

PREGNANCY AND SMOKING

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Most people know that smoking is bad for a woman's health. Tobacco smoke exposure can make it harder for a woman to get pregnant (1), stay pregnant, and have a complication-free, full-term delivery (2). If a pregnant woman is exposed to tobacco smoke because she smokes or is around others who smoke, her newborn is more likely to be born prematurely, have a low birth weight (3) and have certain birth defects (4). As these infants grow-up, they are at increased risk for perinatal mortality (5), reduced lung capacity, asthma, brain development, behavioral problems, obesity, and type 2 diabetes (6).

Quitting smoking is hard, but it's one of the best ways a woman can protect herself and her baby. Many pregnant moms are successfully quitting. Nationally, birth certificates show that about one in eleven women were smokers shortly before they got pregnant and about one in four quit smoking before pregnancy. One out of every five moms who smoked during pregnancy was able to quit by their third trimester. Furthermore, moms who smoked throughout pregnancy were able to reduce the number of pre-pregnancy cigarettes they smoked by one-third (7).

13.3%
OF MICHIGAN MOMS REPORTED THAT THEY SMOKED CIGARETTES DURING THE LAST THREE MONTHS OF THEIR PREGNANCY
(MI PRAMS 2015)

FEWER MOMS ARE SMOKING BEFORE AND DURING PREGNANCY

- In 2015, three-quarters (75.0%) of Michigan moms began their pregnancies smoke-free, an increase of 8.2 percent since 2009. (Figures 1 and 2)
- About 9 out of 10 moms (86.7%) are not smoking in the last three months of pregnancy, an increase of 4.5 percent since 2009. (Figure 1)
- In 2015, non-Hispanic black moms (74.1%) and non-Hispanic white moms (74.2%) were equally likely to be non-smokers prior to pregnancy.

THE OVERALL CESSATION RATE DURING PREGNANCY IS UNCHANGED

- In any year between 2009 and 2015, about half as many moms were smoking in the last three months of pregnancy as were smoking in the three months before they became pregnant. (Figure 1)
- Non-Hispanic black moms have increased smoking cessation rates during pregnancy 2.5 percent per year on average between 2012 and 2015.

SOME GROUPS OF MOMS STILL HAVE HIGHER RISK

- Moms with household incomes under \$15,000 (2015, 27.3%) or with only a high school education (2015, 27.9%) are more than twice as likely to smoke during the last three months of pregnancy than Michigan moms overall (2015, 13.3%).

“Cigarettes took a toll - my baby was born underweight.”
—PRAMS MOM

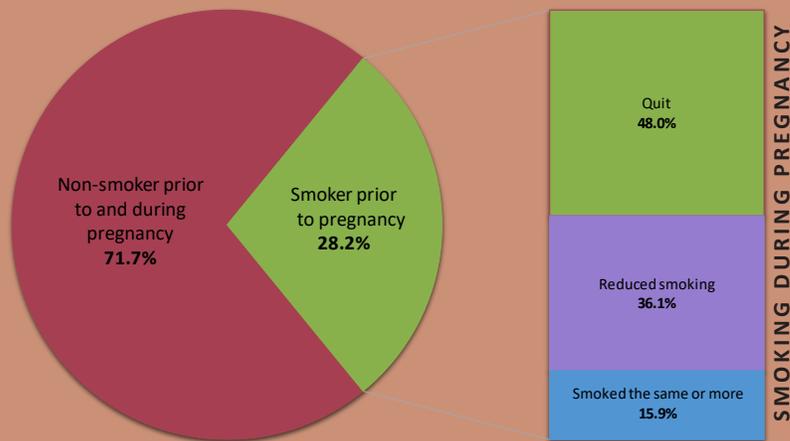
FIGURE 1: FEWER MOMS ARE SMOKING AROUND PREGNANCY*



*MI PRAMS 2012-2015

“I quit smoking cold turkey as soon as I found out I was pregnant and it was terrible. The group of doctors I used for prenatal care gave me little support and my pregnancy was miserable.”
—PRAMS MOM

FIGURE 2. MOST SMOKERS QUIT OR REDUCE SMOKING DURING PREGNANCY*



* MI PRAMS 2012-2015

MOMS CAN'T HEED ADVICE NOT OFFERED

- Between 2012 and 2015, close to 9 out of 10 women smoking in the three months before they became pregnant had prenatal conversations with a healthcare worker about the dangers of smoking.
- That leaves a little over 4,200 pregnant smokers per year who didn't recall discussing smoking risks with their prenatal healthcare worker.
- Although first-time moms (2012-2015, 28.5%) and moms for whom this is not their first baby (2012-2015, 28.7%) are equally likely to smoke before pregnancy, providers were 10.2 percent more likely to talk to first time moms about smoking than to a mom for whom this was not their first baby.

