

Reproductive Health and Family Planning

Preconception Health



Preconception health refers to the health and well-being of women prior to becoming pregnant either for the first time or with subsequent pregnancies. Improving the

preconception health of women can improve maternal and infant health outcomes.^{1,2,3}

Preconception health encompasses biomedical, behavioral, and social factors. In 2018, 57.6 percent of Michigan mothers delivering live births reported that their pregnancy was intended (MI PRAMS, 2018). Additionally, many women do not seek prenatal care until eight weeks of gestation or later, at which the time period that carries the highest risk for the fetus has already passed.³ Education and awareness of improved health of all women of reproductive age can help improve future pregnancy outcomes.

Preconception Health Indicators



A national committee of state program leaders and epidemiologists identified broad health domains related to preconception health, and proposed specific health indicators based on currently measurable data for women of reproductive age. These indicators are used to monitor public health status and help assess progress toward national and state goals. The information in these factsheets encompasses the Reproductive Health and Family Planning domains:

- Previous Preterm Birth
- Interpregnancy Intervals less than 18 months
- Intended Pregnancy
- Postpartum Contraceptive Use

Healthy People 2020 Goals

The Healthy People 2020 (HP 2020) Goals are a set of science-based goals created by a national multi-disciplinary group with the objective of improving the health and well-being of all people in the United States.³ In these factsheets, the HP 2020 Goal is represented by a dashed line and an arrow demonstrating whether it is more desirable to be above or below the goal.



Reproductive Health and Family Planning

Preconception Health Summary

Reproductive health and family planning are important contributing factors in improving the well-being of mothers and babies. Maternal and child health affects future generations and helps determine public health challenges.⁴ Preconception care, interconception care, and family planning services improve reproductive health and help reduce the risk of maternal and infant mortality and complications during pregnancy. Quality care also increases healthy outcomes for infants, mothers, and families.⁵ Preterm birth, interpregnancy intervals, and intended pregnancy are significant health indicators categorized under reproductive health and family planning. These indicators are impacted by multiple sociodemographic factors such as age, race, education, income, and insurance coverage.⁵ Data from the Michigan Pregnancy Risk Assessment Monitoring System (MI PRAMS) and the Michigan Department of Health and Human Services Division for Vital Records and Health Statistics are studied annually to assess the progress and needs in Michigan in regards to reproductive health and family planning.

Figure 1. Prevalence of women aged 18-44 years with a recent live birth who reported an intended pregnancy*, an interpregnancy interval less than 18 months*, or that their previous birth was more than three weeks premature# (*MI PRAMS, 2018 & #MI PRAMS, 2015)

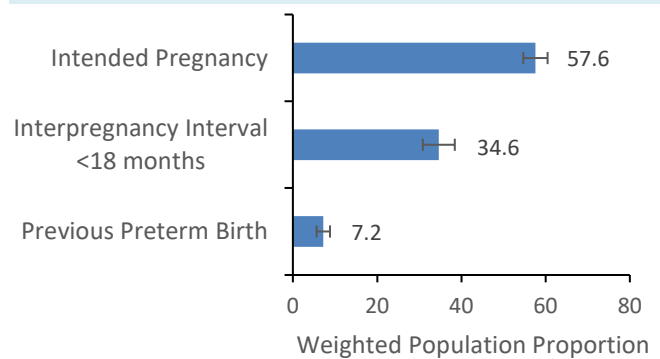
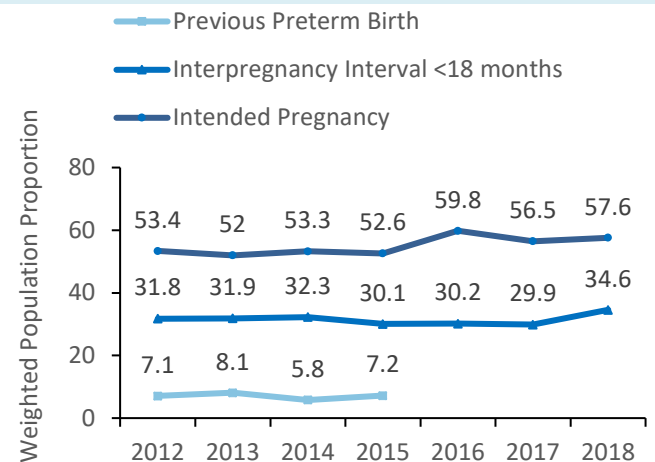


Figure 2. Trends of women aged 18-44 years with a recent live birth who reported an intended pregnancy from 2012-2018, an interpregnancy interval less than 18 months from 2012-2018, or that their previous live birth was more than three weeks premature from 2012-2015 (MI PRAMS)



