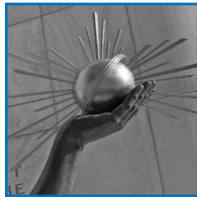




PRAMS Regional Report



Telling
the story
of Michigan's
moms
and
babies.



Wayne County and the City of Detroit

Birth Years 2012-2015



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Introduction to the 2012-2015 City of Detroit and Wayne County regional PRAMS data set

Michigan's Pregnancy Risk Assessment Monitoring System (MI PRAMS) is an annual population-based survey of new mothers, assessing 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 Lifecourse Epidemiology and Genomics Division.

MI PRAMS utilizes a mixed-mode methodology to gather information from women selected for the survey. This combination mail and telephone survey methodology is used to maximize response rates. The weighted response rates were 61 percent for 2012, 60 percent for 2013, 57 percent for 2014, and 55 percent for 2015.

MI PRAMS surveys approximately 1-2 percent of resident mothers who have delivered a live born infant in Michigan within each calendar year. MI PRAMS mothers are selected using a stratified random sample of live birth certificates. In a typical PRAMS year, women are selected from one of five strata:

- Low birth weight (LBW) infants
- Normal birth weight infants (NBW), black mothers, Southeast Michigan
- NBW infants, black mothers, rest of Michigan
- NBW infants, all other mothers, Southeast Michigan
- NBW infants, all other mothers, rest of Michigan

To create PRAMS data sets representing the City of Detroit, Wayne County (excluding Detroit), and the rest of Michigan, the different MI PRAMS sampling strata for each birth year were reorganized into the following four new strata:

- LBW infants, black mothers
- LBW infants, all other mothers
- NBW infants, black mothers
- NBW infants, all other mothers

Mothers within each region who completed MI PRAMS were reassigned into one of these four new strata. Their responses were re-weighted to reflect the experience of other mothers in their respective regions for a given birth year. To obtain the necessary precision to make comparisons between regions, four years of survey data were aggregated together to form a single data set.



Analytic notes: interpretation of tables and graphs, confidence intervals, relative standard error, and comparisons between groups

PRAMS results are most often reported as a weighted percentage. Individual respondents are given an analytic weight so that the sum of all respondents is approximately equal to the total number of live births for the region and time specified. More accurately, the graphs and tables included here report the weighted proportion of mothers of live births using the SAS 9.4 survey procedures suite. The numbers reported are cumulative across birth years 2012-2015.

Each table within this report contains the following statistics. The **sample frequency** represents the number of respondents (unweighted) who gave an answer of interest to a survey question. The **weighted frequency** is the number of mothers of live births across the whole 2012-2015 period those responders represent. The **weighted percent**, also referred to as the point estimate, is the approximate proportion of all mothers of live births for the state or region who gave the answer of interest. The weighted frequency and weighted percent are estimates of what is truly happening at a population level.

PRAMS employs a stratified, randomly selected sample to describe the experiences of Michigan mothers. When using a subset of randomly selected women to represent an entire population, there will be some statistical uncertainty as to how well the estimate represents the population of interest. Two columns quantify this uncertainty - the 95% confidence interval (95% CI) and the relative standard error (RSE).

The **95% confidence interval (95% CI)** describes the range in which the actual population value is most likely to be found. A narrow CI indicates a high degree of statistical precision in an estimate; a broad CI indicates more statistical uncertainty in an estimate. The number of respondents has a direct effect on CIs - data at the state-level will have more respondents and narrower CIs. Sub-state regions and demographic subgroups that have fewer respondents will have wider CIs. Comparing the overlap of confidence intervals for two estimates is an imperfect substitute for tests of statistical significance. Many results for statistical comparison tests are included in this report. Typical tests for significance may compare one individual region against a pooled estimate for all other regions combined (i.e. Detroit mothers vs mothers in Out Wayne and the rest of Michigan together) or compare one region against each other region individually (i.e. Detroit vs Out Wayne only; Detroit vs the rest of Michigan, etc.).

Within select graphs a horizontal dashed line indicates the **state-level estimate** and allows for an informal visual comparison **between state and regional estimates**. These are not meant for formal significance testing between any sub-state regions and the state-level estimates. Results of significance testing for individual regions versus all other combined regions are included for each topic reported here.

The **relative standard error (RSE)** is another important indicator of statistical reliability for a point estimate. The RSE is calculated by dividing the standard error for an estimate by the estimate itself and then multiplying it by 100. Estimates with a smaller RSE are more reliable than estimates with a large RSE. Point estimates with RSE values below 30 percent are ideal; point estimates with RSE values between 30 percent and 50 percent are interpreted with more caution. Point estimates with an RSE above 50 percent are suppressed.

The **Rao-Scott chi-square test** examines associations between two or more categorical variables while adjusting for complex study designs. Rao-Scott chi-squares were employed to adjust for the distribution of survey weights in PRAMS data. Abbreviations used in chi-square tables include Pr (probability), DF (degrees of freedom), Num (numerator) and Dem (denominator).

**Table 1. Distribution of selected maternal characteristics in Detroit,
MI PRAMS 2012-2015**

| Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------------------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Maternal Age | | | | | |
| <20 Years | 118 | 4,473 | 11.4 | 9.3-13.6 | 9.7 |
| 20-29 Years | 586 | 23,690 | 60.5 | 57.0-64.1 | 4.6 |
| 30+ Years | 281 | 10,980 | 28.1 | 24.8-31.3 | 6.0 |
| Race/Ethnicity | | | | | |
| White, non-Hispanic | 27 | 3,371 | 8.6 | 6.1-11.1 | 15.0 |
| Black, non-Hispanic | 919 | 31,855 | 81.4 | 80.4-82.4 | 2.8 |
| Other | 39 | 3,917 | 10.0 | 7.5-12.5 | 12.9 |
| Education | | | | | |
| <High School | 229 | 9,949 | 25.8 | 22.4-29.2 | 6.7 |
| HS Grad/GED | 377 | 14,961 | 38.8 | 35.3-42.3 | 4.6 |
| Some College | 306 | 11,150 | 28.9 | 25.8-32.1 | 5.5 |
| College Degree+ | 60 | 2,504 | 6.5 | 4.6-8.4 | 14.5 |
| Pre-Pregnancy Insurance Status | | | | | |
| Uninsured | 134 | 5,510 | 14.6 | 11.9-17.3 | 9.5 |
| Medicaid/Public | 577 | 23,483 | 62.1 | 58.6-65.7 | 4.8 |
| Private | 239 | 8,816 | 23.3 | 20.3-26.3 | 6.6 |
| Marital Status | | | | | |
| Married | 165 | 7,371 | 18.8 | 15.9-21.8 | 8.0 |
| Other | 819 | 31,740 | 81.2 | 78.2-84.1 | 8.0 |
| Parity | | | | | |
| No Prior Live Births | 376 | 14,491 | 37.0 | 33.6-40.5 | 4.8 |
| 1 | 246 | 10,029 | 25.6 | 22.5-28.8 | 6.3 |
| 2+ | 363 | 14,623 | 37.4 | 33.8-40.9 | 4.8 |
| Last Year's Household Income | | | | | |
| <\$15,000 | 506 | 20,237 | 59.7 | 56.0-63.4 | 4.7 |
| \$15,001-\$22,000 | 155 | 5,731 | 16.9 | 14.2-19.6 | 8.1 |
| \$22,001-\$37,000 | 110 | 4,337 | 12.8 | 10.2-15.4 | 10.3 |
| \$37,001-\$56,000 | 51 | 1,864 | 5.5 | 3.8-7.2 | 15.7 |
| \$56,001+ | 44 | 1,723 | 5.1 | 3.4-6.8 | 17.1 |

**Table 2. Distribution of selected maternal characteristics in Outer Wayne County,
MI PRAMS 2012-2015**

| Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------------------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Maternal Age | | | | | |
| <20 Years | 44 | 2,924 | 5.6 | 3.6-7.6 | 18.3 |
| 20-29 Years | 371 | 26,940 | 51.2 | 46.9-55.5 | 4.5 |
| 30+ Years | 323 | 22,749 | 43.2 | 39.0-47.5 | 5.1 |
| Race/Ethnicity | | | | | |
| White, non-Hispanic | 365 | 34,720 | 66.1 | 62.7-69.4 | 5.0 |
| Black, non-Hispanic | 284 | 9,687 | 18.4 | 17.8-19.1 | 1.7 |
| Other | 87 | 8,147 | 15.5 | 12.2-18.8 | 11.0 |
| Education | | | | | |
| <High School | 63 | 5,370 | 10.3 | 7.3-13.2 | 14.5 |
| HS Grad/GED | 155 | 11,564 | 22.1 | 18.3-25.9 | 8.7 |
| Some College | 295 | 20,017 | 38.2 | 34.1-42.4 | 5.5 |
| College Degree+ | 218 | 15,415 | 29.4 | 25.6-33.3 | 6.7 |
| Pre-Pregnancy Insurance Status | | | | | |
| Uninsured | 87 | 6,505 | 12.7 | 9.7-15.7 | 12.0 |
| Medicaid/Public | 209 | 14,133 | 27.5 | 23.6-31.4 | 7.3 |
| Private | 423 | 30,745 | 59.8 | 55.5-64.1 | 5.5 |
| Marital Status | | | | | |
| Married | 415 | 31,511 | 59.9 | 55.7-64.1 | 5.3 |
| Other | 323 | 21,102 | 40.1 | 35.9-44.3 | 5.3 |
| Parity | | | | | |
| No Prior Live Births | 312 | 21,618 | 41.1 | 36.8-45.3 | 5.3 |
| 1 | 218 | 15,266 | 29.0 | 25.1-32.9 | 6.9 |
| 2+ | 208 | 15,729 | 29.9 | 25.9-33.9 | 6.8 |
| Last Year's Household Income | | | | | |
| <\$15,000 | 171 | 10,594 | 22.4 | 18.7-26.1 | 8.4 |
| \$15,001-\$22,000 | 94 | 6,298 | 13.3 | 10.3-16.4 | 11.7 |
| \$22,001-\$37,000 | 88 | 6,314 | 13.4 | 10.2-16.6 | 12.1 |
| \$37,001-\$56,000 | 92 | 6,903 | 14.6 | 11.3-17.9 | 11.4 |
| \$56,001+ | 225 | 17,157 | 36.3 | 32.0-40.6 | 6.0 |

Table 3. Distribution of selected maternal characteristics in the rest of Michigan, MI PRAMS 2012-2015

| Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------------------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Maternal Age | | | | | |
| <20 Years | 433 | 210,88 | 6.0 | 5.0-6.9 | 8.1 |
| 20-29 Years | 3,086 | 191,659 | 54.2 | 52.3-56.1 | 2.1 |
| 30+ Years | 2,012 | 140,918 | 39.8 | 38.0-41.7 | 2.4 |
| Race/Ethnicity | | | | | |
| White, non-Hispanic | 2,707 | 27,3205 | 77.5 | 76.2-78.8 | 2.9 |
| Black, non-Hispanic | 2,354 | 39,491 | 11.2 | 10.8-11.6 | 1.7 |
| Other | 456 | 39,749 | 11.3 | 10.1-12.5 | 5.6 |
| Education | | | | | |
| <High School | 644 | 36,126 | 10.3 | 9.0-11.5 | 6.2 |
| HS Grad/GED | 1,465 | 84,656 | 24.0 | 22.4-25.7 | 3.6 |
| Some College | 1,918 | 113,877 | 32.3 | 30.6-34.1 | 2.8 |
| College Degree+ | 1,486 | 117,599 | 33.4 | 31.6-35.1 | 2.7 |
| Pre-Pregnancy Insurance Status | | | | | |
| Uninsured | 682 | 51,175 | 14.8 | 13.4-16.3 | 5.0 |
| Medicaid/Public | 1,833 | 80,298 | 23.3 | 21.7-24.9 | 3.5 |
| Private | 2,847 | 213,163 | 61.9 | 60.0-63.7 | 2.5 |
| Marital Status | | | | | |
| Married | 2,718 | 218,276 | 61.7 | 59.9-63.6 | 2.5 |
| Other | 2,812 | 135,386 | 38.3 | 36.4-40.1 | 2.5 |
| Parity | | | | | |
| No Prior Live Births | 2,233 | 144,797 | 40.9 | 39.1-42.8 | 2.3 |
| 1 | 1,707 | 115,717 | 32.7 | 30.9-34.5 | 2.8 |
| 2+ | 1,590 | 93,111 | 26.3 | 24.7-28.0 | 3.2 |
| Last Year's Household Income | | | | | |
| <\$15,000 | 1,649 | 75,405 | 22.9 | 21.2-24.50 | 3.7 |
| \$15,001-\$22,000 | 697 | 42,166 | 12.8 | 11.4-14.1 | 5.4 |
| \$22,001-\$37,000 | 693 | 48,822 | 14.8 | 13.3-16.3 | 5.2 |
| \$37,001-\$56,000 | 613 | 43,977 | 13.3 | 12.0-14.6 | 5.0 |
| \$56,001+ | 1,434 | 119,619 | 36.2 | 34.4-38.1 | 2.6 |

Explanation of Pregnancy Intention, Pregnancy Timing, and Contraceptive Behavior

Michigan PRAMS asks women about several similar yet distinct concepts around pregnancy intention and contraceptive behavior. To measure pregnancy intention, PRAMS asks mothers to think about the time just before they became pregnant. Mothers report how they felt about becoming pregnant. Response options include wanting to be pregnant:

- sooner
- right at that time
- later
- not then or at any time in the future
- not sure what she wanted

Mothers who wanted to be pregnant sooner or right when they got pregnant, combined, make up women with an "intended" pregnancy. Mothers who wanted to be pregnant either never, sometime in the future, or were not sure what they wanted had pregnancies that are classified as "unintended." **Table 4** and **Table 5** report pregnancy intention and pregnancy timing for Michigan mothers.

Contraceptive behavior is distinct from pregnancy intention in that it asks mothers to report not just their feelings about becoming pregnant but their actions at the time before their most recent pregnancy. To capture this concept mothers are first asked whether they were trying to conceive at the time they became pregnant. Mothers who were not trying to conceive are then asked whether they were using any contraceptive practices or engaged in any behavior to prevent pregnancy at the time they became pregnant. **Table 6** reports the prevalence of any contraceptive use / practices at the time of conception among women who told PRAMS that they were not trying to conceive. Women who were not using contraceptives told us their reasons in **Table 7**.

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

Response: Mothers who wanted to be pregnant sooner or right when they got pregnant, combined, make up women with an "intended" pregnancy. Mothers who wanted to be pregnant either never or sometime in the future had pregnancies that are classified as "unintended."

