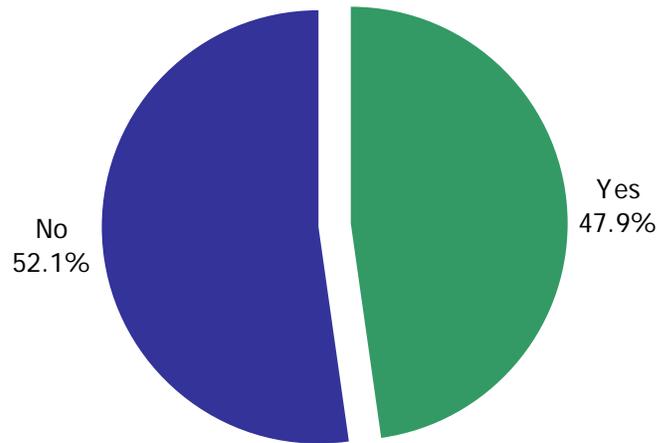
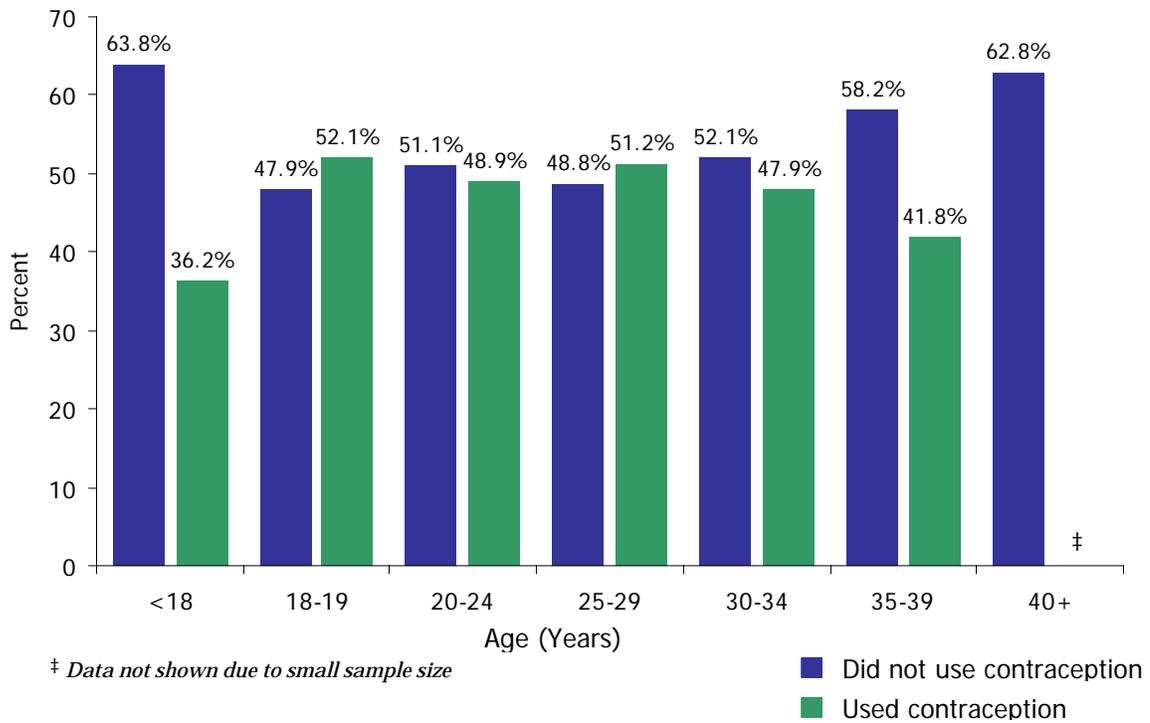


Figure 14:
Prevalence of contraceptive use prior to pregnancy by maternal age,
2004 MI PRAMS



Contraception

Figure 15:
Prevalence of contraceptive use prior to pregnancy by maternal race/ethnicity**,
2004 MI PRAMS

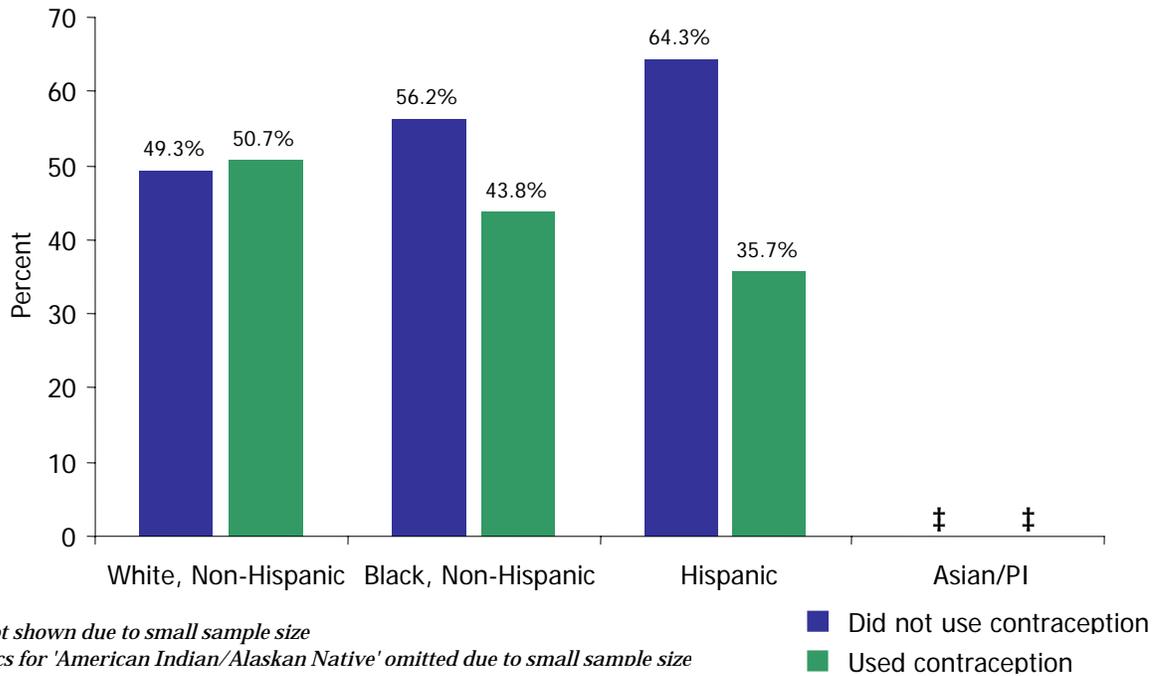
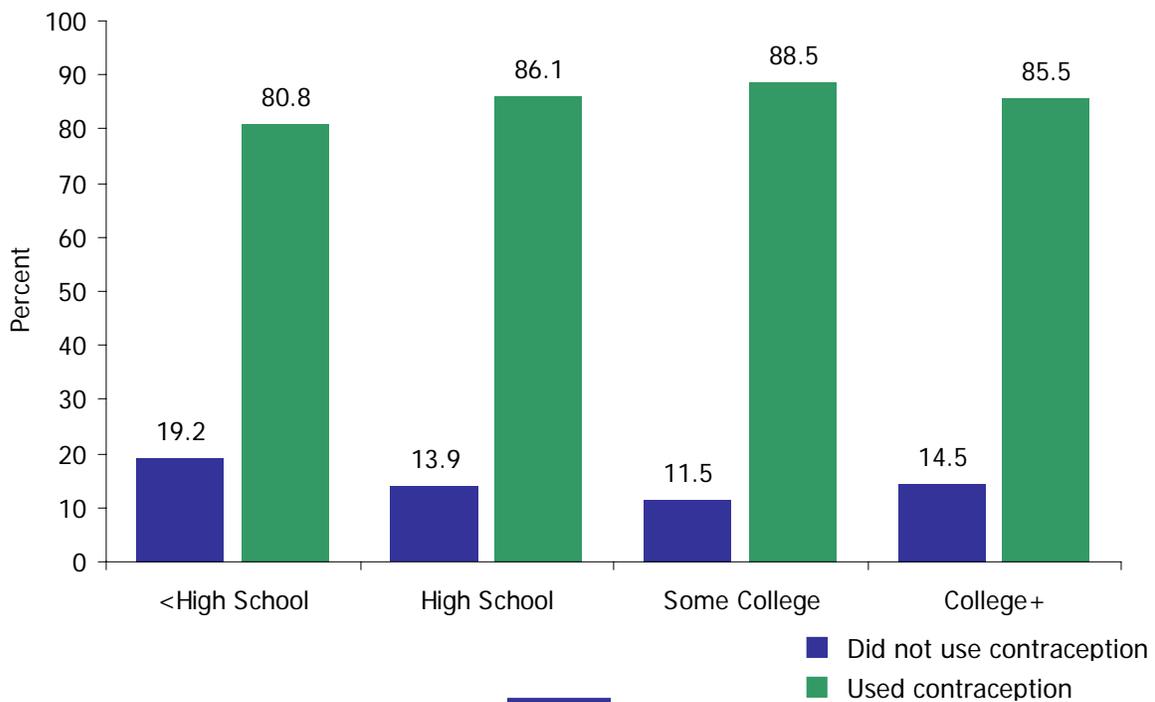
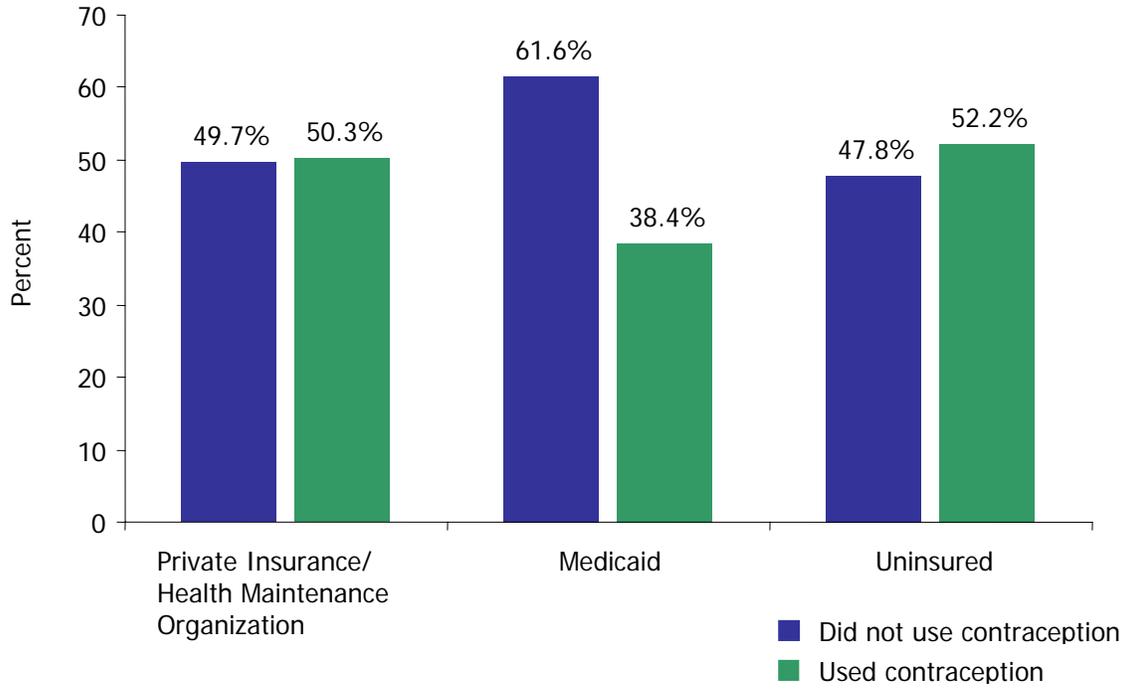


Figure 16:
Prevalence of contraceptive use prior to pregnancy by maternal education,
2004 MI PRAMS



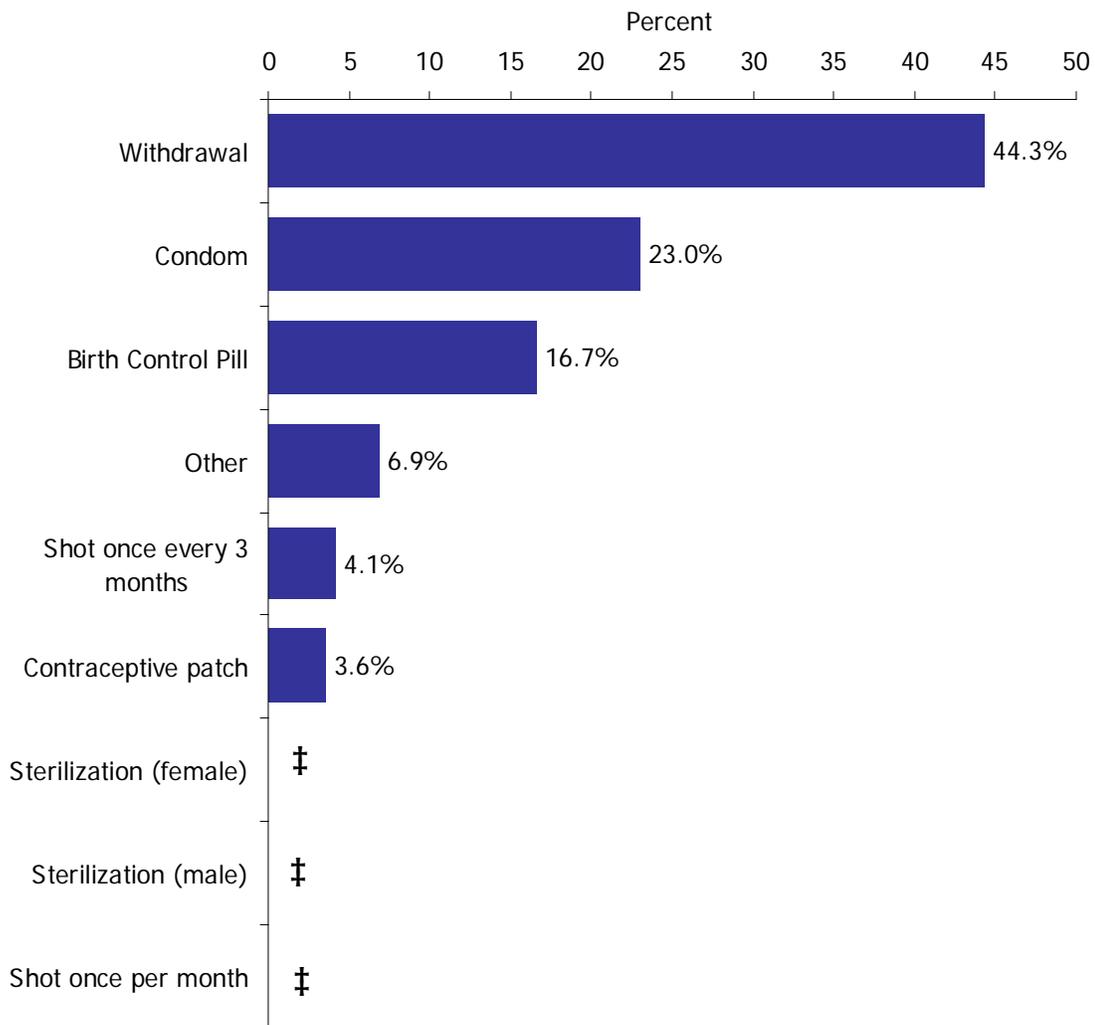
Contraception

Figure 17:
Prevalence of contraceptive use prior to pregnancy by insurance status,
2004 MI PRAMS



Contraception

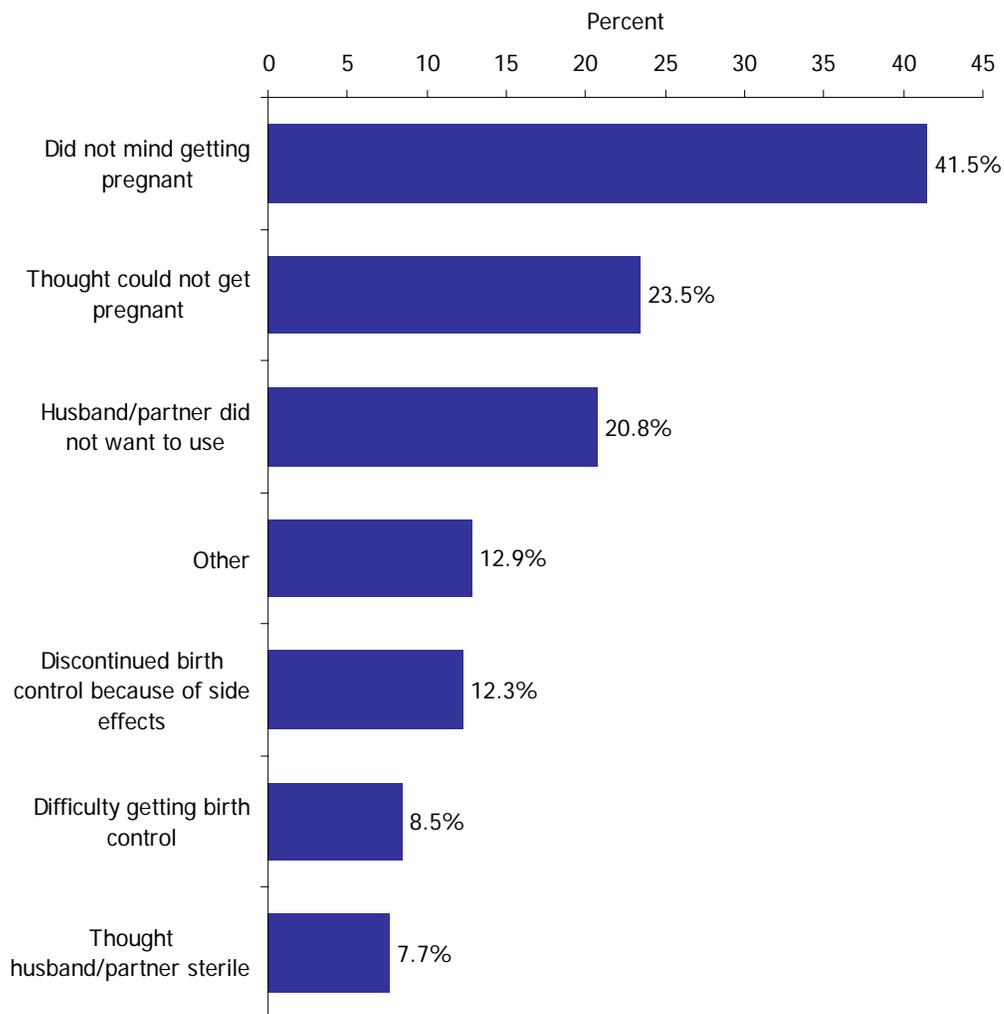
Figure 18:
Method of contraception among women prior to pregnancy,
2004 MI PRAMS



‡ Estimates not shown due to small sample size

Contraception

Figure 19:
Reasons for not using a contraceptive method prior to pregnancy,
2004 MI PRAMS



Contraception

Figure 20:
Prevalence of contraception use during the postpartum period
2004 MI PRAMS

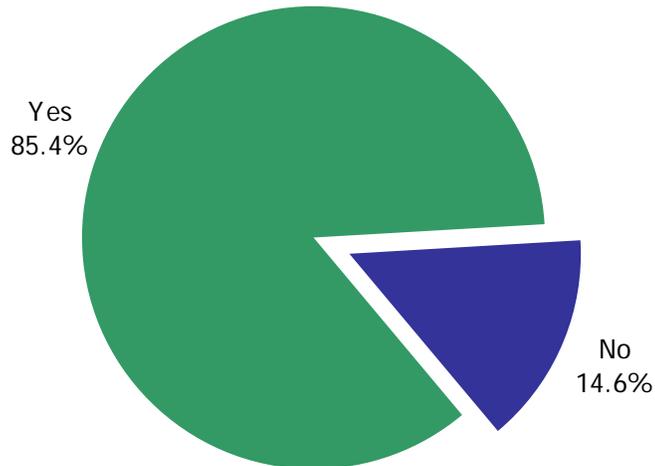
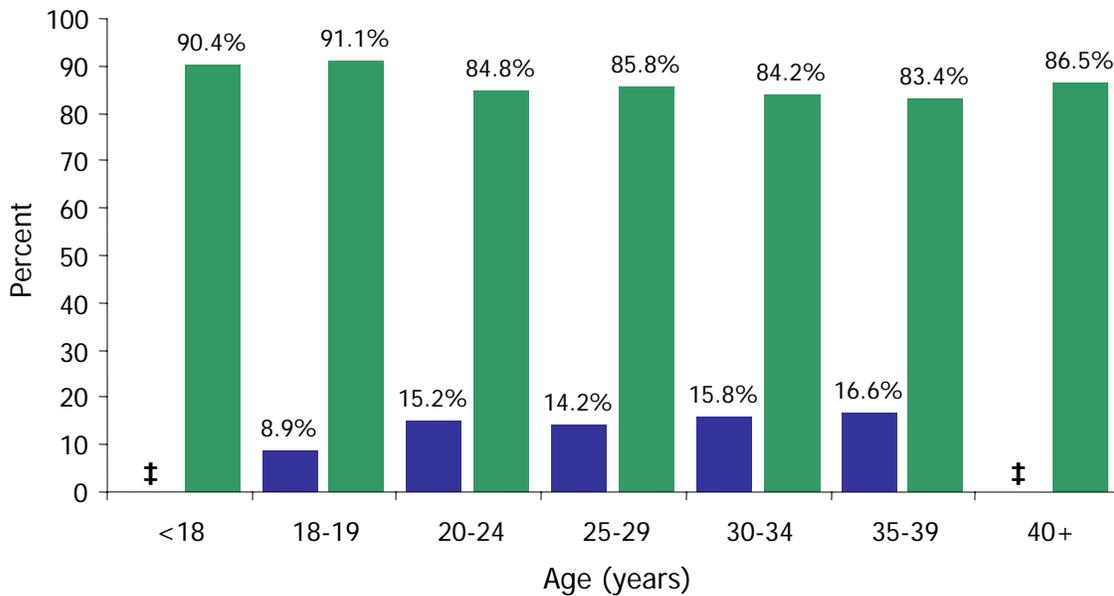


Figure 21:
Prevalence of contraception use during the postpartum period by maternal age,
2004 MI PRAMS



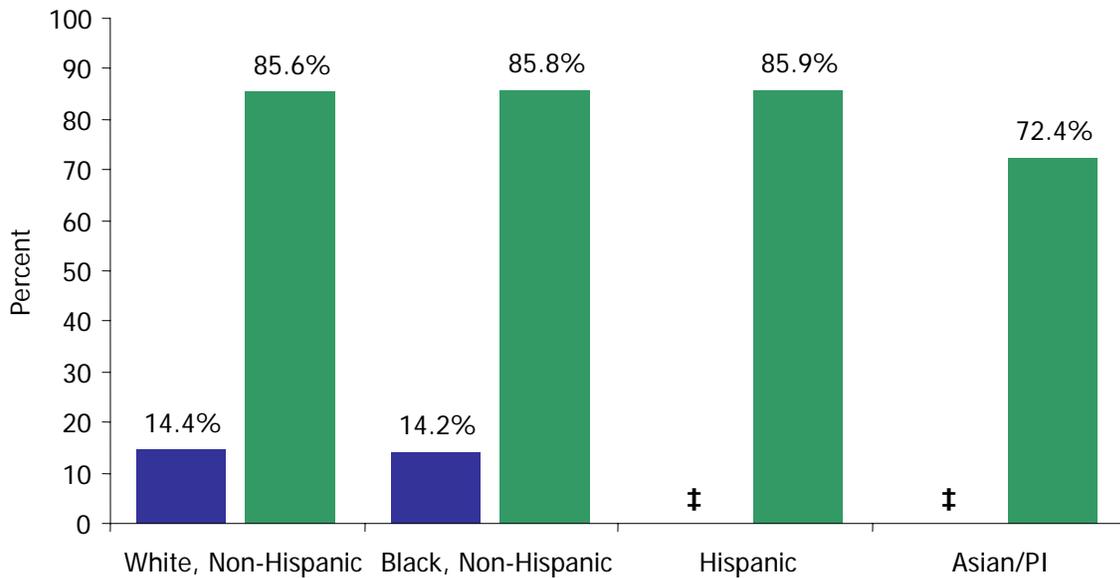
† Data not shown due to small sample size

■ Did not use contraception
■ Used contraception

Contraception

Figure 22:

Prevalence of contraception use during the postpartum period by maternal race/ethnicity, 2004 MI PRAMS



** Statistics for 'American Indian/Alaskan Native' omitted due to small sample size

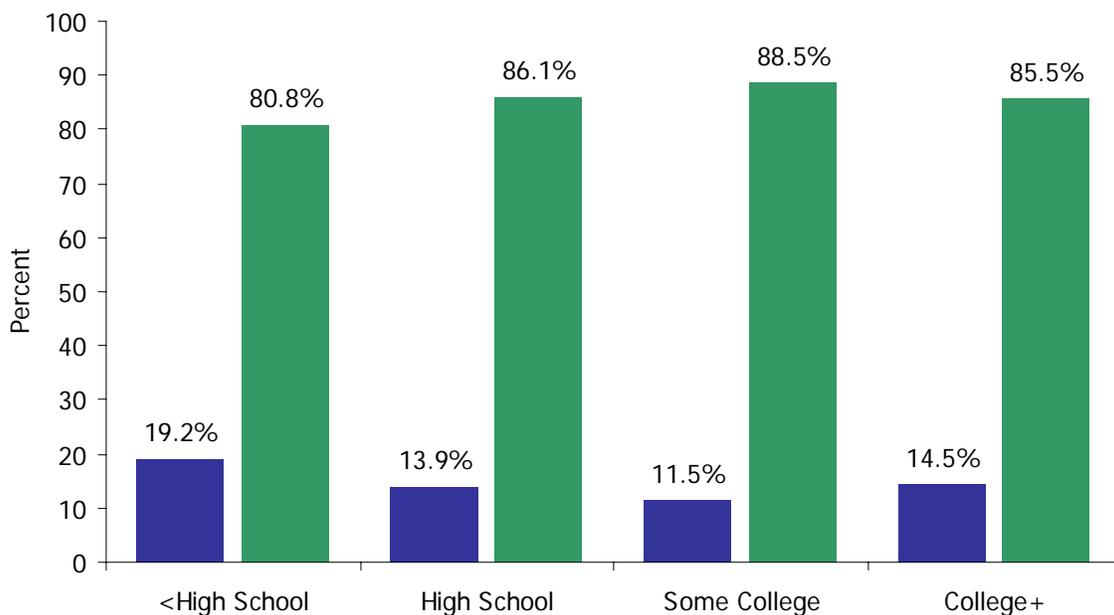
† Data not shown due to small sample size

■ Did not use contraception

■ Used contraception

Figure 23:

Prevalence of contraception use during the postpartum period by maternal education, 2004 MI PRAMS



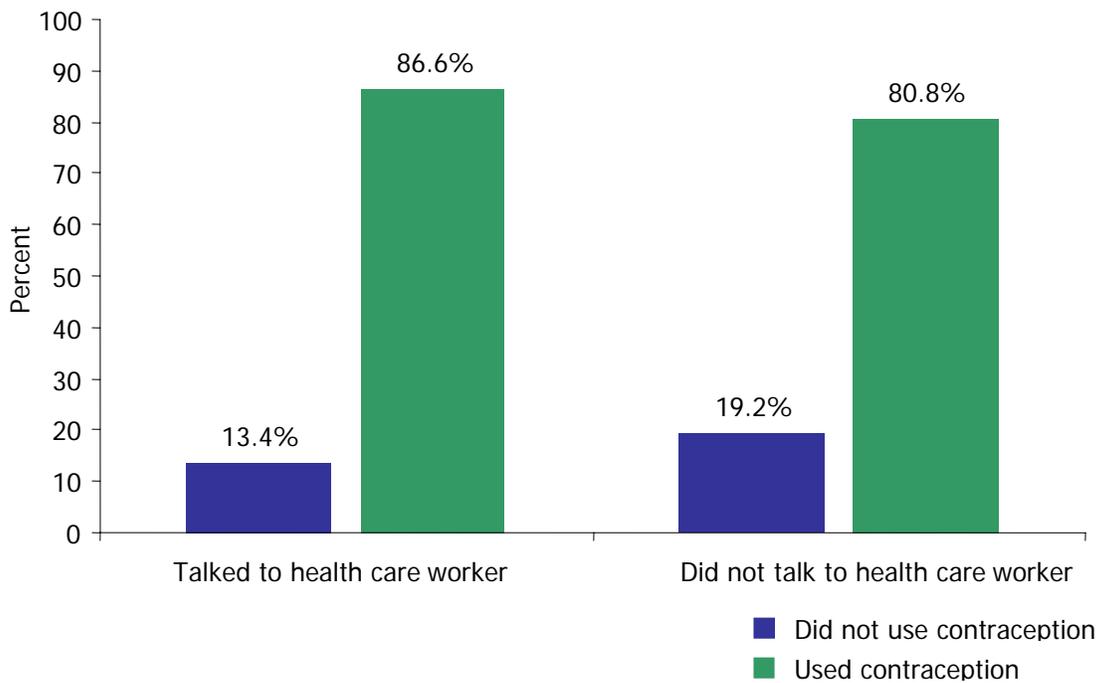
■ Did not use contraception

■ Used contraception

Contraception

Figure 24:

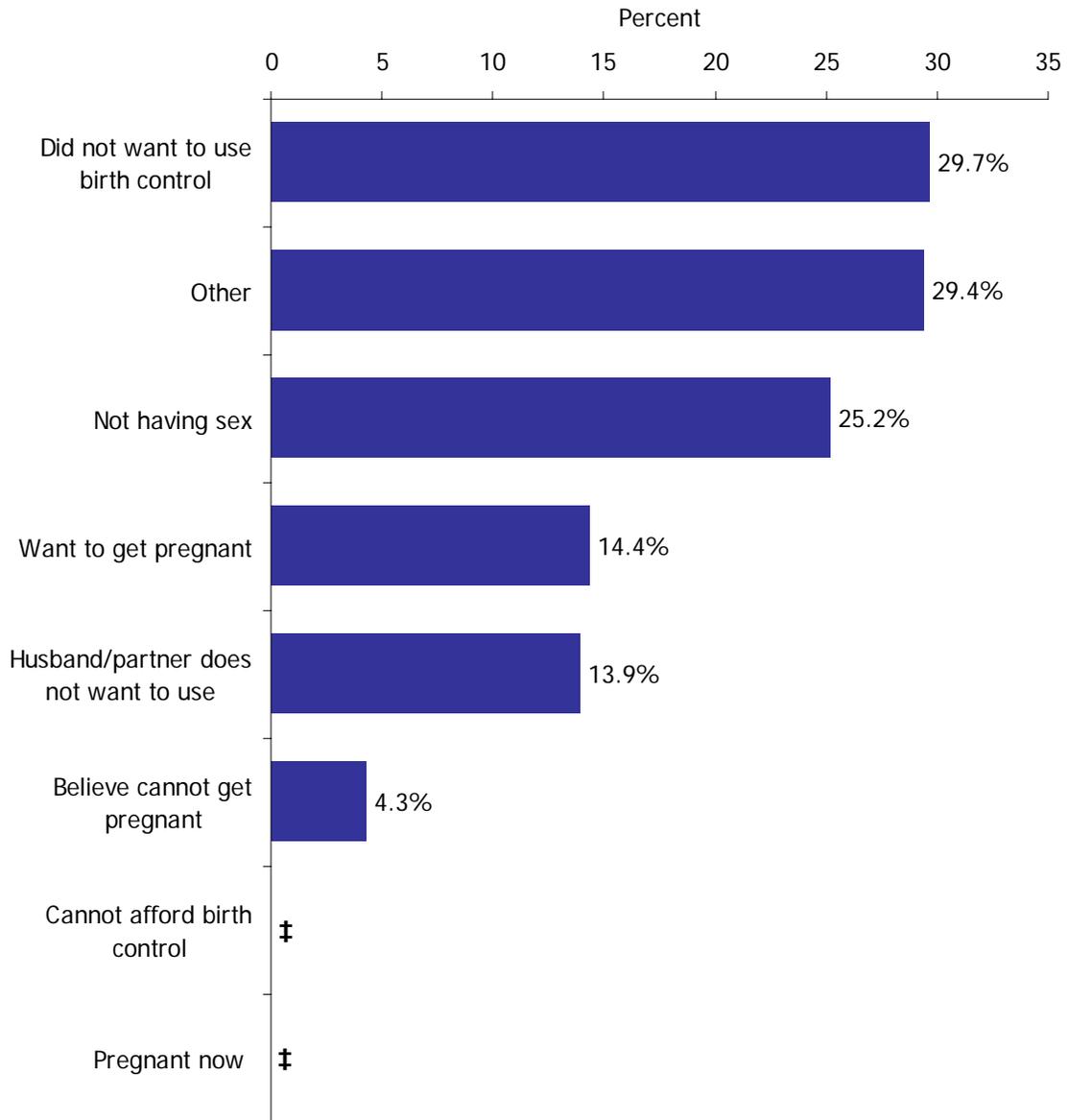
Use of contraception during postpartum by discussion with health care worker during prenatal care, 2004 MI PRAMS



Contraception

Figure 25:

Reasons for not using a contraceptive method postpartum
2004 MI PRAMS



‡ Data not shown due to small sample size

Low Birthweight

Definition:

Information on infant's birthweight was derived from information on the birth certificate included in PRAMS dataset. Infants were classified as 'low birthweight' if they weighed less than 2500 grams (5.51 lbs) at birth and normal birth weight if they weighed 2500 grams or more. 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 127,787 live births in 2004 (PRAMS estimated), 7.3% weighed less than 2500 grams (low birthweight) of which 83.4% were moderate low birthweight (1,500-2,499 grams) and 16.6% very low birth weight infants (below 1,500 grams) (Figure #26). The prevalence of low birthweight varied by select maternal characteristics. Specifically, women 18 to 19 years of age experienced the highest rate of low birthweight infants (16.5%) followed by the 35-39 age group (9.0%). Women 30-34 years and 25-29 years of age had the lowest rate of low birthweight infants (6.2% and 6.3% respectively) (Figure #27). The prevalence of low birthweight was highest among Non-Hispanic Blacks (14.7%) followed by Asian/Pacific Islanders (8.7%), Non-Hispanic Whites (6.3%), and Hispanics (3.6%) (Figure #28). Women with less than a high school education and those with a high school diploma reported the highest proportion of low birthweight (8.3%). The lowest percentage was reported by women with some college education (5.9%) (Figure #29). Medicaid recipients reported the highest prevalence of low birth weight infants (10.8%) followed by women with no insurance (7.5%) (Figure #30). Of note, 68.8% of low birthweight infants were preterm (<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 higher proportion of low birthweight infants than women with an intended pregnancy (8.0% versus 6.6%; not statistically significant) (Figure #32). The prevalence of low birthweight was virtually the same between mistimed and unwanted pregnancies (Figure #33). Women who reported smoking during pregnancy had a significantly higher proportion of low birthweight infants (10.1%) when compared to non-smokers (6.8%) (Figure #34).

Public Health Implications:

The fact that there is an almost two-fold higher proportion of low birthweight among women 18-19 years of age compared to the next highest group (35-39 years of age) is of concern. Furthermore, there was a shift from women over 40 years of age having the highest proportion (11.0%) in 2003, to the highest proportion in 2004 (16.5%) in women 18-19 years of age. This represents an over 50% increase in the proportion of low birthweight, from 2004 data, among women 18-19 years of age. Women with or less than a HS diploma/GED, Medicaid participants, Non-Hispanic Blacks, women with an unintended pregnancy and women who smoked during pregnancy remain at higher risk for delivering a low birthweight infant. Almost 70% of infants born low birthweight were also pre-term. Consequently, efforts aimed at preventing early labor and pre-term birth through counseling about the risks for preterm delivery may have a considerable impact on the number of preterm and low birthweight births.

Reference Tables: #11- #14

Low Birthweight

Figure 26:
Prevalence of infant birthweight and types of low birth weight,
2004 MI PRAMS

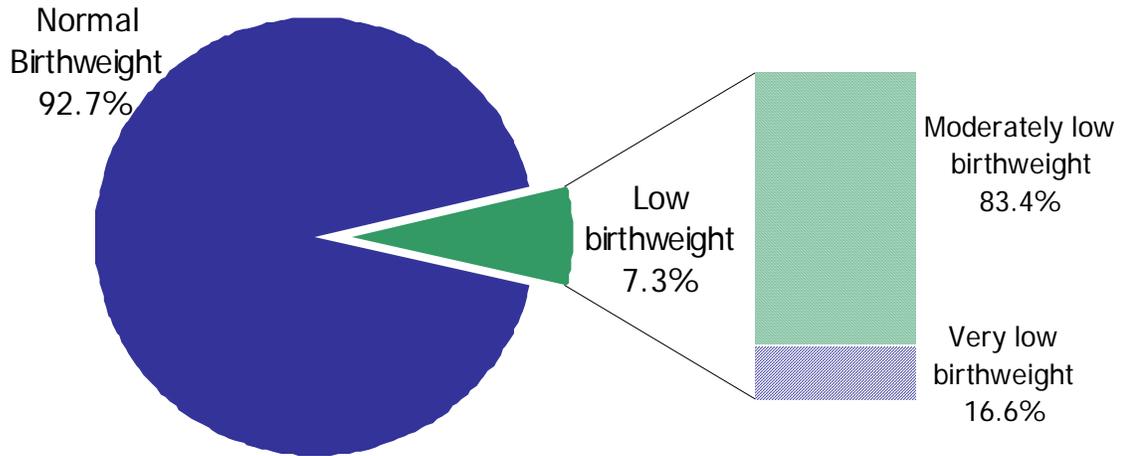
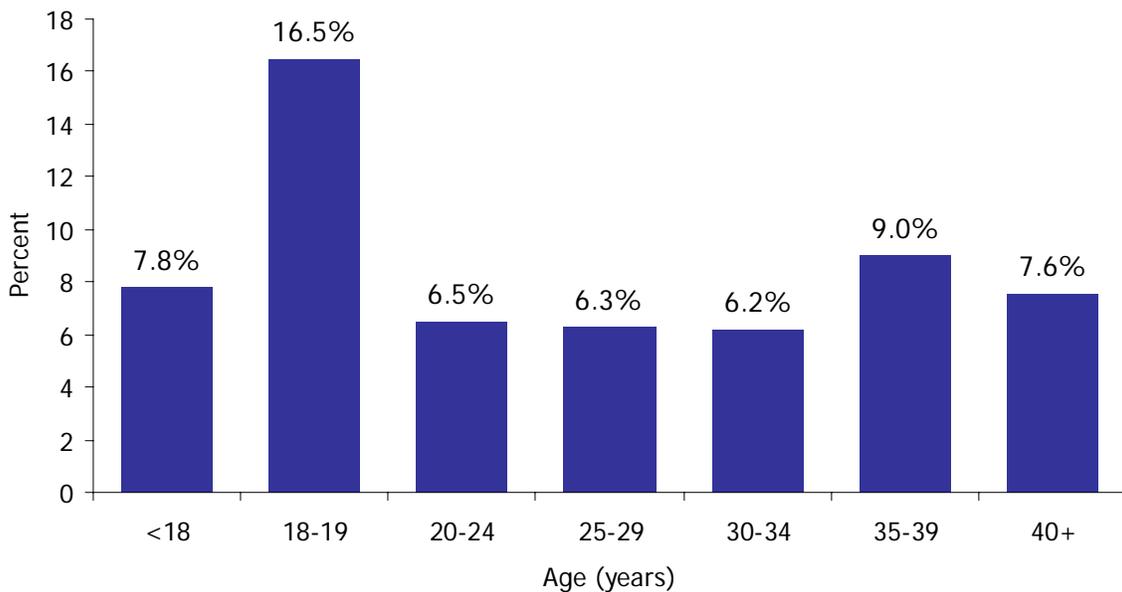
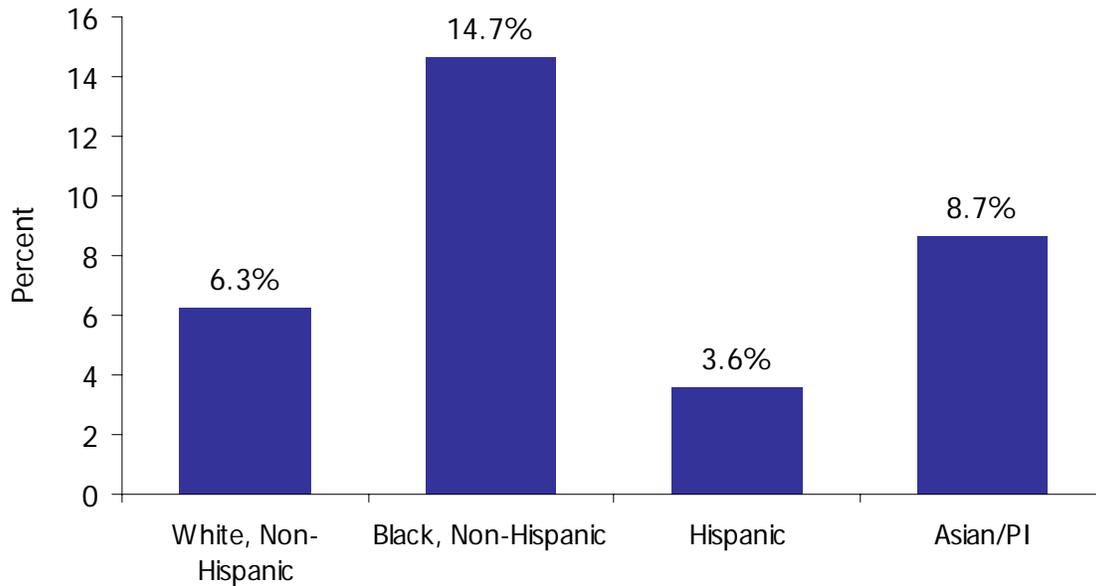


Figure 27:
Prevalence of low birthweight by maternal age,
2004 MI PRAMS



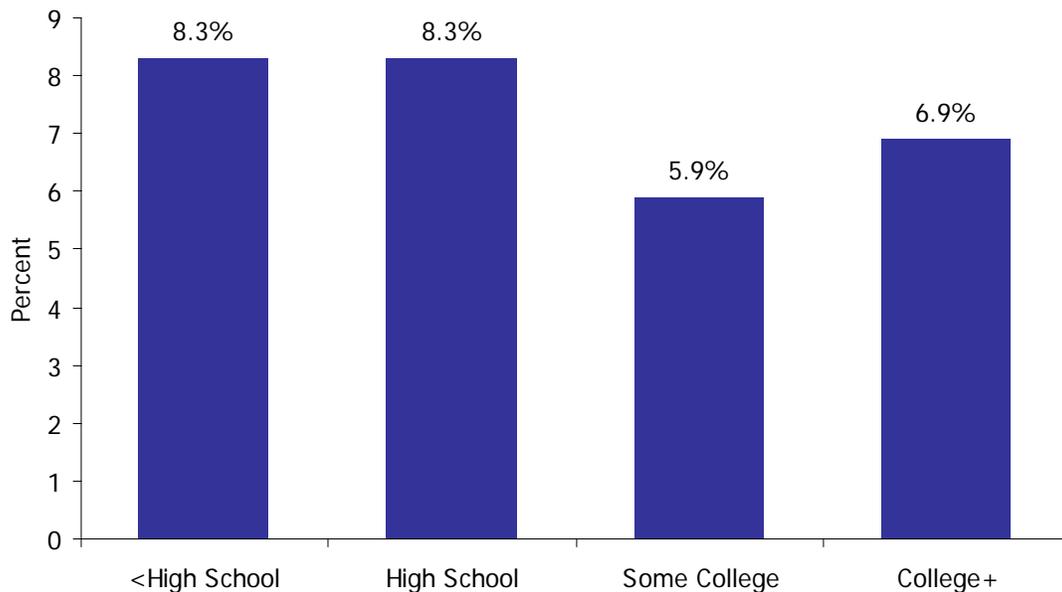
Low Birthweight

Figure 28:
Prevalence of low birthweight by maternal race/ethnicity,
2004 MI PRAMS



*** Statistics for 'American Indian/Alaskan Native' omitted due to small sample size.*

Figure 29:
Prevalence of low birthweight by maternal education,
2004 MI PRAMS



Low Birthweight

Figure 30:

Prevalence of low birthweight by maternal pre-pregnancy insurance status,
2004 MI PRAMS

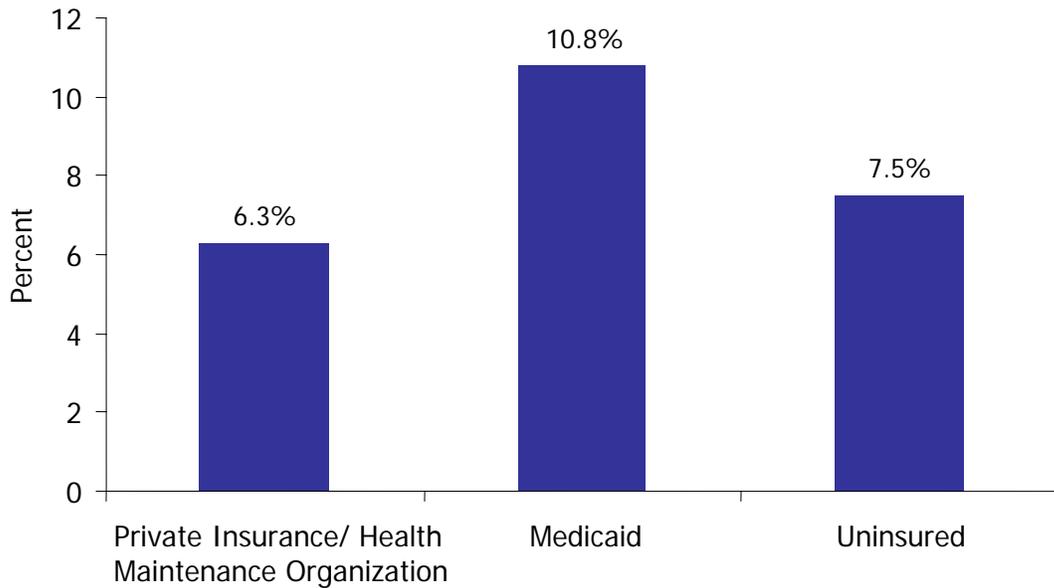
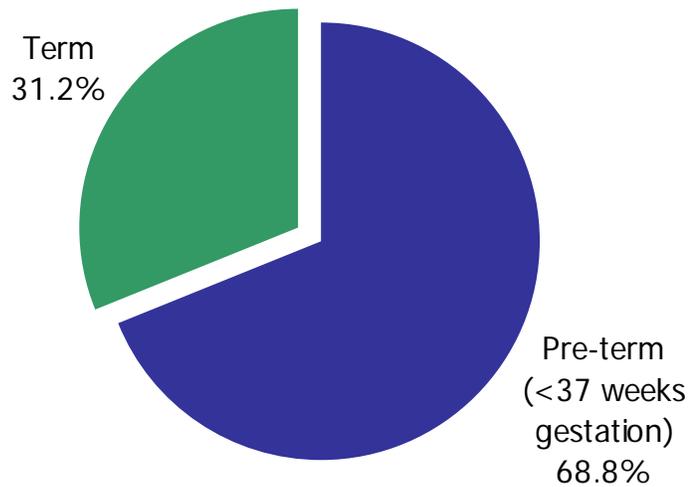


Figure 31:

Prevalence of low birthweight by gestational age,
2004 MI PRAMS



Low Birthweight

Figure 32:
Prevalence of low birthweight by pregnancy intention
2004 MI PRAMS

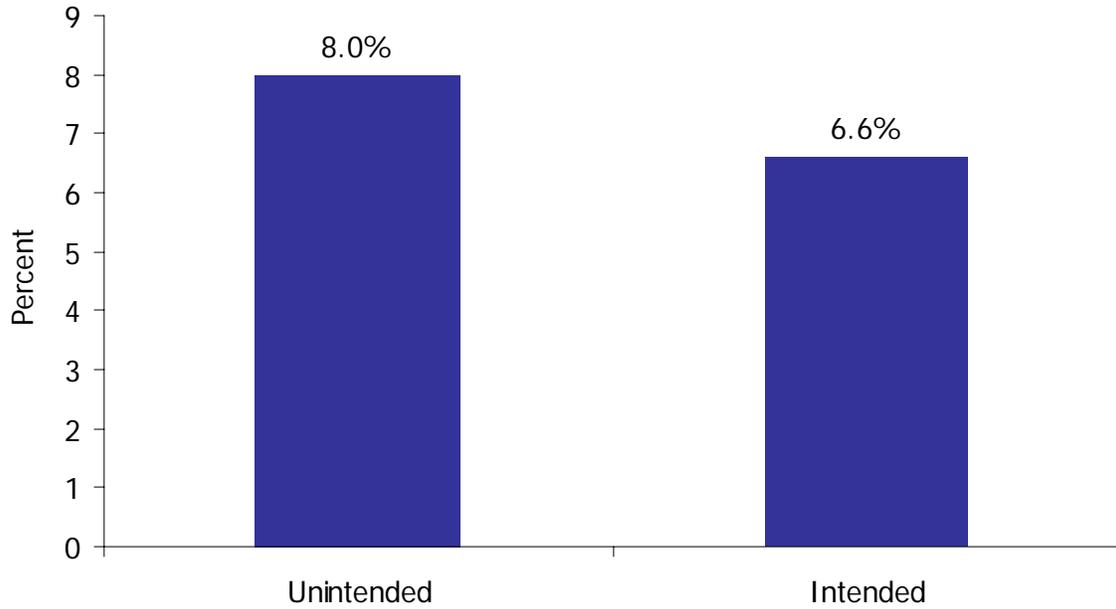
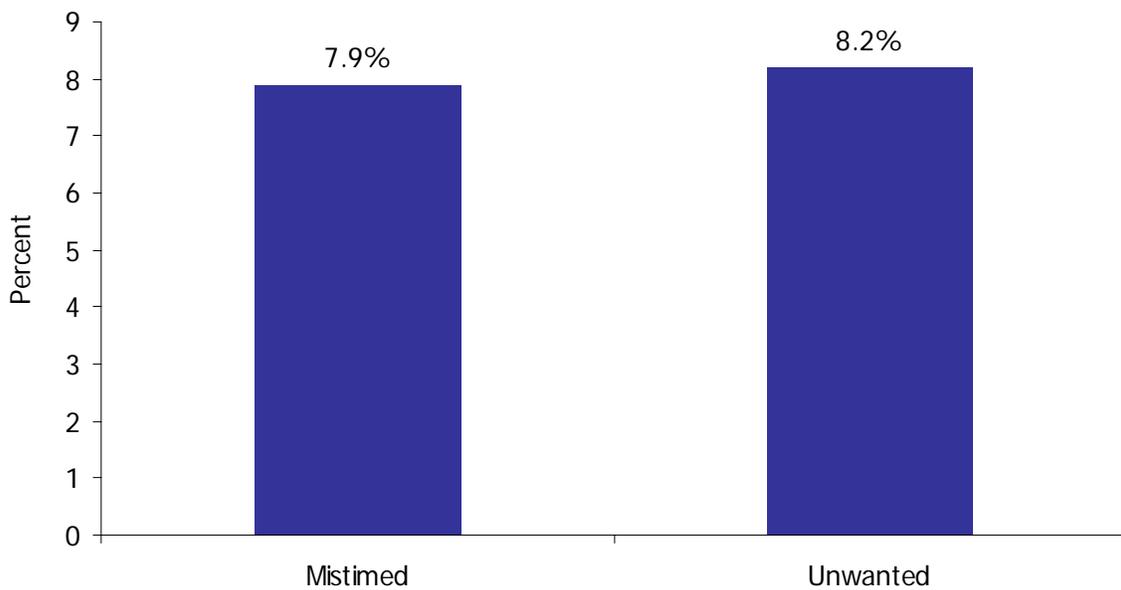
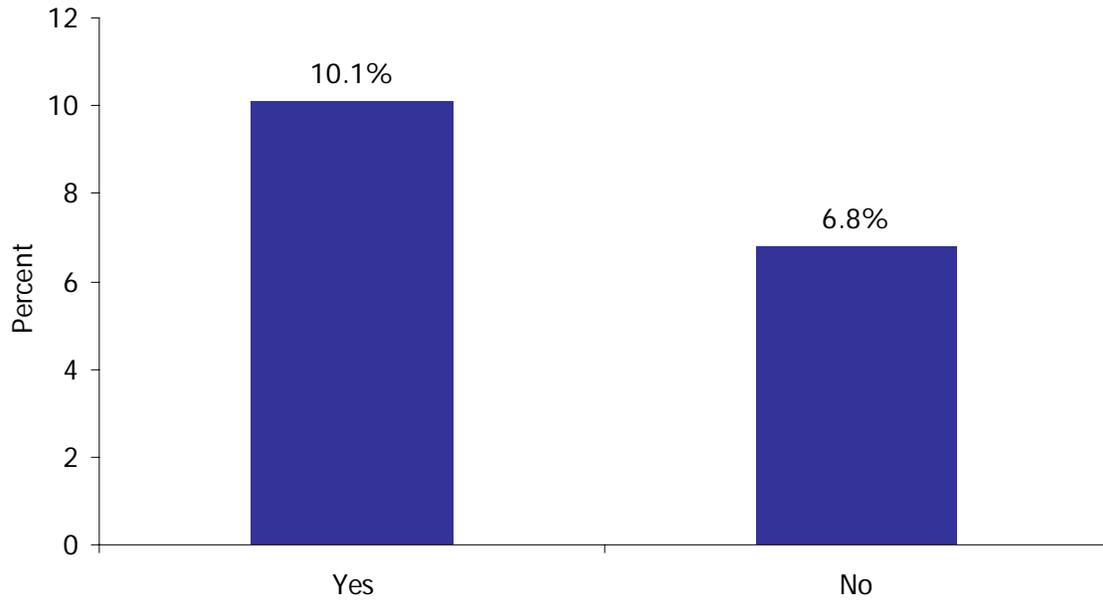


Figure 33:
Prevalence of low birthweight by pregnancy intention type,
2004 MI PRAMS



Low Birthweight

Figure 34:
Prevalence of low birthweight by smoking status during pregnancy,
2004 MI PRAMS



Prenatal Care

Definition:

Several questions in the PRAMS questionnaire are devoted to the topic of prenatal care. 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 2004, approximately 80.3% of Michigan women reported entering prenatal care during the first trimester (Figure #35). However, the rate of first trimester entry into prenatal care was less than 75% among women who were younger than 25 years of age (Figure #36). Black, Non-Hispanic and Hispanic women were the most likely to enter into prenatal care after the first trimester or not at all (34.7% and 22.7% respectively) (Figure #37). Entry into prenatal care during the first trimester was directly related to maternal education; women who have at least a college education reporting the higher rate (90.5%) of first trimester prenatal care entry compared to women with less than a high school diploma (63.8%) (Figure #38). Furthermore, women who were Medicaid recipients along with those without insurance prior to pregnancy had lower rates of first trimester prenatal care entry (64.5% and 66.0%, respectively) when compared to women with private insurance (89.1%) (Figure #39). Women who reported an intended pregnancy indicated higher rates of first trimester prenatal care entry compared to their peers who had an unintended pregnancy (86.2% compared to 71.7%) (Figure #40).

The majority of women (82.3 %) were satisfied with the time of entry into prenatal care (Table #18, page B14). However, it is known that women may face barriers that can affect the time of entry into prenatal care. Among the women who entered prenatal care later than desired, 58.0% reported one barrier to entry, 28.0% indicated two, and 9.0% indicated three barriers. The three most frequently cited barriers to timely entry into prenatal care were, 'could not get an earlier appointment' at (11.0%), 'Did not have Medicaid card' (7.7%) and 'could not pay for visits' (6.7%) (Figure #41).

The most common payer source for prenatal care reported by PRAMS respondents was private insurance (61.5%), followed by Medicaid (38.0%), and personal income (13.2%) (Figure #42).

Prenatal care visits presents 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, screening for birth defects, early labor, HIV/AIDS testing, breastfeeding, and postpartum contraception. The least likely topics discussed during the prenatal care visits were seatbelt utilization and domestic abuse (Figure #43).

Public Health Implications:

Although the overwhelming majority of pregnant women enter prenatal care early it is those who enter after their first trimester who are of particular concern to public health professionals. The top three reasons reported by women for entering prenatal care after the first trimester were: could not get an earlier appointment, did not have Medicaid card, and could not pay for an appointment. These reasons were issues relating to health care access. Community-based initiatives to improve access to care can be effective in developing systems of care for women of childbearing age. Community-based educational interventions on the early signs of and symptoms of pregnancy and benefits of early PNC need to target particularly teenagers, Black Non-Hispanic women, and women with less than a high school education. Continued collaboration is needed between public health professionals and medical providers to further explore and improve access to care in the first trimester of pregnancy.

Prenatal visits provide an important opportunity to educate pregnant women on several topics. To overlook this opportunity to discuss important topics such as the seatbelt use as well as domestic abuse could lead to fatal consequences. Over one in five maternal deaths (21%) was coded as violent with the majority being caused by motor vehicle accidents. As a consequence, one of the recommendations that Michigan Maternal Mortality Surveillance (MMMS) Interdisciplinary Committee agreed upon was to develop and implement an education project regarding the use of seatbelts during pregnancy to thus further prevent maternal deaths associated with motor vehicle accidents. This serves as an example of fruitful collaboration and meaningful use of the PRAMS/MMMS findings to further improve the health of women in Michigan.