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Previous Preterm Birth



Preterm birth is defined as a baby born less than 37 weeks of gestation. Babies who are born premature are at greater risk for

infant mortality, neurological disorders and cognitive challenges later in life.⁶ Preterm birth has also been associated with an increased risk of subsequent preterm birth and complications, and poor outcomes for both mother and baby.⁷ All of the causes behind preterm birth are not clear, but they are believed to be associated with socioeconomic status, prenatal care, maternal risk behaviors, infection, nutrition, preconception stress, and/or genetics.⁶

Questions Asked to PRAMS Survey Participants

1. Before you got pregnant with your new baby, did you ever have any other babies who were born alive?

If 'yes':

2. Was the baby just before your new one born earlier than 3 weeks before his or her due date?

Women who answered 'yes' to both questions were classified as having a previous preterm birth.

Preconception Health Indicators

Percentage of women aged 18-44 years having a live birth who had their previous live birth more than 3 weeks premature

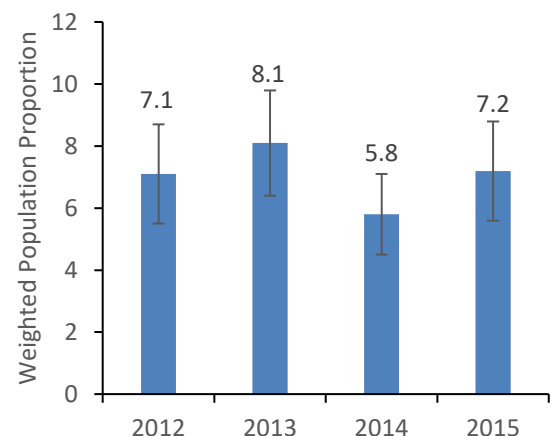
Healthy People 2020 Goals

Reduce total preterm births to 9.4 percent

Trends Over Time

The incidence of previous live birth born preterm increased by 1.4 percent among MI PRAMS respondents from 2012 to 2015.

Figure 3. Trend of women aged 18-44 years who had a recent live birth and reported that they had a previous live birth born preterm (MI PRAMS, 2012-2015)



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Previous Preterm Birth

Figure 4. Prevalence of previous live birth born preterm^a by maternal age (MI PRAMS, 2015)

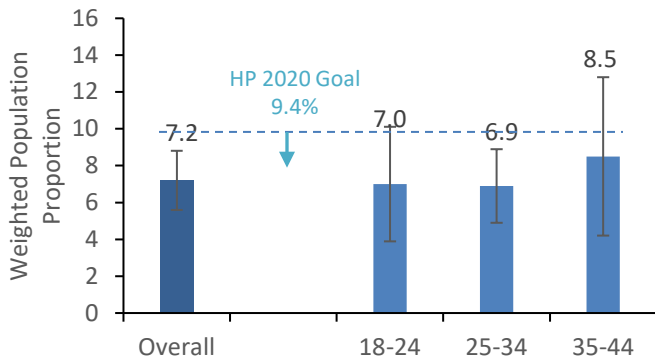


Figure 5. Prevalence of previous live birth born preterm^a by maternal race (MI PRAMS, 2015)

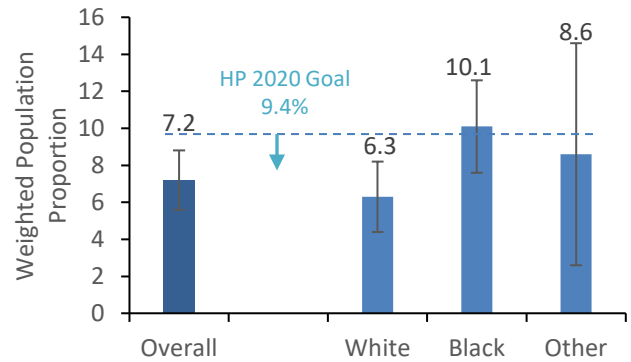


Figure 6. Prevalence of previous live birth born preterm^a by maternal education (MI PRAMS, 2015)

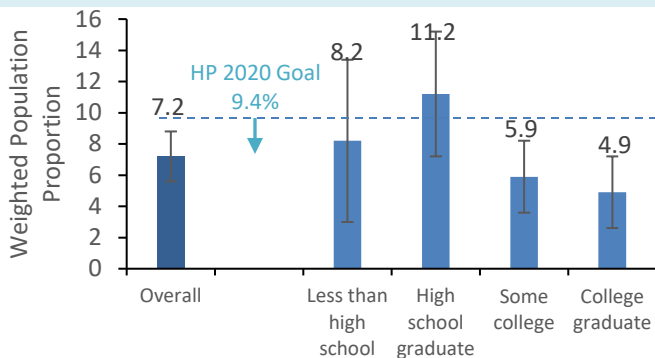


Figure 7. Prevalence of previous live birth born preterm^a by household income (MI PRAMS, 2015)