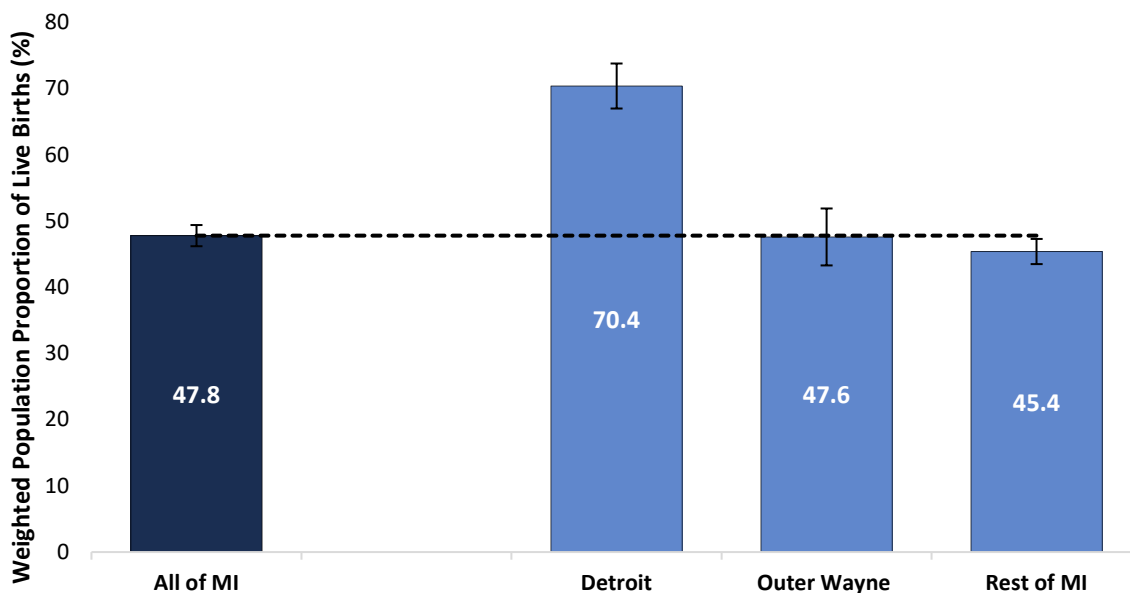
Table 4. Unintended Pregnancy in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Unintended Pregnancy | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 705 | 27,047 | 70.4 | (67.0-73.8) | 5.9 |
| Outer Wayne | Yes | 353 | 24,832 | 47.6 | (43.3-51.9) | 4.6 |
| Rest of MI | Yes | 2,937 | 158,264 | 45.4 | (43.5-47.3) | 2.1 |
| All of MI | Yes | 3,995 | 210,144 | 47.8 | (46.2-49.4) | 1.7 |

Table 4a. Rao-Scott Chi-Square Test, Unintended Pregnancy by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 100.74 | 2 | <0.0001 | 50.37 | 2 | 14,264 | <0.0001 |
| Detroit vs Outer Wayne | 58.81 | 1 | <0.0001 | 58.81 | 1 | 1,685 | <0.0001 |
| Detroit vs Rest MI | 130.30 | 1 | <0.0001 | 130.30 | 1 | 6,407 | <0.0001 |
| Outer Wayne vs Rest MI | 0.85 | 1 | 0.3568 | 0.85 | 1 | 6,172 | 0.3568 |

Figure 4. Unintended Pregnancy by geographic location, MI PRAMS 2012-2015



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

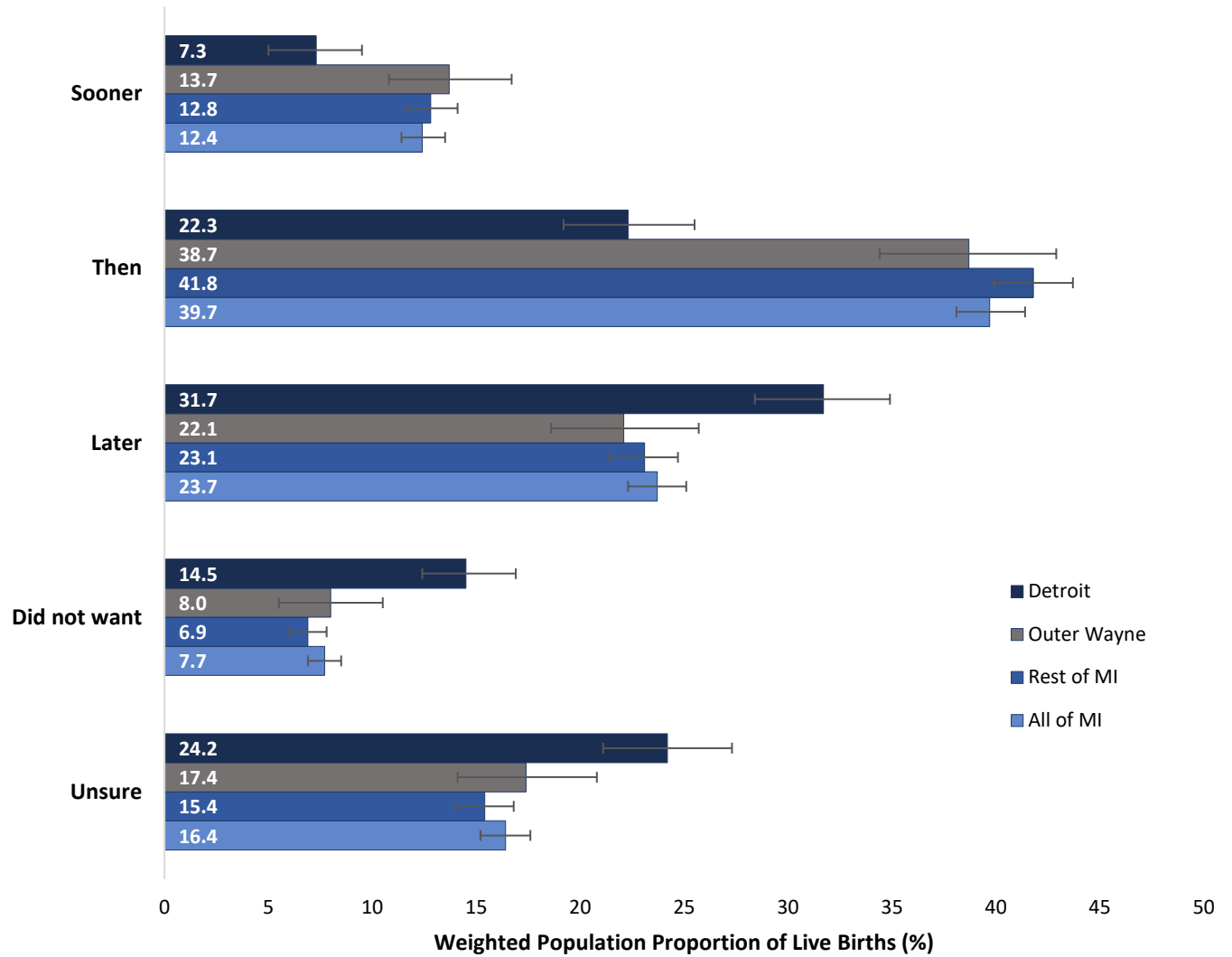
Table 5. Pregnancy Intention in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Intention | Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|--------------|-------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Later | Detroit | 317 | 12,169 | 31.7 | 28.4-34.9 | 5.3 |
| | Outer Wayne | 175 | 11,553 | 22.1 | 18.6-25.7 | 8.1 |
| | Rest of MI | 1,410 | 80,495 | 23.1 | 21.4-24.7 | 3.6 |
| | All of MI | 1,902 | 104,217 | 23.7 | 22.3-25.1 | 3.0 |
| Sooner | Detroit | 54 | 2,788 | 7.3 | 5.0-9.5 | 16.0 |
| | Outer Wayne | 104 | 7,172 | 13.7 | 10.8-16.7 | 11.0 |
| | Rest of MI | 627 | 44,765 | 12.8 | 11.6-14.1 | 4.9 |
| | All of MI | 785 | 54,725 | 12.4 | 11.4-13.5 | 4.4 |
| Then | Detroit | 205 | 8,572 | 22.3 | 19.2-25.5 | 7.2 |
| | Outer Wayne | 272 | 20,178 | 38.7 | 34.4-42.9 | 5.6 |
| | Rest of MI | 1,887 | 145,951 | 41.8 | 39.9-43.7 | 2.3 |
| | All of MI | 2,364 | 174,701 | 39.7 | 38.1-41.4 | 2.1 |
| Did not want | Detroit | 149 | 5,581 | 14.5 | 12.4-16.9 | 8.4 |
| | Outer Wayne | 58 | 4,186 | 8.0 | 5.5-10.5 | 15.8 |
| | Rest of MI | 548 | 23,966 | 6.9 | 6.0-7.8 | 6.7 |
| | All of MI | 755 | 33,732 | 7.7 | 6.9-8.5 | 5.3 |
| Unsure | Detroit | 239 | 9,298 | 24.2 | 21.1-27.3 | 6.5 |
| | Outer Wayne | 120 | 9,093 | 17.4 | 14.1-20.8 | 9.9 |
| | Rest of MI | 979 | 53,804 | 15.4 | 14.0-16.8 | 4.7 |
| | All of MI | 1,338 | 72,195 | 16.4 | 15.2-17.6 | 3.8 |

Table 5a. Rao-Scott Chi-Square Test, Pregnancy Intention by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 110.70 | 8 | <0.0001 | 13.84 | 8 | 57056 | <0.0001 |
| Detroit vs Outer Wayne | 59.09 | 4 | <0.0001 | 14.77 | 4 | 6740 | <0.0001 |
| Detroit vs Rest MI | 140.77 | 4 | <0.0001 | 35.19 | 4 | 25628 | <0.0001 |
| Outer Wayne vs Rest MI | 3.27 | 4 | 0.5135 | 0.82 | 4 | 24688 | 0.5136 |

Figure 5. Pregnancy Intention in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question 1: When you got pregnant with your new baby, were you trying to get pregnant?

Survey Question 2: When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?

Response: If a mother answers “no” to question 1, she is included in the responses below.

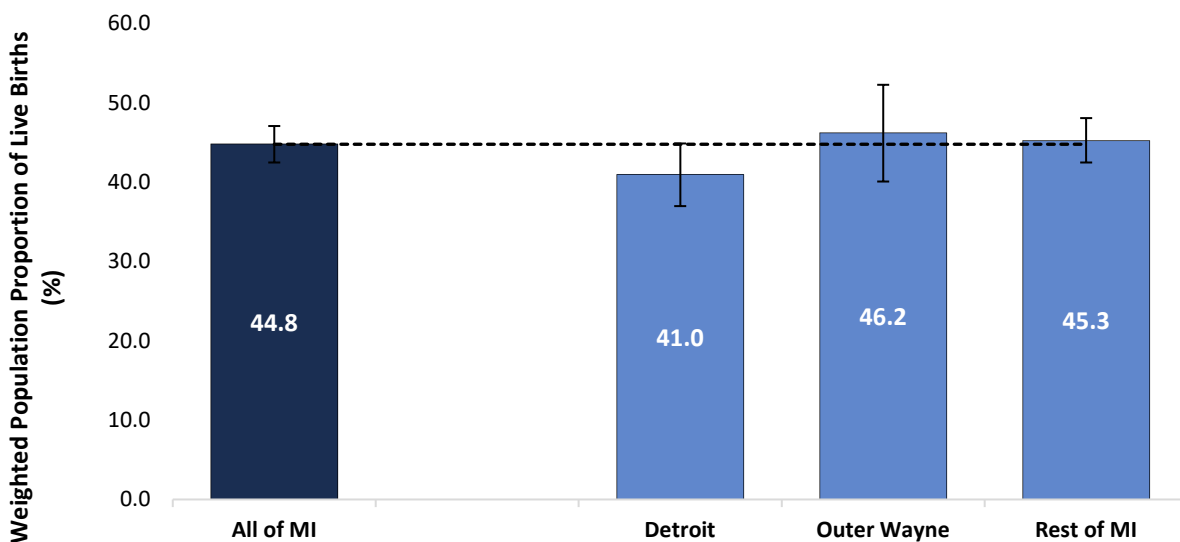
Table 6. Use of birth control when not trying to get pregnant in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Using Birth Control? | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | No | 432 | 16,520 | 59.0 | 55.1-63.0 | 4.9 |
| | Yes | 304 | 11,475 | 41.0 | 37.0-44.9 | 4.9 |
| Outer Wayne | No | 208 | 14,316 | 53.8 | 47.7-59.9 | 6.7 |
| | Yes | 179 | 12,317 | 46.2 | 40.1-52.3 | 6.7 |
| Rest of MI | No | 1,694 | 90,031 | 54.7 | 51.9-57.5 | 3.2 |
| | Yes | 1,371 | 74,462 | 45.3 | 42.5-48.1 | 3.2 |
| All of MI | No | 2,334 | 120,867 | 55.2 | 52.9-57.5 | 2.6 |
| | Yes | 1,854 | 98,253 | 44.8 | 42.5-47.1 | 2.6 |

Table 6a. Rao-Scott Chi-Square Test, Use of birth control when not trying to get pregnant, MI PRAMS 2012-2015

| Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|----------------------|----|----------|---------|--------|--------|--------|
| 2.39 | 2 | 0.3032 | 1.19 | 2 | 8352 | 0.3033 |

Figure 6. Use of birth control when not trying to get pregnant by geographic location, MI PRAMS 2012-2015



Survey Question 1: When you got pregnant with your new baby, were you trying to get pregnant?

Survey Question 2: When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?

Survey Question 3: What were your reasons or your husband's or partner's reasons for not doing anything to keep from getting pregnant?

Response: If a mother answers "no" to questions 1 and 2, she is included in the responses below.

Table 7. Reasons women who were not trying to conceive but were not doing anything to prevent pregnancy did not use contraception in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Didn't Mind Getting Pregnant | | | | | |
| Detroit | 150 | 5,962 | 34.8 | 29.7-39.9 | 7.4 |
| Outer Wayne | 89 | 5,969 | 40.8 | 32.8-48.9 | 10.0 |
| Rest of MI | 724 | 46,221 | 49.0 | 45.3-52.8 | 3.9 |
| All of MI | 963 | 58,152 | 46.2 | 43.1-49.1 | 3.4 |
| Thought Couldn't Get Pregnant at That Time | | | | | |
| Detroit | 149 | 5,720 | 33.2 | 28.2-38.2 | 7.6 |
| Outer Wayne | 70 | 4,471 | 30.5 | 23.0-37.9 | 12.4 |
| Rest of MI | 536 | 25,639 | 27.2 | 23.9-30.5 | 6.1 |
| All of MI | 755 | 35,830 | 28.4 | 25.7-31.1 | 4.8 |
| Partner Didn't Want to Use Birth Control | | | | | |
| Detroit | 99 | 3,489 | 20.5 | 16.9-24.0 | 9.3 |
| Outer Wayne | 42 | 2,819 | 19.3 | 12.8-25.7 | 17.0 |
| Rest of MI | 383 | 15,596 | 16.6 | 14.0-19.2 | 8.0 |
| All of MI | 524 | 21,904 | 17.4 | 15.3-19.6 | 6.3 |
| Forgot to Use Birth Control | | | | | |
| Detroit | 41 | 1,529 | 8.9 | 6.0-11.8 | 16.3 |
| Outer Wayne | 16 | 1,030 | 7.0 | 3.1-11.0 | 28.6 |
| Rest of MI | 177 | 6,958 | 7.4 | 5.7-9.1 | 11.6 |
| All of MI | 234 | 9,517 | 7.6 | 6.2-8.9 | 9.5 |
| Thought Self/Partner Sterile | | | | | |
| Detroit | 53 | 1,760 | 10.2 | 7.6-12.9 | 13.4 |
| Outer Wayne | 30 | 2,021 | 13.8 | 8.1-19.5 | 20.9 |
| Rest of MI | 183 | 9,474 | 10.1 | 7.8-12.3 | 11.5 |
| All of MI | 266 | 13,255 | 10.5 | 8.7-12.4 | 9.0 |
| Side Effects from Birth Control | | | | | |
| Detroit | 61 | 2,287 | 13.3 | 9.9-16.7 | 12.9 |
| Outer Wayne | 20 | 1,391 | 9.5 | 4.5-14.6 | 27.0 |
| Rest of MI | 206 | 9,124 | 9.7 | 7.6-11.7 | 10.8 |
| All of MI | 287 | 12,801 | 10.1 | 8.4-11.9 | 8.6 |

(Table 7 continued)

| Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Problems Getting Birth Control | | | | | |
| Detroit | 40 | 1,529 | 8.9 | 6.0-11.7 | 16.3 |
| Outer Wayne | 20 | 1,257 | 8.6 | 4.1-13.0 | 26.2 |
| Rest of MI | 139 | 6,771 | 7.2 | 5.2-9.2 | 13.8 |
| All of MI | 199 | 9,557 | 7.6 | 6.0-9.2 | 10.7 |
| Other Reason | | | | | |
| Detroit | 62 | 2,322 | 13.5 | 10.0-16.9 | 13.0 |
| Outer Wayne | 38 | 2,364 | 16.1 | 10.0-22.1 | 19.2 |
| Rest of MI | 231 | 11,637 | 12.4 | 10.1-14.7 | 9.3 |
| All of MI | 331 | 16,324 | 13.0 | 11.1-14.9 | 7.5 |