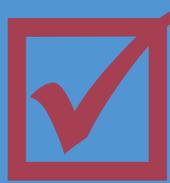
ADDRESSING SECONDHAND SMOKE

5.0%
of moms who were non-smokers prior to pregnancy spent their pregnancy in a home where smoking was allowed.

25.3%
of the occurrences of pregnancy smoke exposure happen not because the mom was smoking, but because smoking was allowed in her home.

16.9%
of non-smoking, but secondhand smoke exposed moms never discussed the dangers of cigarette smoke to themselves or their unborn baby with a healthcare provider during their pregnancy.

MI PRAMS 2012-2015



TAKE ACTION

Providers should ask about tobacco use at every prenatal visit. During the first prenatal visit, the American Council of Obstetrics and Gynecology (ACOG), recommends providers deliver the five smoking cessation A's:

- ASK** the mother-to-be about her smoking status at her first prenatal visit and follow up with her at subsequent visits.
- ADVISE** her about the risks of smoking to both herself and her baby.
- ASSESS** her willingness to attempt quitting and provide advice, assessment and motivational encouragement.
- ASSIST** her efforts by providing pregnancy-specific materials and tell her it is important to establishing smoke-free spaces, find a quitting buddy, and talk about the challenges of quitting. Offer her a direct referral to a quit line.
- ARRANGE** follow up visits to track progress toward quitting, congratulate success and reinforce steps towards quitting. Don't stop asking; incorporate motivational interviewing approaches for moms-to-be who are considering cessation.

“I had a very experienced well-respected doctor, and felt he gave me very good care and listened attentively to all my concerns, but certain information he didn't cover, specifically because I think he assumed I already knew [about] not smoking.” —PRAMS MOM

SELECTED PREGNANCY SMOKING CESSATION RESOURCES FOR PROVIDERS

- Michigan Tobacco Quit line Resources for Healthcare Professionals**, Referral information and free promotional material ordering for MDHHS smoking cessation program with special prenatal options available. https://www.michigan.gov/mdhhs/0,5885,7-339-71550_2955_2973_53242-275414--,00.html
- MDHHS Tobacco Cessation Tools for Professionals**, Links to resources about how to help your patients quit tobacco. https://www.michigan.gov/mdhhs/0,5885,7-339-71550_2955_2973-343324--,00.html
- ACOG E-cigarette Factsheet**, Information about the health hazards of electronic nicotine delivery systems and what to tell patients about vaping nicotine. <https://www.acog.org/-/media/Departments/Tobacco-Alcohol-and-Substance-Abuse/5AsENDSfactsheet.pdf?dmc=1&ts=20180606T2026168501>
- CDC Tobacco Use and Pregnancy**, Centers for Disease Control and Prevention facts on pregnancy smoke exposure risk. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/tobaccousepregnancy/index.htm>

Since 1987, Michigan PRAMS and the Centers for Disease Control and Prevention (CDC) have been telling the stories of Michigan's mothers and babies by collecting and disseminating population-based data on maternal attitudes and experiences before, during and after pregnancy that is not available from other sources.

To access or collaborate on Michigan PRAMS data, email MIPRAMS@michigan.gov.
Learn more about Michigan PRAMS and access this and other reports at <http://Michigan.gov/PRAMS>



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METHODOLOGY NOTES

Michigan's Pregnancy Risk Assessment Monitoring System (MI PRAMS) is an annual population-based survey of new mothers, that assesses behaviors and experiences around the time of pregnancy. MI PRAMS is a collaboration between the Centers for Disease Control and Prevention (CDC) and the Michigan Department of Health and Human Services (MDHHS). MI PRAMS operations are housed within the Maternal and Child Health Epidemiology Section, a part of the Division of Lifecourse Epidemiology and Genomics.