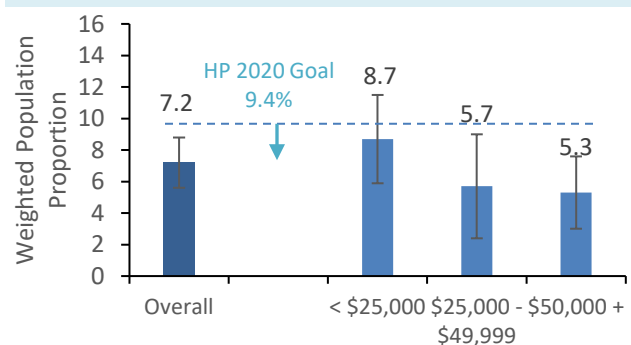
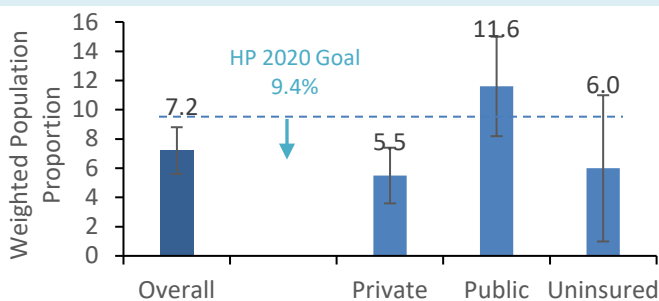


Figure 8. Prevalence of previous live birth born preterm^a by type of health insurance (MI PRAMS, 2015)



Key Points

Groups of women who have not yet reached the HP 2020 Goal include:

- Black women
- Women with high school educational attainment
- Women with public insurance before pregnancy

^aAmong women aged 18-44 years who had a live birth in 2015 that was not their first live birth, the proportion who reported having their last live birth more than three weeks before the due date.

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Interpregnancy Interval



Interpregnancy interval refers to the time between the end of a woman's previous pregnancy to the last normal

menses occurring before the start of the next pregnancy.⁸ Short interpregnancy intervals are associated with higher rates of adverse birth outcomes, such as preterm birth, low birth weight, and small for gestational age. There are also negative maternal outcomes associated with short intervals including folate depletion and other nutritional deficiencies, which is a plausible cause of the association between short intervals and poor outcomes for the birth.^{9,10} Studies show that interpregnancy interval of 18-23 months had the lowest risks of negative birth outcomes.¹¹ Family planning and prenatal care play an important role in the timing between pregnancies. There is strong evidence that indicates that the greater the exposure to prenatal care during the first pregnancy, the more likely the mother will have optimal spacing between the next pregnancy.¹⁰

Preconception Health Indicators

Percentage of women having a live birth who had less than an 18-month interpregnancy interval

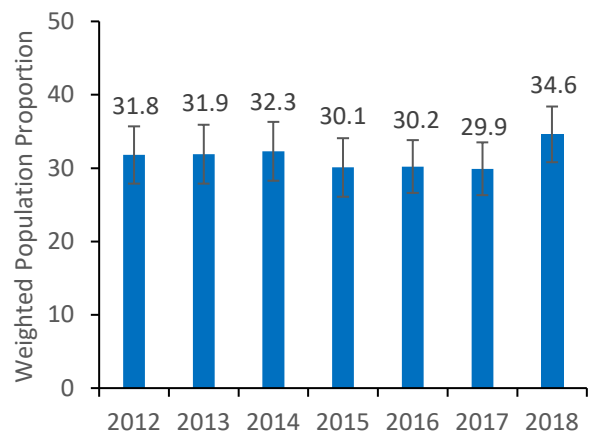
Healthy People 2020 Goals

Reduce the proportion of pregnancies conceived within 18 months of previous birth to 29.8 percent

Trends Over Time

The prevalence of live births with an interpregnancy interval less than 18 months has increased 8.8 percent from 2012 to 2018.

Figure 9. Trend of interpregnancy interval less than 18 months among women aged 18-44 years with a recent live birth (MI PRAMS, 2012-2018)



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Interpregnancy Interval

Figure 10. Prevalence of interpregnancy interval less than 18 months^a by maternal age (MI PRAMS, 2018)

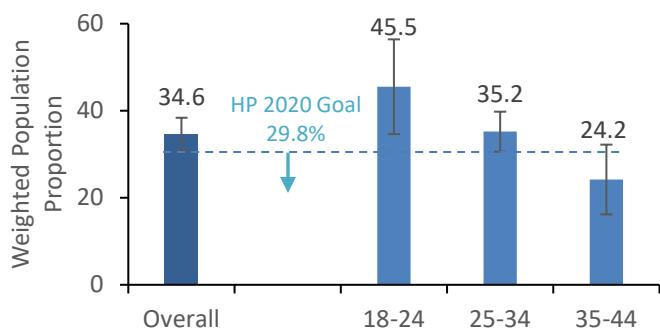


Figure 11. Prevalence of interpregnancy interval less than 18 months^a by maternal race (MI PRAMS, 2018)