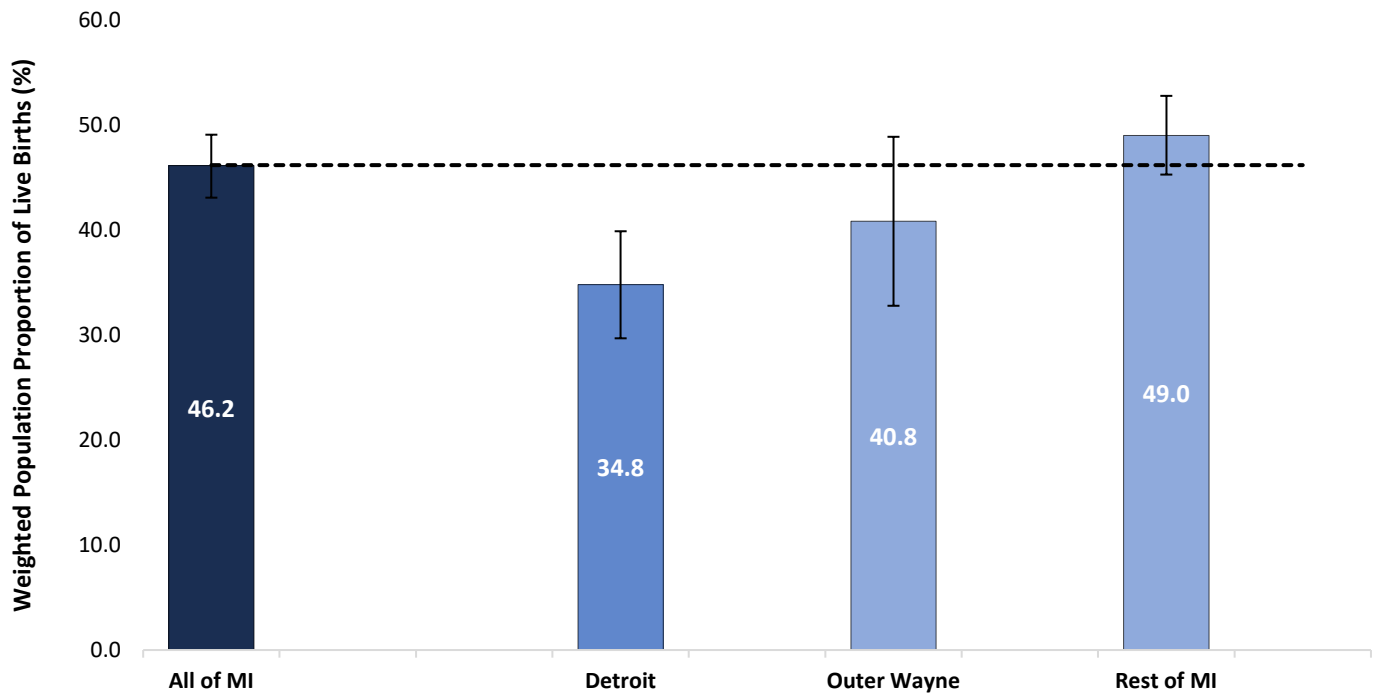
Table 7a. Rao-Scott Chi-Square Test, Reasons women who were not trying to conceive but were not doing anything to prevent pregnancy did not use contraception, MI PRAMS 2012-2015

| Reason (non-exclusive) | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|---------------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Didn't Mind Getting Pregnant | 16.03 | 2 | 0.0003 | 8.01 | 2 | 4836 | 0.0003 |
| Thought Couldn't Get Pregnant | 3.46 | 2 | 0.1777 | 1.73 | 2 | 4852 | 0.1778 |
| Partner Didn't Want to Use | 2.43 | 2 | 0.2966 | 1.22 | 2 | 4832 | 0.2966 |
| Forgot to Use Birth Control | 0.72 | 2 | 0.6971 | 0.36 | 2 | 4852 | 0.6971 |
| Thought Self/Partner Sterile | 2.36 | 2 | 0.3078 | 1.18 | 2 | 4848 | 0.3078 |
| Side Effects from Birth Control | 2.47 | 2 | 0.2912 | 1.23 | 2 | 4852 | 0.2913 |
| Problems Getting Birth Control | 0.99 | 2 | 0.6085 | 0.50 | 2 | 4852 | 0.6085 |
| Other Reason | 1.97 | 2 | 0.3731 | 0.99 | 2 | 4852 | 0.3732 |

Table 7b. Pairwise Rao-Scott Chi-Square Test, Women who were not trying to conceive but didn't mind getting pregnant by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 16.03 | 2 | 0.0003 | 8.01 | 2 | 4836 | 0.0003 |
| Detroit vs Outer Wayne | 1.54 | 1 | 0.2152 | 1.54 | 1 | 649 | 0.2157 |
| Detroit vs Rest MI | 18.16 | 1 | <0.0001 | 18.16 | 1 | 2211 | <0.0001 |
| Outer Wayne vs Rest MI | 3.16 | 1 | 0.0756 | 3.16 | 1 | 1976 | 0.0758 |

Figure 7. Women who were not trying to conceive but did not mind getting pregnant by geographic location, MI PRAMS 2012-2015



Survey Question: How many weeks or months pregnant were you when you had your first visit for prenatal care?

Response: An indicator for whether the mother had her first visit for prenatal care in her first trimester of pregnancy. Because of how the question is worded, both "13 weeks" and "3 months" are classified as *not* first trimester pregnancy.

Table 8. Prevalence of first trimester entry into prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

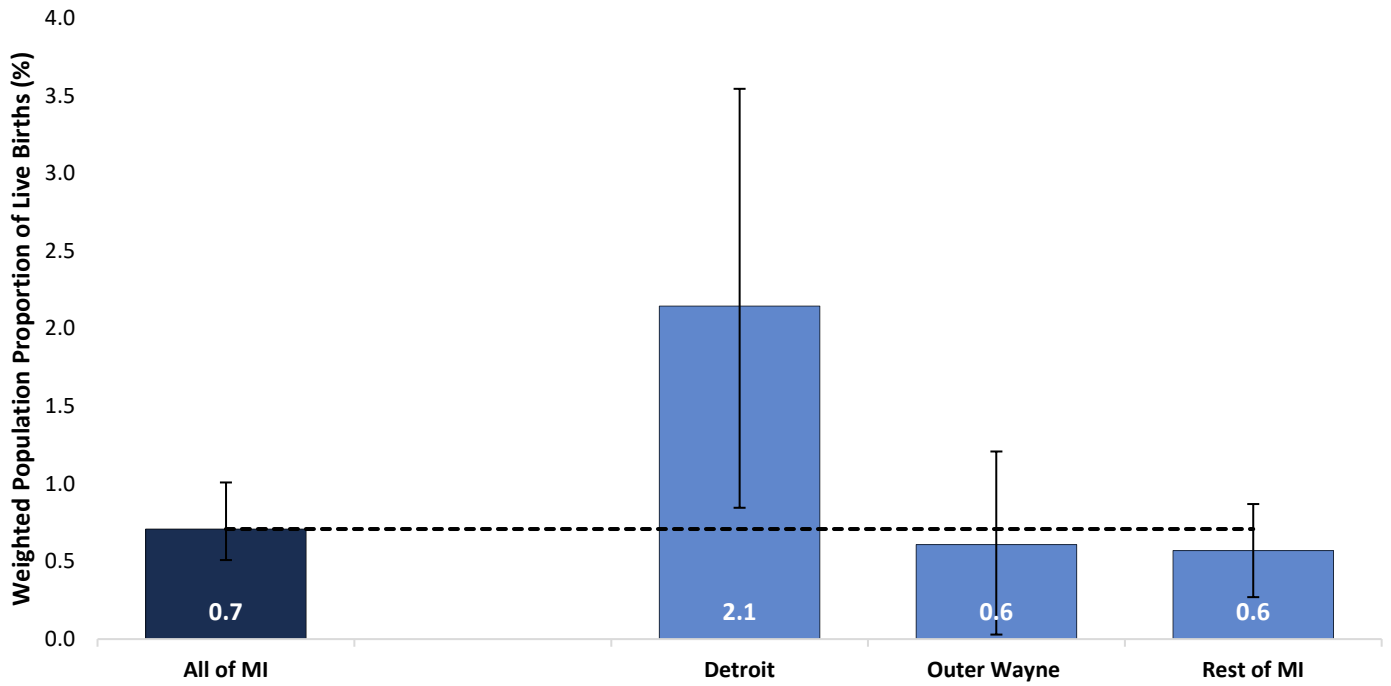
| Region | 1 st Trimester Entry? | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 654 | 25,454 | 68.7 | 65.2-72.2 | 5.7 |
| | No | 265 | 10,801 | 29.2 | 25.8-32.5 | 5.9 |
| | Did not get PNC | 16 | 795 | 2.1 | 0.8-3.5 | 33.3* |
| Outer Wayne | Yes | 612 | 44,155 | 85.3 | 82.1-88.4 | 10.9 |
| | No | 104 | 7,308 | 14.1 | 11.0-17.2 | 11.3 |
| | Did not get PNC | 6 | 315 | 0.6 | 0.02-1.2 | 49.5* |
| Rest of MI | Yes | 4,465 | 297,406 | 86.1 | 84.7-87.4 | 4.9 |
| | No | 884 | 46,211 | 13.4 | 12.1-14.7 | 5.0 |
| | Did not get PNC | 37 | 1,972 | 0.6 | 0.3-0.9 | 23.8 |
| All of MI | Yes | 5,731 | 367,016 | 84.5 | 83.3-85.7 | 3.8 |
| | No | 1,253 | 64,320 | 14.8 | 13.7-15.9 | 3.9 |
| | Did not get PNC | 59 | 3,082 | 0.7 | 0.5-1.0 | 19.0 |

* Relative standard errors exceed 30%; interpret with caution

Table 8a. Rao-Scott Chi-Square Test, Prevalence of first trimester entry into prenatal care by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 89.42 | 4 | <0.0001 | 22.35 | 4 | 28124 | <0.0001 |
| Detroit vs Outer Wayne | 42.54 | 2 | <0.0001 | 21.27 | 2 | 3298 | <0.0001 |
| Detroit vs Rest MI | 94.62 | 2 | <0.0001 | 47.31 | 2 | 12626 | <0.0001 |
| Outer Wayne vs Rest MI | 0.23 | 2 | 0.8904 | 0.12 | 2 | 12200 | 0.8904 |

Figure 8. Prevalence of women not receiving prenatal care by geographic location, MI PRAMS 2012-2015



Survey Question 1: How many weeks or months pregnant were you when you had your first visit for prenatal care?

Survey Question 2: Did you get prenatal care as early in your pregnancy as you wanted?

Response: If a mother received prenatal care after the first trimester, her answers to survey question 2 are included below.

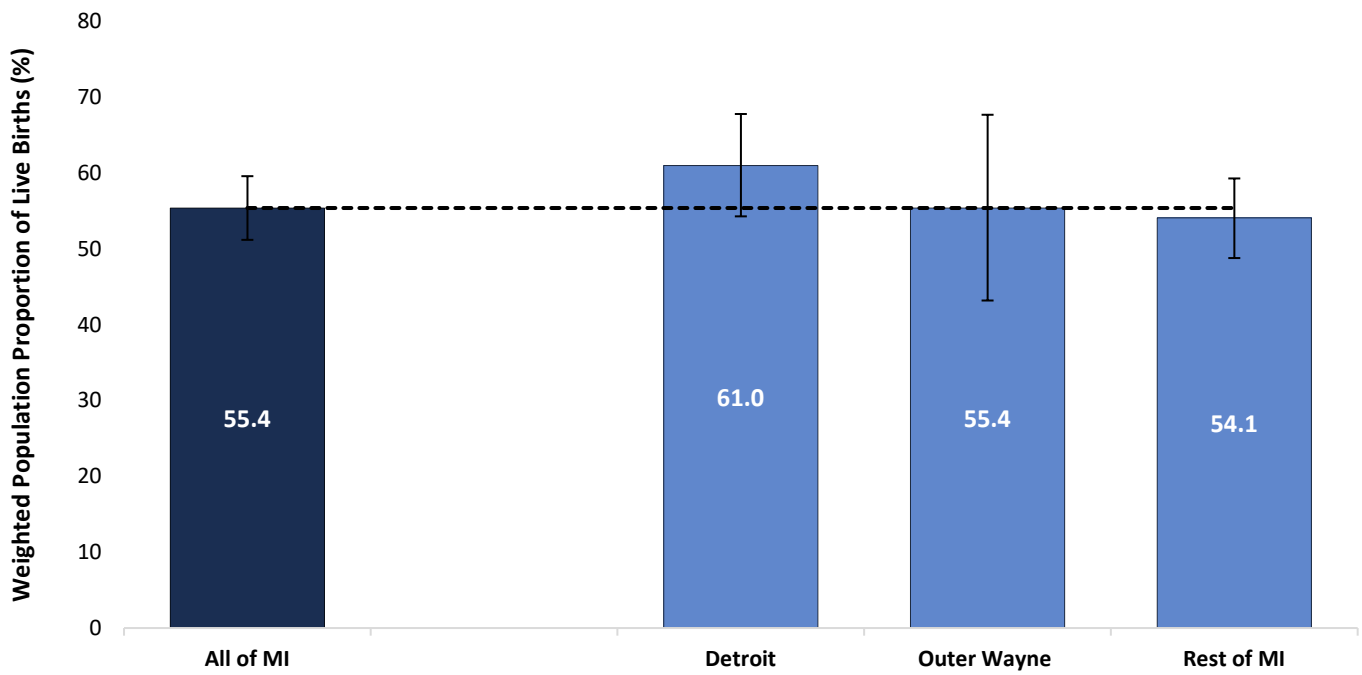
Table 9. Prevalence of receiving prenatal care after first trimester and as early as wanted in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | PNC timing opinion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | As early as wanted | 97 | 4,169 | 39.0 | 32.3-45.7 | 9.0 |
| | Not as early as wanted | 165 | 6,527 | 61.0 | 54.3-67.8 | 9.0 |
| Outer Wayne | As early as wanted | 44 | 3,241 | 44.6 | 32.3-56.8 | 13.8 |
| | Not as early as wanted | 59 | 4,033 | 55.4 | 43.2-67.7 | 13.8 |
| Rest of MI | As early as wanted | 379 | 21,191 | 45.9 | 40.7-51.2 | 5.8 |
| | Not as early as wanted | 499 | 24,929 | 54.1 | 48.8-59.3 | 5.8 |
| All of MI | As early as wanted | 520 | 28,602 | 44.6 | 40.4-48.8 | 4.8 |
| | Not as early as wanted | 723 | 35,489 | 55.4 | 51.2-59.6 | 4.8 |

Table 9a. Rao-Scott Chi-Square Test, Receiving prenatal care after first trimester and as early as wanted, MI PRAMS 2012-2015

| Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|----------------------|----|----------|---------|--------|--------|--------|
| 1.85 | 2 | 0.3971 | 0.92 | 2 | 2462 | 0.3973 |

Figure 9. Prevalence of women initiating prenatal care after the first trimester but not as early as they wanted by Geographic Location, MI PRAMS 2012-2015



Data Source: Birth certificate information on the timing of prenatal care initiation and the total number of prenatal care visits are used to calculate the Kotelchuck Adequacy of Prenatal Care Utilization Index.

Citation: Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. Am J Public Health. 1994 Sep;84(9):1414-20

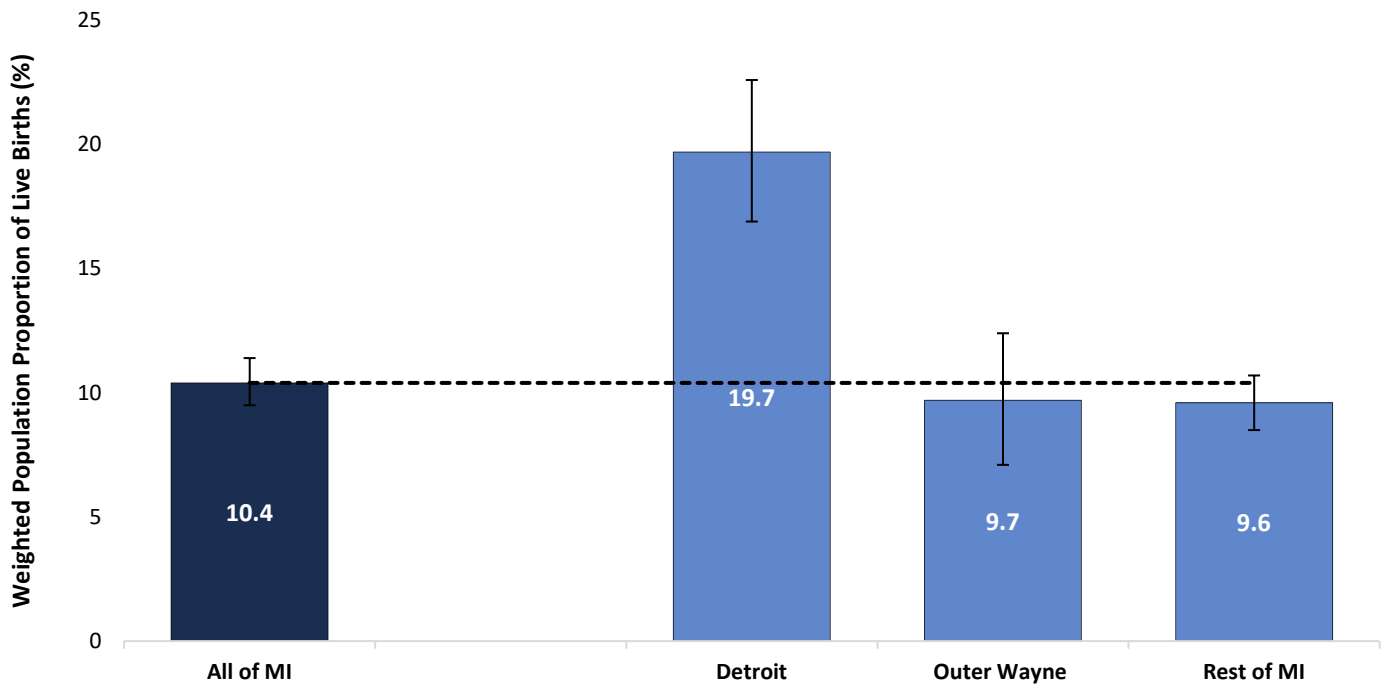
Table 10. Kotelchuck Index of Prenatal Care Utilization in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Kotelchuck Index | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Inadequate | 184 | 7,288 | 19.7 | 16.9-22.6 | 7.4 |
| | Intermediate | 170 | 7,227 | 19.6 | 16.5-22.7 | 8.1 |
| | Adequate | 308 | 12,186 | 33.0 | 29.4-36.5 | 5.5 |
| | Adequate plus | 264 | 10,243 | 27.7 | 24.4-31.0 | 6.1 |
| Outer Wayne | Inadequate | 75 | 5,014 | 9.7 | 7.1-12.4 | 13.7 |
| | Intermediate | 88 | 6,047 | 11.8 | 9.0-14.5 | 12.0 |
| | Adequate | 277 | 22,516 | 43.8 | 39.4-48.1 | 5.1 |
| | Adequate plus | 276 | 17,850 | 34.7 | 30.6-38.8 | 6.1 |
| Rest of MI | Inadequate | 649 | 33,223 | 9.6 | 8.5-10.7 | 5.9 |
| | Intermediate | 468 | 31,480 | 9.1 | 8.0-10.1 | 6.3 |
| | Adequate | 2,101 | 163,962 | 47.2 | 45.3-49.1 | 2.1 |
| | Adequate plus | 2,202 | 118,678 | 34.2 | 32.4-36.0 | 2.7 |
| All of MI | Inadequate | 908 | 45,526 | 10.4 | 9.5-11.4 | 4.7 |
| | Intermediate | 726 | 44,754 | 10.3 | 9.3-11.3 | 4.9 |
| | Adequate | 2,686 | 198,664 | 45.6 | 44.0-47.2 | 1.8 |
| | Adequate plus | 2,742 | 146,771 | 33.7 | 32.1-35.2 | 2.3 |

Table 10a. Rao-Scott Chi-Square Test, Kotelchuck Index of Prenatal Care Utilization by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 104.64 | 6 | <0.0001 | 17.44 | 6 | 42300 | <0.0001 |
| Detroit vs Outer Wayne | 42.82 | 3 | <0.0001 | 14.27 | 3 | 4902 | <0.0001 |
| Detroit vs Rest MI | 132.98 | 3 | <0.0001 | 44.33 | 3 | 19014 | <0.0001 |
| Outer Wayne vs Rest MI | 4.31 | 3 | 0.2302 | 1.44 | 3 | 18384 | 0.2302 |

Figure 10. Kotelchuck Index of Inadequate Prenatal Care Utilization in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: Where did you go *most of the time* for your prenatal care visits?