Reference Tables: #15-#22

Prenatal Care

Figure 35:
Trimester of entry into prenatal care,
2004 MI PRAMS

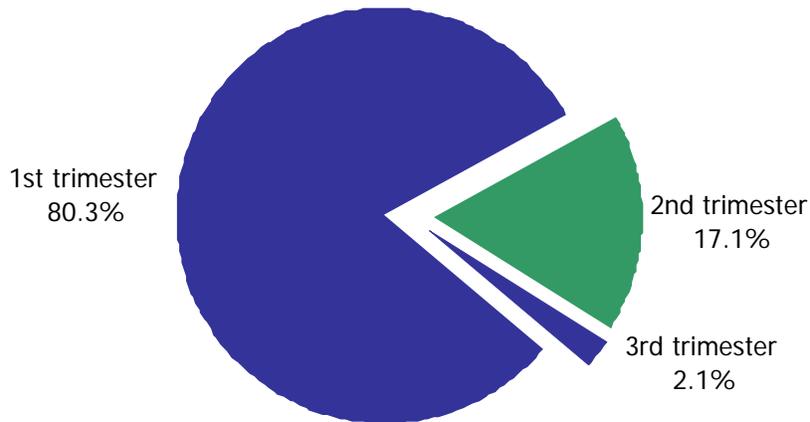
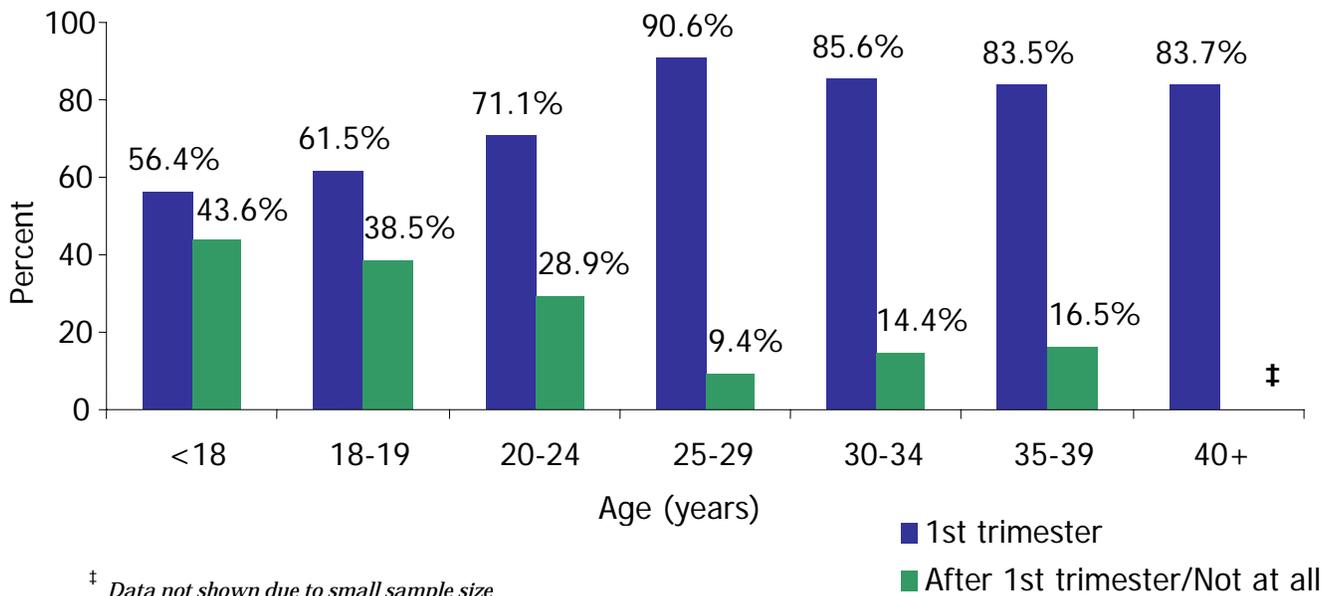


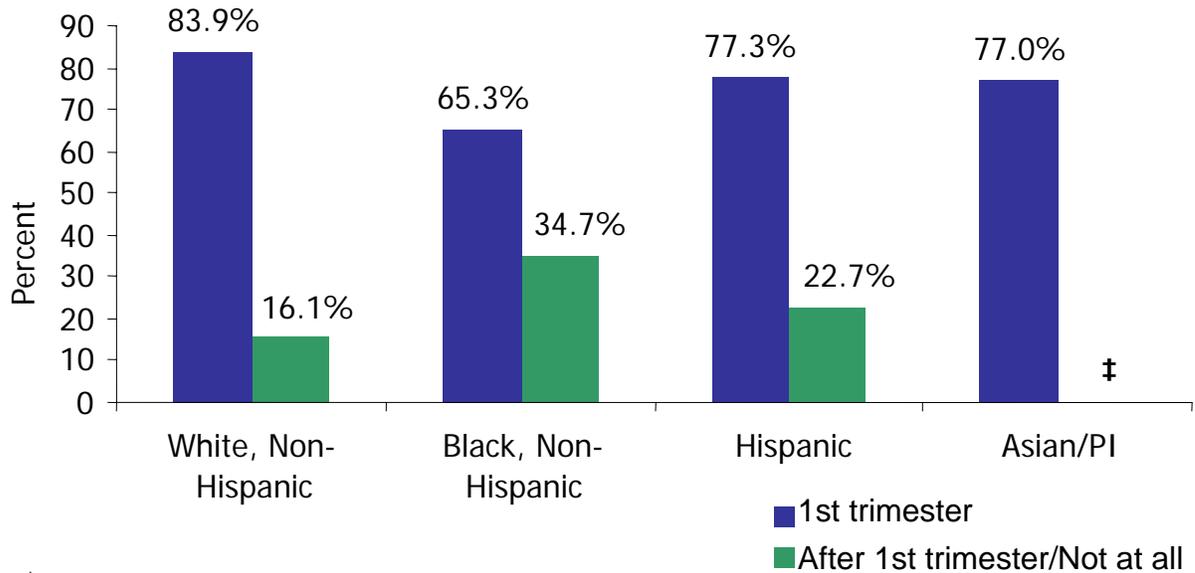
Figure 36:
Entry into prenatal care after the first trimester or not at all by maternal age,



Prenatal Care

Figure 37:

Entry into prenatal care after the first trimester or not at all by maternal race/ethnicity, 2004 MI PRAMS

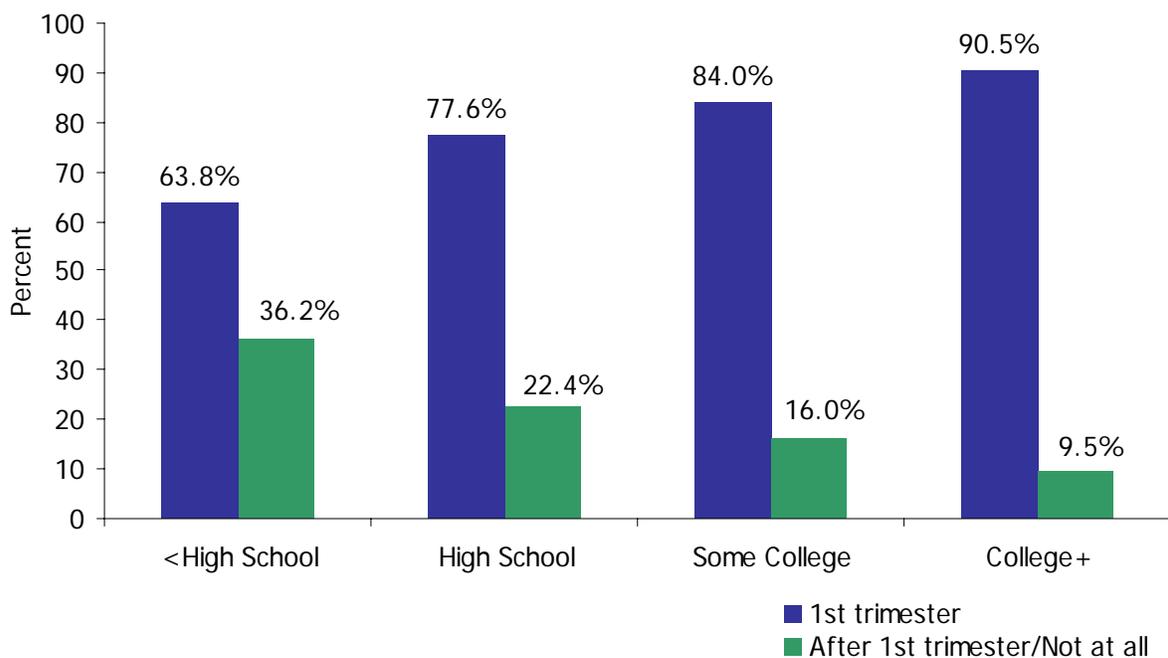


† Data not shown due to small sample size

** Statistics for 'American Indian/Alaskan Native' omitted due to small sample size.

Figure 38:

Entry into prenatal care after the first trimester or not at all by maternal education, 2004 MI PRAMS



Prenatal Care

Figure 39:

Entry into prenatal care after the first trimester or not at all by pre-pregnancy insurance status, 2004 MI PRAMS

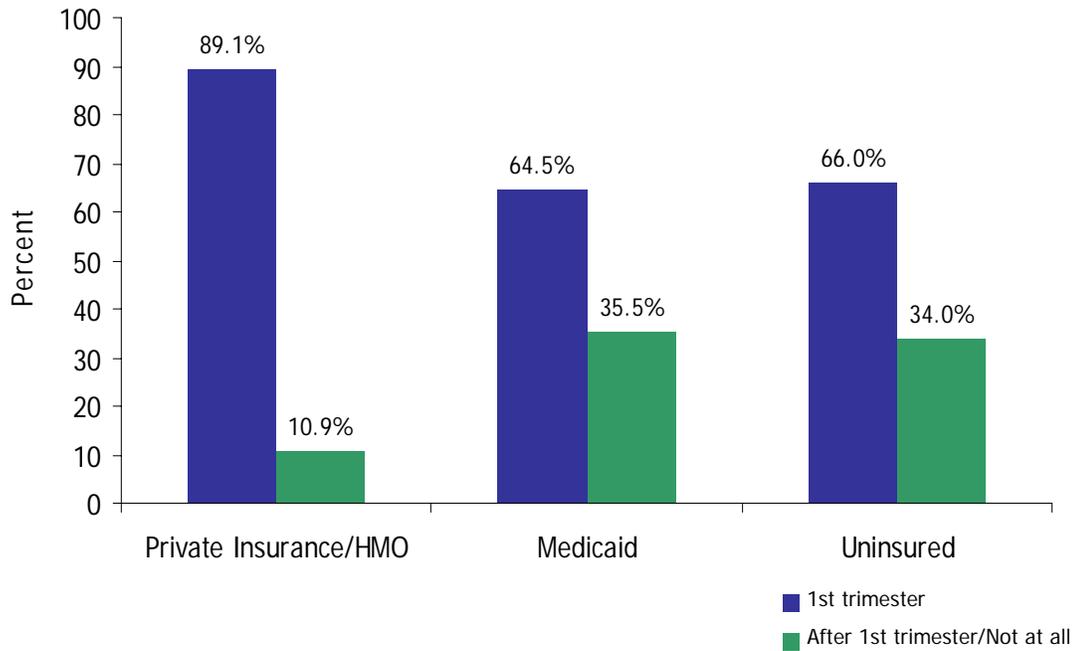
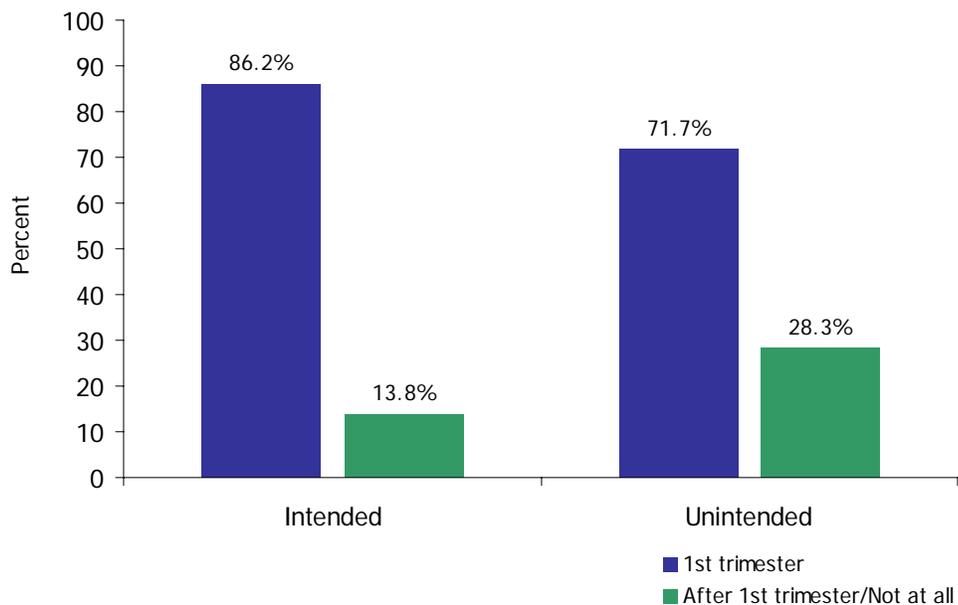


Figure 40:

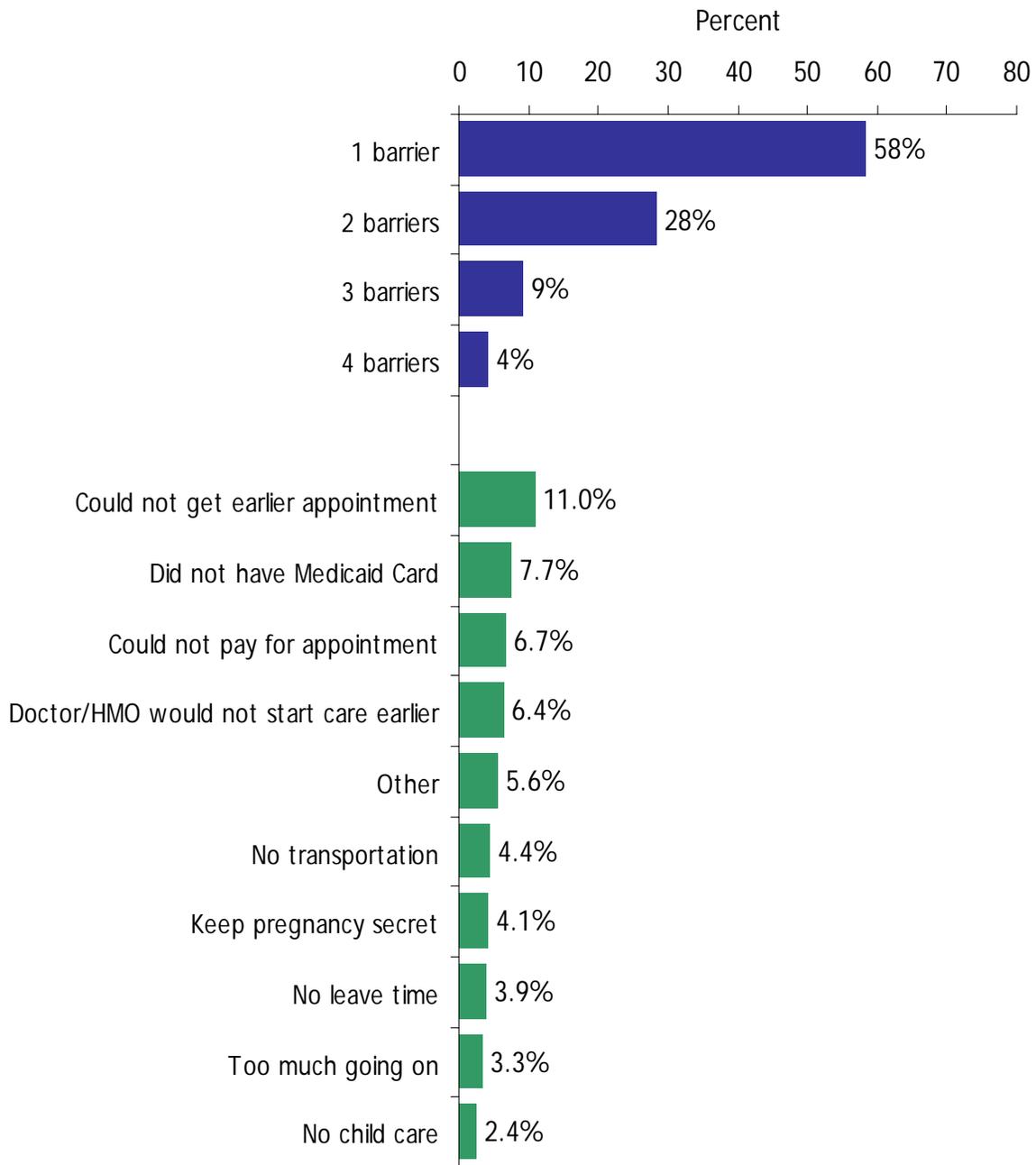
Entry into prenatal care by pregnancy intention, 2004 MI PRAMS



Prenatal Care

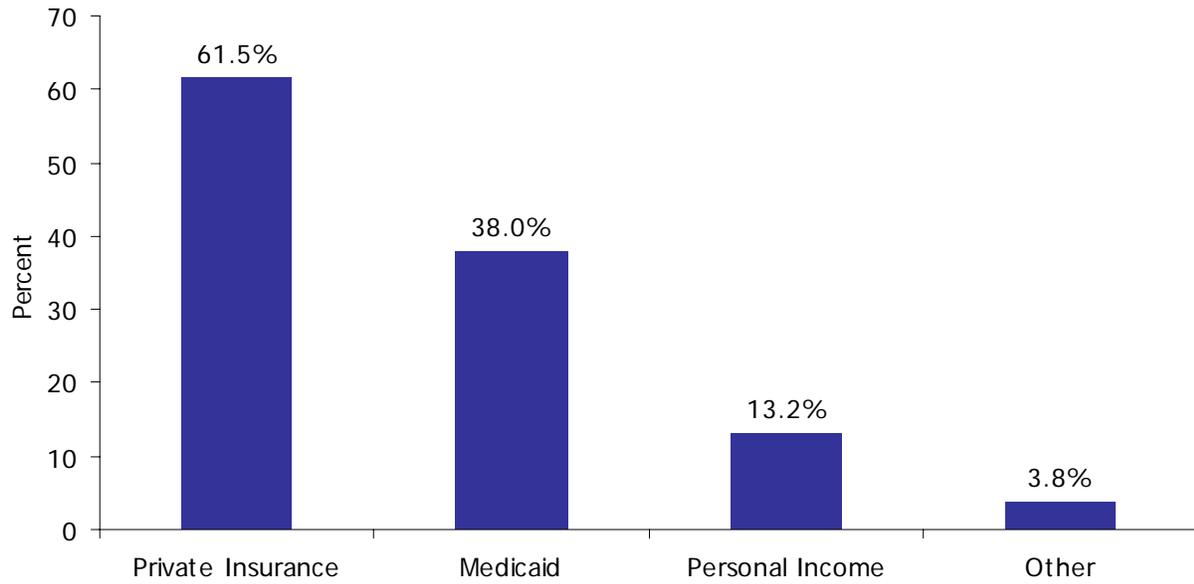
Figure 41:

Number and type of barriers to prenatal care,
2004 MI PRAMS



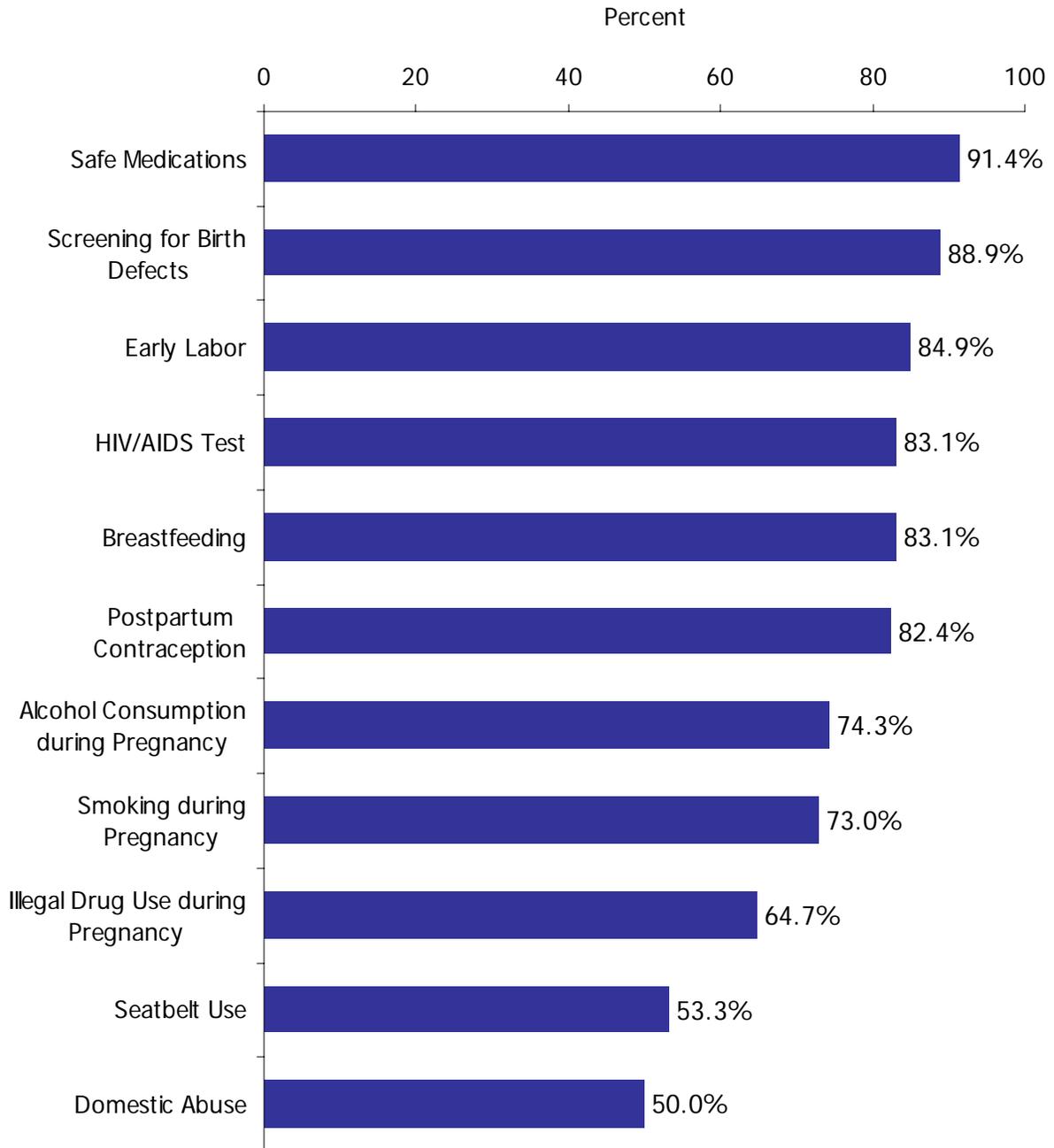
Prenatal Care

Figure 42:
Sources of payment for prenatal care,
2004 MI PRAMS



Prenatal Care

Figure 43:
Topics discussed with a health care professional during prenatal care,
2004 MI PRAMS



Breastfeeding

Definition:

Seven questions in the Phase 4 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 their baby (56.5%), while 17.0% thought that they may breastfeed, and 23.1% planned not to breastfeed (Figure #45). At the time surveyed (two to six months postpartum), 32.7% of women were still breastfeeding their infant. 29.3% did not breastfeed at all while the remaining 5.4% breastfed for less than a week (Figure #46).

Breastfeeding was directly correlated with maternal age and educational. Less than 40% of women under 18 years of age reported breastfeeding, while 70% or more of women over the age of 25 years of age reported breastfeeding (Figure #47). Black Non-Hispanic women were the least likely (57.4%) to report ever breastfeeding (Figure #48). Women with a college degree or higher reported the highest rate of breastfeeding at 91.0% conversely, women without a high school diploma reported the lowest rate at 52.7% (Figure #49).

Among women who breastfed their infants, those 18-19 years of age breastfed for an average of 6.2 weeks while those ages 30-34 years breastfed for an average of 9.1 weeks. (Figure #50). Breastfeeding duration was similar among different race/ethnic groups except for Asian/Pacific Islanders. Among ethnic groups, breastfeeding duration ranges from 6.7 weeks for Hispanic women to 10.5 weeks in Asian/Pacific Islanders (Figure #51). In addition, women with a college degree or more reported breastfeeding their infants for the longest period at 8.6 weeks while women with a high school degree/GED breastfed for the shortest duration at 6.4 weeks (Figure #52). The most frequently reported barriers to breastfeeding continuation were mother thought she was not producing enough milk (34.0%) thought breast milk alone did not satisfy infant (33.6%), the infant had difficulty nursing (29.3%), and other (24.5%) (Figure #53). Other reasons for breastfeeding discontinuation were; had to return to school, nipples were sore and cracked, mother felt it was time to discontinue breastfeeding, and too many household duties.

Public Health Implications:

Prenatal care providers and health care workers should continue to engage all pregnant mothers in discussions regarding the benefits of breastfeeding. Their efforts should be mainly targeted to the groups in which breastfeeding is less prevalent such as Black, Non-Hispanic, as well as women who are less than twenty years of age and those without high school diplomas. Though women with less than a high school diploma still have the lowest proportion of breastfeeding, it is noteworthy that there is a significant increase in this proportion compare to 2003 data (39.3% vs. 52.7%). Personnel should be made available to all new mothers in the hospital to give assistance and information to help them through the first crucial days.

Almost one in five women who gave birth thought they might breastfeed, but were undecided. Breastfeeding education throughout pregnancy, and exposure to breastfeeding in prenatal groups and other venues may increase breastfeeding practices. Communities can promote breastfeeding-friendly workplaces, parks, malls, and other facilities to further promote the practice.

Of concern is the fact that women 40 years of age or over, reported the longest duration in 2003 (12.7 weeks), however in 2004 these women only breastfed for half the duration (6.4 weeks). Postpartum care which supports breastfeeding should continue after the woman returns home from the hospital so that the most common barriers to breastfeeding can be addressed.