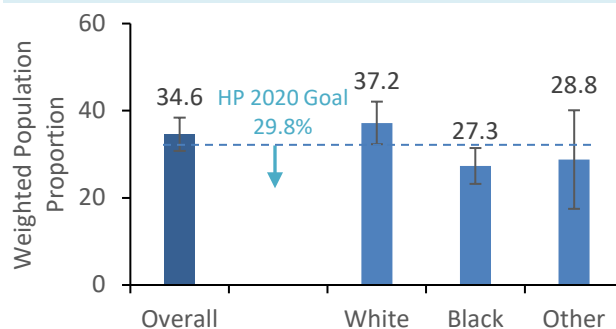


Figure 12. Prevalence of interpregnancy interval less than 18 months^a by maternal education (MI PRAMS, 2018)

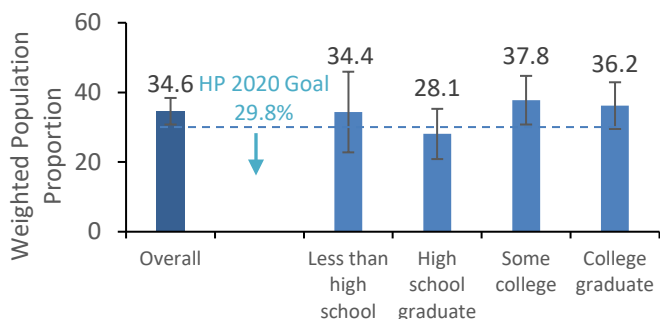


Figure 13. Prevalence of interpregnancy interval less than 18 months^a by household income (MI PRAMS, 2018)

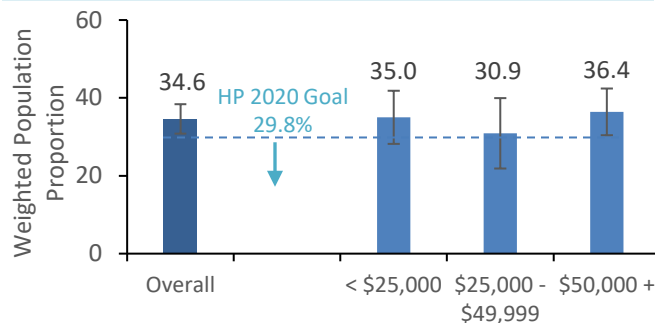
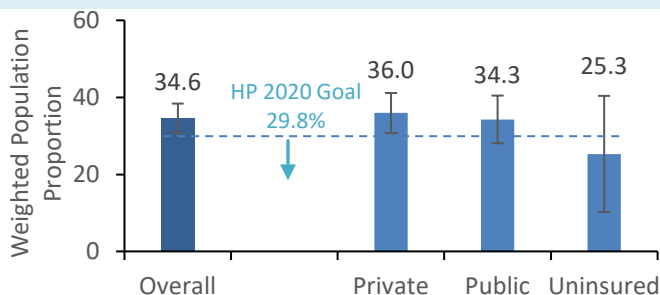


Figure 14. Prevalence of interpregnancy interval less than 18 months^a by type of health insurance (MI PRAMS, 2018)



Key Points

Groups of women who have met the HP 2020 Goal for interpregnancy intervals less than 18 months include:

- Women aged 35-44 years
- Black and other race women
- Women with high school educational attainment
- Women who are uninsured before pregnancy

^aAmong women aged 18-44 years who had a previous pregnancy.

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Pregnancy Intendedness

Pregnancy intendedness measures the number of women who have become pregnant at the time that they wished to conceive.⁴ There are many reasons for both child and mother as to why it is important to promote the prevention of unintended pregnancy. It is more likely that with an unintended pregnancy, a mother will wait longer to seek the appropriate prenatal care and continue to smoke and drink further into the pregnancy, which puts the child at risk for low birth weight and birth defects.^{4,12,13} Also, the mother is at greater risk to suffer within an abusive relationship and forego career and educational plans.¹² Pregnancy intendedness, on the other hand, provides many contributions to birth outcomes, such as necessary testing for STI's, folic acid supplementation, and the opportunity to make healthy lifestyle choices including smoking and alcohol cessation, exercise and healthy diet.¹³

Questions Asked to PRAMS Survey Participants

Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant?