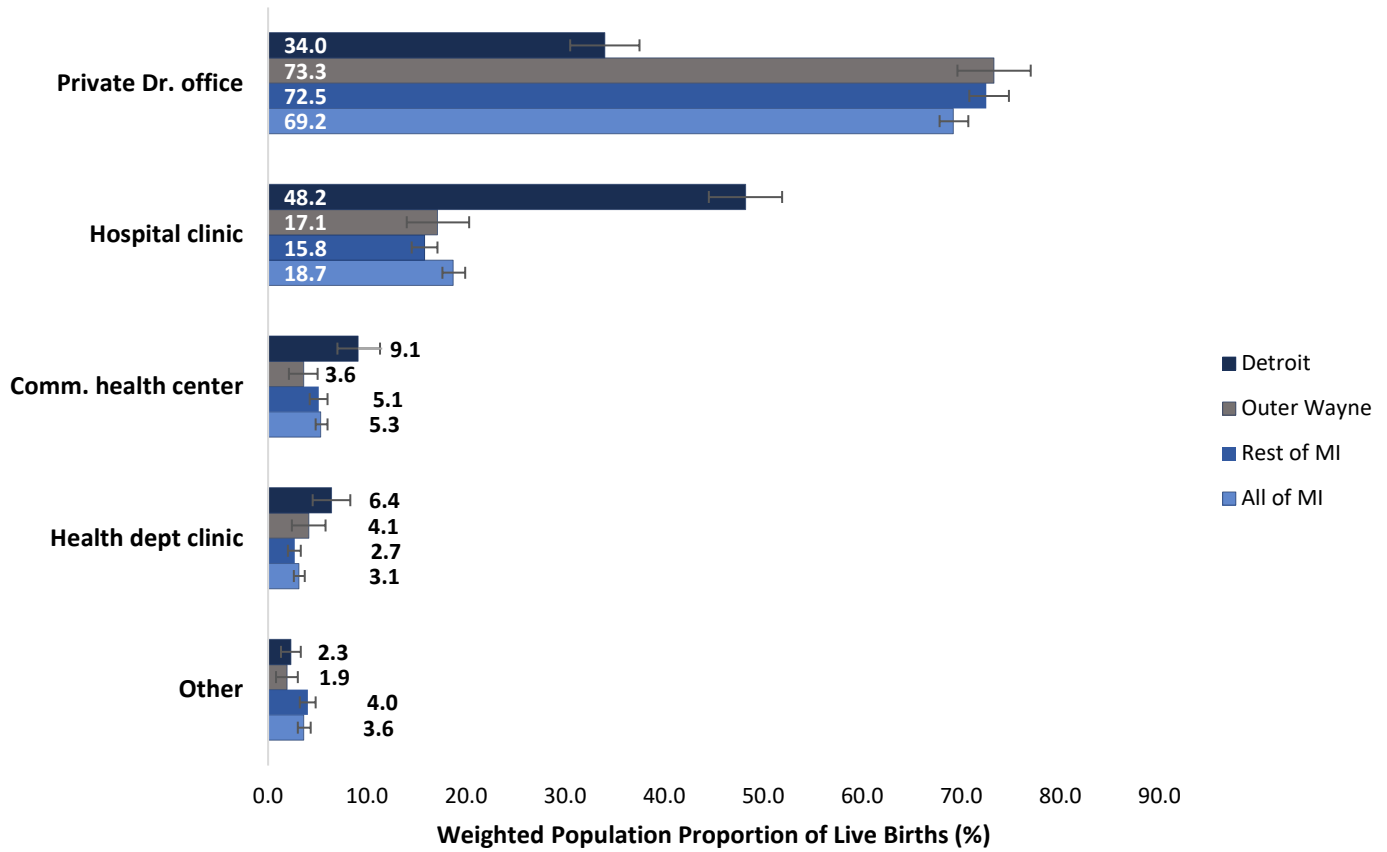
Table 11. Primary location of prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Number of PNC visits | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Hospital clinic | 457 | 18,099 | 48.2 | 44.5-51.9 | 3.9 |
| | Health dept clinic | 58 | 2,411 | 6.4 | 4.5-8.3 | 15.2 |
| | Private Dr. office | 327 | 12,769 | 34.0 | 30.5-37.5 | 5.2 |
| | Comm. health center | 81 | 3,426 | 9.1 | 7.0-11.3 | 12.1 |
| | Other | 23 | 867 | 2.3 | 1.3-3.3 | 22.8 |
| Outer Wayne | Hospital clinic | 142 | 8,763 | 17.1 | 14.0-20.3 | 9.4 |
| | Health dept clinic | 35 | 2,091 | 4.1 | 2.4-5.8 | 21.1 |
| | Private Dr. office | 492 | 37,517 | 73.3 | 69.6-77.0 | 7.0 |
| | Comm. health center | 34 | 1,827 | 3.6 | 2.1-5.0 | 20.3 |
| | Other | 16 | 976 | 1.9 | 0.8-3.0 | 28.6 |
| Rest of MI | Hospital clinic | 1,078 | 54,727 | 15.8 | 14.5-17.1 | 4.3 |
| | Health dept clinic | 217 | 9,203 | 2.7 | 2.0-3.3 | 11.7 |
| | Private Dr. office | 3,437 | 25,1238 | 72.5 | 70.8-74.8 | 3.2 |
| | Comm. health center | 431 | 17,618 | 5.1 | 4.2-6.0 | 9.2 |
| | Other | 231 | 13,886 | 4.0 | 3.2-4.8 | 10.1 |
| All of MI | Hospital clinic | 1,677 | 81,590 | 18.7 | 17.6-19.9 | 3.2 |
| | Health dept clinic | 310 | 13,705 | 3.1 | 2.6-3.7 | 9.2 |
| | Private Dr. office | 4,256 | 301,524 | 69.2 | 67.8-70.7 | 2.4 |
| | Comm. health center | 546 | 22,870 | 5.3 | 4.8-6.0 | 7.4 |
| | Other | 270 | 15,729 | 3.6 | 3.0-4.3 | 9.2 |

Table 11a. Rao-Scott Chi-Square Test, Primary location of prenatal care by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 376.56 | 8 | <0.0001 | 47.07 | 8 | 56376 | <0.0001 |
| Detroit vs Outer Wayne | 188.43 | 4 | <0.0001 | 47.11 | 4 | 6628 | <0.0001 |
| Detroit vs Rest MI | 425.43 | 4 | <0.0001 | 106.36 | 4 | 25328 | <0.0001 |
| Outer Wayne vs Rest MI | 11.70 | 4 | 0.0197 | 2.93 | 4 | 24420 | 0.0197 |

Figure 11. Primary location of prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: 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?

Response: For each subcategory, if a mother marked “yes” she is included in the responses below.

Table 12. Prevalence of topics discussed by healthcare provider during prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Amount of weight to gain during pregnancy | | | | | | |
|--|-------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 744 | 29,033 | 76.8 | 73.6-80.1 | 7.1 |
| Outer Wayne | Yes | 543 | 38,439 | 74.7 | 70.9-78.5 | 7.7 |
| Rest of MI | Yes | 4,227 | 268,993 | 77.0 | 75.4-78.6 | 3.5 |
| All of MI | Yes | 5,514 | 336,466 | 76.7 | 75.4-78.1 | 3.0 |
| Smoking during pregnancy | | | | | | |
| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 833 | 32,659 | 86.3 | 83.6-89.0 | 10.1 |
| Outer Wayne | Yes | 524 | 36,207 | 70.3 | 66.3-74.3 | 6.9 |
| Rest of MI | Yes | 4,148 | 248,735 | 71.3 | 69.6-73.0 | 3.0 |
| All of MI | Yes | 5,505 | 317,602 | 72.5 | 71.0-74.0 | 2.7 |
| Breastfeeding my baby | | | | | | |
| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 881 | 34,266 | 90.6 | 88.1-93.0 | 13.2 |
| Outer Wayne | Yes | 590 | 41,261 | 79.8 | 76.2-83.4 | 9.1 |
| Rest of MI | Yes | 4,709 | 294,137 | 84.4 | 83.0-85.7 | 4.5 |
| All of MI | Yes | 6,180 | 369,664 | 84.4 | 83.2-85.6 | 3.9 |
| Alcohol use during pregnancy | | | | | | |
| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 829 | 32,547 | 85.8 | 83.1-88.5 | 9.7 |
| Outer Wayne | Yes | 518 | 35,379 | 68.6 | 64.5-72.7 | 6.6 |
| Rest of MI | Yes | 4,113 | 247,634 | 71.0 | 69.3-72.7 | 3.0 |
| All of MI | Yes | 5,460 | 315,559 | 72.0 | 70.5-73.5 | 2.7 |

Seatbelt use (Table 12 continued)

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 626 | 24,530 | 64.8 | 61.3-68.4 | 5.1 |
| Outer Wayne | Yes | 386 | 26,407 | 51.3 | 46.9-55.7 | 4.6 |
| Rest of MI | Yes | 3,283 | 191,178 | 54.9 | 53.0-56.9 | 2.2 |
| All of MI | Yes | 4,295 | 242,115 | 55.4 | 53.7-57.0 | 1.9 |

Medicines safe to take during my pregnancy

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 843 | 33,240 | 87.7 | 85.2-90.2 | 10.2 |
| Outer Wayne | Yes | 645 | 45,929 | 88.7 | 85.8-91.5 | 12.9 |
| Rest of MI | Yes | 4,966 | 318,263 | 91.1 | 90.0-92.2 | 6.1 |
| All of MI | Yes | 6,454 | 397,432 | 90.5 | 89.6-91.5 | 5.0 |

Illegal drug use during pregnancy

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 785 | 30,616 | 80.8 | 77.8-83.9 | 8.0 |
| Outer Wayne | Yes | 462 | 30,717 | 59.6 | 55.4-63.9 | 5.4 |
| Rest of MI | Yes | 3,766 | 221,909 | 63.7 | 61.9-65.6 | 2.6 |
| All of MI | Yes | 5,013 | 283,242 | 64.7 | 63.2-66.3 | 2.3 |

Tests for birth defects/hereditary disorders

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 818 | 32,169 | 85.0 | 82.3-87.7 | 9.2 |
| Outer Wayne | Yes | 625 | 44,427 | 86.2 | 83.1-89.3 | 11.4 |
| Rest of MI | Yes | 4,812 | 309,711 | 88.7 | 87.5-89.9 | 5.5 |
| All of MI | Yes | 6,255 | 386,308 | 88.1 | 87.0-89.2 | 4.5 |

Signs and symptoms of preterm labor

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 794 | 31,181 | 82.3 | 79.4-85.2 | 8.4 |
| Outer Wayne | Yes | 586 | 41,764 | 81.1 | 77.6-84.6 | 9.5 |
| Rest of MI | Yes | 4,450 | 284,848 | 81.6 | 80.1-83.1 | 4.1 |
| All of MI | Yes | 5,830 | 357,793 | 81.6 | 80.3-82.9 | 3.5 |

Getting tested for HIV (Table 12 continued)

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 839 | 33,016 | 87.4 | 84.9-89.9 | 10.1 |
| Outer Wayne | Yes | 535 | 37,413 | 73.0 | 69.1-77.0 | 7.4 |
| Rest of MI | Yes | 4,452 | 276,689 | 79.6 | 78.1-81.1 | 3.7 |
| All of MI | Yes | 5,826 | 347,118 | 79.5 | 78.2-80.8 | 3.2 |

What to do if experiencing depression during/after pregnancy

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 742 | 28,626 | 75.5 | 72.2-78.8 | 6.8 |
| Outer Wayne | Yes | 540 | 38,863 | 75.3 | 71.6-79.0 | 7.7 |
| Rest of MI | Yes | 4,391 | 278,548 | 79.8 | 78.3-81.3 | 3.8 |
| All of MI | Yes | 5,673 | 346,037 | 78.9 | 77.6-80.2 | 3.2 |

Domestic abuse towards women by partners

| Region | Discussion | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 658 | 25,791 | 68.1 | 64.6-71.5 | 5.5 |
| Outer Wayne | Yes | 404 | 27,256 | 53.0 | 48.6-57.3 | 4.7 |
| Rest of MI | Yes | 3,283 | 193,806 | 55.6 | 53.7-57.5 | 2.2 |
| All of MI | Yes | 4,345 | 246,852 | 56.3 | 54.7-58.0 | 1.9 |

Table 12a. Rao-Scott Chi-Square Test, Prevalence of topics discussed by provider during prenatal care, MI PRAMS 2012-2015

| Reason (non-exclusive) | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|--|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Amount of weight to gain during pregnancy | 1.57 | 2 | 0.4551 | 0.79 | 2 | 14186 | 0.4551 |
| Smoking during pregnancy | 45.66 | 2 | <0.0001 | 22.83 | 2 | 14194 | <0.0001 |
| Breastfeeding my baby | 20.56 | 2 | <0.0001 | 10.28 | 2 | 14186 | <0.0001 |
| Alcohol use during pregnancy | 46.67 | 2 | <0.0001 | 23.33 | 2 | 14194 | <0.0001 |
| Seatbelt use | 20.45 | 2 | <0.0001 | 10.23 | 2 | 14166 | <0.0001 |
| Medicines safe to take during my pregnancy | 7.86 | 2 | 0.0196 | 3.93 | 2 | 14220 | 0.0196 |
| Illegal drug use during pregnancy | 58.42 | 2 | <0.0001 | 29.21 | 2 | 14180 | <0.0001 |
| Tests for birth defects/hereditary disorders | 7.16 | 2 | 0.0279 | 3.58 | 2 | 14210 | 0.0279 |
| Signs and symptoms of preterm labor | 0.24 | 2 | 0.8856 | 0.12 | 2 | 14194 | 0.8856 |
| Getting tested for HIV | 32.53 | 2 | <0.0001 | 16.27 | 2 | 14150 | <0.0001 |
| What to do if experiencing depression during/after | 9.69 | 2 | 0.0079 | 4.85 | 2 | 14200 | 0.0079 |
| Domestic abuse towards women by partners | 28.87 | 2 | <0.0001 | 14.44 | 2 | 14176 | <0.0001 |

Table 12b. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of smoking during pregnancy by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 45.66 | 2 | <0.0001 | 22.83 | 2 | 14194 | <0.0001 |
| Detroit vs Outer Wayne | 40.61 | 1 | <0.0001 | 40.61 | 1 | 1665 | <0.0001 |
| Detroit vs Rest MI | 57.35 | 1 | <0.0001 | 57.35 | 1 | 6381 | <0.0001 |
| Outer Wayne vs Rest MI | 0.21 | 1 | 0.6464 | 0.21 | 1 | 6148 | 0.6465 |