Reference Tables: #23- #28

Breastfeeding

Figure 45:
Pre-delivery breastfeeding planning,
2004 MI PRAMS

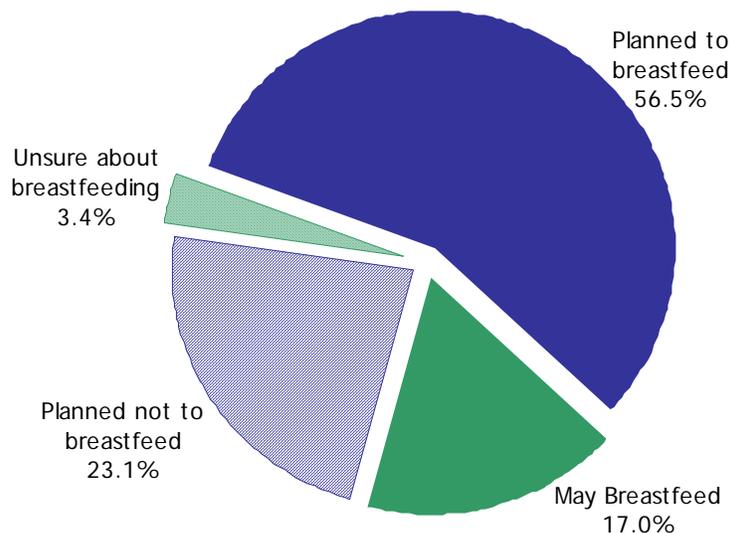
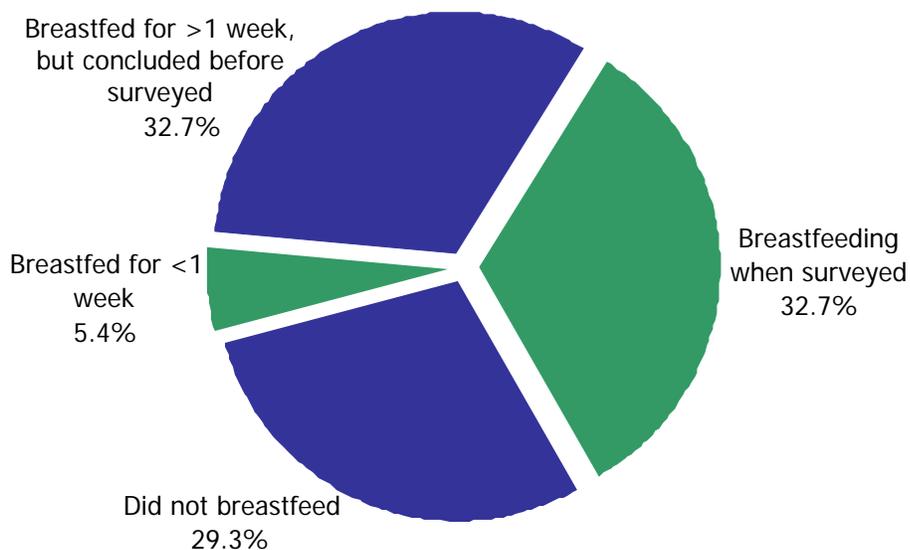


Figure 46:
Prevalence of breastfeeding behavior,
2004 MI PRAMS



Breastfeeding

Figure 47:
Prevalence of women who breastfed ever by maternal age,
2004 MI PRAMS

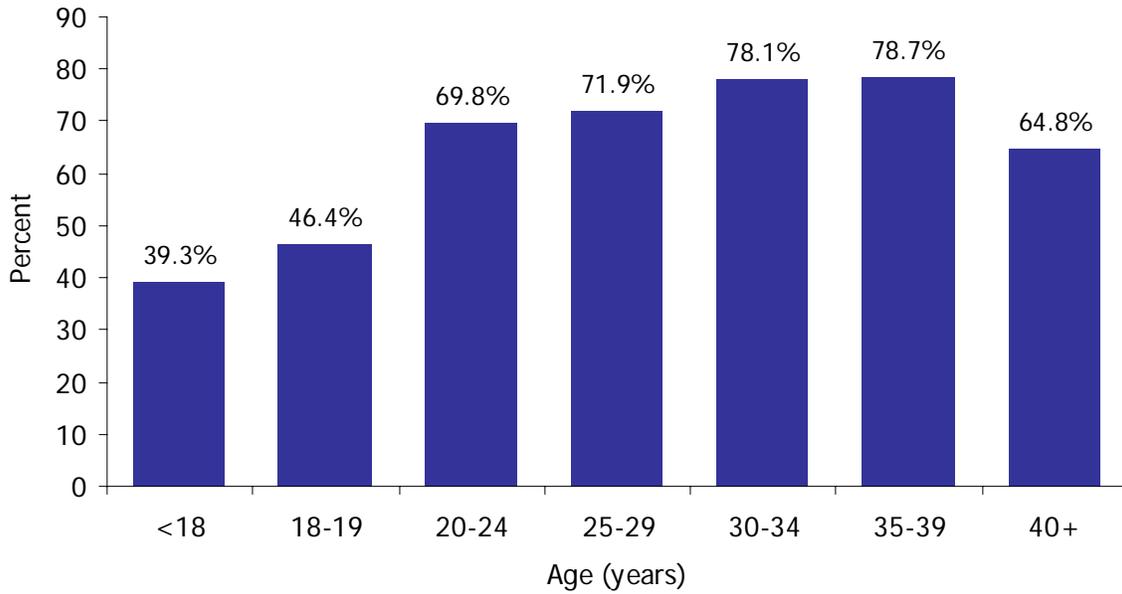
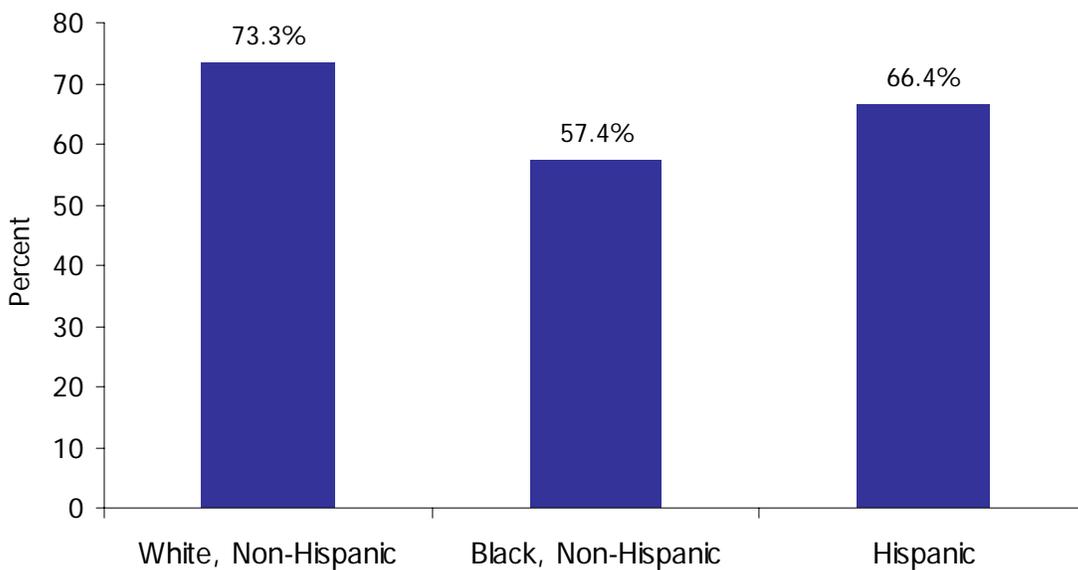


Figure 48:
Prevalence of women who breastfed ever maternal race/ethnicity,
2004 MI PRAMS



** Statistics for 'American Indian/Alaskan Native' and 'Asian/Pacific Islander' omitted due to small sample size.

Breastfeeding

Figure 49:
Prevalence of women who did breastfed ever by maternal education,
2004 MI PRAMS

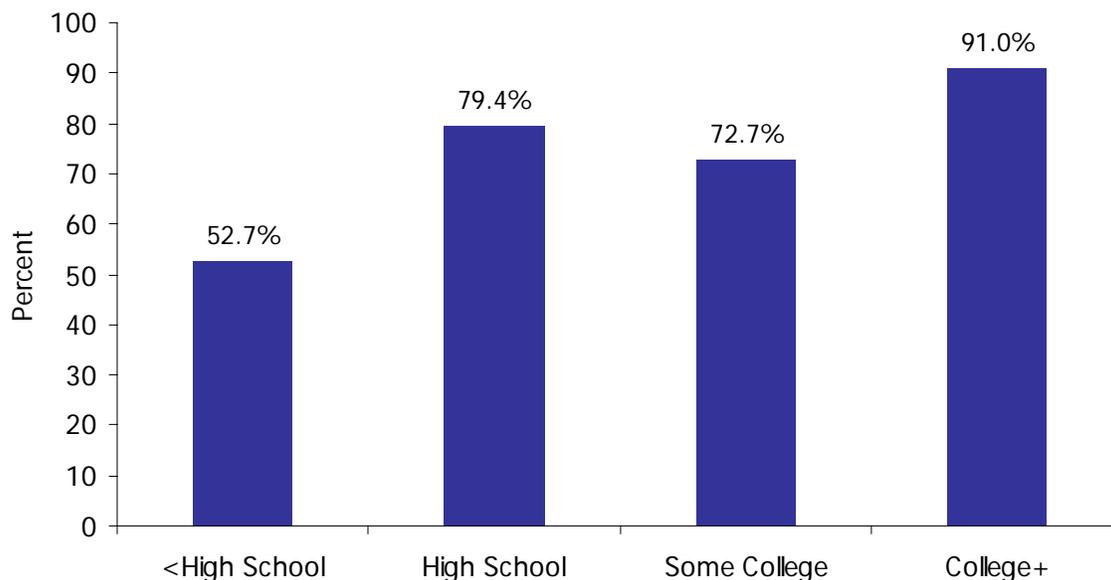
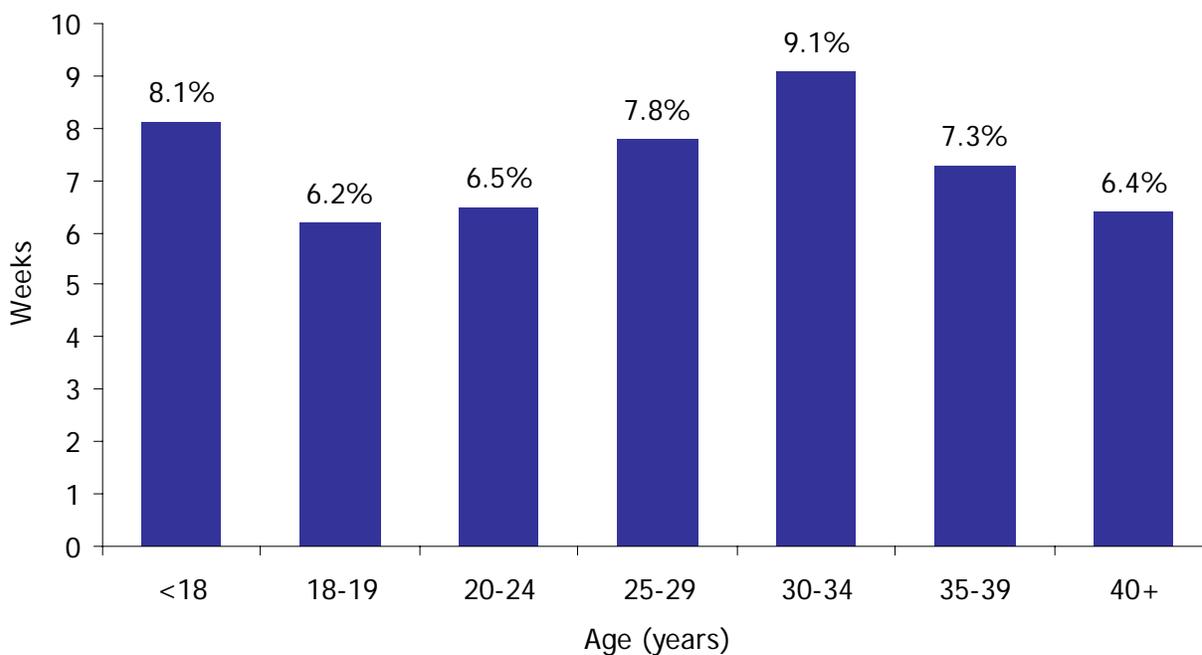


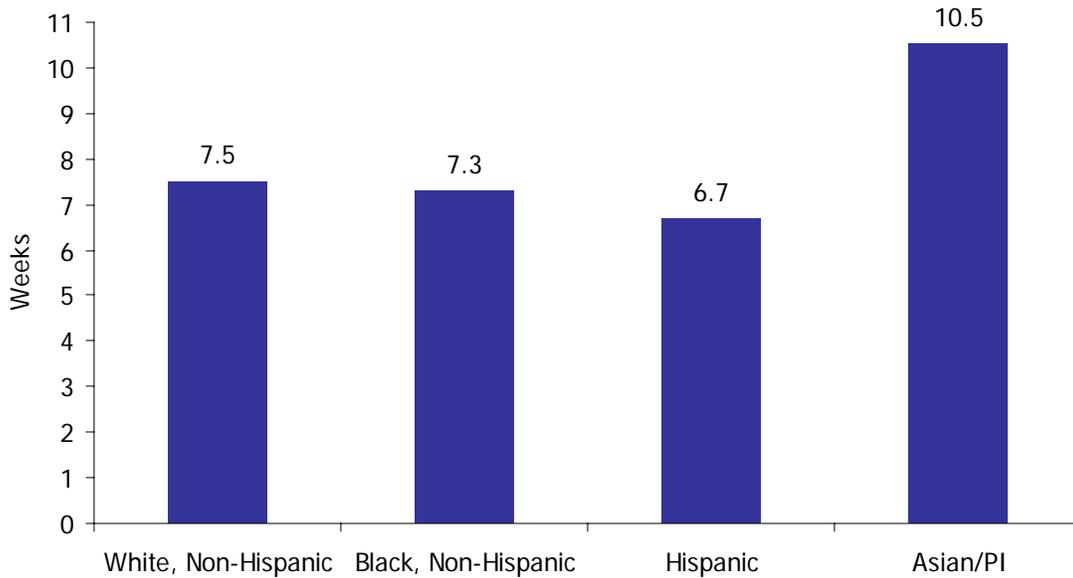
Figure 50:
Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued
breastfeeding before surveyed (2 to 4 months after delivery) by maternal age,
2004 MI PRAMS



Breastfeeding

Figure 51:

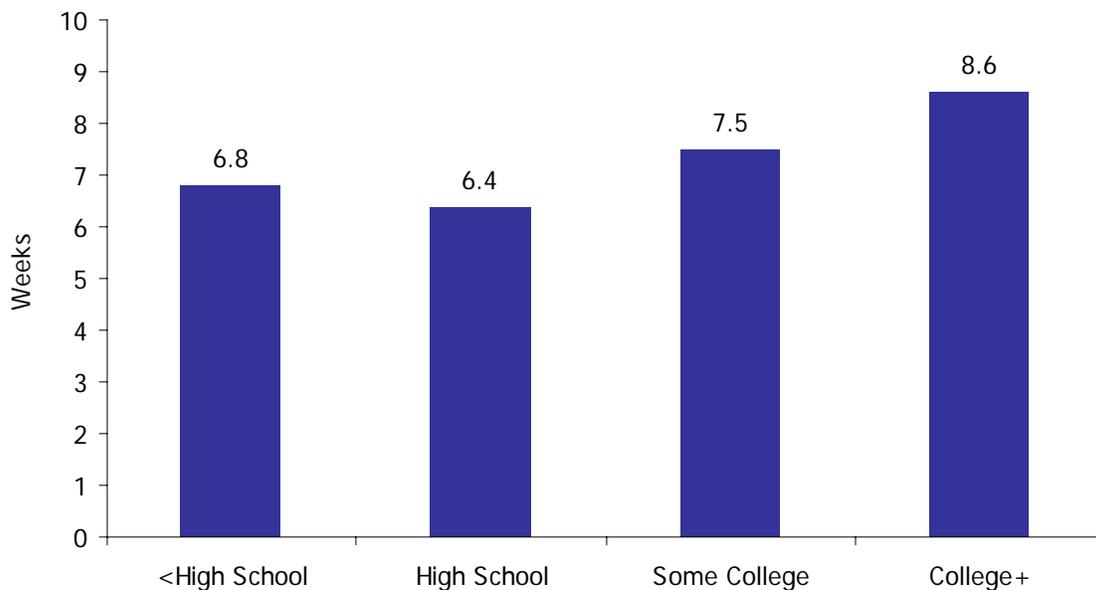
Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed, by maternal race/ethnicity, 2004 MI PRAMS



*** Statistics for 'American Indian/Alaskan Native' omitted due to small sample size.*

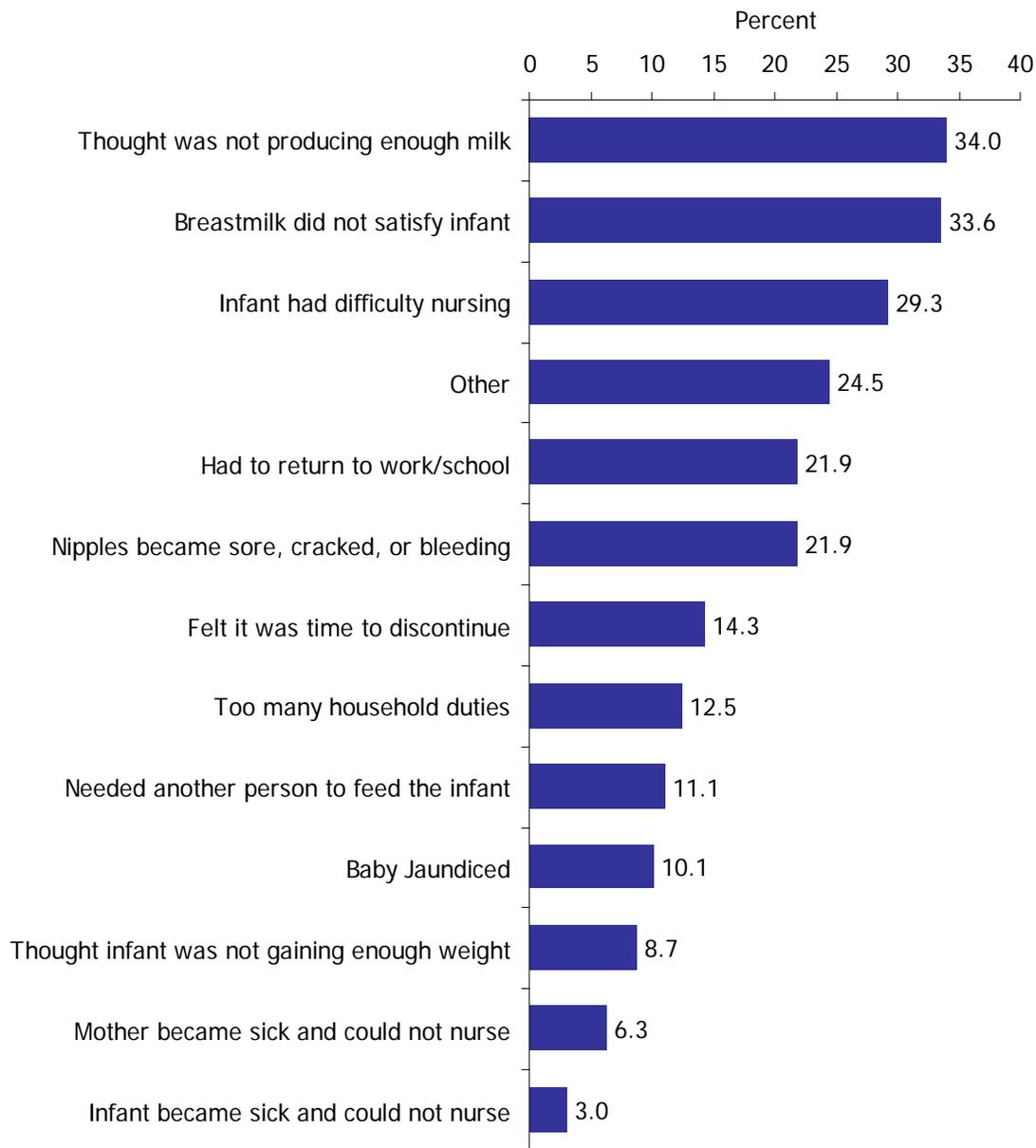
Figure 52:

Average breastfeeding duration, among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed, by maternal education, 2004 MI PRAMS



Breastfeeding

Figure 53:
Barriers to breastfeeding continuation among women who breastfed for longer than a week, but discontinued breastfeeding before surveyed,
2004 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 high percentage of PRAMS respondents reported nonsmokers prior to pregnancy (68.5%). Among women who reported being smokers prior to pregnancy, 12.6% had quit, 11.9% reduced the number of cigarettes, and the remaining 7.0% did not change or increased the number of cigarettes consumed during pregnancy (Figure #55). In the last three months of pregnancy, women in their late teens/early 20's were the most likely to report smoking, with 35.4% of women between the ages of 18-19 years reporting smoking and 28.3% of women between 20-24 years of age indicating that they smoked. Ninety percent of women 30-34 years of age reported not smoking in the last three months of pregnancy (Figure #56). Non-Hispanic Whites were the most likely to report smoking in the last three months of pregnancy (17.0%) while Hispanic were the least likely (9.8%) to report smoking (the number for Asian/Pacific Islander was too small to report the prevalence) (Figure #57). Like many of the other risk factors analyzed in this report, smoking rates had a dose dependent inverse relationship to education: women without a high school degree had the highest prevalence of smoking in the three months prior to delivery (35.4%), while women with at least a college degree had the lowest (3.8%) (Figure #58). In addition, women who were on Medicaid at any time had a higher rate of smoking during pregnancy when compared to women who had never received Medicaid (Figure #59).

Smoking reduction during pregnancy does not appear to be associated with a permanent decline. While a majority of women remained non-smokers during pregnancy, 16.1% reported that they smoked the same number or more cigarettes after their pregnancy when compared to their pre-pregnancy behavior. Further, a small group of women (0.1%) who were previously categorized as non-smokers prior to pregnancy began smoking in the postpartum period (Figure #60).

Public Health Implications:

It is well known that smoking during pregnancy has been associated with many adverse pregnancy outcomes. Therefore smoking cessation programs should be offered as components of the prenatal visits as well as family planning visits during the preconceptional period, following the “Stages of Change” model developed by Dr. James Prochaska¹.

Although the majority of women reported not smoking in the third trimester, an high percentage of women continued to smoke. The cessation programs should target women found more likely to smoke such as women less than 20 years of age, Non-Hispanic Whites, Medicaid participants, and women with less than a high school diploma.

The risk of relapsing remains an issue. Among women surveyed, smokers who had quit during pregnancy tended to relapse during the postpartum period. While it is good that women are waiting until after delivery to resume smoking, cessation programs should continue to encourage to permanently quit smoking.

Reference Tables: #29- #34

¹Prochaska JO, DiClemente CC. Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*. 1983; 51(3): 390-395.

Substance Abuse: Tobacco

Figure 55:

Prevalence of smoking behavior during pregnancy (compared with pre-pregnancy behavior),
2004 MI PRAMS

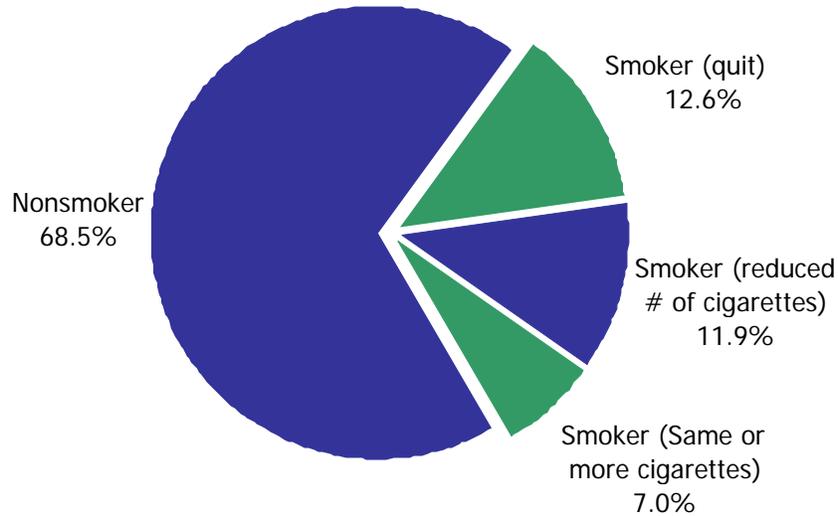
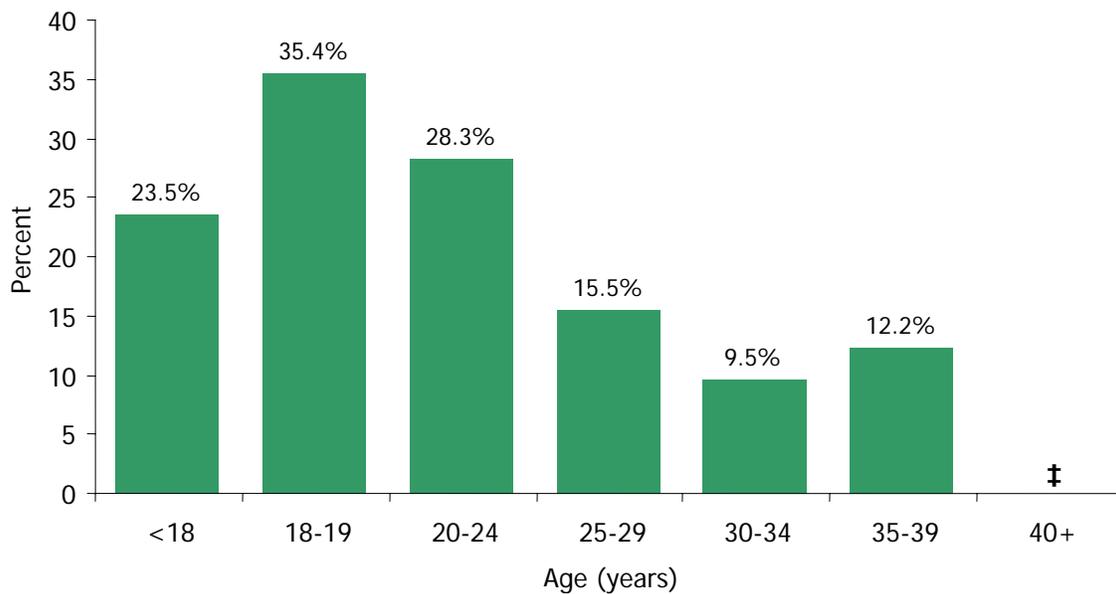


Figure 56:

Prevalence of smoking status in the last three months of pregnancy by maternal age,
2004 MI PRAMS

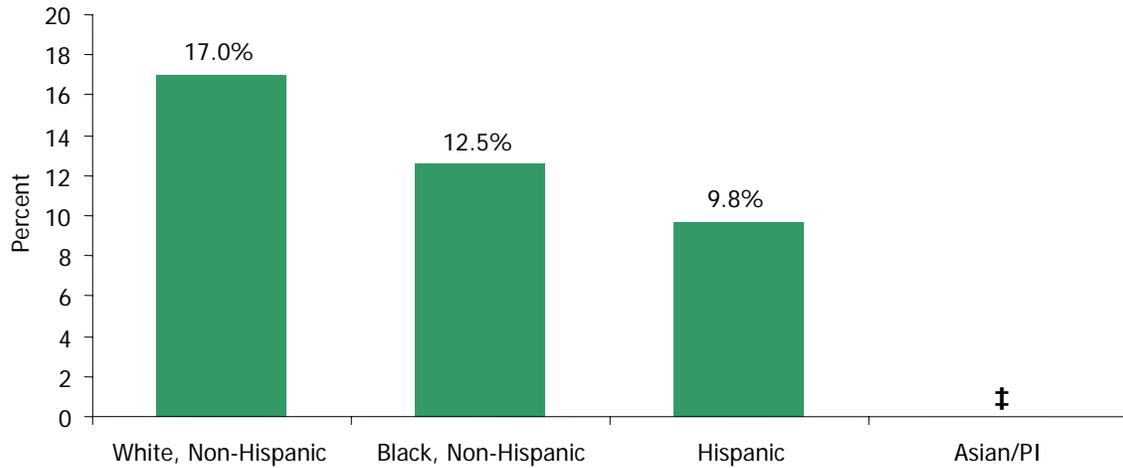


‡ Data not shown due to small sample size

Substance Abuse: Tobacco

Figure 57:

Prevalence of smoking behavior in the last three months of pregnancy by maternal race/ethnicity**, 2004 MI PRAMS

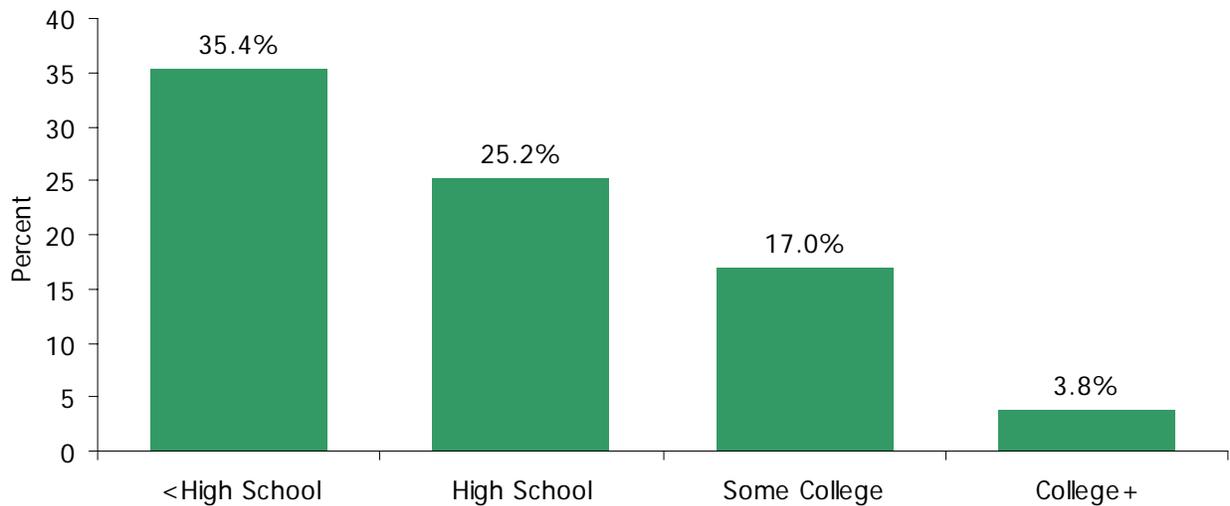


† Data not shown due to small sample size

**Statistics for 'American Indian/Alaskan Native' omitted due to small sample size

Figure 58:

Prevalence of smoking behavior in the last three months of pregnancy by maternal education, 2004 MI PRAMS



Substance Abuse: Tobacco

Figure 59:

Prevalence of smoking in the last three months of pregnancy by Medicaid participation, 2004 MI PRAMS

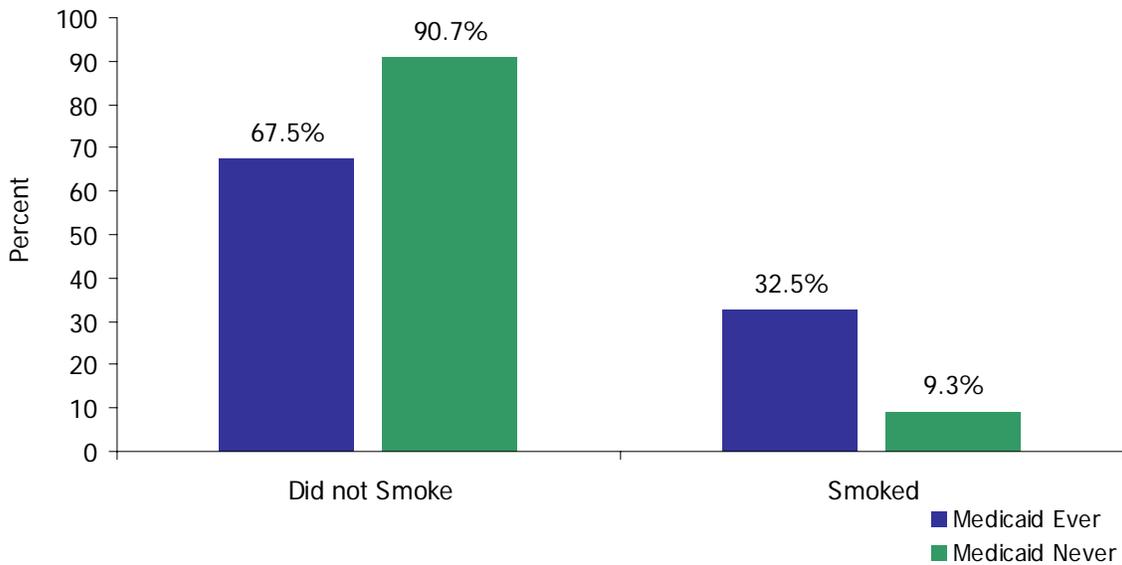
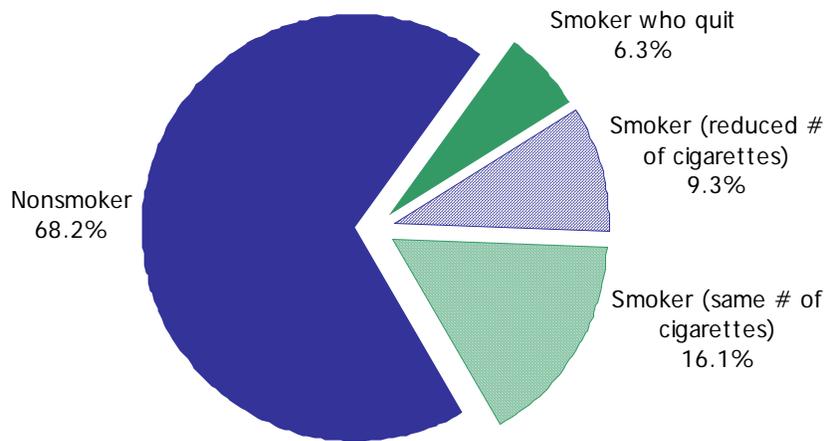


Figure 60:

Prevalence of smoking behavior in the postpartum period (compared with pre-pregnancy behavior), 2004 MI PRAMS



Nonsmoker who began smoking = 0.1% (slice 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, the 41.9% of women reported not drinking. Fifty-one percent reported quitting drinking. Among the few women who reported drinking during pregnancy, 3.7% reported consuming a reduced number of alcoholic beverages and 3.5% indicated drinking the same number of drinks (Figure #61). Due to the small sample size, drinking behavior was not further stratified by maternal demographics (age, race/ethnicity, education).