MI 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 is used to maximize response rates. Data collection for the 2012-2015 birth year was conducted by the Michigan State University Office for Survey Research, MDHHS, and the Bloustein Center for Survey Research at Rutgers University.

MI PRAMS surveys approximately one to two percent of resident mothers who have delivered a live born infant in Michigan within each calendar year. MI PRAMS uses a random sample stratified by birthweight (low and normal birthweight), race (black and non-black) and region (Southeast Michigan counties and all other counties). In 2012 and 2013 there were additional strata for black mothers in Wayne and Kent Counties. From 2012 to 2015, there was an additional stratum for black mothers in Calhoun County. This brief reports on Phase 7 of the PRAMS survey and includes responses from 7,257 mothers spanning birth years 2012 to 2015. Weighted response rates by year were 61 percent in 2012, 60 percent in 2013, 57 percent in 2014, and 55 percent in 2015. The Phase 7 question topic map can be found at:

http://www.michigan.gov/documents/mdch/MI_PRAMS_Topic_Map_366719_7.pdf

ANALYTIC DEFINITIONS

For the purposes of this analysis **smoking status** was defined as:

Non-smoker: Respondent did not smoke any cigarettes in the last two years.

Quit during pregnancy: Respondent was smoking one or more cigarette per day in the three months before pregnancy and not smoking in the last three months of pregnancy.

Reduced smoking during pregnancy: Number of cigarettes the respondent smoked per day in the three months before pregnancy was greater than the number of cigarettes per day in the last three months of pregnancy

Smoked the same or more: Number of cigarettes the respondent smoked per day in the three months before pregnancy was equal to or less than the number of cigarettes smoked per day in the last three months of pregnancy.

Resumed smoking during pregnancy: The respondent was not smoking in the three months before they became pregnant and smoking at least one cigarette per day in the last three months of pregnancy.

Cessation rate: The difference between the percentage of respondents smoking in the three months before they became pregnant and the percentage of respondents smoking in the last three months of their pregnancy.

Smoke exposure during pregnancy: The respondent's smoking status was reduced, smoke the same or less or resumed smoking during pregnancy or respondent's smoking status was non-smoker or quit during pregnancy but, during her pregnancy, the respondent lived in a home where smoking was allowed in some rooms or at some times or was permitted anywhere inside the home during her pregnancy.

Secondhand smoke exposure during pregnancy: Respondent's smoking status was non-smoker or quit during pregnancy but, during her pregnancy, the respondent lived in a home where smoking was allowed in some rooms or at some times or was permitted anywhere inside the home during her pregnancy.

An estimated 105 Michigan mothers per year (2012-2015, 0.1%) indicated they resumed smoking during pregnancy. These cases were not included in the analysis of smoking rates.

ANALYSIS QUESTIONS

During any of your prenatal care visits, did a doctor, nurse or healthcare worker talk with you about any of the things listed below? How smoking during pregnancy could affect my baby. (*No, Yes*)

Have you smoked any cigarettes in the past two years? (*No, Yes*)

(*Asked if mom was smoking in the last two years*) In the three months before you got pregnant, how many cigarettes did you smoke on an average day? (*41 cigarettes or more, 21-40 cigarettes, 11-20 cigarettes, 6-10 cigarettes, 1-5 cigarettes, Less than 1 cigarette, I didn't smoke then*)

(*Asked if mom was smoking in the last two years*) In the last three months of your pregnancy, how many cigarettes did you smoke on an average day? (*41 cigarettes or more, 21-40 cigarettes, 11-20 cigarettes, 6-10 cigarettes, 1-5 cigarettes, Less than 1 cigarette, I didn't smoke then*)

Which of the following statements best describes the rules about smoking inside your home during your most recent pregnancy, even if no one who lived in your home was a smoker? (*No one was allowed to smoke anywhere inside my home, Smoking was allowed in some rooms or at some times, Smoking was permitted anywhere inside my home*)

RECOMMENDED CITATION

Raykov, A., Hardy, J., Haak, P. (2018) *A Michigan PRAMS Brief for Programs and Providers: Pregnancy and Smoking*, 1(3) Lansing, MI: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.