Table 12c. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of breastfeeding by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 20.56 | 2 | <0.0001 | 10.28 | 2 | 14186 | <0.0001 |
| Detroit vs Outer Wayne | 23.19 | 1 | <0.0001 | 23.19 | 1 | 1666 | <0.0001 |
| Detroit vs Rest MI | 13.87 | 1 | 0.0002 | 13.87 | 1 | 6376 | 0.0002 |
| Outer Wayne vs Rest MI | 6.08 | 1 | 0.0136 | 6.08 | 1 | 6144 | 0.0137 |

Table 12d. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of alcohol use during pregnancy by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 46.67 | 2 | <0.0001 | 23.33 | 2 | 14194 | <0.0001 |
| Detroit vs Outer Wayne | 45.86 | 1 | <0.0001 | 45.86 | 1 | 1667 | <0.0001 |
| Detroit vs Rest MI | 56.83 | 1 | <0.0001 | 56.83 | 1 | 6381 | <0.0001 |
| Outer Wayne vs Rest MI | 1.17 | 1 | 0.2802 | 1.17 | 1 | 6146 | 0.2802 |

Table 12e. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of seatbelt use by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 20.46 | 2 | <0.0001 | 10.22 | 2 | 14166 | <0.0001 |
| Detroit vs Outer Wayne | 21.29 | 1 | <0.0001 | 21.29 | 1 | 1664 | <0.0001 |
| Detroit vs Rest MI | 21.46 | 1 | <0.0001 | 21.46 | 1 | 6368 | <0.0001 |
| Outer Wayne vs Rest MI | 2.21 | 1 | 0.1368 | 2.21 | 1 | 6134 | 0.1368 |

Table 12f. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of safe medicines during pregnancy by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 7.86 | 2 | .0196 | 3.93 | 2 | 14220 | 0.0196 |
| Detroit vs Outer Wayne | 0.24 | 1 | 0.6234 | 0.24 | 1 | 1670 | 0.6234 |
| Detroit vs Rest MI | 7.18 | 1 | 0.0074 | 7.18 | 1 | 6391 | 0.0074 |
| Outer Wayne vs Rest MI | 2.84 | 1 | 0.092 | 2.84 | 1 | 6159 | 0.0921 |

Table 12g. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of illegal drug use during pregnancy by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 58.42 | 2 | <0.0001 | 29.21 | 2 | 14180 | <0.0001 |
| Detroit vs Outer Wayne | 58.31 | 1 | <0.0001 | 58.31 | 1 | 1666 | <0.0001 |
| Detroit vs Rest MI | 67.51 | 1 | <0.0001 | 67.51 | 1 | 6374 | <0.0001 |
| Outer Wayne vs Rest MI | 2.96 | 1 | 0.0856 | 2.96 | 1 | 6140 | 0.0856 |

Table 12h. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of tests for birth defects by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 7.16 | 2 | 0.0279 | 3.58 | 2 | 14210 | 0.0279 |
| Detroit vs Outer Wayne | 0.30 | 1 | 0.5861 | 0.30 | 1 | 1667 | 0.5862 |
| Detroit vs Rest MI | 6.68 | 1 | 0.0098 | 6.68 | 1 | 6388 | 0.0098 |
| Outer Wayne vs Rest MI | 2.43 | 1 | 0.1188 | 2.43 | 1 | 6155 | 0.1188 |

Table 12i. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of HIV testing by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 32.53 | 2 | <0.0001 | 16.27 | 2 | 14150 | <0.0001 |
| Detroit vs Outer Wayne | 36.84 | 1 | <0.0001 | 36.84 | 1 | 1660 | <0.0001 |
| Detroit vs Rest MI | 21.11 | 1 | <0.0001 | 21.11 | 1 | 6362 | <0.0001 |
| Outer Wayne vs Rest MI | 10.57 | 1 | 0.0011 | 10.57 | 1 | 6128 | 0.0012 |

Table 12j. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of depression by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 9.69 | 2 | 0.0079 | 4.85 | 2 | 14200 | 0.0079 |
| Detroit vs Outer Wayne | 0.004 | 1 | 0.9529 | 0.004 | 1 | 1669 | 0.9529 |
| Detroit vs Rest MI | 5.85 | 1 | 0.0156 | 5.85 | 1 | 6383 | 0.0156 |
| Outer Wayne vs Rest MI | 5.13 | 1 | 0.0235 | 5.13 | 1 | 6148 | 0.0236 |

Table 12k. Pairwise Rao-Scott Chi-Square Test, Prenatal care discussions of domestic abuse by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 28.87 | 2 | <0.0001 | 14.44 | 2 | 14176 | <0.0001 |
| Detroit vs Outer Wayne | 27.16 | 1 | <0.0001 | 27.16 | 1 | 1665 | <0.0001 |
| Detroit vs Rest MI | 34.86 | 1 | <0.0001 | 34.86 | 1 | 6373 | <0.0001 |
| Outer Wayne vs Rest MI | 1.12 | 1 | 0.2903 | 1.12 | 1 | 6138 | 0.2904 |

Survey Question 1: How did you feel about the prenatal care you got during your most recent pregnancy?

Were you satisfied with-

- a. The amount of time you had to wait after you arrived for your visits
- b. The amount of time the doctor, nurse, or midwife spent with you during your visits
- c. The advice you got on how to take care of yourself
- d. The understanding and respect that the staff showed toward you as a person

Survey Question 2: During your most recent pregnancy, how satisfied were you with the overall quality of prenatal care that you received at the clinic, or doctor's office where you got most of your care?

Table 13. Satisfaction with prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Amount of time waiting after arrival for visits | | | | | | |
|--|---------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Region | Satisfaction | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Satisfied | 691 | 27,096 | 71.7 | 68.4-75.0 | 6.0 |
| | Dissatisfied | 261 | 10,696 | 28.3 | 25.0-31.6 | 6.0 |
| Outer Wayne | Satisfied | 588 | 41,400 | 80.6 | 77.1-84.1 | 9.3 |
| | Dissatisfied | 130 | 9,970 | 19.4 | 15.9-23.0 | 9.3 |
| Rest of MI | Satisfied | 4,555 | 292,095 | 84.2 | 82.8-85.6 | 4.5 |
| | Dissatisfied | 841 | 54,754 | 15.8 | 14.4-17.2 | 4.5 |
| All of MI | Satisfied | 5,834 | 360,591 | 82.7 | 81.5-83.9 | 3.6 |
| | Dissatisfied | 1,232 | 75,420 | 17.3 | 16.1-18.5 | 3.6 |

| Amount of time provider spent during visits | | | | | | |
|--|------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--|
| Region | Satisfied | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | RSE Relative Standard Error (RSE) |
| Detroit | Satisfied | 805 | 32,039 | 84.9 | 82.3-87.4 | 8.7 |
| | Dissatisfied | 146 | 5,719 | 15.1 | 12.6-17.7 | 8.7 |
| Outer Wayne | Satisfied | 655 | 47,121 | 91.5 | 89.1-93.9 | 14.5 |
| | Dissatisfied | 64 | 4,388 | 8.5 | 6.1-10.9 | 14.5 |
| Rest of MI | Satisfied | 4,822 | 310,590 | 89.5 | 88.4-90.7 | 5.7 |
| | Dissatisfied | 574 | 36,261 | 10.5 | 9.3-11.6 | 5.7 |
| All of MI | Satisfied | 6,282 | 389,750 | 89.4 | 88.4-90.4 | 4.9 |
| | Dissatisfied | 784 | 46,368 | 10.6 | 9.6-11.6 | 4.9 |

Advice received during prenatal care (Table 13 continued)

| Region | Satisfied | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------|------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Detroit | Satisfied | 871 | 34,515 | 91.2 | 89.1-93.3 | 12.3 |
| | Dissatisfied | 82 | 3,339 | 8.8 | 6.7-10.9 | 12.3 |
| Outer Wayne | Satisfied | 666 | 48,066 | 93.4 | 91.3-95.6 | 16.8 |
| | Dissatisfied | 51 | 3,385 | 6.6 | 4.4-8.8 | 16.8 |
| Rest of MI | Satisfied | 4,991 | 321,656 | 92.7 | 91.7-93.6 | 6.9 |
| | Dissatisfied | 409 | 25,497 | 7.3 | 6.4-8.3 | 6.9 |
| All of MI | Satisfied | 6,528 | 404,237 | 92.6 | 91.8-93.5 | 5.8 |
| | Dissatisfied | 542 | 32,221 | 7.4 | 6.5-8.2 | 5.8 |

Understanding and respect showed by staff

| Region | Satisfied | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|---------------|------------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Detroit | Satisfied | 890 | 35,173 | 93.1 | 91.2-95.1 | 14.4 |
| | Dissatisfied | 61 | 2,606 | 6.9 | 5.0-8.9 | 14.4 |
| Outer Wayne | Satisfied | 692 | 49,550 | 96.6 | 95.0-98.2 | 24.1 |
| | Dissatisfied | 23 | 1,730 | 3.4 | 1.8-5.0 | 24.1 |
| Rest of MI | Satisfied | 5,117 | 327,804 | 94.6 | 93.7-95.5 | 8.7 |
| | Dissatisfied | 275 | 18,792 | 5.4 | 4.5-6.4 | 8.7 |
| All of MI | Satisfied | 6,699 | 412,527 | 94.7 | 93.9-95.5 | 7.5 |
| | Dissatisfied | 359 | 23,128 | 5.3 | 4.5-6.1 | 7.5 |

Overall satisfaction (Table 13 continued)

| Satisfaction | Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|----------------------------------|-------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Very Satisfied | Detroit | 479 | 18,264 | 49.5 | 45.9-53.2 | 3.8 |
| | Outer Wayne | 444 | 31,687 | 62.1 | 57.8-66.5 | 5.8 |
| | Rest of MI | 3,312 | 226,417 | 65.4 | 63.5-67.2 | 2.7 |
| | All of MI | 4,235 | 276,368 | 63.6 | 62.1-65.2 | 2.2 |
| Satisfied | Detroit | 310 | 12,904 | 35.0 | 31.4-38.6 | 5.2 |
| | Outer Wayne | 198 | 14,695 | 28.8 | 24.8-32.9 | 7.2 |
| | Rest of MI | 1,497 | 88,503 | 25.5 | 23.9-27.2 | 3.3 |
| | All of MI | 2,005 | 116,102 | 26.7 | 25.3-28.2 | 2.7 |
| Neutral | Detroit | 104 | 4,092 | 11.1 | 8.8-13.4 | 10.8 |
| | Outer Wayne | 50 | 3,772 | 7.4 | 4.9-9.9 | 16.9 |
| | Rest of MI | 398 | 21,561 | 6.2 | 5.3-7.1 | 7.6 |
| | All of MI | 552 | 29,425 | 6.8 | 6.0-7.6 | 6.1 |
| Dissatisfied + Very Dissatisfied | Detroit | 39 | 1,611 | 4.4 | 2.7-6.0 | 19.0 |
| | Outer Wayne | 14 | 834 | 1.6 | 0.5-2.7 | 34.9* |
| | Rest of MI | 212 | 12,431 | 2.9 | 2.3-3.5 | 12.9 |
| | All of MI | 159 | 9,987 | 2.9 | 2.2-3.6 | 10.8 |

* Relative standard error exceeds 30%; interpret with caution

Table 13a. Rao-Scott Chi-Square Test, Satisfaction with prenatal care, MI PRAMS 2012-2015

| Satisfaction | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|---|----------------------|----|----------|---------|--------|--------|---------|
| Amount of time waiting after arrival for visits | 43.75 | 2 | <0.0001 | 21.88 | 2 | 14108 | <0.0001 |
| Amount of time provider spent during visits | 12.72 | 2 | 0.0017 | 6.36 | 2 | 14108 | 0.0017 |
| Advice received during prenatal care | 1.91 | 2 | 0.3842 | 0.96 | 2 | 14116 | 0.3842 |
| Understanding and respect showed by staff | 6.44 | 2 | 0.0399 | 3.22 | 2 | 14092 | 0.0399 |
| Overall satisfaction | 47.80 | 6 | <0.0001 | 7.97 | 6 | 41952 | <0.0001 |

Table 13b. Pairwise Rao-Scott Chi-Square Test, Prenatal care satisfaction with time waiting after arrival for visits by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 43.75 | 2 | <0.0001 | 21.88 | 2 | 14108 | <0.0001 |
| Detroit vs Outer Wayne | 11.74 | 1 | 0.0006 | 11.74 | 1 | 1662 | 0.0006 |
| Detroit vs Rest MI | 55.77 | 1 | <0.0001 | 55.77 | 1 | 6340 | <0.0001 |
| Outer Wayne vs Rest MI | 3.80 | 1 | 0.0512 | 3.80 | 1 | 6106 | 0.0512 |

Table 13c. Pairwise Rao-Scott Chi-Square Test, Prenatal care satisfaction with time provider spent during visits by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 12.72 | 2 | 0.0017 | 6.36 | 2 | 14108 | 0.0017 |
| Detroit vs Outer Wayne | 11.93 | 1 | 0.0006 | 11.93 | 1 | 1662 | 0.0006 |
| Detroit vs Rest MI | 12.31 | 1 | 0.0005 | 12.31 | 1 | 6339 | 0.0005 |
| Outer Wayne vs Rest MI | 1.73 | 1 | 0.1887 | 1.73 | 1 | 6107 | 0.1887 |

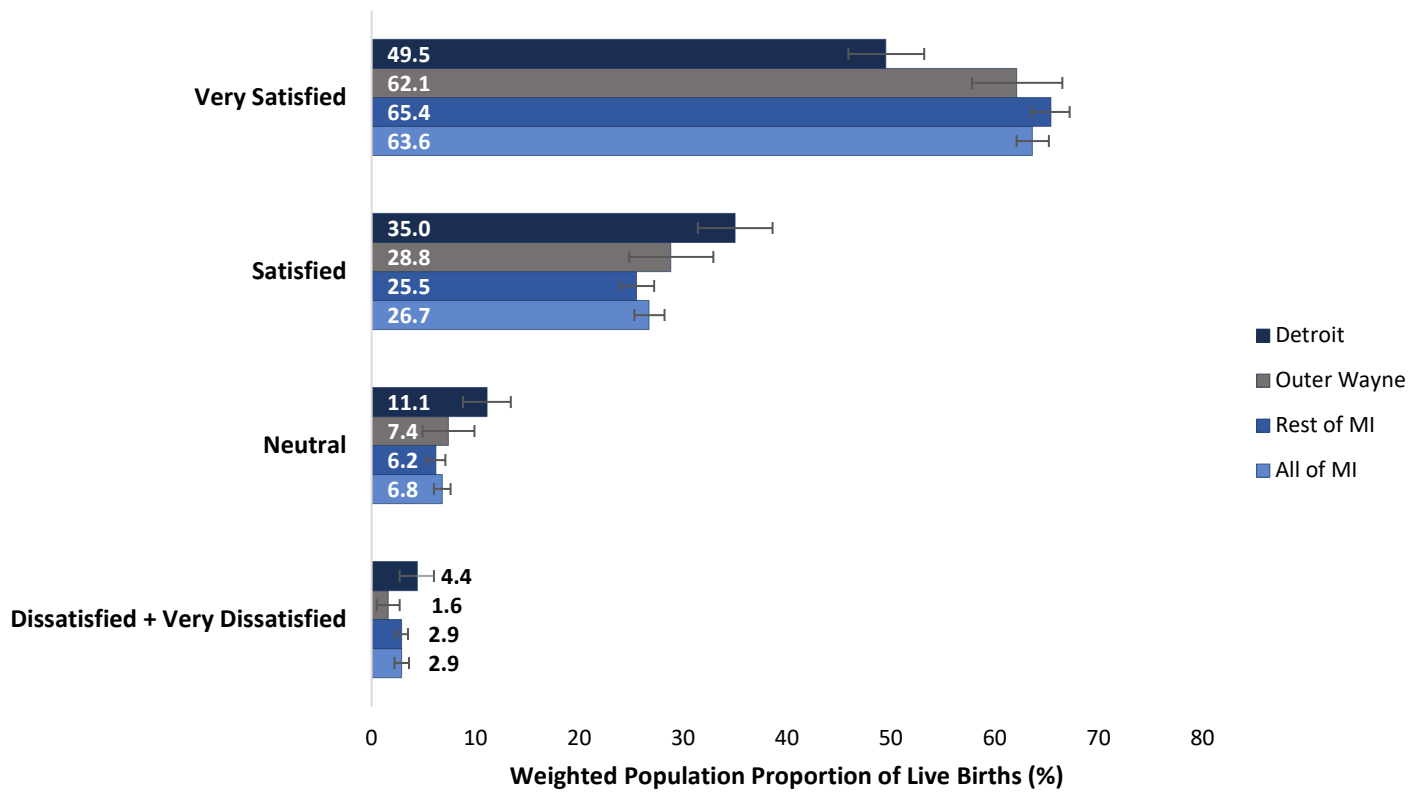
Table 13d. Pairwise Rao-Scott Chi-Square Test, Prenatal care satisfaction with understanding and respect showed by staff by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 6.44 | 2 | 0.0399 | 3.22 | 2 | 14092 | 0.0399 |
| Detroit vs Outer Wayne | 6.63 | 1 | 0.01 | 6.63 | 1 | 1658 | 0.0101 |
| Detroit vs Rest MI | 2.01 | 1 | 0.1567 | 2.01 | 1 | 6335 | 0.1568 |
| Outer Wayne vs Rest MI | 3.45 | 1 | 0.0634 | 3.45 | 1 | 6099 | 0.0634 |

Table 13e. Pairwise Rao-Scott Chi-Square Test, Overall prenatal care satisfaction by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 47.80 | 6 | <0.0001 | 7.97 | 6 | 41952 | <0.0001 |
| Detroit vs Outer Wayne | 20.90 | 3 | 0.0001 | 6.97 | 3 | 4890 | 0.0001 |
| Detroit vs Rest MI | 55.69 | 3 | <0.0001 | 18.56 | 3 | 18870 | <0.0001 |
| Outer Wayne vs Rest MI | 5.37 | 3 | 0.1463 | 1.79 | 3 | 18192 | 0.1464 |

Figure 13. Overall satisfaction with prenatal care in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: How satisfied were you with your overall birthing experience at the hospital or birthing center where you delivered your new baby?