- I wanted to be pregnant later
- I wanted to be pregnant sooner
- I wanted to be pregnant then
- I didn't want to be pregnant then or at any time in the future
- I wasn't sure what I wanted

Women who wanted to be pregnant sooner or then were classified as having an intended pregnancy.

Preconception Health Indicators

Percentage of women having a live birth who reported having an intended pregnancy

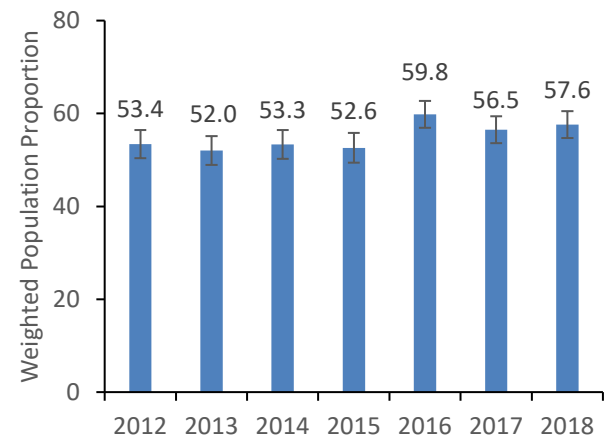
Healthy People 2020 Goals

Increase the proportion of pregnancies that are wanted to 56 percent

Trends Over Time

Prevalence of intended pregnancy increased 7.9 percent among MI PRAMS respondents from 2012 to 2018 and has exceeded the Healthy People 2020 Goal from 2016 to 2018.

Figure 15. Trend of intended pregnancy among women aged 18-44 years with a recent live birth (MI PRAMS, 2012-2018)



Reproductive Health and Family Planning

Pregnancy Intendedness

Figure 16. Prevalence of intended pregnancy^a by maternal age (MI PRAMS, 2018)

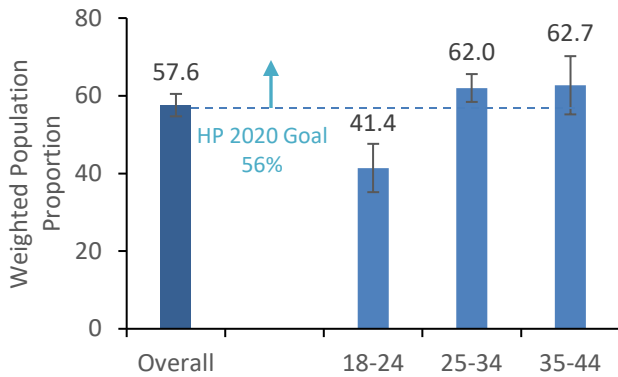


Figure 17. Prevalence of intended pregnancy^a by maternal race (MI PRAMS, 2018)

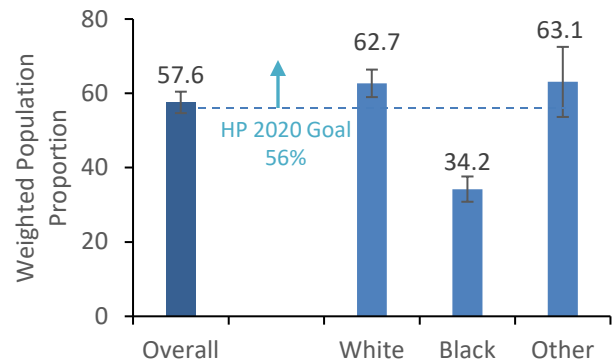


Figure 18. Prevalence of intended pregnancy^a by maternal education (MI PRAMS, 2018)

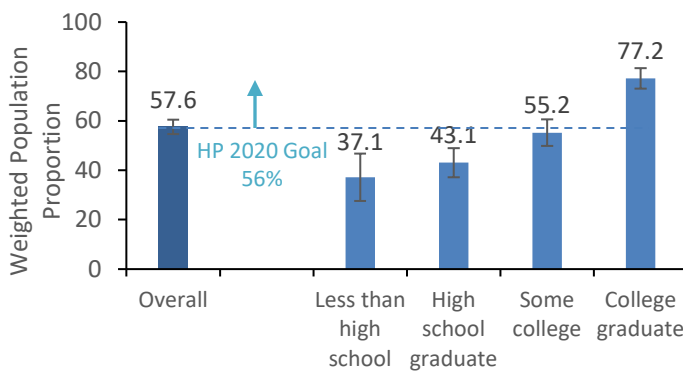


Figure 19. Prevalence of intended pregnancy^a by household income (MI PRAMS, 2018)