Public Health Implications:

Regardless of the amount of alcohol consumed during pregnancy, the fetus is at an increased risk of Fetal Alcohol syndrome (FAS). Preconceptional and prenatal education should continue to focus on reducing the risks of this syndrome and the other health effects of drinking during pregnancy. All prenatal care providers in clinical settings can use simple assessment tools such as the T-ACE* to identify at-risk drinkers among pregnant women.

The Michigan Fetal Alcohol Syndrome program provides education about FAS to women of childbearing age with the following goals: to increase awareness and prevention of FAS, make outreach, screening, and referrals for diagnostic services easier, and provide therapeutic and social support for families with children with FAS.

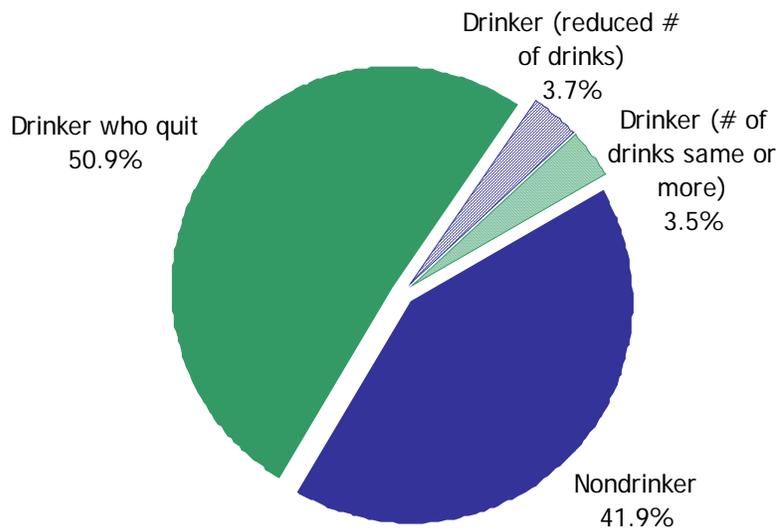
Reference Tables: #35

*

1. Does it take more than it used to for you to get high? [Tolerance] (yes, 2 points)
2. Have you become **A**ngry or **A**nnoyed when others express concern about your use? (yes, 1 point)
3. Have you tried to **C**ut down or quit? (yes, 1 point)
4. Have you had an **E**ye opener? (yes, 1 point)

Substance Abuse: Alcohol

Figure 61:
Prevalence of alcohol consumption during pregnancy (compared with pre-pregnancy behavior),
2004 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 2004, 69.2% of women reported placing their infant to sleep on their back, 16.3% on their stomach, and 14.5% on their side (Figure #62). Women 18 to 24 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 (58.3%). The prevalence of 'back sleeping' position was at or above 70% for Non-Hispanic Whites, Hispanics, and Asian/Pacific Islanders (Figure #64). The back sleeping position had the lowest prevalence among women with some college education (65.1%), while women with a college degree or higher were the most likely to place their infant to sleep on their backs (76.3%) (Figure #65). Women who had ever been on Medicaid reported a higher proportion of placing infants in the back sleeping position when compared to women who had never been on Medicaid (Figure #66).

About 21.2% of the PRAMS respondents report always or often bed sharing (Figure #67). Women under 40 years of age or above reported the highest proportion of always/often bed sharing (32.6%) (Figure #68). When stratified by race/ethnicity, both Non-Hispanic Black and Asian/Pacific Islander had the highest rate of always/often bed sharing at 41.7% and 28.7% respectively. Further, Non-Hispanic Whites have the lowest prevalence with 15.9% indicating always/often bed sharing (Figure #69). The prevalence of always/often bed sharing was inversely related to maternal education. Respondents with at least a college education possessing the lowest prevalence, (14.8%) and women without a high school diploma having the highest rate (25.8%) (Figure #70).

The overwhelming majority (92.6%) of respondents reported receiving information on placing their baby on his/her back to sleep (Figure 71). Approximately 4% reported not receiving any infant sleep related information. Among women who reported receiving infant sleep information, 68.6% reported their baby's doctor as the source of such information (Figure 72). Of note, 26.8% of respondents reported the source of infant sleep information as 'Other'.

Public Health Implications:

The "Back to Sleep" campaign that begun in 1994 in Michigan has improved the behavior of many mothers to put infants to sleep on their back. However, the campaign needs to identify and address changes in the public health message, which may be more effective for women who are less than 20 years of age, Non-Hispanic Black and have less than some college education. A closer look at respondents who reported 'Other' as the source of infant sleep information may reveal additional portal of sleep information. Also, MDCH should explore further the possibility of adding the "Back to Sleep" curriculum in the Michigan Model, School Health education and a strategy for working with teen health centers on safe sleep issues.

The new information gathered about the high prevalence of bed sharing in Michigan is a timely contribution to the planning for a statewide "Infant Safe Sleep" campaign sponsored by MDCH,

MDHS, and MDE. A work group recently reported on the growing risk of sudden infant death associated with infants sleeping in unsafe arrangements. Important ethnic and age appropriate considerations are needed to adequately target younger women to avoid the accidental suffocation risk associated with bed sharing. The high prevalence of this risky behavior demands rigorous study of the reasons behind the numbers, including qualitative evaluation of women's stories.

Reference Tables: #36- #39b

Infant Sleep

Figure 62:
Prevalence of infant sleep position,
2004 MI PRAMS

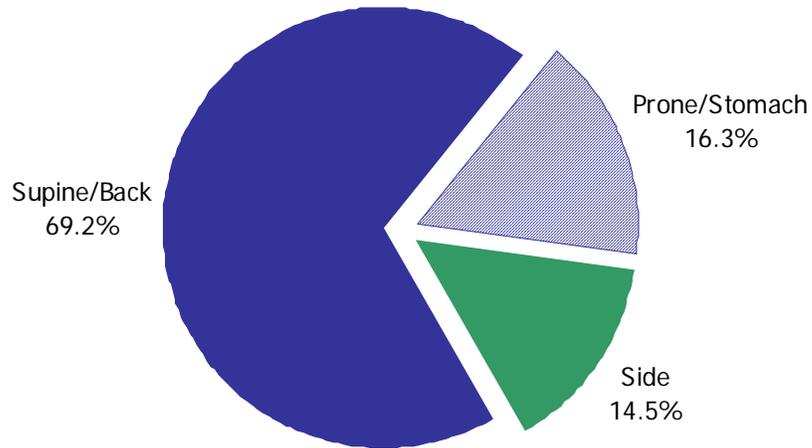
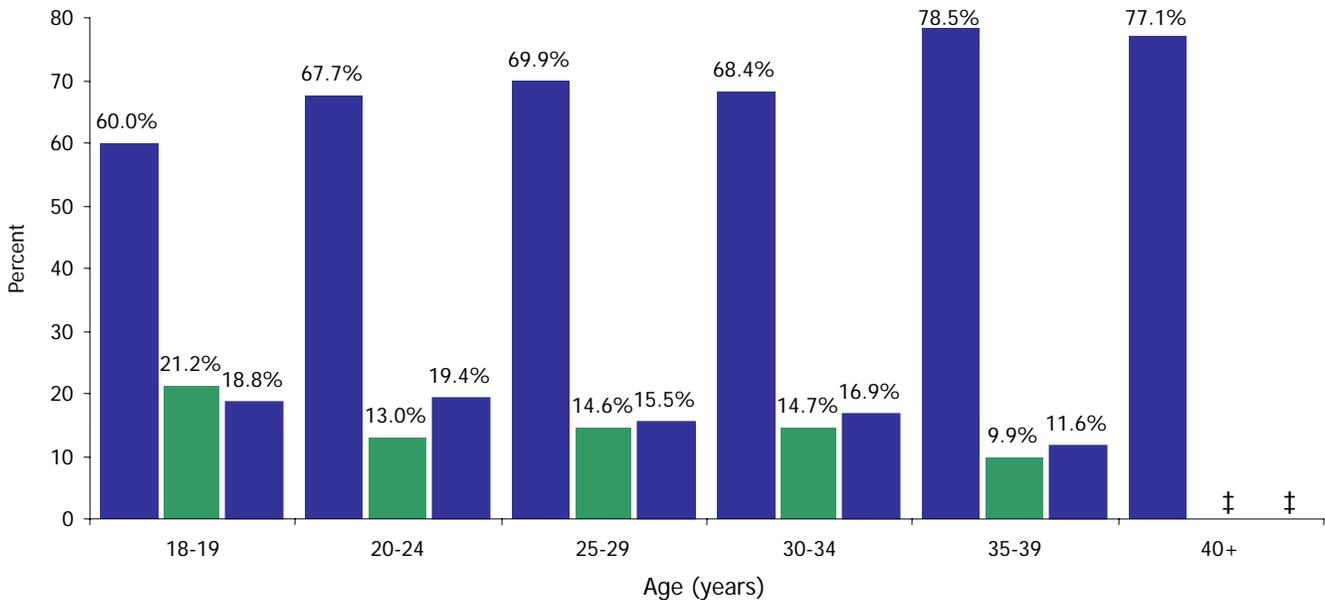


Figure 63:
Prevalence of infant sleep position by maternal age,
2004 MI PRAMS



† Data not shown due to small sample size

■ Supine/Back
■ Side
■ Stomach/Prone

Infant Sleep

Figure 64:
Prevalence of infant sleep position by maternal race/ethnicity,
2004 MI PRAMS

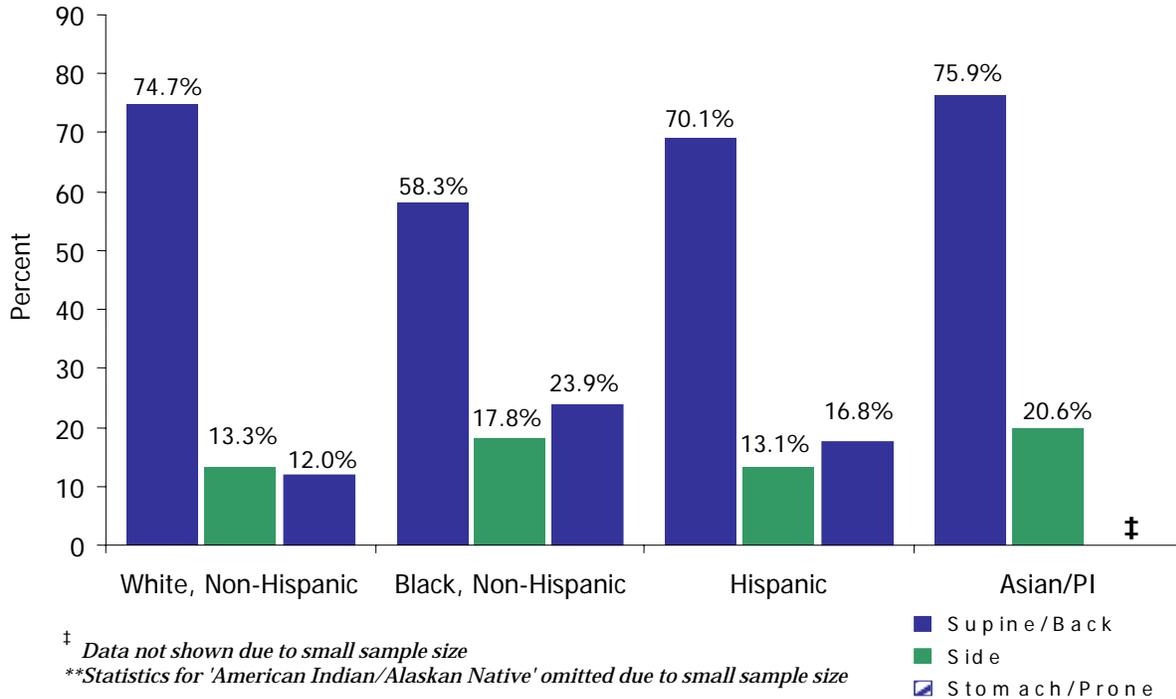
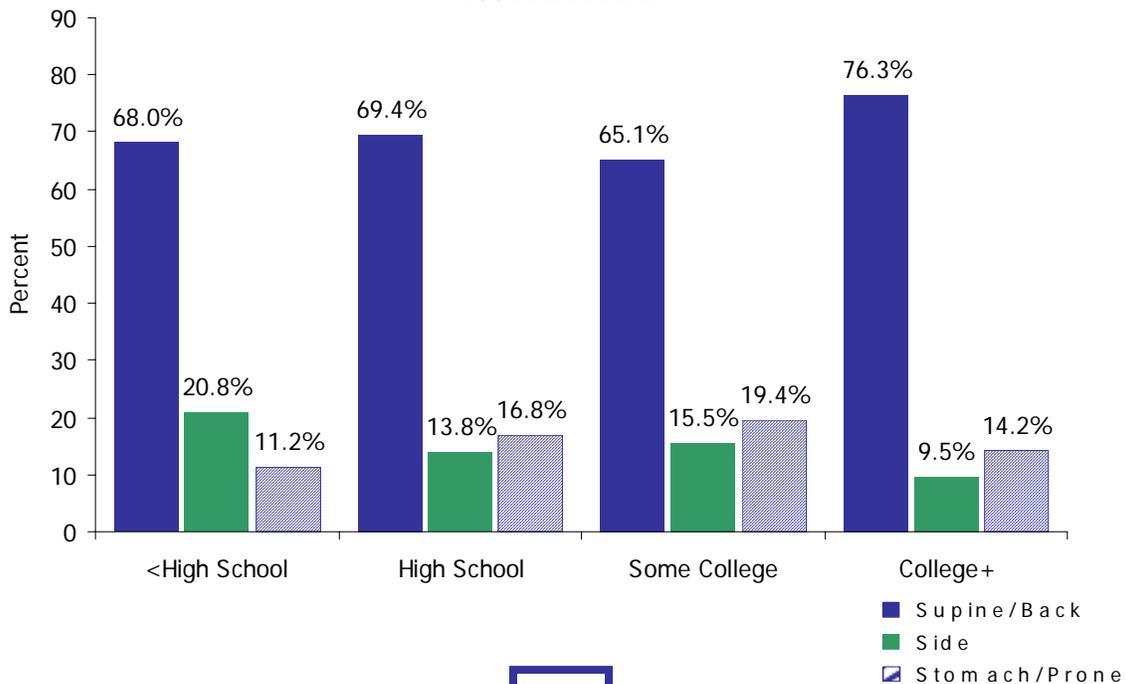


Figure 65:
Prevalence of infant sleep position by maternal education,
2004 MI PRAMS



Infant Sleep

Figure 66:
Prevalence of infant sleep position by maternal insurance status,
2004 MI PRAMS

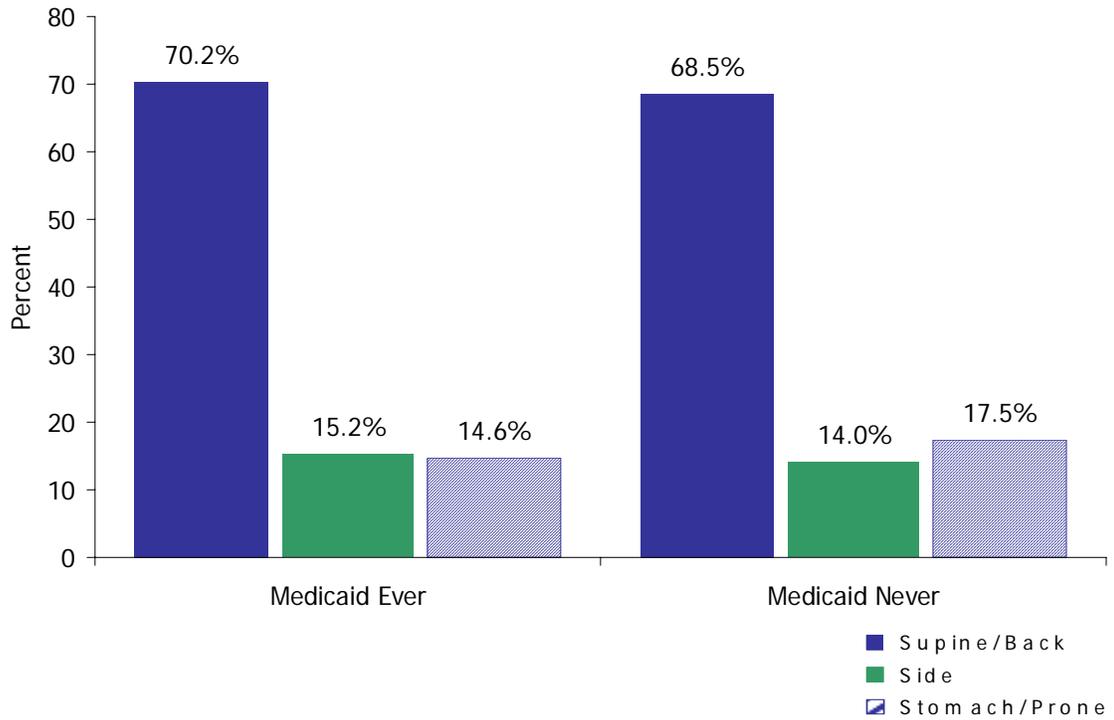
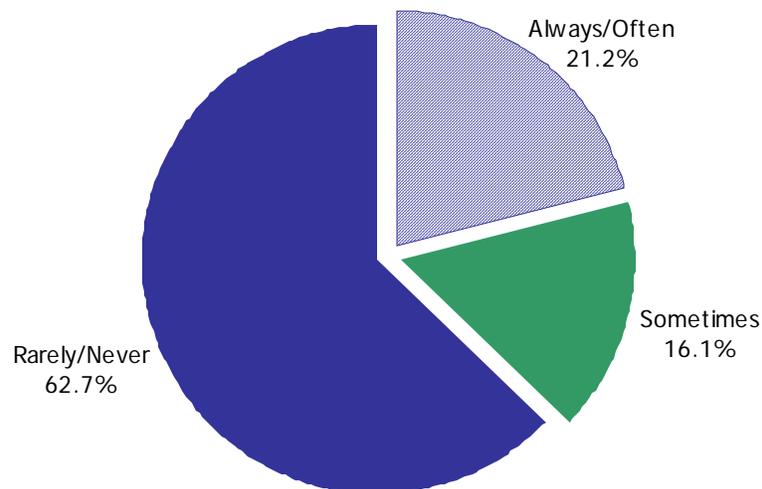


Figure 67:
Prevalence of infant bed sharing,
2004 MI PRAMS



Infant Sleep

Figure 68:
Prevalence of infant bed sharing by maternal age,
2004 MI PRAMS

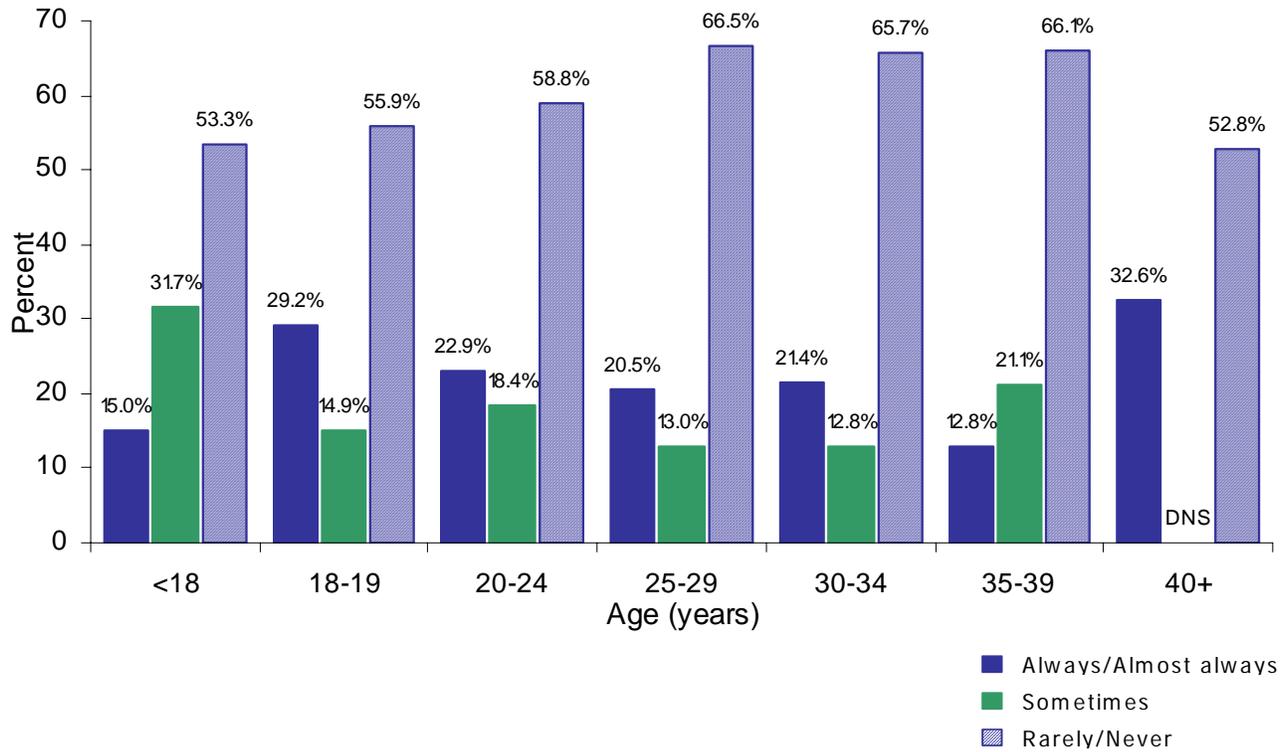
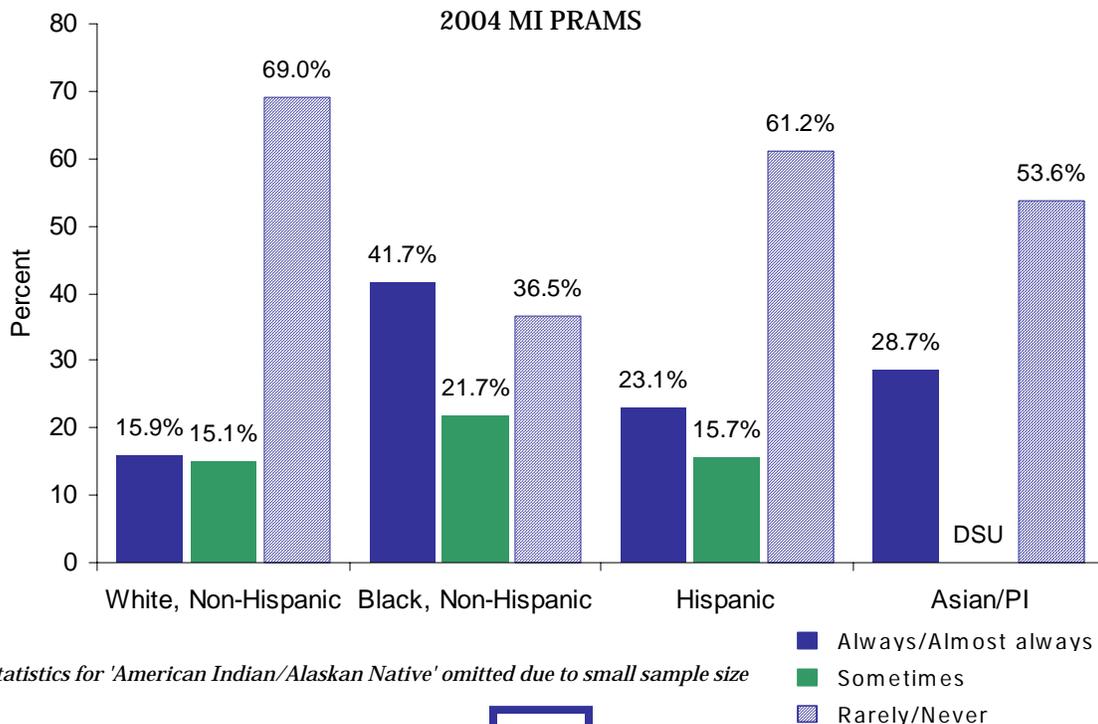


Figure 69:
Prevalence of infant bed sharing by maternal race/ethnicity,
2004 MI PRAMS