Those who did not deliver at a hospital or birthing center were excluded due to their small sample frequency.

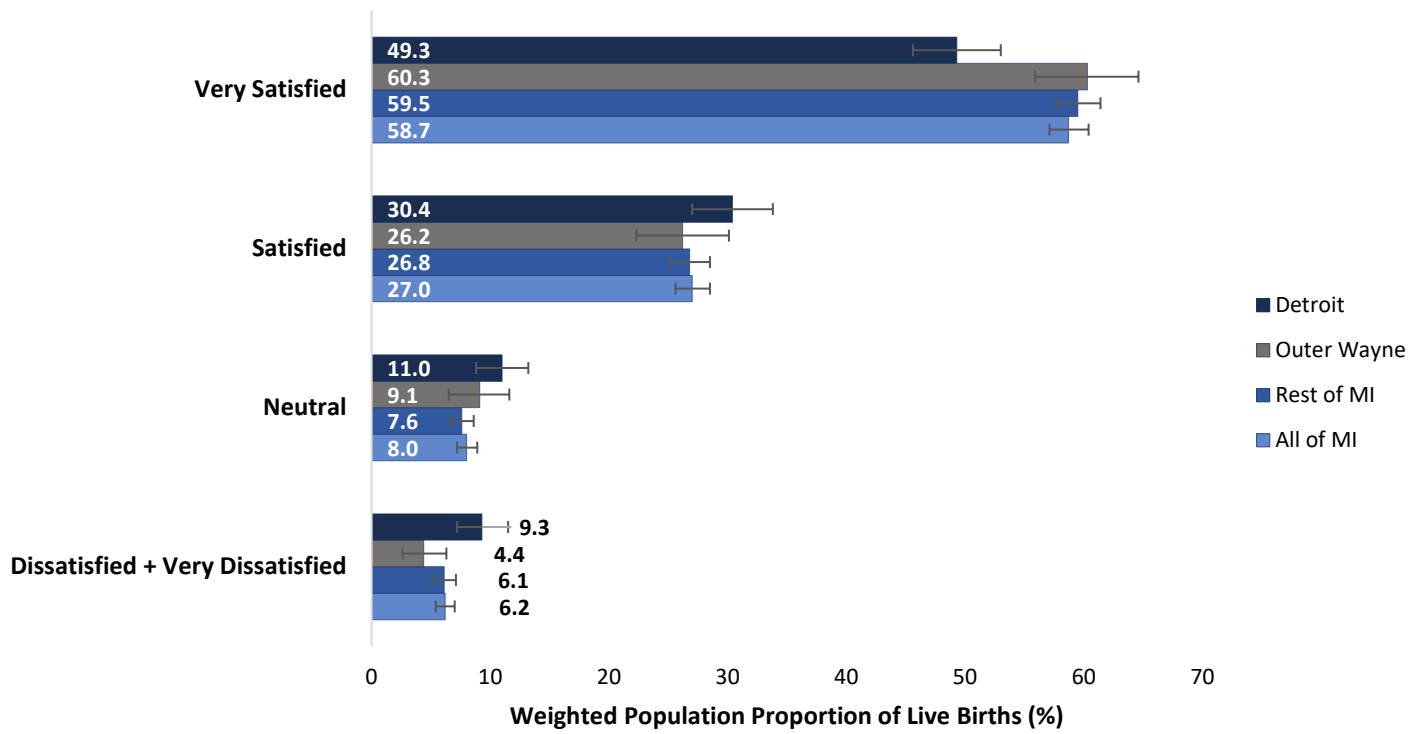
Table 14. Satisfaction with birth experience in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Satisfaction | Region | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|----------------------------------|-------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Very Satisfied | Detroit | 460 | 18,394 | 49.3 | 45.6-53.0 | 3.8 |
| | Outer Wayne | 423 | 30,855 | 60.3 | 55.9-64.6 | 5.6 |
| | Rest of MI | 3,119 | 205,695 | 59.5 | 57.7-61.4 | 2.4 |
| | All of MI | 4,002 | 254,943 | 58.7 | 57.1-60.4 | 2.0 |
| Satisfied | Detroit | 284 | 11,324 | 30.4 | 27.0-33.8 | 5.7 |
| | Outer Wayne | 183 | 13,417 | 26.2 | 22.3-30.1 | 7.6 |
| | Rest of MI | 1,478 | 92,481 | 26.8 | 25.1-28.5 | 3.2 |
| | All of MI | 1,945 | 117,221 | 27.0 | 25.6-28.5 | 2.7 |
| Neutral | Detroit | 106 | 4,089 | 11.0 | 8.8-13.2 | 10.1 |
| | Outer Wayne | 69 | 4,642 | 9.1 | 6.5-11.6 | 14.3 |
| | Rest of MI | 440 | 26,180 | 7.6 | 6.6-8.6 | 6.7 |
| | All of MI | 615 | 34,912 | 8.0 | 7.2-8.9 | 5.5 |
| Dissatisfied + Very Dissatisfied | Detroit | 91 | 3,482 | 9.3 | 7.2-11.5 | 11.7 |
| | Outer Wayne | 35 | 2,278 | 4.4 | 2.6-6.3 | 21.2 |
| | Rest of MI | 331 | 21,113 | 6.1 | 5.1-7.1 | 8.2 |
| | All of MI | 457 | 26,873 | 6.2 | 5.4-7.0 | 6.8 |

Table 14a. Rao-Scott Chi-Square Test, Satisfaction with birth experience by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 25.64 | 6 | 0.0003 | 4.27 | 6 | 42042 | 0.0003 |
| Detroit vs Outer Wayne | 18.47 | 3 | 0.0004 | 6.16 | 3 | 4929 | 0.0004 |
| Detroit vs Rest MI | 28.52 | 3 | <0.0001 | 9.51 | 3 | 18903 | <0.0001 |
| Outer Wayne vs Rest MI | 3.13 | 3 | 0.3723 | 1.04 | 3 | 18210 | 0.3723 |

Figure 14. Satisfaction with birth experience in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: This question is about things that may have happened during the 12 months before your new baby was born. For each item, check No if it did not happen to you or Yes if it did.

- a. I felt that my race or ethnic background contributed to the stress in my life
- b. I felt emotionally upset (for example, angry, sad, or frustrated) as a result of how I was treated based on my race or ethnic background
- c. I experienced physical symptoms (for example, a headache, an upset stomach, or a pounding heart) that I felt were related to how I was treated based on my race or ethnic background

Table 15. Experiences of racism in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| I felt that my race or ethnic background contributed to the stress in my life | | | | | | |
|---|-----------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 49 | 2,010 | 5.3 | 3.6-7.0 | 16.3 |
| Outer Wayne | Yes | 28 | 1,631 | 3.2 | 1.8-4.5 | 21.9 |
| Rest of MI | Yes | 208 | 6,804 | 2.0 | 1.5-2.4 | 11.5 |
| All of MI | Yes | 285 | 10,444 | 2.4 | 2.0-2.8 | 8.9 |
| I felt emotionally upset (for example, angry, sad, or frustrated) as a result of how I was treated based on my race or ethnic background | | | | | | |
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 70 | 2,772 | 7.4 | 5.5-9.3 | 13.3 |
| Outer Wayne | Yes | 29 | 2,066 | 4.0 | 2.3-5.7 | 21.6 |
| Rest of MI | Yes | 239 | 8,649 | 2.5 | 1.9-3.1 | 11.5 |
| All of MI | Yes | 338 | 13,487 | 3.1 | 2.6-3.6 | 8.5 |
| I experienced physical symptoms (for example, a headache, an upset stomach, or a pounding heart) that I felt were related to how I was treated based on my race or ethnic background | | | | | | |
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 42 | 1,778 | 4.7 | 3.1-6.4 | 17.7 |
| Outer Wayne | Yes | 18 | 1,211 | 2.4 | 1.1-3.6 | 25.9 |
| Rest of MI | Yes | 135 | 5,077 | 1.5 | 1.1-1.9 | 13.9 |
| All of MI | Yes | 195 | 8,066 | 1.8 | 1.5-2.2 | 10.9 |

**Table 15a. Rao-Scott Chi-Square Test, Experiences of racism,
MI PRAMS 2012-2015**

| Reason (non-exclusive) | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|--|---------------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| I felt that my race or ethnic background contributed to the stress in my life | 24.05 | 2 | <0.0001 | 12.02 | 2 | 14080 | <0.0001 |
| I felt emotionally upset (for example, angry, sad, or frustrated) as a result of how I was treated based on my race or ethnic background | 33.20 | 2 | <0.0001 | 16.60 | 2 | 14086 | <0.0001 |
| I experienced physical symptoms (for example, a headache, an upset stomach, or a pounding heart) that I felt were related to how I was treated based on my race or ethnic background | 25.75 | 2 | <0.0001 | 12.88 | 2 | 14070 | <0.0001 |

Table 15b. Pairwise Rao-Scott Chi-Square Test, Race contributed to stress by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 24.05 | 2 | <0.0001 | 12.02 | 2 | 14080 | <0.0001 |
| Detroit vs Outer Wayne | 3.66 | 1 | 0.0556 | 3.66 | 1 | 1655 | 0.0558 |
| Detroit vs Rest MI | 26.29 | 1 | <0.0001 | 26.29 | 1 | 6328 | <0.0001 |
| Outer Wayne vs Rest MI | 3.64 | 1 | 0.0565 | 3.64 | 1 | 6097 | 0.0565 |

Table 15c. Pairwise Rao-Scott Chi-Square Test, emotionally upset due to treatment based on race by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 33.20 | 2 | <0.0001 | 16.60 | 2 | 14086 | <0.0001 |
| Detroit vs Outer Wayne | 5.90 | 1 | 0.0151 | 5.90 | 1 | 1654 | 0.0152 |
| Detroit vs Rest MI | 40.11 | 1 | <0.0001 | 40.11 | 1 | 6330 | <0.0001 |
| Outer Wayne vs Rest MI | 3.71 | 1 | 0.0541 | 3.71 | 1 | 6102 | 0.0541 |

Table 15d. Pairwise Rao-Scott Chi-Square Test, Physical symptoms due to treatment based on race by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|-----------------------------|-----------|--------------------|----------------|---------------|---------------|----------------|
| Overall | 25.75 | 2 | <0.0001 | 12.87 | 2 | 14070 | <0.0001 |
| Detroit vs Outer Wayne | 4.92 | 1 | 0.0266 | 4.92 | 1 | 1654 | 0.0267 |
| Detroit vs Rest MI | 28.77 | 1 | <0.0001 | 28.77 | 1 | 6324 | <0.0001 |
| Outer Wayne vs Rest MI | 2.50 | 1 | 0.114 | 2.50 | 1 | 6092 | 0.1141 |

Survey Question: This question is about things that may have happened during the 12 months before your new baby was born. For each item, check No if it did not happen to you or Yes if it did.

- a. I felt that my race or ethnic background contributed to the stress in my life
- b. I felt emotionally upset (for example, angry, sad, or frustrated) as a result of how I was treated based on my race or ethnic background
- c. I experienced physical symptoms (for example, a headache, an upset stomach, or a pounding heart) that I felt were related to how I was treated based on my race or ethnic background

Response: Each “yes” response to the above options was counted as one race stressor.

Table 16. Prevalence of race stressors in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

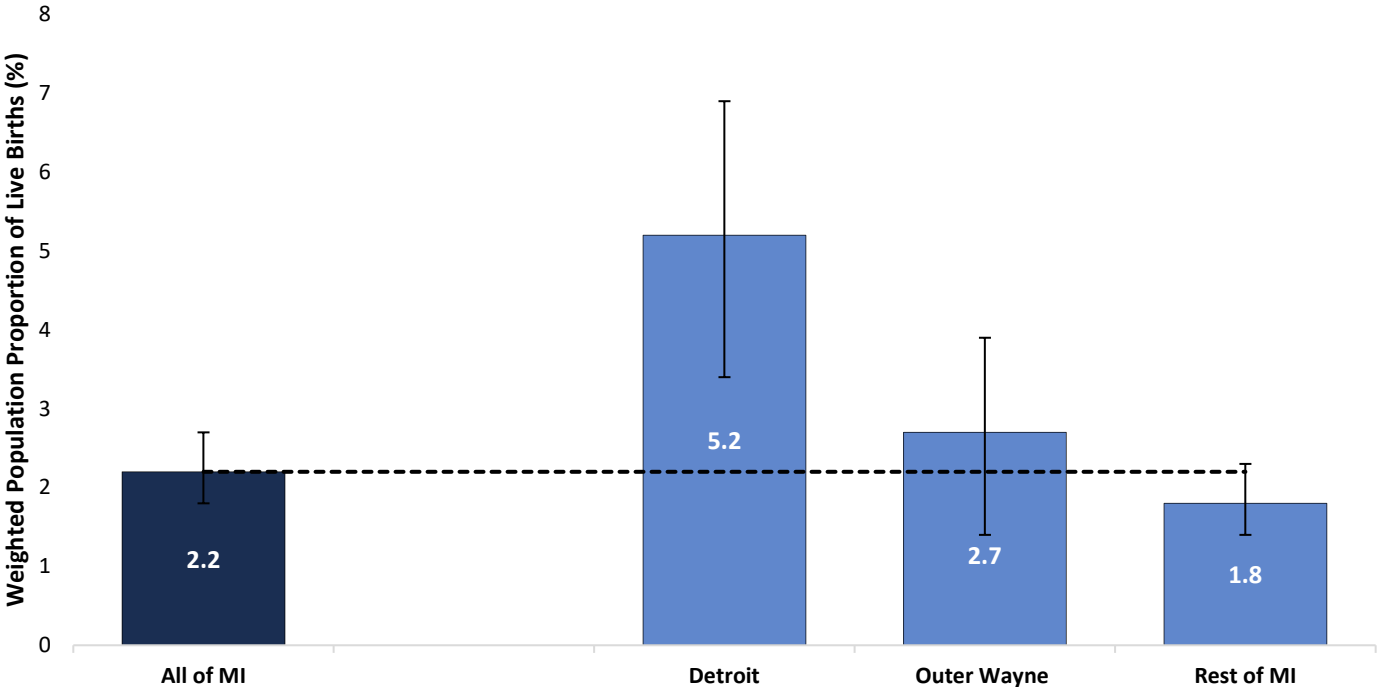
| Region | Number of race stressors | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|--------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | 0 | 851 | 33,838 | 89.7 | 87.5-91.9 | 11.0 |
| | 1 | 53 | 1,933 | 5.1 | 3.7-6.6 | 14.2 |
| | 2-3 | 45 | 1,943 | 5.2 | 3.4-6.9 | 17.2 |
| Outer Wayne | 0 | 679 | 49,113 | 95.0 | 93.2-96.9 | 18.9 |
| | 1 | 15 | 1,176 | 2.3 | 0.9-3.7 | 31.2* |
| | 2-3 | 23 | 1,386 | 2.7 | 1.4-3.9 | 23.5 |
| Rest of MI | 0 | 5,058 | 336,107 | 96.5 | 95.9-97.2 | 9.1 |
| | 1 | 170 | 5,662 | 1.6 | 1.2-2.0 | 12.7 |
| | 2-3 | 174 | 6,421 | 1.8 | 1.4-2.3 | 13.7 |
| All of MI | 0 | 6,588 | 419,058 | 95.8 | 95.2-96.3 | 7.0 |
| | 1 | 238 | 8,771 | 2.0 | 1.6-2.4 | 9.7 |
| | 2-3 | 242 | 9,749 | 2.2 | 1.8-2.7 | 10.2 |

* Relative standard error exceeds 30%; interpret with caution

Table 16a. Rao-Scott Chi-Square Test, Prevalence of race stressors by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 48.23 | 4 | <0.0001 | 12.06 | 4 | 28224 | <0.0001 |
| Detroit vs Outer Wayne | 11.29 | 2 | 0.0035 | 5.64 | 2 | 3316 | 0.0036 |
| Detroit vs Rest MI | 61.36 | 2 | <0.0001 | 30.68 | 2 | 12686 | <0.0001 |
| Outer Wayne vs Rest MI | 2.77 | 2 | 0.2509 | 1.38 | 2 | 12222 | 0.2509 |

Figure 16. Prevalence of 2-3 race stressors in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: This question is about things that may have happened during the 12 months before your new baby was born. For each item, check No if it did not happen to you or Yes if it did.