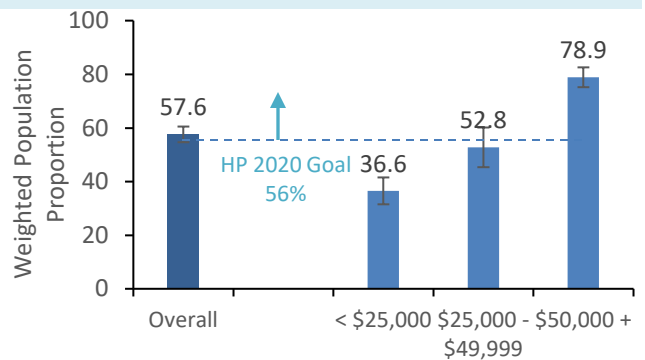
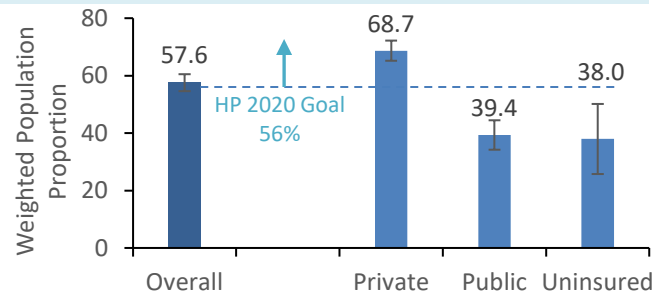


Figure 20. Prevalence of intended pregnancy^a by type of health insurance (MI PRAMS, 2018)



Key Points

The prevalence of intended pregnancy did not reach the HP 2020 Goal of increasing intended pregnancies to 56 percent among:

- Women aged 18-24 years
- Black women
- Women with some college or lower educational attainment
- Women with a household income <\$50,000/year
- Women who are uninsured or on public insurance before pregnancy

^aAmong women aged 18-44 years who had a live birth in 2018, the proportion who reported wanting to be pregnant just before conception or sooner

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Contraception

The correct and consistent use of contraception is a method of reducing unintended pregnancy and short pregnancy intervals.⁴ When a couple chooses to forego contraceptive methods, they have an 85 percent chance of conceiving within one year. Fifty-two percent of pregnancies that are not intended occur among 10.7 percent of women who do not use contraception.¹³ Cost, method-related difficulties, cultural norms, and a lack of reproductive health care for men contribute to the reasoning behind why women and couples do not use contraception.¹⁴ However, the promotion of effective contraception counseling from provider to patient has proven to be an important factor in decreasing unintended pregnancy.¹⁵ Physician counseling regarding contraceptive health is also important for women and couples who are in the postpartum period, especially for those who have had a previous unintended pregnancy or poor pregnancy outcome. Men and women of reproductive age should be encouraged to create reproductive life plans to help prevent unintended pregnancy and short pregnancy intervals.¹⁶

Healthy People 2020 Goals

Increase the proportion of females or their partners at risk of unintended pregnancy who used contraception at most recent sexual intercourse to 91.6 percent

Preconception Health Indicators

Percentage of women having a live birth who were not trying to get pregnant at the time of conception and neither they nor their partner were doing anything to prevent pregnancy

Questions Asked to PRAMS Survey Participants

- When you got pregnant with your new baby, were you trying to become pregnant?
- When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?

Women who answered 'no' to both questions were included in the numerator to determine this indicator.

Preconception Health Indicators

Percentage of women who have had a live birth who reported that they or their husband or partner were currently doing something to keep from getting pregnant in the postpartum period

Questions Asked to PRAMS Survey Participants

- Are you or your husband or partner doing anything now to keep from getting pregnant?

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Preconception Contraceptive Non-use

Figure 21. Prevalence of preconception contraceptive non-use^a by maternal age (MI PRAMS, 2018)

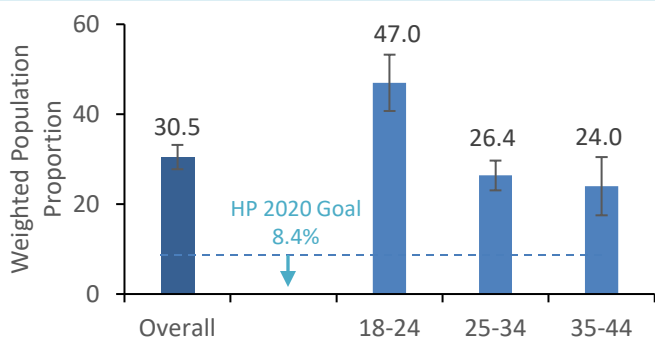


Figure 22. Prevalence of preconception contraceptive non-use^a by maternal race (MI PRAMS, 2018)