***Statistics for 'American Indian/Alaskan Native' omitted due to small sample size*

Infant Sleep

Figure 70:
Prevalence of infant bed sharing by maternal education,
2004 MI PRAMS

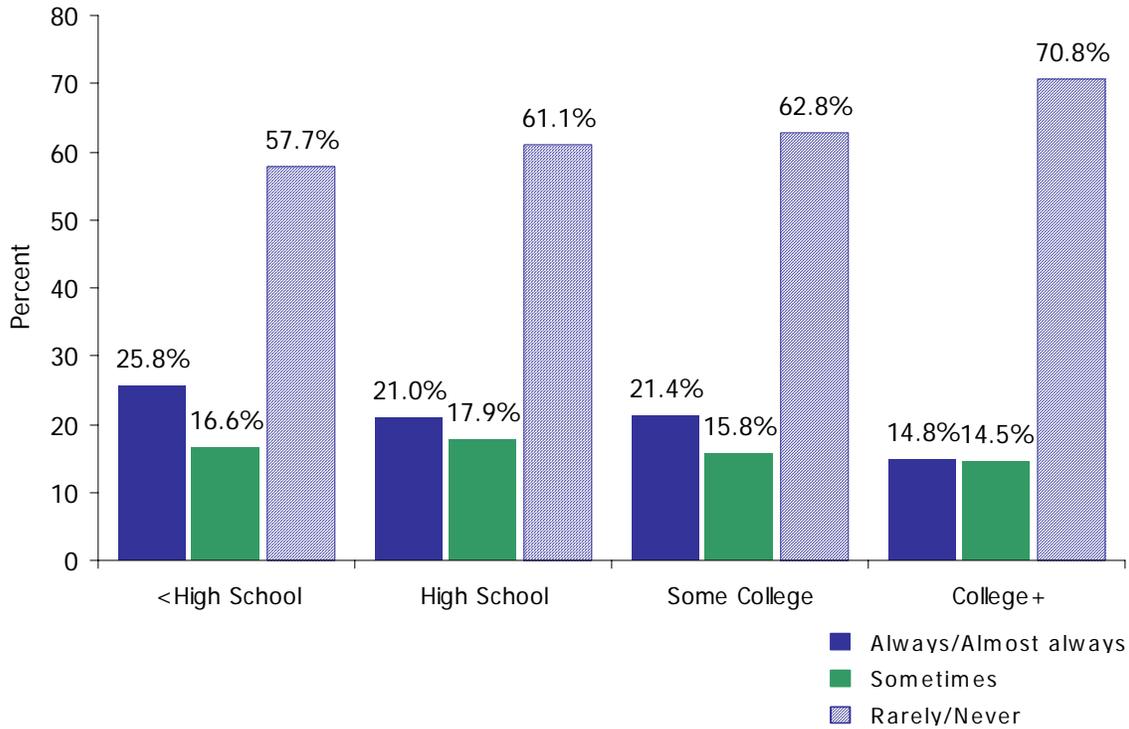


Figure 71:
Prevalence of infant sleep information,
2004 MI PRAMS

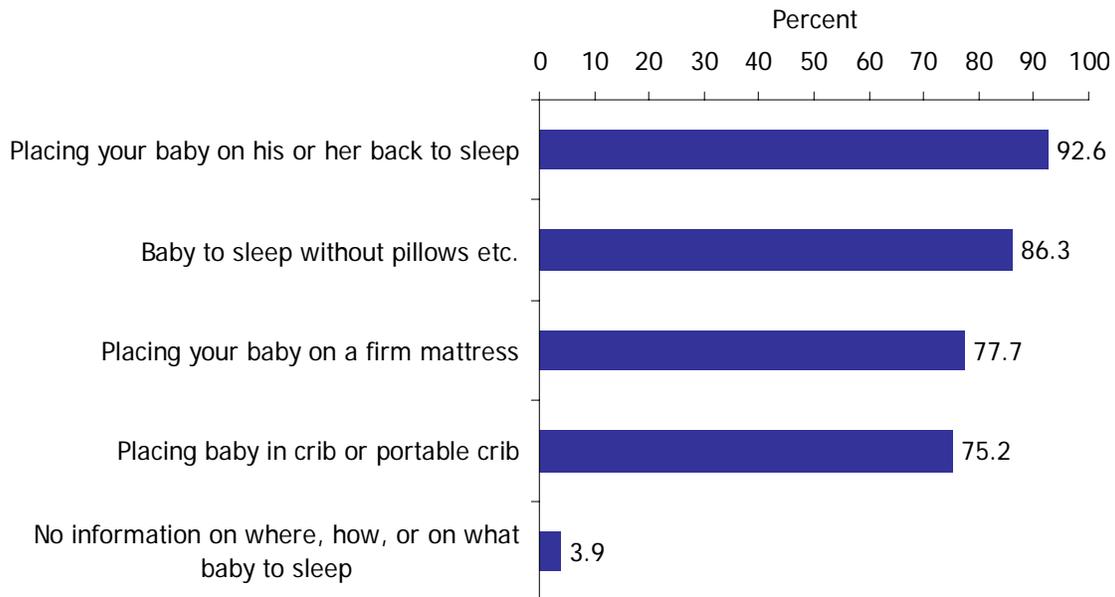
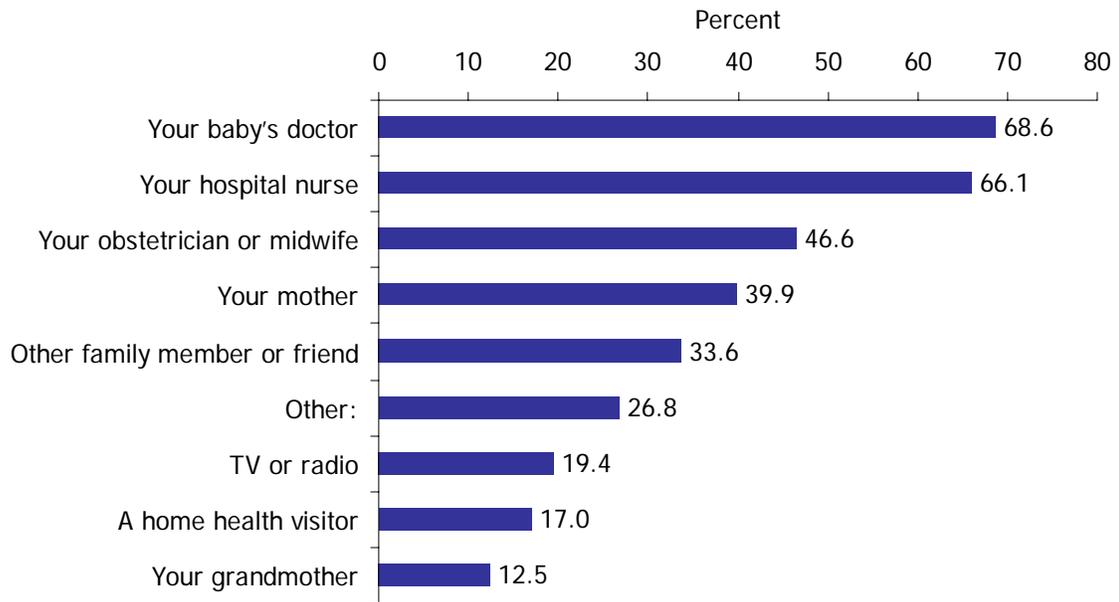


Figure 72:
Source of infant sleep information,
2004 MI PRAMS



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, 5.3% reported experiencing physical abuse in the year prior to their pregnancy with the woman's husband/ex-husband/partner/ex-partner being named the abuser in 48.1% of the cases (Figure #73). A similar picture was presented during pregnancy, with 3.0% of women indicating being physically abused (Figure #74). In addition, approximately 6.1% of women reported being verbally abused in the year prior to pregnancy (Figure #75).

Public Health Implications:

A small, yet unacceptable, percentage of women report either physical or verbal abuse. Of note, significantly fewer women were abused by their husband/ex-husband/partner/ex-partner in 2004 compared to 2003 (48.1% vs. 74.3%). Standardized screening tools used by providers during prenatal care would help identify women who are victims of abuse. These women can then be referred to appropriate services. With a larger sample size, further stratification may be conducted to provide clues to more effective violence prevention among women.

Reference Tables: #40- #44

Violence Against Women

Figure 73:
Prevalence of pre-pregnancy physical abuse and abuser,
2004 MI PRAMS

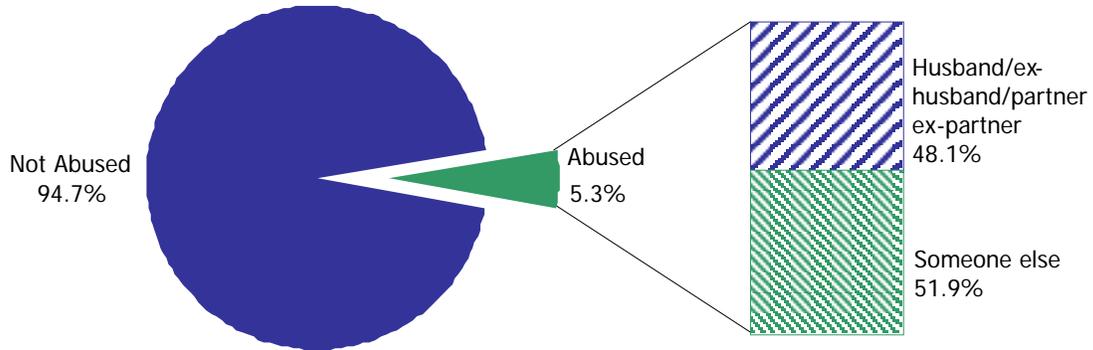
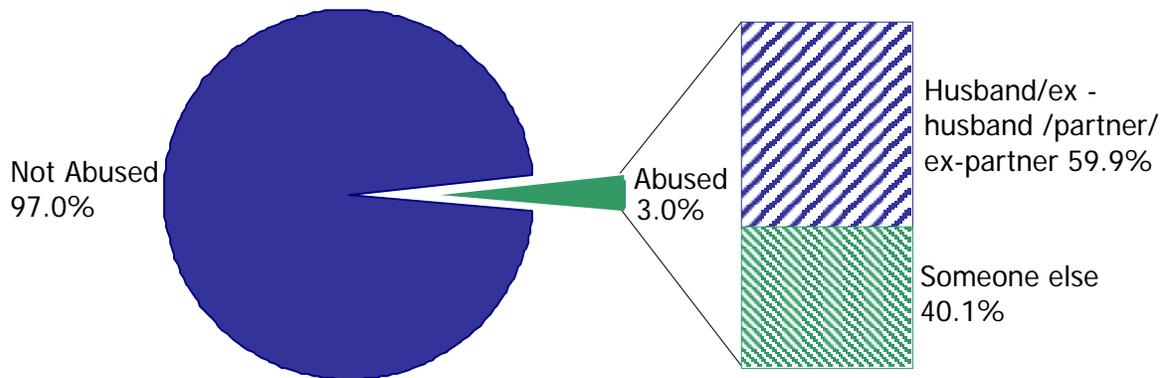
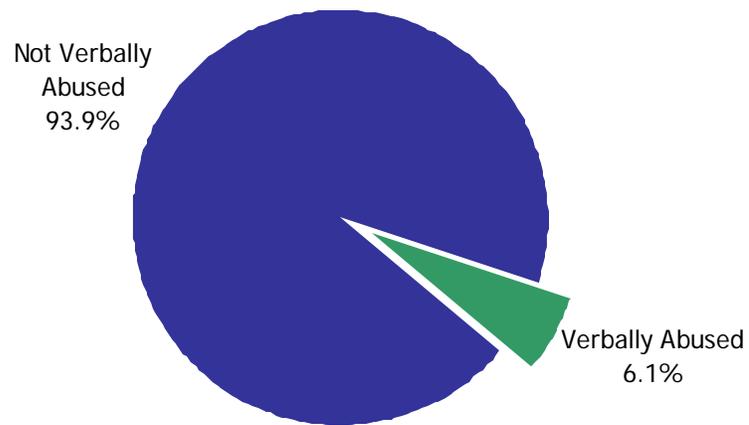


Figure 74:
Prevalence of physical abuse during pregnancy and abuser,
2004 MI PRAMS



Violence Against Women

Figure 75:
Prevalence of verbal abuse in the year prior to delivery,
2004 MI PRAMS



HIV

Definition:

As of January 1, 2006, there were 1,070 reported cases of births to HIV-positive mothers in Michigan. 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 2004, 68.2% of women reported receiving HIV counseling during prenatal care (Figure 76). Among these respondents, 75.5% reported actually being tested for HIV. Figure 77 shows that HIV testing was highest (82.6%) among of women less than 20 years of age while 61% of their 35 year of age or more peers. Black, Non Hispanic women were more likely (87%) to have HIV test done (Figure 78) while their White, Non Hispanic counterpart were least likely (63.2%). Women with less than a high school education had the highest proportion (84.3%) of HIV test done followed by those with a high school diploma (71.7%) and those with a college degree or higher (56.1%) (Figure 79). Women who had Medicaid coverage had the highest proportion of HIV test done (Figure 80).

Public Health Implications:

In keeping with the US Public Health Service recommendation on routine HIV counseling, 68.2% of respondents reported receiving such counseling during pregnancy. When counseled in the prenatal period, three quarter of these women go on to be tested for HIV. While these proportions are encouraging, much work still need to be done to have all women counseled and tested for HIV during the prenatal period. It is known that women will be more likely to be tested for HIV when they understand the modes of vertical transmission and the role of medication regimens in preventing transmission [Fernandez, 2000 #4]. It is important that HIV counseling be woven into a brief 'pre-test' message and made a routine component of prenatal care. This message should be aimed at all sexually active women.

* 2006 Epidemiologic Profile of HIV/AIDS in Michigan; Michigan Department of Community Health, HIV/STD & Other Bloodborne Infections Surveillance Section, Bureau of Epidemiology.

** 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.

• **Figure 76:**

Prevalence of prenatal HIV counseling and testing,
2004 MI PRAMS

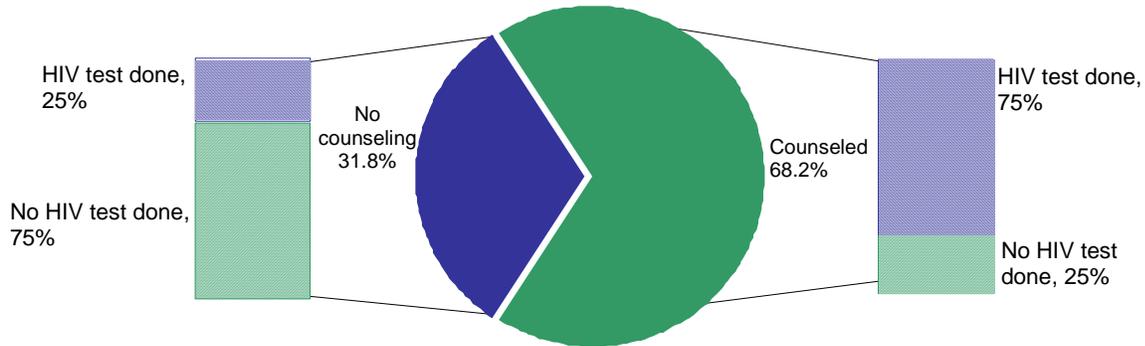


Figure 77:

Prevalence of prenatal HIV test status by maternal age,
2004 MI PRAMS

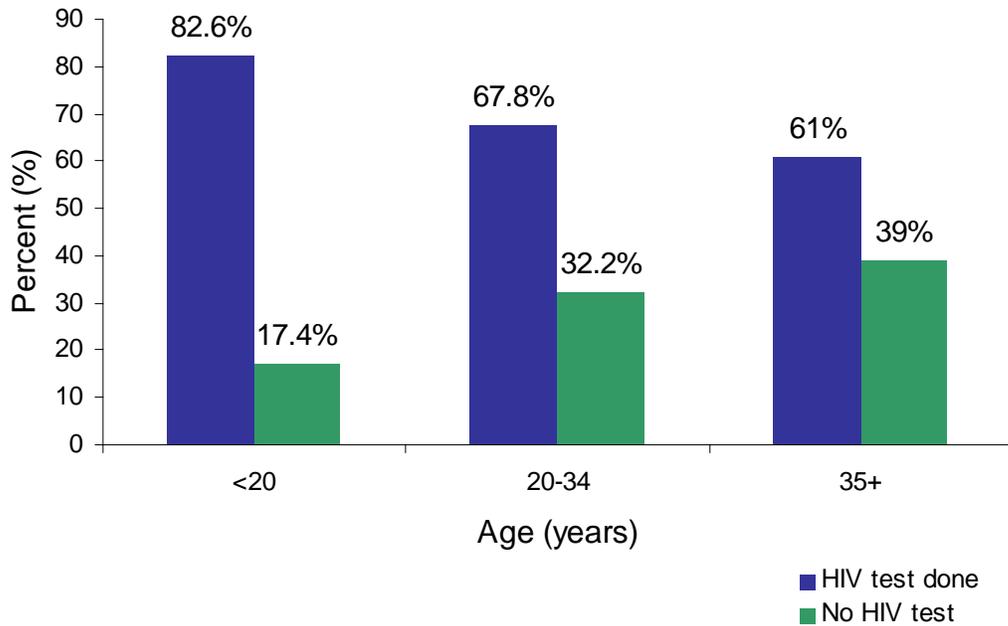


Figure 78:
Prevalence of prenatal HIV test status by maternal race/ethnicity,
2004 MI PRAMS

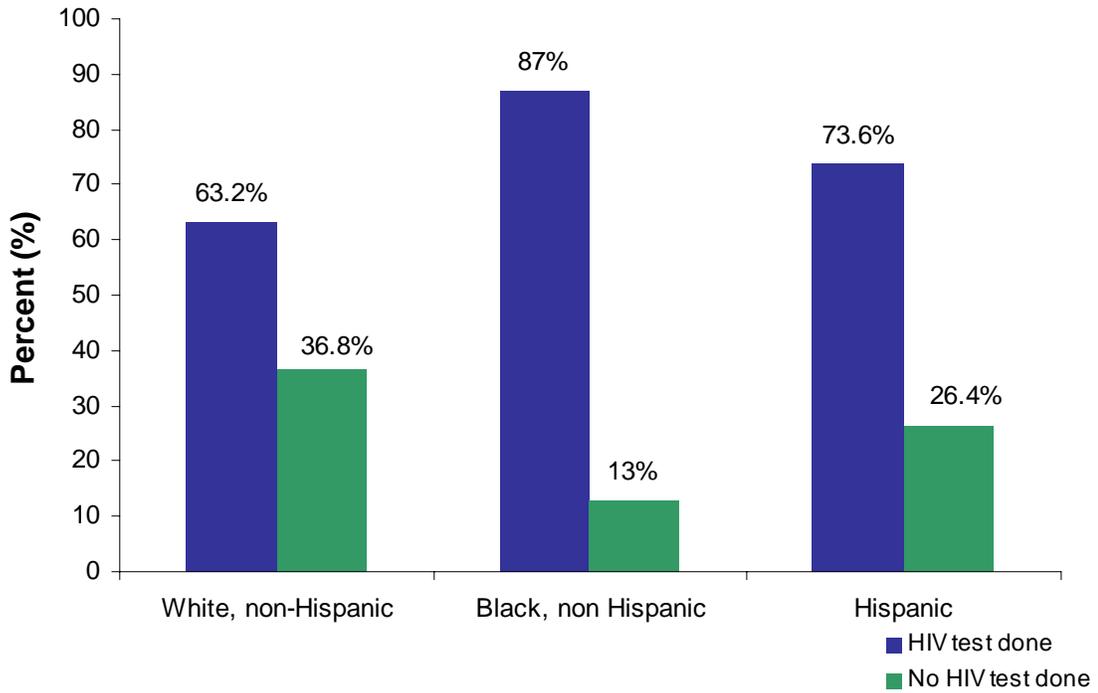


Figure 79:
Prevalence of prenatal HIV test status by maternal education,
2004 MI PRAMS

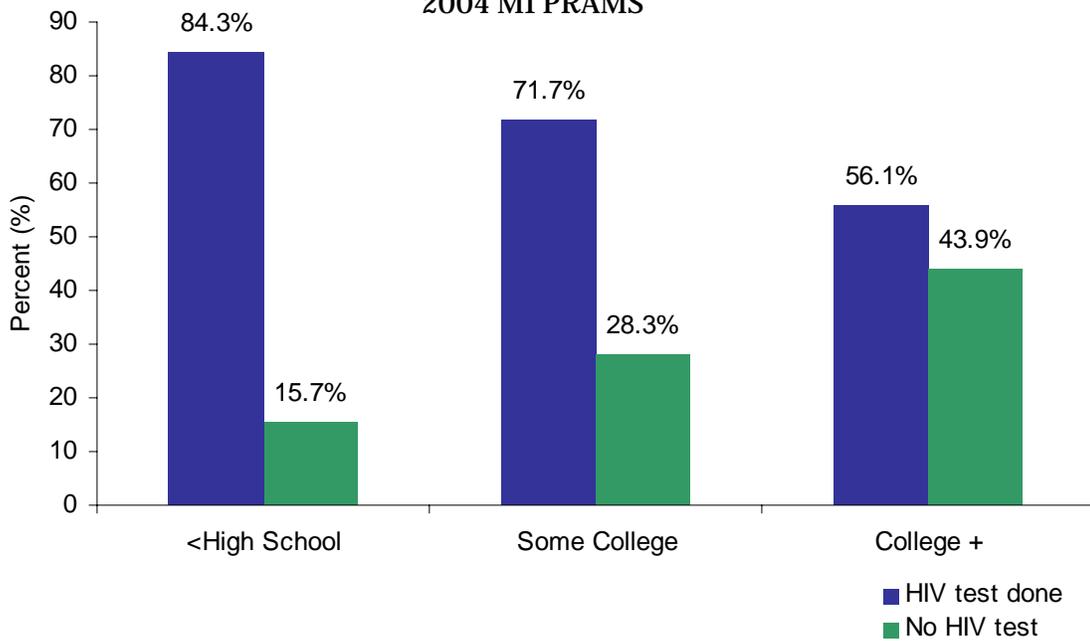
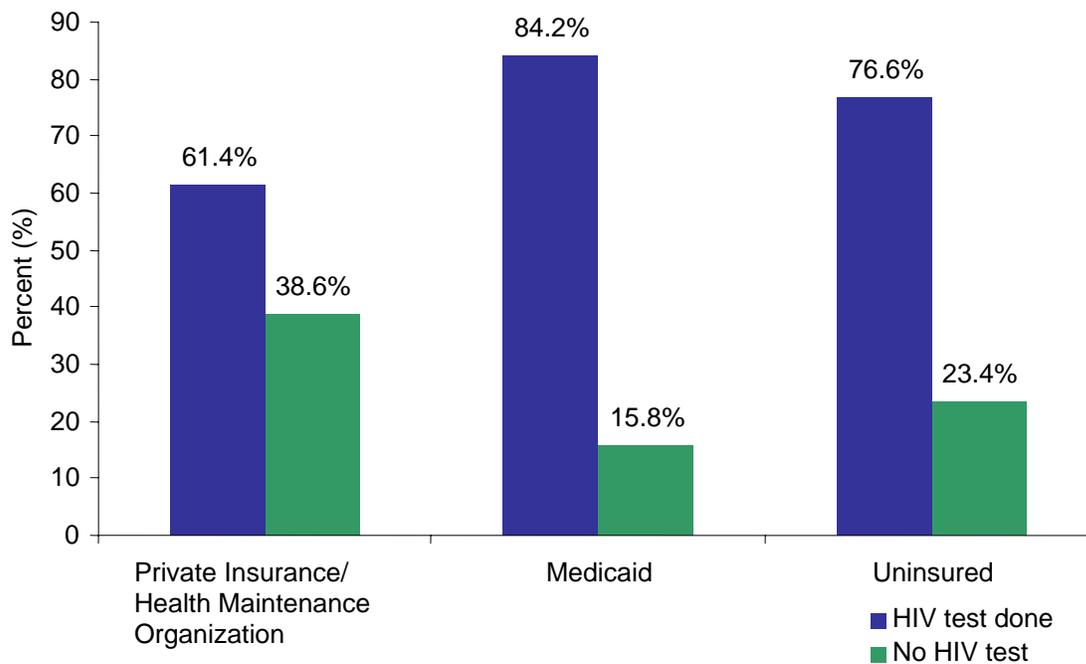


Figure 80:
Prevalence of prenatal HIV test status by maternal pre-pregnancy insurance status,
2004 MI PRAMS



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, 55.7% of women were aware and instructed by a healthcare professional about the importance of folic acid in reducing the risk for birth defects. Another 21.2% were aware but received no instruction, 16.8% were neither aware nor instructed, and the final 6.3% of women did not have any prior awareness but were instructed on folic acid by their healthcare provider (Figure #81).

Fifty-six percent of women reported not taking any multivitamins in the month prior to pregnancy while approximately 30% did report taking a daily multivitamin (Figure #82). The prevalence of daily multivitamin consumption was highest (38.8%) among women who reported to be both aware and instructed by a healthcare professional about the benefits of folic acid. Of note, 19.1% of women who were neither instructed nor aware of folic acid reported taking a daily multivitamin in the month prior to pregnancy (Figure #83).

Public Health Implications:

The recommended dose of folic acid is 400µg/day. In the survey, the assumption was made that all multivitamins the mother may have taken in the month prior to pregnancy contained the recommended amount of folic acid.

There appears to be a disconnection however, between knowledge of the benefits of folic acid and consumption of a daily supplement. The majority of women know about the sources and benefits of folic acid, but they did not consume a multivitamin daily. Continued education about the benefits of folic acid consumption is still needed particularly in the preconceptional period to encourage women of childbearing age to take a multivitamin. More research is also needed to better understand the reasons/beliefs/barriers why women don't take multivitamins.

Reference Tables: #45- #49b

Folic Acid Awareness

Figure 81:
Prevalence of folic acid awareness and/or instruction,
2004 MI PRAMS

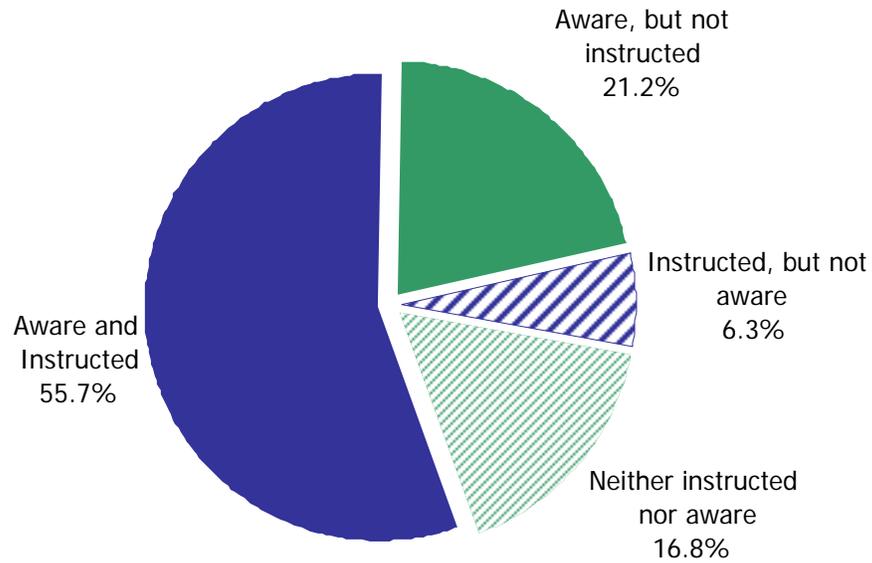
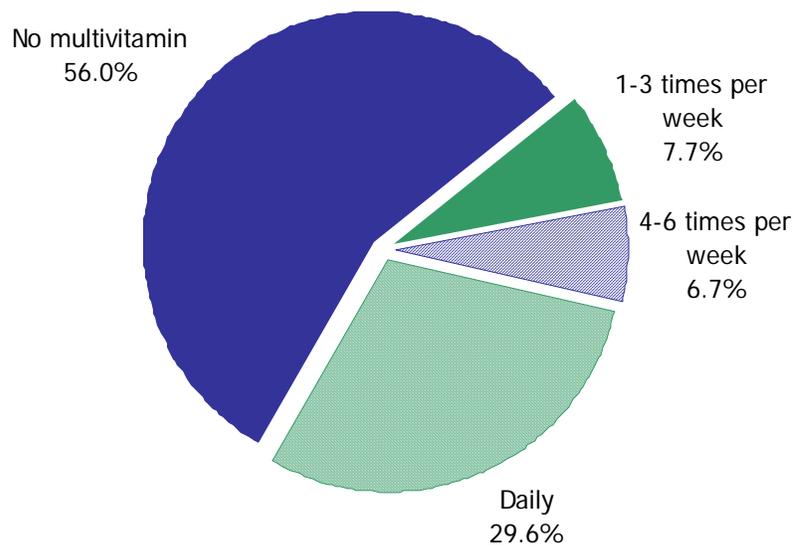
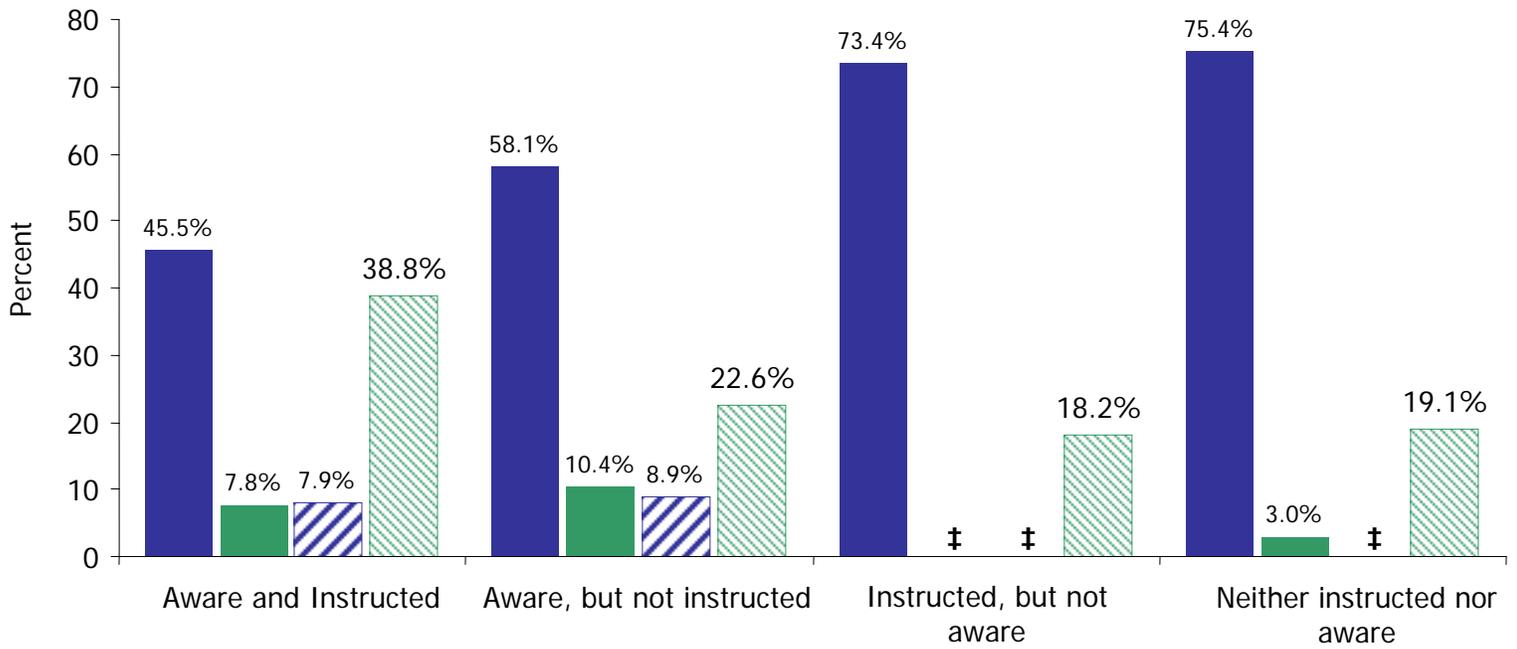


Figure 82:
Frequency of consumption of a multivitamin in the month prior to pregnancy,
2004 MI PRAMS



Folic Acid Awareness

Figure 83:
Consumption of a multivitamin in the month before pregnancy by awareness of / instruction about folic acid, 2004 MI PRAMS



† Data not shown due to small sample size

- no multivitamin
- 1-3 times per week
- ▨ 4-6 times per week
- ▨ Daily

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 the women who met the WIC income requirements, 19.6% did not participate in WIC during their pregnancy (Figure #84). During the postpartum period, 13.5% of women reported that they did not use WIC services for their new baby (Figure #85). Most women (41%) reported 'Other' as their reason for not participating in WIC followed by 'Do not want to enroll infant' as the second most prevalent (34.6%) reason for not enrolling their infant (Figure #86).