- a. A close family member was very sick and had to go into the hospital
- b. I got separated or divorced from my husband or partner
- c. I moved to a new address
- d. I was homeless or had to sleep outside, in a car, or in a shelter
- e. My husband or partner lost his job
- f. I lost my job even though I wanted to go on working
- g. My husband, partner, or I had a cut in work hours or pay
- h. I was apart from my husband or partner due to military deployment or extended work-related travel
- i. I argued with my husband or partner more than usual
- j. My husband or partner said he didn't want me to be pregnant
- k. I had problems paying the rent, mortgage, or other bills
- l. My husband, partner, or I went to jail
- m. Someone very close to me had a problem with drinking or drugs
- n. Someone very close to me died

Response: Each "yes" response to the above options was counted as one life stressor.

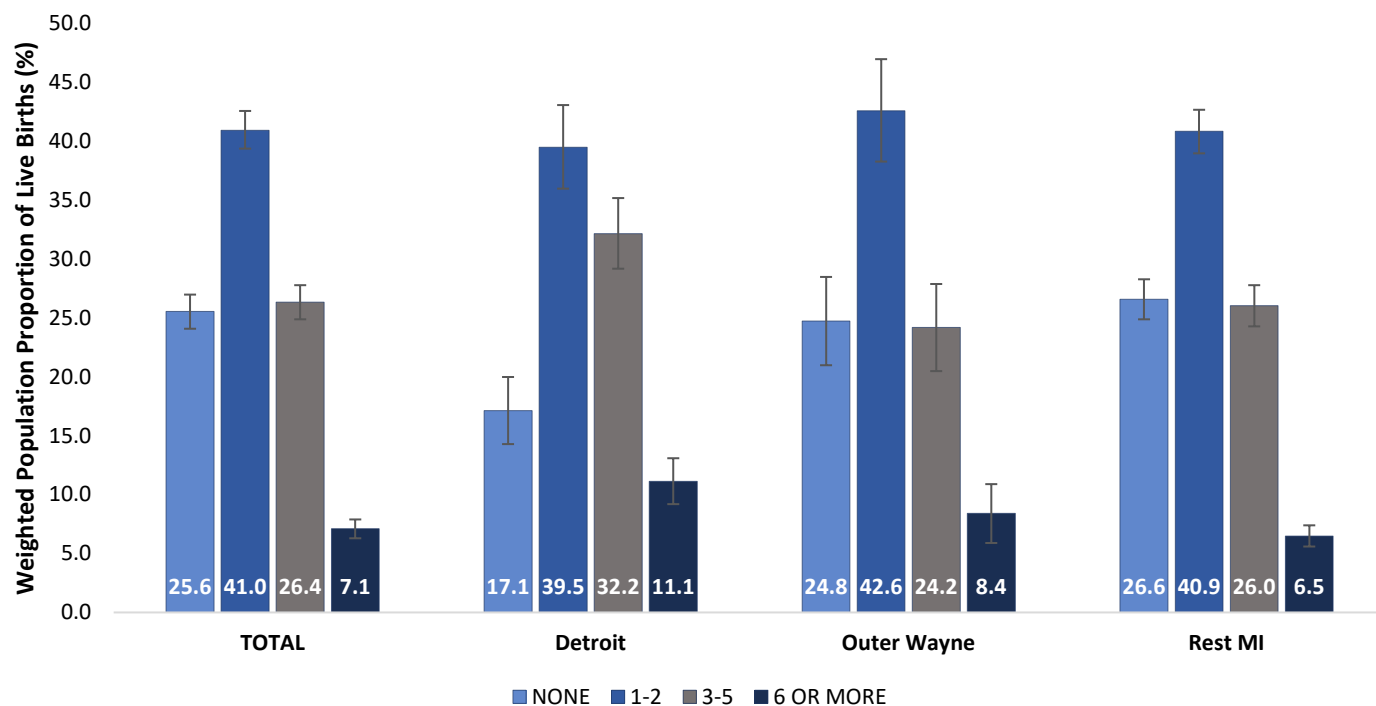
Table 17. Prevalence of life stressors in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Number of life stressors | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|--------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | 0 | 145 | 6,580 | 17.1 | 14.3-20.0 | 8.6 |
| | 1-2 | 357 | 15,171 | 39.5 | 36.0-43.1 | 4.6 |
| | 3-5 | 347 | 12,354 | 32.2 | 29.2-35.2 | 4.8 |
| | 6 or more | 117 | 4,278 | 11.1 | 9.2-13.1 | 9.0 |
| Outer Wayne | 0 | 174 | 12,856 | 24.8 | 21.0-28.5 | 7.7 |
| | 1-2 | 289 | 22,126 | 42.6 | 38.3-47.0 | 5.2 |
| | 3-5 | 204 | 12,572 | 24.2 | 20.5-27.9 | 7.8 |
| | 6 or more | 57 | 4,366 | 8.4 | 5.9-10.9 | 15.0 |
| Rest of MI | 0 | 1,296 | 93,225 | 26.6 | 24.9-28.3 | 3.2 |
| | 1-2 | 2,172 | 143,255 | 40.9 | 39.0-42.7 | 2.3 |
| | 3-5 | 1,518 | 91,292 | 26.0 | 24.3-27.8 | 3.4 |
| | 6 or more | 466 | 22,731 | 6.5 | 5.6-7.4 | 7.3 |
| All of MI | 0 | 1,615 | 112,662 | 25.6 | 24.1-27.0 | 2.9 |
| | 1-2 | 2,818 | 180,552 | 41.0 | 39.4-42.6 | 2.0 |
| | 3-5 | 2,069 | 116,218 | 26.4 | 24.9-27.8 | 2.8 |
| | 6 or more | 640 | 31,376 | 7.1 | 6.3-7.9 | 5.9 |

Table 17a. Rao-Scott Chi-Square Test, Prevalence of life stressors by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 36.87 | 6 | <0.0001 | 6.15 | 6 | 42780 | <0.0001 |
| Detroit vs Outer Wayne | 17.82 | 3 | 0.0005 | 5.94 | 3 | 5046 | 0.0005 |
| Detroit vs Rest MI | 47.10 | 3 | <0.0001 | 15.70 | 3 | 19230 | <0.0001 |
| Outer Wayne vs Rest MI | 3.66 | 3 | 0.3011 | 1.22 | 3 | 18504 | 0.3011 |

Figure 17. Prevalence of life stressors in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Survey Question: In which one position do you most often lay your baby down to sleep now?

- a. On his or her side
- b. On his or her back
- c. On his or her stomach

Response: If a mother answers “On his or her back,” she is included in the responses below.

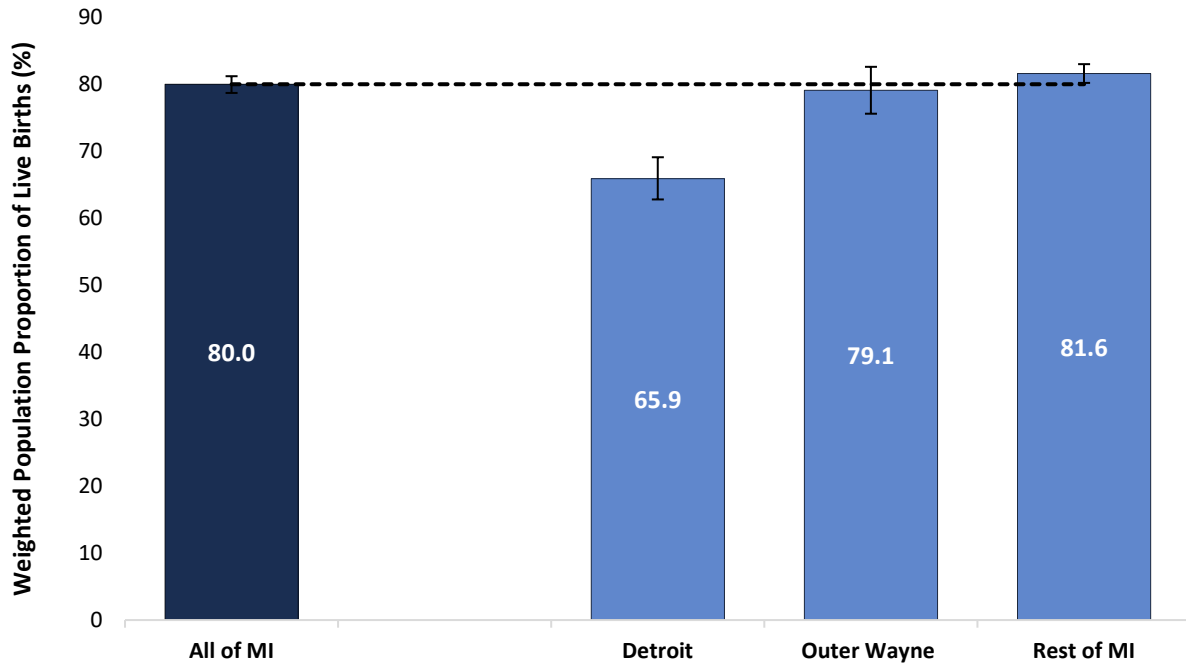
Table 18. Prevalence of infant primarily sleeping on its back in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Back sleep | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 580 | 24,270 | 65.9 | 62.8-69.1 | 4.8 |
| Outer Wayne | Yes | 533 | 40,283 | 79.1 | 75.6-82.6 | 8.5 |
| Rest of MI | Yes | 3,979 | 280,840 | 81.6 | 80.2-83.0 | 3.9 |
| All of MI | Yes | 5,092 | 345,393 | 80.0 | 78.7-81.2 | 3.1 |

Table 18a. Rao-Scott Chi-Square Test, Prevalence of infant primarily sleeping on its back by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 65.43 | 2 | <0.0001 | 32.72 | 2 | 13804 | <0.0001 |
| Detroit vs Outer Wayne | 25.91 | 1 | <0.0001 | 25.91 | 1 | 1624 | <0.0001 |
| Detroit vs Rest MI | 91.49 | 1 | <0.0001 | 91.49 | 1 | 6202 | <0.0001 |
| Outer Wayne vs Rest MI | 1.81 | 1 | 0.1788 | 1.81 | 1 | 5978 | 0.1788 |

Figure 18. Prevalence of infant primarily sleeping on its back in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Sleep Space Survey Question: Listed below are some things that describe how your new baby usually sleeps. For each item, check No if it doesn't usually apply to your baby or Yes if it usually applies to your baby.

Response: For each subcategory, if a mother marked "yes" she is included in the responses below.

Table 19. Prevalence of usual infant sleep practices in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Sleeps in crib | | | | | | |
|--------------------------------|-----------------|-------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 782 | 31,338 | 85.3 | 82.9-87.8 | 8.5 |
| Outer Wayne | Yes | 615 | 45,380 | 89.6 | 87.0-92.1 | 12.5 |
| Rest of MI | Yes | 4,618 | 306,200 | 89.2 | 88.0-90.4 | 5.7 |
| All of MI | Yes | 6,015 | 382,918 | 88.9 | 87.9-89.9 | 4.7 |
| Sleeps on firm mattress | | | | | | |
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 603 | 23,617 | 65.6 | 62.0-69.2 | 5.4 |
| Outer Wayne | Yes | 559 | 41,358 | 83.6 | 80.4-86.8 | 10.1 |
| Rest of MI | Yes | 4,103 | 284,754 | 84.4 | 83.0-85.7 | 4.5 |
| All of MI | Yes | 5,265 | 349,728 | 82.7 | 81.5-83.9 | 3.6 |
| Sleeps with pillows | | | | | | |
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 62 | 2,302 | 6.4 | 4.7-8.2 | 13.9 |
| Outer Wayne | Yes | 35 | 2,178 | 4.4 | 2.5-6.2 | 21.5 |
| Rest of MI | Yes | 318 | 18,454 | 5.5 | 4.5-6.4 | 8.7 |
| All of MI | Yes | 415 | 22,933 | 5.4 | 4.6-6.2 | 7.5 |
| Sleeps with bumper pads | | | | | | |
| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
| Detroit | Yes | 103 | 4,307 | 12.2 | 9.6-14.9 | 11.1 |
| Outer Wayne | Yes | 119 | 8,777 | 17.9 | 14.3-21.3 | 9.9 |
| Rest of MI | Yes | 840 | 57,718 | 17.1 | 15.7-18.6 | 4.4 |
| All of MI | Yes | 1,062 | 70,802 | 16.8 | 15.5-18.1 | 3.9 |

Sleeps with blankets (Table 19 continued)

| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 178 | 7,251 | 20.2 | 17.2-23.3 | 7.7 |
| Outer Wayne | Yes | 106 | 7,715 | 15.5 | 12.3-18.8 | 10.7 |
| Rest of MI | Yes | 862 | 52,377 | 15.5 | 14.1-17.0 | 4.7 |
| All of MI | Yes | 1,146 | 67,343 | 15.9 | 14.7-17.2 | 3.9 |

Sleeps with toys

| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 18 | 610 | 1.7 | 0.9-2.5 | 23.6 |
| Outer Wayne | Yes | 7 | 494 | 1.0 | 0.02-2.0 | 49.6* |
| Rest of MI | Yes | 121 | 9,784 | 2.9 | 2.2-3.6 | 12.2 |
| All of MI | Yes | 146 | 10,888 | 2.6 | 2.0-3.1 | 11.2 |

Sleeps with an infant positioner

| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 45 | 1,786 | 5.1 | 3.4-6.8 | 16.9 |
| Outer Wayne | Yes | 39 | 3,038 | 6.2 | 3.9-8.6 | 19.1 |
| Rest of MI | Yes | 310 | 19,172 | 5.7 | 4.8-6.6 | 8.0 |
| All of MI | Yes | 394 | 23,996 | 5.7 | 5.0-6.5 | 6.9 |

Sleeps with mother or another person

| Region | Response | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|----------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 259 | 9717 | 27.1 | 23.9-30.3 | 6.1 |
| Outer Wayne | Yes | 158 | 10,662 | 21.6 | 18.0-25.2 | 8.6 |
| Rest of MI | Yes | 1,247 | 70,329 | 20.8 | 19.3-22.4 | 3.9 |
| All of MI | Yes | 1,664 | 90,708 | 21.5 | 20.1-22.8 | 3.3 |

* Relative standard error exceeds 30%; interpret with caution

Table 19a. Rao-Scott Chi-Square Test, Usual infant sleep practices, MI PRAMS 2012-2015

| Sleep practice (non-exclusive) | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|----------------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Sleeps in crib | 6.82 | 2 | 0.0331 | 3.41 | 2 | 13798 | 0.0331 |
| Sleeps on firm mattress | 93.85 | 2 | <0.0001 | 46.92 | 2 | 13534 | <0.0001 |
| Sleeps with pillows | 2.04 | 2 | 0.3602 | 1.02 | 2 | 13528 | 0.3602 |
| Sleeps with bumper pads | 6.73 | 2 | 0.0346 | 3.36 | 2 | 13480 | 0.0346 |
| Sleeps with blankets | 6.24 | 2 | 0.0442 | 3.12 | 2 | 13538 | 0.0442 |
| Sleeps with toys | 8.82 | 2 | 0.0121 | 4.41 | 2 | 13548 | 0.0122 |
| Sleeps with an infant positioner | 0.56 | 2 | 0.7568 | 0.28 | 2 | 13414 | 0.7568 |
| Sleeps with mother or another | 9.10 | 2 | 0.0106 | 4.55 | 2 | 13578 | 0.0106 |

Table 19b. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping in crib by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 6.82 | 2 | 0.0331 | 3.41 | 2 | 13798 | 0.0331 |
| Detroit vs Outer Wayne | 5.17 | 1 | 0.023 | 5.17 | 1 | 1620 | 0.0231 |
| Detroit vs Rest MI | 8.59 | 1 | 0.0034 | 8.59 | 1 | 6204 | 0.0034 |
| Outer Wayne vs Rest MI | 0.07 | 1 | 0.7888 | 0.072 | 1 | 5974 | 0.7888 |