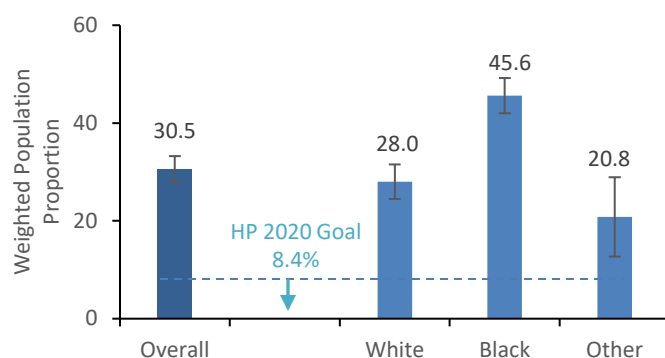


Figure 23. Prevalence of preconception contraceptive non-use^a by maternal education (MI PRAMS, 2018)

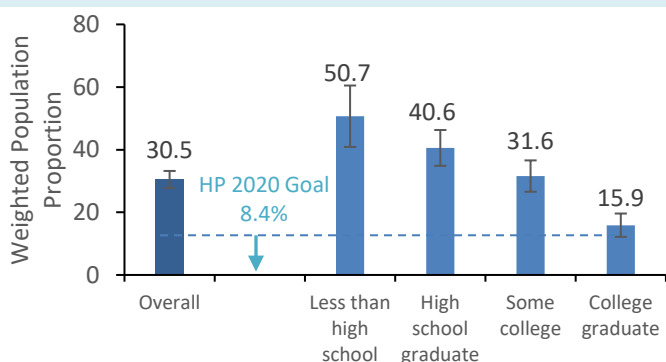


Figure 24. Prevalence of preconception contraceptive non-use^a by household income (MI PRAMS, 2018)

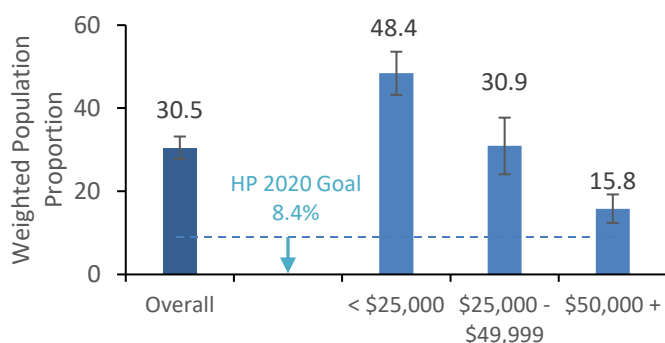
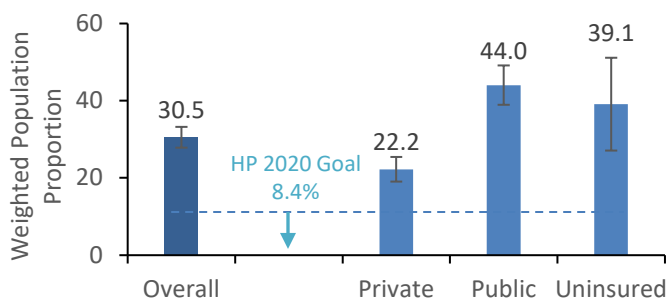


Figure 25. Prevalence of preconception contraceptive non-use^a by type of health insurance (MI PRAMS, 2018)



Key Points

All groups significantly exceeded the HP 2020 Goal of 8.4%, but the highest groups include:

- Women aged 18-24 years
- Black women
- Women with less than high school educational attainment
- Women with a household income <\$25,000/year
- Women who are uninsured or on public insurance

^aAmong women aged 18-44 years who had a live birth in 2018, the proportion who reported not trying to get pregnant at conception and that neither they nor their husband/partner were doing anything to keep from getting pregnant at time of conception.

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Postpartum Contraceptive Use

Figure 26. Prevalence of postpartum contraceptive use^a by maternal age (MI PRAMS, 2018)

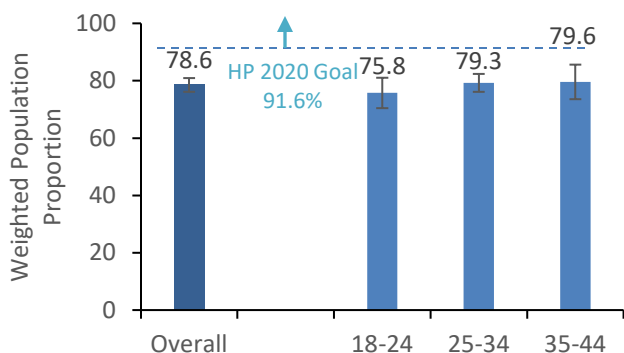


Figure 27. Prevalence of postpartum contraceptive use^a by maternal race (MI PRAMS, 2018)