Public Health Implications:

Based on the PRAMS survey, Michigan's WIC program serves approximately 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. The Michigan WIC program's continuing efforts in outreach activities to reach the most at-risk populations and educate them about the benefits of WIC enrollment on birth outcome, has helped in increasing program participation. Further assessment of the cohort 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,
2004 MI PRAMS

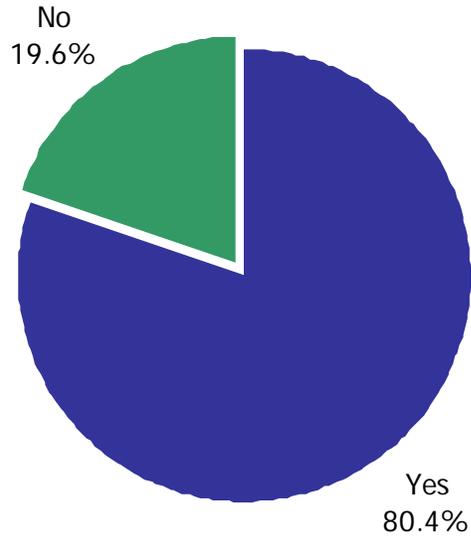
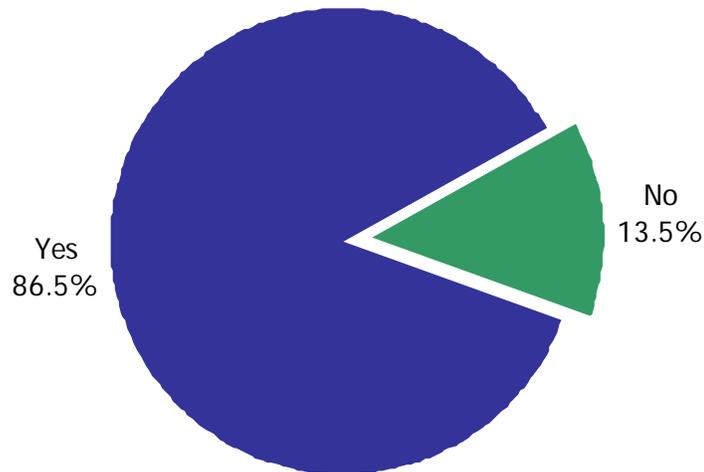
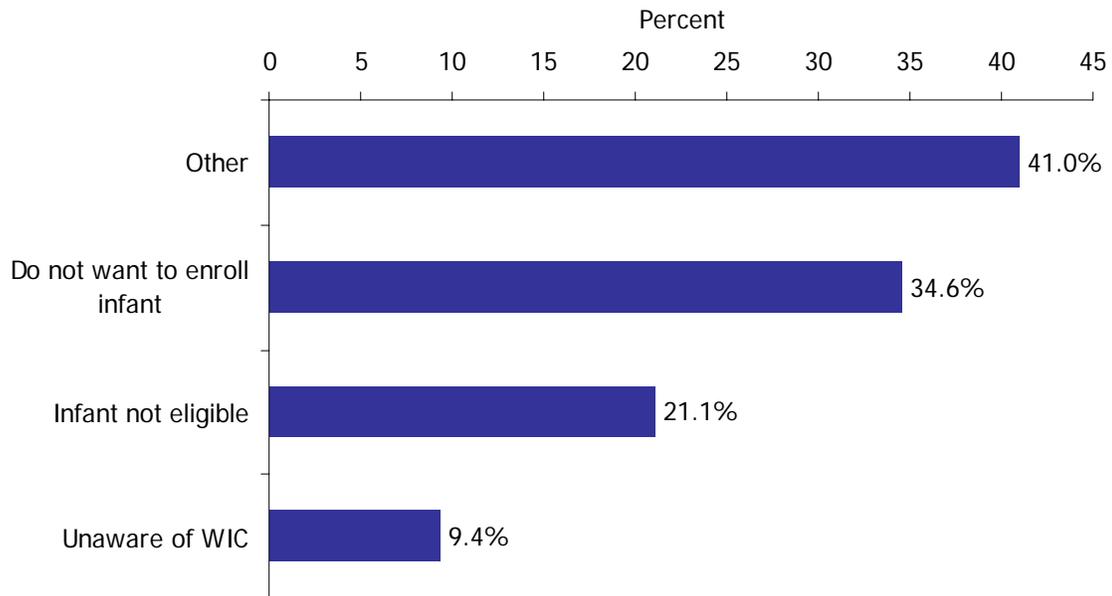


Figure 85:
Prevalence of WIC usage for infants among income eligible women,
2004 MI PRAMS



WIC Participation

Figure 86:
Reasons for infant non-participation in WIC among income eligible women,
2004 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:

A quarter (25.0%) 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, 44.0% 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 (9.9%) to report that they NEVER had their teeth cleaned followed by those on Medicaid (9.2%) (Figure 88). Of note, women with private insurance were three times (3.1%) less likely to report that they NEVER had their teeth cleaned. Women with a college degree or higher were over three times (3.0%) less likely to report that they NEVER had their teeth cleaned compared to their peers who had less than a high school education (10.1%) (Figure 89). The proportion of women with a high school education was over two-fold compared to respondents with a college degree or higher (6.8% vs. 3.0%).

Sample sizes for dental care NEVER/EVER by maternal age, and Race/Ethnicity were too small and thus statistically unreliable – data not shown.

Public Health Implications:

Oral diseases are among the most prevalent and preventable health conditions affecting women in the United States ^a. Based on the PRAMS 2004 survey, 75% of Michigan's women who had a live birth did not need dental care during pregnancy. However, the fact that many of the women who had a need did not seek care suggests that there may be an unmet need. Oral health programs aimed at uninsured women and those with less than a high school education should be considered.

^a Improving Women's Health and Perinatal Outcomes: Snapshot of the Impact of Oral Diseases Women's and Children's Health Policy Center, Bloomberg School of Public Health, Johns Hopkins University; (<http://www.med.jhu.edu/wchpc>).

Figure 87:
Prevalence of dental care need and dental care sought,
2004 MI PRAMS

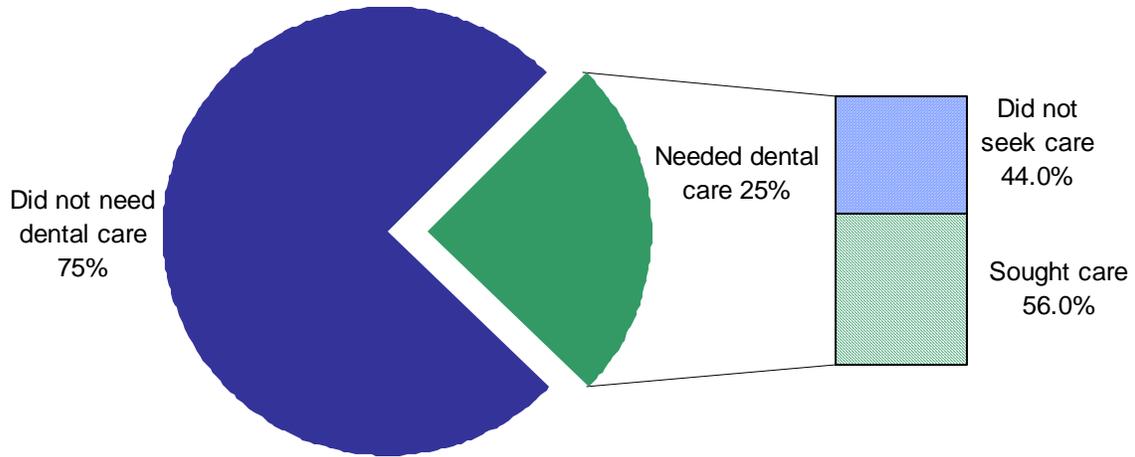


Figure 88:
Prevalence of dental care NEVER/EVER by maternal pre-pregnancy insurance status,
2004 MI PRAMS

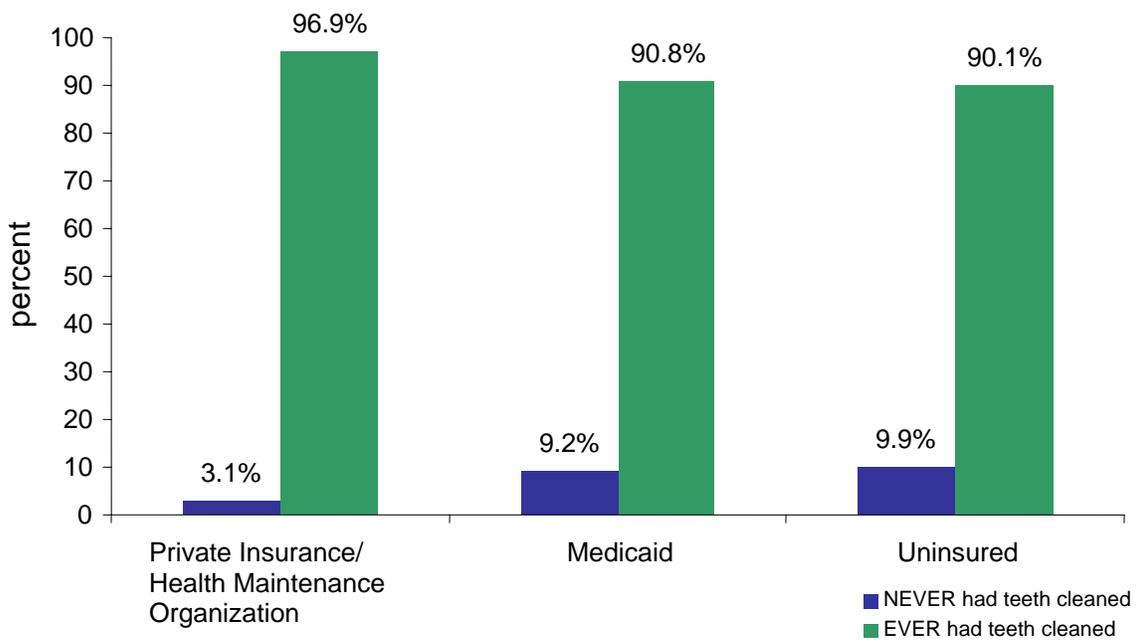


Figure 89:
Prevalence of dental care NEVER/EVER by maternal education,
2004 MI PRAMS

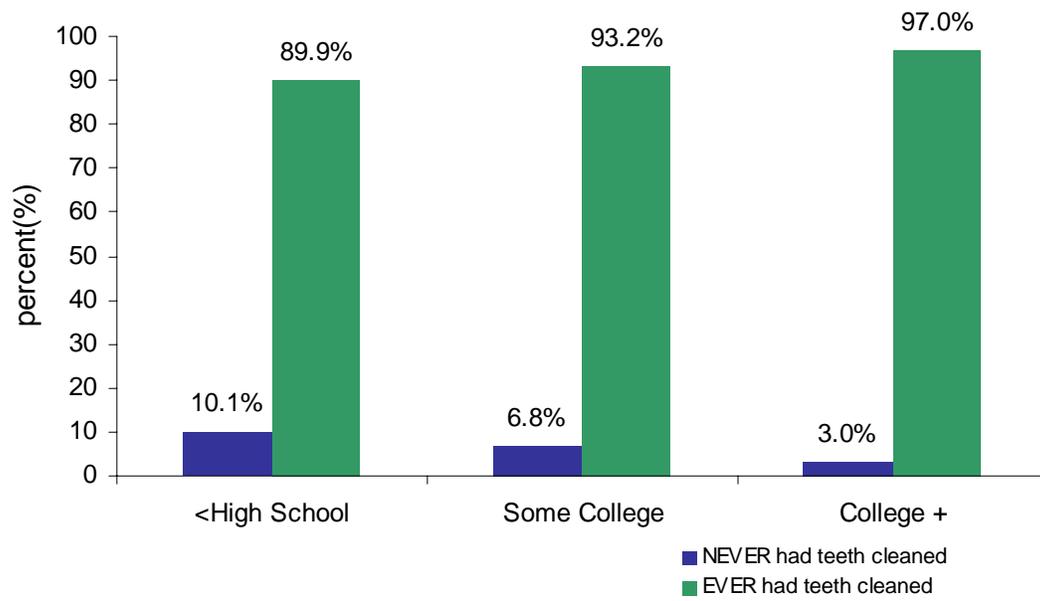


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Methodology

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. The Michigan Department of Community Health (MDCH), under the auspices of the CDC, conducted the data collection for the 2004 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 2004, 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 2004, 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 2200 women,

who were selected from the sampling frame to participate, 1568 (71%) 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 2004 Michigan sample was stratified by infant birthweight (Low or Normal) and geographic region (SE Region, Other Urban Areas, 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 2004. The overall response rate was 71%. The response rate for each of the strata is as follows:

- SE Region/LBW: 66%
- SE Region/NBW: 66%
- Other Urban Areas/LBW: 59%
- Other Urban Areas/NBW: 70%
- All Other Areas/LBW: 75%
- All Other Areas/NBW: 77%

Both Southeast and the Other Urban Low Birth Weight strata had response rates in 2004 that fell short of the 70% that the CDC regards as the epidemiologically valid threshold for PRAMS. Analysis specific to these strata will 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,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,316	125,737	100.0		
Maternal age (years)					
<18	38	4,347	3.5	2.2	4.8
18-19	90	7,505	6.0	4.6	7.4
20-24	333	34,096	27.1	24.2	30.0
25-29	353	34,094	27.1	24.3	29.9
30-34	311	28,583	22.7	20.2	25.3
35-39	155	13,574	10.8	8.9	12.7
40+	36	3,538	2.8	1.7	3.9
Race/Ethnicity					
White, Non-Hispanic	977	90,057	75.2	72.3	78.2
Black, Non-Hispanic	187	19,057	15.9	13.3	18.5
Hispanic	65	6,943	5.8	4.2	7.4
American Indian	34	3,034	2.5	1.5	3.5
Asian/Pacific Islander	6	639	0.5	0.1	1.0
Other	0	0	0.0	--	--
Maternal Education					
<High School	186	21,329	17.5	14.9	20.2
High School	392	38,906	32.0	29.0	35.0
Some College	320	28,303	23.3	20.7	25.8
College+	393	33,194	27.3	24.6	29.9
Marital Status					
Married	860	79,879	63.5	60.4	66.6
Un-married	456	45,858	36.5	33.4	39.6
Pre-Pregnancy Insurance Status					
Private Insurance/HMO	841	79,037	62.9	59.9	66.0
Medicaid	213	20,674	16.5	14.1	18.9
Uninsured	259	25,851	20.6	18.0	23.2
					2004 MI PRAMS

Table 2:
Prevalence of intended and unintended pregnancies,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,300	124,757	100.0	--	--
Intended	798	75,318	60.4	57.3	63.5
Unintended*	502	49,439	39.6	36.5	42.7
2004 MI PRAMS					

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

Table 3:
Prevalence of types of unintended pregnancies,
2004 MI PRAMS

Table 3:

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	502	49,439	100.0	--	--
Type of Unintended Pregnancy					
Mistimed*	386	37,891	76.6	72.3	81.0
Unwanted**	116	11,548	23.4	19.0	27.7
2004 MI PRAMS					

*Mistimed: Wanted to bcome 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,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	454	44,223	100.0	--	--
Contraceptive Use					
Yes	246	23,144	52.3	46.9	57.7
No	208	21,079	47.7	42.3	53.1
Contraceptive Method					
Withdrawal	108	10,285	45.9	38.4	53.4
Condom	54	4,851	21.6	15.5	27.7
Birth Control Pill	35	3,334	14.9	9.8	20.0
Other	16	1,782	7.9	3.6	12.3
Contraceptive patch	9	951	4.2	1.3	7.2
Shot 3 times per month	9	876	3.9	0.6	7.2
Shot once per month	1	‡	‡	‡	‡
Sterilization (male)	3	‡	‡	‡	‡
Sterilization (female)	2	‡	‡	‡	‡

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 5:
Prevalence of pregnancy intention by maternal demographic characteristics,
2004 MI PRAMS

	Intended Pregnancy					Unintended Pregnancy				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence	Upper confidence	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	798	75,318	60.4	57.3	63.5	502	49,439	39.6	36.5	42.7
Maternal age (years)										
<18	9	899	20.7	5.9	35.5	29	3,448	79.3	64.5	94.1
18-19	31	2,681	35.8	24.3	47.4	58	4,798	64.2	52.6	75.7
20-24	154	15,719	46.1	39.8	52.4	179	18,377	54.0	47.6	60.2
25-29	237	23,180	68.4	62.7	74.1	112	10,727	31.6	25.9	37.3
30-34	222	19,865	70.3	64.3	76.2	84	8,411	29.7	23.8	35.7
35-39	121	10,801	81.8	74.7	89.0	29	2,408	18.2	11.1	25.3
40+	24	2,172	63.1	43.1	83.1	11	1,270	37.0	16.9	56.9
Race/Ethnicity										
White, Non-Hispanic	640	58,316	65.1	61.7	68.6	327	31,238	34.9	31.4	38.3
Black, Non-Hispanic	75	7,506	40.0	32.0	49.0	109	11,250	60.0	51.0	69.0
Hispanic	36	4,255	61.9	48.7	75.1	28	2,617	38.1	24.9	51.3
American Indian	3	‡	‡	‡	‡	3	‡	‡	‡	‡
Asian/Pacific Islander	21	1,812	60.5	40.8	80.1	12	1,185	39.5	20.0	59.2
Maternal Education										
<High School	72	9,131	43.0	34.4	51.5	111	12,126	57.0	48.5	65.6
High School	198	20,218	52.1	46.3	57.9	191	18,561	47.9	42.1	53.7
Some College	199	17,029	60.5	54.3	66.6	118	11,138	39.5	33.4	45.7
College+	315	26,182	80.4	75.8	85.0	71	6,365	19.6	15.0	24.2
Marital Status										
Married	641	59,618	75.1	71.8	78.4	210	19,785	24.9	21.6	28.2
Other	157	15,700	34.6	29.3	39.9	292	29,654	65.4	60.1	70.7
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	598	55,093	70.5	66.8	74.1	231	23,108	29.5	25.9	33.2
Medicaid	90	9,069	44.1	36.0	52.1	121	11,508	55.9	47.9	64.0
Uninsured	108	11,008	42.7	35.5	49.8	149	14,795	57.3	50.2	64.5

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 6:
Prevalence of contraceptive use prior to pregnancy by maternal demographic characteristics,
2004 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	324	31,709	52.1	47.5	56.7	309	29,207	47.9	43.3	52.5
Maternal age (years)										
<18	20	2,320	63.8	43.8	83.7	13	1,319	36.2	16.3	56.2
18-19	33	2,551	47.9	34.3	61.5	35	2,775	52.1	38.5	65.7
20-24	105	11,059	51.1	43.2	58.9	109	10,603	48.9	41.1	56.8
25-29	70	6,799	48.8	39.0	58.6	74	7,125	51.2	41.4	61.0
30-34	56	5,310	52.1	41.2	63.0	51	4,887	47.9	37.0	58.8
35-39	29	2,613	58.2	42.1	74.4	21	1,874	41.8	25.6	57.9
40+	11	1,057	62.8	34.0	91.6	6	†	†	†	†
Race/Ethnicity										
White, Non-Hispanic	215	19,858	49.3	43.9	54.8	218	20,404	50.7	45.2	56.1
Black, Non-Hispanic	68	7,277	56.2	45.2	67.2	58	5,667	43.8	32.8	54.8
Hispanic	20	2,137	64.3	46.7	81.9	13	1,187	35.7	18.1	53.3
American Indian	9	†	†	†	†	6	†	†	†	†
Asian/Pacific Islander	2	†	†	†	†	1	†	†	†	†
Maternal Education										
<High School	73	8,112	55.7	45.5	65.8	59	6,458	44.3	34.2	54.5
High School	117	11,090	50.4	42.8	58.1	115	10,910	49.6	41.9	57.2
Some College	69	6,341	46.9	37.8	56.0	84	7,179	53.1	44.0	62.2
College+	57	5,124	55.3	44.4	66.2	47	4,138	44.7	33.8	55.6
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	150	14,466	49.7	43.1	56.3	154	14,632	50.3	43.7	56.9
Medicaid	90	9,002	61.6	52.3	70.9	60	5,604	38.4	29.1	47.7
Uninsured	83	8,213	47.8	39.1	56.5	95	8,971	52.2	43.5	60.9

2004 MI PRAMS

† Data not shown due to small sample size

Table 7:
Reasons for contraceptive nonuse prior to pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Reasons					
Did not mind getting pregnant	151	14,294	41.5	35.4	47.6
Thought could not get pregnant	78	8,107	23.5	18.1	29.0
Husband/partner did not want to use	71	7,152	20.8	15.7	25.9
Other	50	4,466	12.9	8.8	17.0
Discontinued birth control because of side effects	47	4,252	12.3	8.4	16.3
Difficulty getting birth control	30	2,943	8.5	5.0	12.1
Thought husband/partner sterile	31	2,651	7.7	4.5	10.9
2004 MI PRAMS					

Table 8:
Contraceptive method used prior to pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Contraceptive Method					
Condom	69	1,493	23.5	11.6	35.5
Withdrawal	125	5,510	15.5	7.8	23.3
Birth Control Pill	49	4,605	27.8	13.0	42.6
Other	17	2,883	6.3	0.1	18.4
Shot once per month	1	DSU	DSU	DSU	DSU
Shot 3 times per month	11	DSU	DSU	DSU	DSU
contraceptive patch	10	DSU	DSU	DSU	DSU
Sterilization (male)	3	DSU	DSU	DSU	DSU
Sterilization (female)	2	DSU	DSU	DSU	DSU
2004 MI PRAMS					

Table 9:
Prevalence of contraceptive use postpartum by maternal demographic characteristics,
2004 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	185	18,235	14.6	12.3	16.9	1,127	106,660	85.4	83.1	87.7
Maternal age (years)										
<18	3	‡	‡	‡	‡	34	3,706	90.4	78.0	100.0
18-19	11	669	8.9	2.9	15.0	79	6,836	91.1	85.1	97.1
20-24	49	5,107	15.2	10.6	19.9	281	28,393	84.8	80.1	89.4
25-29	43	4,837	14.2	9.7	18.7	310	29,257	85.8	81.3	90.3
30-34	47	4,504	15.8	11.1	20.5	264	24,079	84.2	79.5	88.9
35-39	27	2,248	16.6	9.9	23.2	128	11,326	83.4	76.8	90.1
40+	5	‡	‡	‡	‡	31	3,061	86.5	73.7	99.4
Race/Ethnicity										
White, Non-Hispanic	132	12,968	14.4	11.8	17.0	844	76,842	85.6	83.0	88.2
Black, Non-Hispanic	32	2,658	14.2	8.0	20.4	153	16,050	85.8	79.6	92.0
Hispanic	7	‡	‡	‡	‡	57	5,755	85.9	75.5	96.4
Asian/Pacific Islander	8	‡	‡	‡	‡	26	2,197	72.4	53.5	91.3
American Indian	1	‡	‡	‡	‡	5	‡	‡	‡	‡
Maternal Education										
<High School	34	3,976	19.2	12.3	26.1	149	16,757	80.8	73.9	87.7
High School	52	5,360	13.9	9.8	17.9	339	33,300	86.1	82.1	90.2
Some College	38	3,246	11.5	7.5	15.4	282	25,057	88.5	84.6	92.5
College+	57	4,811	14.5	10.5	18.5	336	28,383	85.5	81.5	89.5
Prenatal Contraception Counseling										
Talked to Health Care Worker	132	13,487	13.4	10.9	15.9	905	87,190	86.6	84.1	89.1
Did not talk to Health Care Worker	48	4,131	19.2	13.3	25.2	202	17,353	80.8	74.8	86.8

2004 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,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Reasons					
Did not want to use birth control	54	5,475	29.7	21.5	37.8
Other	52	5,437	29.4	21.7	37.2
Not having sex	43	4,655	25.2	17.6	32.8
Want to get pregnant	32	2,656	14.4	8.8	19.9
Husband/partner does not want to use	27	2,566	13.9	8.1	19.7
Believe cannot get pregnant	11	779	4.3	1.0	7.5
Cannot afford birth control	6	DSU	DSU	DSU	DSU
Pregnant now	9	DSU	DSU	DSU	DSU
2004 MI PRAMS					

Table 11:
Prevalence of infant birthweight,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Prevalence by LBW					
Total	1,316	125,737			
NBW	1,003	116,534	92.7	91.8	93.6
LBW*	313	9,203	7.3	6.4	8.2
Prevalence by LBW Type					
Total	313	9,203			
mLBW**	263	7,679	83.4	79.0	87.9
vLBW***	50	1,524	16.6	12.1	21.0
2004 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,
2004 MI PRAMS

	Low Birthweight					Normal Birthweight				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Unintended Pregnancy										
Total	303	8,935				997	115,821			
Unintended	128	3,954	8.0	6.4	9.6	374	45,485	92.0	90.4	93.6
Intended	175	4,981	6.6	5.5	7.7	623	70,336	93.4	92.3	94.5
Unintended Pregnancy Type										
Total	128	3,954				374	45,485			
Mistimed	101	3,009	7.9	6.2	9.7	285	34,882	92.1	90.3	93.8
Unwanted	27	945	8.2	4.7	11.6	89	10,603	91.8	88.4	95.3

2004 MI PRAMS

Table 13:
Infant birthweight by maternal demographic characteristics,
2004 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	313	9,203	7.3	6.4	8.2	1,003	116,534	92.7	91.8	93.6
Maternal age (years)										
<18	12	338	7.8	2.6	12.9	26	4,009	92.2	87.1	97.4
18-19	34	1,235	16.5	10.3	22.6	56	6,270	83.5	77.4	89.7
20-24	76	2,221	6.5	4.8	8.2	257	31,874	93.5	91.8	95.2
25-29	71	2,155	6.3	4.7	8.0	282	31,939	93.7	92.0	95.3
30-34	65	1,762	6.2	4.5	7.8	246	26,821	93.8	92.2	95.5
35-39	44	1,222	9.0	6.0	12.0	111	12,352	91.0	88.0	94.0
40+	11	270	7.6	2.4	12.9	25	3,267	92.4	87.1	97.6
Race/Ethnicity										
White, Non-Hispanic	212	5,706	6.3	5.4	7.3	765	84,351	93.7	92.7	94.6
Black, Non-Hispanic	78	2,793	14.7	10.7	18.6	109	16,264	85.3	81.4	89.3
Hispanic	9	247	3.6	1.1	6.0	56	6,696	96.4	94.0	98.9
Asian/Pacific Islander	9	265	8.7	2.4	15.0	25	2,769	91.3	85.0	97.6
American Indian	1	‡	‡	‡	‡	5	‡	‡	‡	‡
Maternal Education										
<High School	56	1,760	8.3	5.7	10.8	130	19,569	91.7	89.2	94.3
High School	106	3,247	8.3	6.5	10.2	286	35,658	91.7	89.8	93.5
Some College	58	1,663	5.9	4.2	7.6	262	26,639	94.1	92.4	95.8
College+	87	2,285	6.9	5.3	8.5	306	30,908	93.1	91.5	94.7
Marital Status										
Married	173	4,659	5.8	4.9	6.8	687	75,221	94.2	93.2	95.1
Un-married	140	4,544	9.9	8.0	11.8	316	41,314	90.1	88.2	92.0
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	180	4,994	6.3	5.3	7.4	661	74,043	93.7	92.6	94.7
Medicaid	66	2,224	10.8	7.8	13.7	147	18,450	89.2	86.3	92.2
Uninsured	65	1,929	7.5	5.4	9.5	194	23,922	92.5	90.5	94.6

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 14:
Prevalence of low birthweight by gestational age,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	313	9,203	7.3	6.4	8.2
Gestational Age					
Pre-term infant*	216	6,334	57.5	48.2	66.8
Term infant**	97	2,869	2.5	2.0	3.0
2004 MI PRAMS					

*Pre-term infant: Gestational age < 37 weeks

**Term infant: Gestational age >= 37 weeks

Table 15:
Trimester of entry into prenatal care,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,300	123,537			
Entry into Prenatal Care					
1st trimester	1,055	99,848	80.3	77.7	82.9
2nd trimester	212	21,113	17.0	14.5	19.4
3rd trimester	26	2,576	2.1	1.1	3.0
No PNC	7	‡	‡	‡	‡
2004 MI PRAMS					

*LBW: Birthweight below 2500 grams

‡ Data not shown due to small sample size

Table 16:
Trimester of entry into prenatal care by maternal demographic characteristics,
2004 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	1,055	99,848	80.3	77.7	82.9	245	23,689	19.1		
Maternal age (years)										
<18	20	2,451	56.4	37.4	75.3	18	1,896	43.6	24.7	62.6
18-19	53	4,571	61.5	49.7	73.3	36	2,863	38.5	26.7	50.3
20-24	235	23,666	71.1	65.3	76.9	91	9,634	28.9	23.1	34.7
25-29	316	30,854	90.6	87.2	94.1	36	3,189	9.4	5.9	12.8
30-34	266	24,173	85.6	80.6	90.5	40	4,078	14.4	9.5	19.4
35-39	134	11,317	83.5	76.1	91.0	20	2,230	16.5	9.0	23.9
40+	31	2,816	83.7	65.7	100.0	4	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	813	74,520	83.9	81.2	86.6	152	14,325	16.1	13.4	18.8
Black, Non-Hispanic	125	12,353	65.3	56.3	74.3	60	6,573	34.7	25.7	43.7
Hispanic	49	5,315	77.3	65.7	89.0	15	1,557	22.7	11.0	34.3
Asian/Pacific Islander	26	2,307	77.0	59.3	94.6	7	‡	‡	‡	‡
American Indian	5	‡	‡	‡	‡	1	‡	‡	‡	‡
Maternal Education										
<High School	116	13,306	63.8	55.4	72.2	67	7,554	36.2	27.8	44.6
High School	290	29,766	77.6	72.9	82.3	95	8,586	22.4	17.7	27.1
Some College	275	23,565	84.0	78.9	88.9	43	4,523	16.0	11.1	21.1
College+	353	29,853	90.5	87.1	93.9	36	3,128	9.5	6.1	12.9
Pre-Pregnancy Insurance Status										
Private Insurance/HMO	749	69,809	89.1	86.6	91.6	85	8,555	10.9	8.4	13.4
Medicaid	133	13,069	64.5	56.7	72.4	75	7,177	35.5	27.6	43.3
Uninsured	171	16,823	66.0	59.0	72.9	84	8,679	34.0	27.1	41.0

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 17:
Trimester of entry into prenatal care by pregnancy intention,
2004 MI PRAMS

	1st Trimester					After 1st Trimester/Not at all				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Intended	696	64,475	86.2	83.2	89.2	94	10,313	13.8	10.8	16.8
Unintended	348	34,793	71.7	67.0	76.3	147	13,753	28.3	23.7	33.0
2004 MI PRAMS										

Table 18:
Satisfaction with trimester of entry into prenatal care,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,307	124,695	100.0		
Satisfaction with Time of Entry					
No	223	21,295	17.1	14.7	19.5
Yes	1,077	102,679	82.3	79.9	84.8
2004 MI PRAMS					

Table 19:
Number of barriers to care experienced by women who were not satisfied with the trimester of entry into prenatal care, 2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	367	35,872	100.0		
Number of Barriers					
1 barrier	206	20,911	56.2	50.3	62.2
2 barriers	95	10,152	27.3	22.0	32.6
3 barriers	36	3,339	9.0	5.5	12.4
4 barriers	15	1,470	4.0	1.6	6.3
5 barriers	5	DSU	DSU	DSU	DSU
6 barriers	10	DSU	DSU	DSU	DSU

2004 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, 2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Types of Barriers					
Could not get earlier appointment	130	12,916	11.0	8.8	13.1
Could not pay for appointment	79	7,874	6.7	5.0	8.4
Doctor/HMO would not start care earlier	84	7,475	6.4	4.8	7.9
Other	63	6,495	5.6	4.0	7.1
Too much going on	43	3,841	3.3	2.2	4.4
Did not have Medicaid Card	130	12,916	7.7	8.8	13.1
No transportation	55	5,196	4.4	3.0	5.8
No child care	29	2,824	2.4	1.4	3.4
No leave time	47	4,585	3.9	2.6	5.2
Keep pregnancy secret	50	4,851	4.1	2.8	5.5

2004 MI PRAMS

Table 21:
Sources of payment for prenatal care,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Sources of Payment					
Private Insurance	824	76,502	61.5	58.4	64.6
Medicaid	492	47,120	38.0	34.9	41.1
Personal Income	178	16,372	13.2	11.1	15.3
Other	44	4,753	3.8	2.5	5.1
2004 MI PRAMS					

Table 22:
Topics discussed during any prenatal care visit (literature and videos excluded),
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Topics Discussed					
Safe Medications	1,172	111,863	91.4	89.7	93.2
Screening for Birth Defects	1,131	108,903	88.9	86.9	90.8
Early Labor	1,061	103,795	84.9	82.7	87.1
HIV/AIDS Test	1,059	101,495	83.1	80.8	85.5
Breastfeeding	1,073	101,777	83.1	80.8	85.5
Postpartum Contraception	1,038	100,923	82.4	80.1	84.8
Alcohol Consumption during Pregnancy	951	90,750	74.3	71.6	77.1
Smoking during Pregnancy	941	89,298	73.0	70.2	75.8
Illegal Drug Use during Pregnancy	829	78,959	64.7	61.7	67.8
Seatbelt Use	699	65,036	53.3	50.1	56.5
Domestic Abuse	626	61,111	50.0	46.8	53.1
2004 MI PRAMS					

Table 23:
Breastfeeding intention prior to delivery,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,286	123,359	100.0		
Plan					
Planned to breastfeed	742	69,729	56.5	53.4	59.7
May Breastfeed	218	20,938	17.0	14.5	19.4
Planned not to breastfeed	276	28,531	23.1	20.4	25.9
Unsure about breastfeeding	50	4,161	3.4	2.3	4.5
2004 MI PRAMS					

Table 24:
Breastfeeding initiation,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,285	123,128	100.0		
Breastfeeding Initiation					
Yes	934	87,414	71.0	68.0	73.9
No	351	35,714	29.0	26.1	32.0
2004 MI PRAMS					

Table 25:
Breastfeeding duration,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,272	121,900	100.1		
Breastfeeding Duration					
Did not breastfeed	351	35,714	29.3	26.3	32.3
Breastfed for <1 week	63	6,530	5.4	3.9	6.8
Breastfed for >1 week, but concluded	429	39,830	32.7	29.7	35.7
Breastfeeding when surveyed	429	39,826	32.7	29.7	35.6
2004 MI PRAMS					

Table 26a:
Prevalence of breastfeeding duration by maternal demographic characteristics,
2004 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	351	35,714	100.0			63	6,530	100.0		
Maternal age (years)										
<18	18	2,558	60.7	41.6	79.7	3	‡	‡	‡	‡
18-19	44	3,780	53.6	41.4	65.8	8	‡	‡	‡	‡
20-24	100	9,787	30.2	24.3	36.1	15	1,524	4.7	2.2	7.2
25-29	89	9,412	28.1	22.4	33.8	15	1,674	5.0	2.2	7.8
30-34	60	6,131	21.9	16.4	27.4	16	1,536	5.5	2.5	8.5
35-39	31	2,821	21.3	13.5	29.2	5	‡	‡	‡	‡
40+	9	1,224	35.2	15.2	55.1	1	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	247	23,399	26.7	23.4	29.9	45	4,788	5.5	3.7	7.2
Black, Non-Hispanic	67	7,657	42.6	33.1	52.0	13	1,232	6.8	2.3	11.4
Hispanic	18	2,254	33.6	20.0	47.3	2	‡	‡	‡	‡
Asian/Pacific Islander	2	‡	‡	‡	‡	0	-	-	-	-
American Indian	2	‡	‡	‡	‡	1	-	-	-	-
Education										
<High School	78	9,199	47.3	38.3	56.3	13	1,661	8.5	3.4	13.7
High School	145	14,829	39.3	33.5	45.0	26	2,751	7.3	4.2	10.4
Some College	85	7,696	27.3	21.7	32.9	12	1,209	4.3	1.8	6.8
College+	36	2,940	9.0	5.8	15.5	11	790	2.4	0.8	5.8
Marital Status										
Married	161	16,298	20.8	17.7	24.0	35	3,438	4.4	2.8	6.0
Un-married	190	19,415	44.4	38.8	50.1	28	3,093	7.1	4.2	10.0

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 26b:
Prevalence of breastfeeding duration by maternal demographic characteristics,
2004 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	429	39,830	100.0			429	39,826	100.0		
Maternal age (years)										
<18	13	808	19.2	5.2	33.1	2	‡	‡	‡	‡
18-19	22	1,743	24.7	14.1	35.3	11	863	8.7	4.2	20.2
20-24	132	14,357	44.3	37.8	50.7	69	6,776	12.2	15.8	26.0
25-29	108	10,049	30.0	24.3	35.7	133	12,361	20.9	31.1	42.7
30-34	94	8,103	29.0	23.3	34.7	135	12,209	36.9	37.4	50.0
35-39	48	4,006	30.3	21.7	38.8	67	6,004	43.6	36.2	54.5
40+	12	765	22.0	7.8	36.2	12	1,247	45.4	17.2	54.4
Race/Ethnicity										
White, Non-Hispanic	324	28,566	32.5	29.1	35.9	335	31,019	35.3	31.9	38.8
Black, Non-Hispanic	47	5,439	30.2	21.3	39.1	46	3,665	20.4	13.5	27.3
Hispanic	26	2,517	37.6	24.2	51.0	16	1,729	25.8	13.3	38.3
Asian/Pacific Islander	16	1,533	50.5	30.8	70.3	16	1,256	41.4	22.5	60.3
American Indian	3	‡	‡	‡	‡	0	‡	‡	‡	‡
Education										
<High School	58	6,015	30.9	22.7	39.2	20	2,568	13.2	7.0	19.4
High School	126	12,397	32.8	27.3	38.4	81	7,772	20.6	15.9	25.3
Some College	110	9,965	35.4	29.4	41.3	109	9,288	33.0	27.3	38.7
College+	126	9,896	30.2	25.0	35.6	212	19,165	58.4	52.9	60.4
Marital Status										
Married	270	23,663	30.3	26.7	33.8	374	34,784	44.5	40.7	48.3
Un-married	159	16,167	37.0	31.5	42.5	55	5,041	11.5	8.0	15.1

2004 MI PRAMS

Table 27:
Average breastfeeding duration, in weeks, among women who breastfed for longer than 1 week, but had discontinued before being surveyed, 2004 MI PRAMS

	Breastfed for >1 week, but concluded				
	Sample Frequency (n)	Weighted Frequency (N)	Average (weeks)	Lower confidence interval	Upper confidence interval
Total	429	39,830			
Maternal age (years)					
<18	13	808	8.1	3.9	12.3
18-19	22	1,743	6.2	3.9	8.5
20-24	132	14,357	6.5	5.5	7.5
25-29	108	10,049	7.8	6.3	9.3
30-34	94	8,103	9.1	7.3	11.0
35-39	48	4,005	7.3	5.7	9.0
40+	12	765	6.4	2.9	10.0
Race/Ethnicity					
White, Non-Hispanic	324	28,566	7.5	6.7	8.3
Black, Non-Hispanic	47	5,440	7.3	5.6	9.1
Hispanic	26	2,517	6.7	4.6	8.9
Asian/PI	16	1,533	10.5	3.4	17.5
American Indian	3	‡	‡	‡	‡
Education					
<High School	58	6,015	6.8	4.5	9.1
High School	126	12,397	6.4	5.4	7.4
Some College	110	9,965	7.5	6.4	8.7
College+	126	9,896	8.6	7.5	9.6
Marital Status					
Married	270	23,663	7.8	6.8	8.7
Un-married	159	16,167	7.0	6.1	8.0

2004 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,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Barriers					
Thought was not producing enough milk	188	16,526	34	29	39
Breastmilk did not satisfy infant	159	16,313	34	29	38
Infant had difficulty nursing	157	14,224	29	25	34
Other	135	11,930	25	20	29
Had to return to work/school	108	10,624	22	18	26
Nipples became sore, cracked, or bleeding	111	10,654	22	18	26
Felt it was time to discontinue	67	6,908	14	11	18
Too many household duties	62	6,066	13	9	16
Needed another person to feed the infant	58	5,398	11	8	14
Baby Jaundiced	56	4,919	10	7	13
Thought infant was not gaining enough weight	47	4,241	9	6	12
Mother became sick and could not nurse	33	3,061	6	4	9
Infant became sick and could not nurse	16	1,477	3	1	5

2004 MI PRAMS

Table 29:
Smoking status during pregnancy (compared with pre-pregnancy smoking),
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	2,602	247,568	100.0		
Smoking Status					
Nonsmoker	902	84,672	68.4	65.4	71.4
Smoker who quit	153	15,625	12.6	10.5	14.8
Smoker (reduced # of cigarettes)	156	14,783	11.9	9.9	14.0
Smoker (same # of cigarettes)	90	8,704	7.0	5.4	8.7
Nonsmoker Resumed	1,301	123,784	0	0	0

2004 MI PRAMS

Table 30:
Smoking status in the last three months of pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,302	124,030	100.0		
Smoking Status					
Smoked	246	23,487	18.9	16.4	21.4
Did not smoke	1,056	100,543	81.1	78.6	83.6

2004 MI PRAMS

Table 31:
Smoking status in the last three months of pregnancy by maternal demographic characteristics,
2004 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	1,056	100,543	100.0			246	23,487	100.0		
Maternal age (years)										
<18	28	3,326	76.5	61.1	91.9	10	1,021	23.5	8.1	38.9
18-19	60	4,849	64.6	53.3	76.0	30	2,655	35.4	24.0	46.7
20-24	234	23,734	71.7	66.0	77.3	92	9,374	28.3	22.7	34.0
25-29	292	28,550	84.5	80.1	88.9	58	5,251	15.5	11.1	19.9
30-34	279	25,640	90.5	86.6	94.3	30	2,705	9.5	5.7	13.4
35-39	136	11,875	87.8	81.3	94.3	18	1,646	12.2	5.7	18.7
40+	27	2,568	75.5	56.8	94.1	8	†	†	†	†
Race/Ethnicity										
White, Non-Hispanic	782	71,860	80.8	78.0	83.7	186	17,057	19.2	16.3	22.0
Black, Non-Hispanic	151	15,235	81.6	74.3	88.9	33	3,444	18.4	11.1	25.7
Hispanic	55	5,736	82.6	72.0	93.2	10	1,207	17.4	6.8	28.0
Asian/Pacific Islander	30	2,541	83.8	67.8	99.7	4	†	†	†	†
American Indian	4	†	†	†	†	2	†	†	†	†
Education										
<High School	110	13,327	64.6	56.4	72.7	71	7,310	35.4	27.3	43.6
High School	283	28,584	74.8	69.9	79.8	103	9,614	25.2	20.2	30.1
Some College	265	23,279	83.0	78.2	87.8	53	4,770	17.0	12.2	21.8
College+	377	31,884	96.2	94.0	98.4	15	1,257	3.8	1.6	6.0
Medicaid Status										
Medicaid Ever	354	34,838	67.5	62.8	72.2	180	16,762	32.5	27.8	37.2
Medicaid Never	699	65,624	90.7	88.3	93.1	66	6,725	9.3	6.9	11.7

2004 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,
2004 MI PRAMS

	Low Birthweight					Normal Birthweight				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI	Sample Frequency (N)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	313	9,203	7.3	6.4	8.2	1,003	116,534	92.7	91.8	93.6
Smoking Status										
Did not Smoke	237	6,799	6.8	5.8	7.7	819	93,744	93.2	92.3	94.2
Smoked	75	2,376	10.1	7.5	12.7	171	21,112	89.9	87.3	92.5
2004 MI PRAMS										

Table 33:
Smoking status in the postpartum period
(compared with pre-pregnancy smoking),
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,704	163,283	100.0		
Smoking Status					
Nonsmoker	900	84,523	68.2	65.2	71.2
Smoker who quit	79	7,847	6.3	4.8	7.9
Smoker (reduced # of cigarettes)	114	11,487	9.3	7.4	11.1
Smoker (same # of cigarettes)	207	19,898	16.1	13.7	18.4
Nonsmoker who began smoking	2	‡	‡	‡	‡
2004 MI PRAMS					

‡ Data not shown due to small sample size

Table 34:
Smoking status in the postpartum period
(compared with pregnancy smoking),
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,633	156,595	100		
Smoking Status					
Nonsmoker	971	91,465	73.7	70.9	76.6
Smoker who quit	7	786	0.6	0.1	1.1
Smoker (reduced # of cigarettes)	11	881	0.7	0.2	1.2
Smoker (same # of cigarettes)	228	21,820	17.6	15.2	20.0
Nonsmoker who began smoking	85	9,078	7.3	5.6	9.1
2004 MI PRAMS					

Table 35:
Alcohol consumption during pregnancy
(compared with pre-pregnancy drinking),
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	1,291	122,865	100.0		
Alcohol Consumption					
Nondrinker	529	51,484	41.8	38.6	44.9
Drinker who quit	665	62,543	50.7	47.6	53.9
Drinker (reduced # of drinks)	46	4,584	3.7	2.5	4.9
Drinker (# of drinks same or more)	45	4,254	3.5	2.3	4.6
Nondrinker who began drinking	6	‡	‡	‡	‡
2004 MI PRAMS					

‡ Data not shown due to small sample size

Table 36:
Prevalence of infant sleep position,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,247	120,228	100.0		
Sleep Position					
Supine/Back	874	83,213	69.2	66.2	72.2
Prone/Stomach	199	19,624	16.3	13.9	18.7
Side	174	17,391	14.5	12.1	16.8
2004 MI PRAMS					

Table 37a:
Prevalence of infant sleep position by maternal demographic characteristics,
2004 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	874	83,213	100.0			174	17,391	100.0		
Maternal age (years)										
<18	22	2,449	60	40	80	7	‡	‡	‡	‡
18-19	49	4,163	60	47	73	17	1,471	21	10	32
20-24	214	21,306	68	62	74	36	4,079	13	8	18
25-29	239	23,357	70	64	76	56	4,863	15	10	19
30-34	208	19,035	68	62	74	41	4,096	15	10	20
35-39	115	10,244	79	71	86	13	1,295	10	4	16
40+	27	2,659	77	60	95	4	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	678	61,971	71.4	68.1	74.7	118	10,668	12.3	9.9	14.7
Black, Non-Hispanic	93	10,063	58.2	48.6	67.9	32	4,056	23.5	15.1	31.9
Hispanic	41	4,546	69.5	56.2	82.9	11	1,289	19.7	7.8	31.6
Asian/Pacific Islander	25	2,153	71.8	52.8	90.8	5	‡	‡	‡	‡
American Indian	3	‡	‡	‡	‡	2	‡	‡	‡	‡
Education										
<High School	118	13,102	68.0	59.3	76.7	29	4,010	20.8	12.9	28.7
High School	250	25,774	69.4	63.9	74.8	54	5,127	13.8	9.7	17.9
Some College	206	17,980	65.1	59.2	71.0	48	4,277	15.5	11.0	19.9
College+	290	24,839	76.3	71.5	81.1	37	3,091	9.5	6.3	12.7
Medicaid Status										
Medicaid Ever	349	34,454	70.2	65.4	75.0	74	7,460	15.2	11.3	19.1
Medicaid Never	523	48,705	68.5	64.6	72.4	100	9,931	14.0	11.0	17.0

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 37b:
Prevalence of infant sleep position by maternal demographic characteristics,
2004 MI PRAMS

	Prone/Stomach				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	199	19,624	100.0		
Maternal age (years)					
<18	5	‡	‡	‡	‡
18-19	14	1,304	19	9	29
20-24	58	6,098	19	14	24
25-29	51	5,174	16	11	20
30-34	50	4,691	17	12	22
35-39	18	1,519	12	6	18
40+	3	‡	‡	‡	‡
Race/Ethnicity					
White, Non-Hispanic	146	14,130	16	14	19
Black, Non-Hispanic	35	3,157	18	11	26
Hispanic	7	702	11	3	19
Asian/Pacific Islander	3	‡	‡	‡	‡
American Indian	1	‡	‡	‡	‡
Education					
<High School	20	2,153	11	6	17
High School	63	6,248	17	12	21
Some College	57	5,349	19	14	24
College+	53	4,607	14	10	18
Medicaid Status					
Medicaid Ever	77	7,155	15	11	18
Medicaid Never	121	12,441	18	14	21

2004 MI PRAMS

‡ Data not shown due to small sample size

Table #38:
Prevalence of infant bed sharing,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,316	125,737	100.0		
Bed Sharing					
Never Sleeps Alone	270	26,664	21	19	24
Sometimes Sleeps Alone	212	20,241	16	14	18
Always Sleeps Alone	834	78,832	63	60	66
2004 MI PRAMS					

Table 39a:
Prevalence of infant bed sharing by maternal demographic characteristics,
2004 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	834	78,832	100.0			212	20,241	100		
Maternal age (years)										
<18	19	2,316	53	34	72	12	1,377	32	15	49
18-19	50	4,196	56	44	68	15	1,121	15	7	23
20-24	194	20,037	59	53	65	61	6,264	18	14	23
25-29	241	22,661	67	61	72	47	4,433	13	9	17
30-34	205	18,778	66	60	72	42	3,673	13	9	17
35-39	102	8,974	66	58	75	31	2,860	21	14	29
40+	23	1,869	53	33	73	4	‡	‡	‡	‡
Race/Ethnicity										
White, Non-Hispanic	685	62,180	69	66	72	139	13,577	15	13	18
Black, Non-Hispanic	63	6,964	37	28	45	44	4,140	22	14	29
Hispanic	36	4,251	61	48	74	13	1,088	16	7	25
Asian/Pacific Islander	17	1,626	54	34	73	7	‡	‡	‡	‡
American Indian	5	‡	‡	‡	‡	1	‡	‡	‡	‡
Education										
<High School	107	12,300	58	49	66	31	3,530	17	10	23
High School	242	23,758	61	55	67	62	6,983	18	13	23
Some College	203	17,769	63	57	69	54	4,478	16	12	20
College+	272	23,487	71	57	69	61	4,797	15	12	20
Insurance Status										
Medicaid Ever	318	30,442	58	53	63	90	9,059	17	14	21
Medicaid Never	514	48,336	67	63	70	122	11,182	15	13	18

2004 MI PRAMS

‡ Data not shown due to small sample size

Table 39b:
Prevalence of infant bed sharing by maternal demographic characteristics,
2004 MI PRAMS

	Always Sleeps Alone				
	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	Lower confidence interval	Upper confidence interval
Total	270	26,664	100.0		
Maternal age (years)					
<18	7	653	15	2	28
18-19	25	2,188	29	17	41
20-24	78	7,795	23	18	28
25-29	65	7,000	21	15	26
30-34	64	6,132	21	16	27
35-39	22	1,740	13	7	19
40+	9	1,155	33	13	52
Race/Ethnicity					
White, Non-Hispanic	153	14,299	16	13	19
Black, Non-Hispanic	80	7,953	42	33	51
Hispanic	16	1,603	23	12	35
Asian/Pacific Islander	10	871	29	10	47
American Indian	0	–	–	–	–
Education					
<High School	48	5,499	26	18	33
High School	88	8,165	21	16	26
Some College	63	6,055	21	16	27
College+	60	4,910	15	11	19
Insurance Status					
Medicaid Ever	134	12,929	25	20	29
Medicaid Never	133	13,215	18	15	21

2004 MI PRAMS

Table 40:
Prevalence of physical abuse prior to pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,297	123,730			
Physically Abused					
Not Abused	1,229	117,143	94.7	93.2	96.1
Abused	68	6,587	5.3	3.9	6.8
2004 MI PRAMS					

Table 41:
Person inflicting abuse among women abused prior to pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	68	6,587	100.0		
Abuser					
Abused by husband/ex-husband/partner/ex-partner	40	3,167	48.1	34.3	65.7
Abused by someone else	28	3,420	51.9	38.1	65.7
2004 MI PRAMS					

Table 42:
Prevalence of physical abuse during pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,309	124,658	100.0		
Physically Abused					
Not Abused	1,265	120,897	97.0	96.0	98.0
Abused	44	3,761	3.0	2.0	4.0
2004 MI PRAMS					

Table 43:
Person inflicting abuse among women abused during pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	44	3,761	100.0		
Abuser					
Abused by husband/ex-husband/partner/ex-partner	29	2,253	59.9	43.2	76.6
Abused by someone else	15	1,508	40.1	23.4	56.8
2004 MI PRAMS					

Table 44:
Prevalence of verbal abuse in the year prior to delivery,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,299	123,441	100.0		
Verbally Abused					
Not Verbally Abused	1,219	115,925	93.9	92.4	95.4
Verbally Abused	80	7,516	6.1	4.6	7.6
2004 MI PRAMS					

Table 45:
Prevalence of women hearing or reading about folic acid and its benefits,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,244	118,549	100.0		
Heard/read about folic acid					
Yes	970	91,080	76.8	74.0	79.6
No	274	27,469	23.2	20.4	26.0
2004 MI PRAMS					

Table 46:
Prevalence of women instructed, by a health care professional on the appropriate amount of folic acid to consume,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,233	117,380	100.0		
Instructed by healthcare professional					
Yes	770	72,251	61.6	58.4	64.7
No	463	45,129	38.4	35.3	41.6
2004 MI PRAMS					

Table 47:
Prevalence of multivitamin consumption in the month prior to pregnancy,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,315	125,685	100.0		
Multivitamin Consumption					
No multivitamin	720	70,142	55.8	52.7	58.9
1-3 times per week	108	9,703	7.7	6.1	9.4
4-6 times per week	86	8,707	6.7	5.3	8.6
Daily	401	37,133	29.5	26.7	32.4
2004 MI PRAMS					

Table 48:
Prevalence of folic acid awareness and/or instruction by a health care professional,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	1,198	114,286	100.0		
Awareness of folic acid/Instructed by healthcare professional					
Aware and Instructed	686	63,677	55.7	52.4	59.0
Aware, but not instructed	250	24,209	21.2	18.0	23.9
Instructed, but not aware	65	7,184	6.3	4.6	8.0
Neither instructed or aware	197	19,216	16.8	14.3	19.4

2004 MI PRAMS

Table 49a:
Multivitamin consumption in the month prior to pregnancy by folic acid awareness and/or instruction by
a healthcare professional,
2004 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	644	62,769				99	8,046			
Awareness of folic acid/Instructed by healthcare professional										
Aware and Instructed	310	28,943	45.5	41.1	49.8	56	4,949	7.8	5.5	10.1
Aware, but not instructed	140	14,064	58.1	51.2	65.0	28	2,517	10.4	6.2	14.6
Instructed, but not aware	45	5,270	73.4	61.7	85.0	5	DSU	DSU	DSU	DSU
Neither instructed or aware	149	14,492	75.4	68.1	82.7	10	580	3.0	0.7	5.4

2004 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, 2004 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	77	7,185				377	35,160			
Awareness of folic acid/Instructed by healthcare professional										
Aware and Instructed	52	5,023	7.9	5.5	10.2	267	24,711	38.8	34.6	43.1
Aware, but not instructed	19	2,162	8.9	4.6	13.2	63	5,466	22.6	17.0	28.2
Instructed, but not aware	1	DSU	DSU	DSU	DSU	14	1,311	18.2	8.5	28.0
Neither instructed or aware	5	DSU	DSU	DSU	DSU	33	3,672	19.1	12.3	25.9

2004 MI PRAMS

DSU: Data Statistically Unreliable

Table 50:
Prevalence of WIC participation during pregnancy among income eligible women, 2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total*	568	54,843	100.0		
WIC Participation During Pregnancy					
Yes	459	44,082	80.4	76.1	84.1
No	109	10,761	19.6	15.9	23.9

2004 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,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Total	556	54,200	100.0		
WIC Participation - Infant					
Enrolled	492	46,867	86.5	82.5	89.7
Not Enrolled	64	7,333	13.5	10.3	17.5

2004 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, whose infant did not participate in WIC,
2004 MI PRAMS

	Sample Frequency (n)	Weighted Frequency (N)	Weighted Percent	LCI	UCI
Reasons					
Other	27	2,918	41	28	56
Do not want to enroll infant	20	2,463	35	22	50
Infant not eligible	11	1,497	21	12	36
Unaware of WIC	6	692	9	4	22

2004 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*



Jennifer M. Granholm, Governor
Janet Olszewski, Director

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