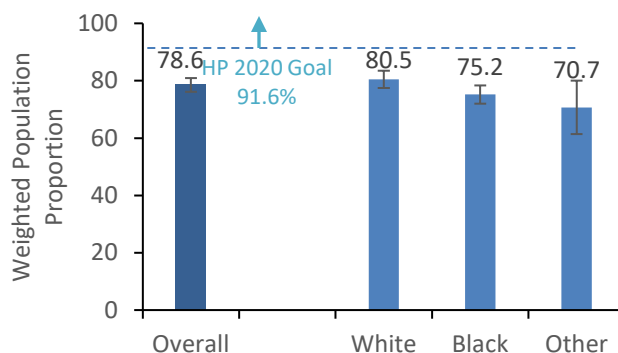


Figure 28. Prevalence of postpartum contraceptive use^a by maternal education (MI PRAMS, 2018)

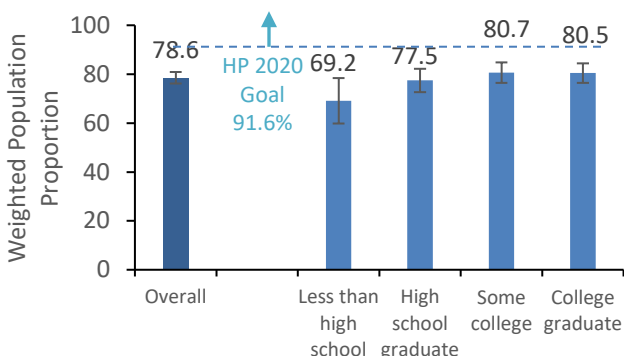


Figure 29. Prevalence of postpartum contraceptive use^a by household income (MI PRAMS, 2018)

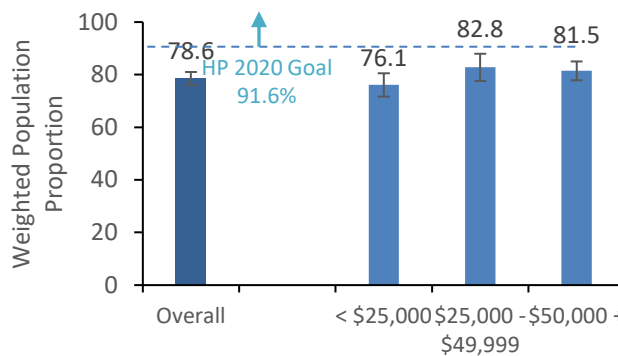
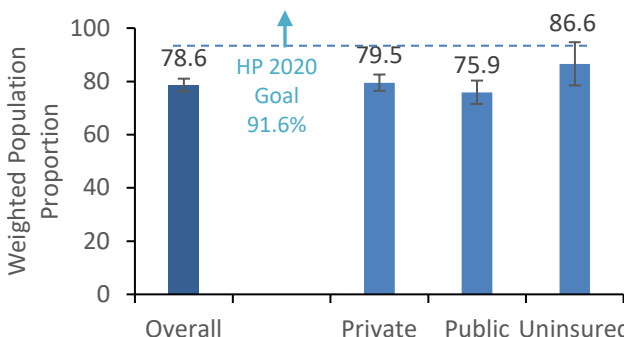


Figure 30. Prevalence of postpartum contraceptive use^a by type of health insurance (MI PRAMS, 2018)



Key Points

All groups are below the HP 2020 Goal for contraceptive use, but the lowest groups include:

- Women aged 18-24 years
- Women who are neither white or black
- Women with less than high school educational attainment
- Women with a household income <\$25,000/year
- Women who have public insurance

^aAmong women aged 18-44 years who had a live birth in 2018, the proportion who reported either they or their husband/partner were doing something to keep from getting pregnant after their previous birth.

Reproductive Health and Family Planning

Data Sources

Michigan Pregnancy Risk Assessment Monitoring System (MI-PRAMS)

PRAMS is a joint effort of the CDC and state health departments and is available in 47 states, two territories, and New York City. It is a mailed questionnaire sent to a stratified, random sample of women selected 2-3 months after a live birth, gathering data on maternal attitudes, experiences, health behaviors and conditions, and health care access. Telephone follow-up is conducted for women who do not respond by mail. Data are cross-sectional, self-reported, and subject to recall bias. However, yearly findings can be applied to 98 percent of residents who deliver a live singleton, twin, or triplet birth in Michigan.¹⁷



Suggested Citation

Tian Y, Haak P, Fussman C. (2021). Michigan Department of Health and Human Services. Preconception Health in Michigan: Reproductive Health and Family Planning.

Michigan Live Birth File

Data from the Michigan Live Birth File is available through the Division for Vital Records and Health Statistics. Records of births, deaths, and marriages that occurred in Michigan were filed with the state beginning in 1867. Vital records files can provide statistical data on many maternal and child health topics, such as live births, low birth weight, maternal morbidity, and many others.¹⁸



Reproductive Health and Family Planning

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