Table 19c. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping on firm mattress by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 93.85 | 2 | <0.0001 | 46.92 | 2 | 13534 | <0.0001 |
| Detroit vs Outer Wayne | 44.80 | 1 | <0.0001 | 44.80 | 1 | 1582 | <0.0001 |
| Detroit vs Rest MI | 114.78 | 1 | <0.0001 | 114.78 | 1 | 6088 | <0.0001 |
| Outer Wayne vs Rest MI | 0.18 | 1 | 0.6709 | 0.18 | 1 | 5864 | 0.6709 |

Table 19d. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping with bumper pads by Geographic Location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 6.73 | 2 | 0.0346 | 3.36 | 2 | 13480 | 0.0346 |
| Detroit vs Outer Wayne | 6.43 | 1 | 0.0112 | 6.43 | 1 | 1568 | 0.0113 |
| Detroit vs Rest MI | 8.32 | 1 | 0.0039 | 8.32 | 1 | 6064 | 0.0039 |
| Outer Wayne vs Rest MI | 0.14 | 1 | 0.71 | 0.14 | 1 | 5848 | 0.7100 |

Table 19e. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping with blankets by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 6.24 | 2 | 0.0442 | 3.12 | 2 | 13538 | 0.0442 |
| Detroit vs Outer Wayne | 4.00 | 1 | 0.0454 | 4.00 | 1 | 1586 | 0.0456 |
| Detroit vs Rest MI | 8.22 | 1 | 0.0041 | 8.22 | 1 | 6087 | 0.0041 |
| Outer Wayne vs Rest MI | 0 | 1 | 0.9995 | 0 | 1 | 5865 | 0.9995 |

Table 19f. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping with toys by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 8.82 | 2 | 0.0121 | 4.41 | 2 | 13548 | 0.0122 |
| Detroit vs Outer Wayne | 0.95 | 1 | 0.3291 | 0.95 | 1 | 1586 | 0.3292 |
| Detroit vs Rest MI | 4.09 | 1 | 0.0431 | 4.09 | 1 | 6093 | 0.0431 |
| Outer Wayne vs Rest MI | 4.77 | 1 | 0.0289 | 4.77 | 1 | 5869 | 0.0289 |

Table 19g. Pairwise Rao-Scott Chi-Square Test, Prevalence of sleeping with another person by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|--------|
| Overall | 9.10 | 2 | 0.0106 | 4.55 | 2 | 13578 | 0.0106 |
| Detroit vs Outer Wayne | 4.63 | 1 | 0.0314 | 4.63 | 1 | 1583 | 0.0316 |
| Detroit vs Rest MI | 12.43 | 1 | 0.0004 | 12.43 | 1 | 6111 | 0.0004 |
| Outer Wayne vs Rest MI | 0.15 | 1 | 0.7037 | 0.15 | 1 | 5884 | 0.7037 |

Sleep Space Survey Question: Listed below are some things that describe how your new baby usually sleeps. For each item, check No if it doesn't usually apply to your baby or Yes if it usually applies to your baby.

- a. My new baby sleeps in a crib or portable crib
- b. My new baby sleeps on a firm or hard mattress
- c. My new baby sleeps with pillows
- d. My new baby sleeps with bumper pads
- e. My new baby sleeps with plush or thick blankets
- f. My new baby sleeps with stuffed toys
- g. My new baby sleeps with an infant positioner
- h. My new baby sleeps with me or another person

Response: If a mother indicates that her infant usually **does** sleep in a crib and that her baby **does not** usually sleep with mom or another person then she is included in the responses below.

Table 20. Prevalence of infant sleeping in an empty crib in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Empty crib | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 487 | 19,374 | 56.1 | 52.3-59.8 | 4.4 |
| Outer Wayne | Yes | 394 | 29,150 | 60.1 | 55.7-64.5 | 5.6 |
| Rest of MI | Yes | 2,904 | 194,220 | 58.7 | 56.8-60.7 | 2.4 |
| All of MI | Yes | 3,785 | 242,744 | 58.7 | 57.0-60.4 | 2.1 |

Table 20a. Rao-Scott Chi-Square Test, Prevalence of infant sleeping in an empty crib, MI PRAMS 2012-2015

| Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|----------------------|----|----------|---------|--------|--------|--------|
| 1.65 | 2 | 0.438 | 0.83 | 2 | 13220 | 0.4380 |

Sleep Space Survey Question: Listed below are some things that describe how your new baby usually sleeps. For each item, check No if it doesn't usually apply to your baby or Yes if it usually applies to your baby.

- a. My new baby sleeps in a crib or portable crib
- b. My new baby sleeps on a firm or hard mattress
- c. My new baby sleeps with pillows
- d. My new baby sleeps with bumper pads
- e. My new baby sleeps with plush or thick blankets
- f. My new baby sleeps with stuffed toys
- g. My new baby sleeps with an infant positioner
- h. My new baby sleeps with me or another person

Response: If a mother indicates that her infant usually **does** sleep in a crib, that the sleep space **does not** have pillows, bumper pads, blankets, toys, or an infant positioner, and that her baby **does not** usually sleep with mom or another person then she is included in the responses below.

Table 21. Prevalence of infant sleeping alone in an empty crib in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Empty crib alone | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 405 | 16,056 | 46.8 | 43.0-50.6 | 4.1 |
| Outer Wayne | Yes | 340 | 25,281 | 52.8 | 48.2-57.3 | 4.9 |
| Rest of MI | Yes | 2,531 | 171,219 | 52.1 | 50.1-54.0 | 2.1 |
| All of MI | Yes | 3,276 | 212,555 | 51.7 | 50.0-53.4 | 1.8 |

Table 21a. Rao-Scott Chi-Square Test, Prevalence of infant sleeping alone in an empty crib, MI PRAMS 2012-2015

| Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|----------------------|----|----------|---------|--------|--------|--------|
| 4.38 | 2 | 0.1117 | 2.19 | 2 | 13156 | 0.1117 |

Sleep Position Survey Question: In which one position 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

Sleep Space Survey Question: Listed below are some things that describe how your new baby usually sleeps. For each item, check No if it doesn't usually apply to your baby or Yes if it usually applies to your baby.

- a. My new baby sleeps in a crib or portable crib
- b. My new baby sleeps on a firm or hard mattress
- c. My new baby sleeps with pillows
- d. My new baby sleeps with bumper pads
- e. My new baby sleeps with plush or thick blankets
- f. My new baby sleeps with stuffed toys
- g. My new baby sleeps with an infant positioner
- h. My new baby sleeps with me or another person

Response: This is a composite measure of all reported safe sleep practices. If a mother indicates that her infant usually sleeps only on his or her back, in a crib, on a firm mattress, that the sleep space does not have pillows, bumper pads, blankets, toys, or an infant positioner, and that her baby does not usually sleep with mom or another person then she is included in the responses below.

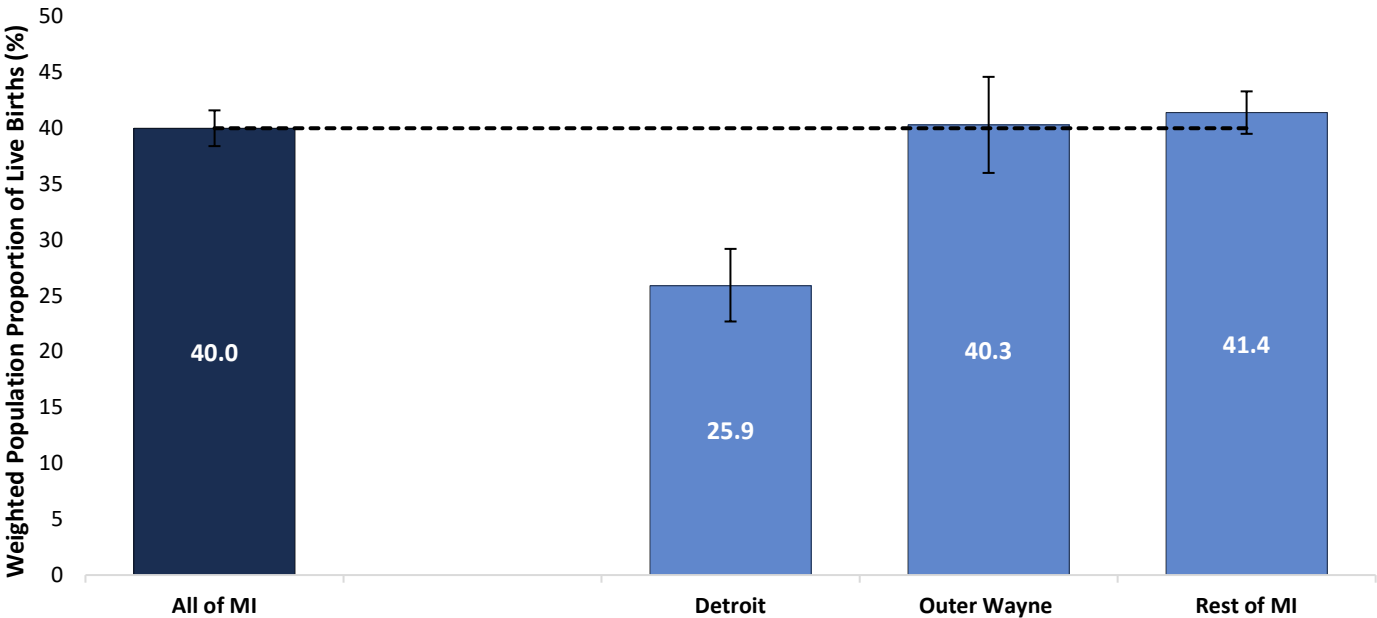
Table 22. Prevalence of infant sleeping in an ideal sleep environment in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Ideal sleep environment | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|-------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | Yes | 237 | 9635 | 25.9 | 22.7-29.2 | 6.4 |
| Outer Wayne | Yes | 266 | 20,646 | 40.3 | 36.0-44.6 | 5.5 |
| Rest of MI | Yes | 1,903 | 143,259 | 41.4 | 39.5-43.3 | 2.3 |
| All of MI | Yes | 2,406 | 173,539 | 40.0 | 38.4-41.6 | 2.1 |

Table 22a. Rao-Scott Chi-Square Test, Prevalence of infant sleeping in an ideal sleep environment by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 39.63 | 2 | <0.0001 | 19.81 | 2 | 13910 | <0.0001 |
| Detroit vs Outer Wayne | 26.31 | 1 | <0.0001 | 26.31 | 1 | 1637 | <0.0001 |
| Detroit vs Rest MI | 54.48 | 1 | <0.0001 | 54.48 | 1 | 6250 | <0.0001 |
| Outer Wayne vs Rest MI | 0.23 | 1 | 0.6339 | 0.23 | 1 | 6023 | 0.6339 |

Figure 22. Prevalence of infant sleeping in an ideal sleep environment in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



Sleep Position Survey Question: In which one position 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

Sleep Space Survey Question: Listed below are some things that describe how your new baby usually sleeps. For each item, check No if it doesn't usually apply to your baby or Yes if it usually applies to your baby.

- a. My new baby sleeps in a crib or portable crib
- b. My new baby sleeps on a firm or hard mattress
- c. My new baby sleeps with pillows
- d. My new baby sleeps with bumper pads
- e. My new baby sleeps with plush or thick blankets
- f. My new baby sleeps with stuffed toys
- g. My new baby sleeps with an infant positioner
- h. My new baby sleeps with me or another person

Response: Each answer above that corresponds to a sleep risk (non-supine position, number of sleep space objects, co-sleeping with mother or another person) is counted as one sleep hazard. There are a total of 9 possible safe sleep risks measured in this version of the PRAMS survey. The number of total risks faced by infants can range from 0 (the same proportion of infants ideally slept, reported in Table 22) and 9. Categories of cumulative sleep-space hazards are reported below.

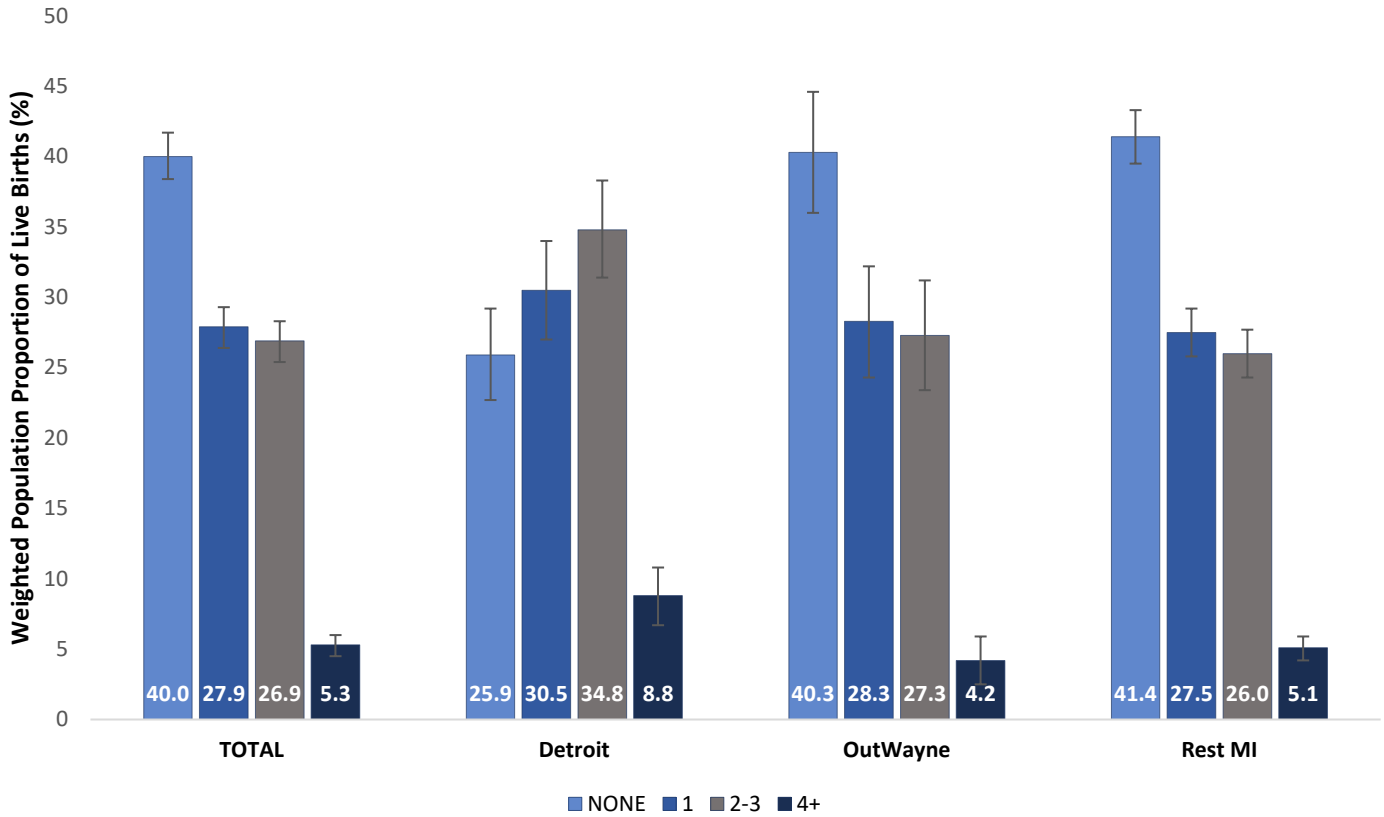
Table 23. Number of sleep hazards in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015

| Region | Number of sleep hazards | Sample Frequency | Weighted Frequency | Weighted Percent | 95% Confidence Interval (CI) | Relative Standard Error (RSE) |
|-------------|-------------------------|------------------|--------------------|------------------|------------------------------|-------------------------------|
| Detroit | 0 | 237 | 9,635 | 25.9 | 22.7-29.2 | 6.4 |
| | 1 | 273 | 11,337 | 30.5 | 27.0-34.0 | 5.8 |
| | 2-3 | 339 | 12,935 | 34.8 | 31.4-38.3 | 5.1 |
| | 4 or more | 87 | 3,253 | 8.8 | 6.7-10.8 | 11.7 |
| Outer Wayne | 0 | 266 | 20,646 | 40.3 | 36.0-44.6 | 5.5 |
| | 1 | 201 | 14,485 | 28.3 | 24.3-32.2 | 7.1 |
| | 2-3 | 207 | 13,989 | 27.3 | 23.4-31.2 | 7.2 |
| | 4 or more | 35 | 2,145 | 4.2 | 2.5-5.9 | 20.7 |
| Rest of MI | 0 | 1,903 | 143,259 | 41.4 | 39.5-43.3 | 2.3 |
| | 1 | 1,505 | 95,161 | 27.5 | 25.8-29.2 | 3.2 |
| | 2-3 | 1,575 | 89,803 | 26.0 | 24.3-27.7 | 3.3 |
| | 4 or more | 339 | 17,543 | 5.1 | 4.2-5.9 | 8.7 |
| All of MI | 0 | 2,406 | 173,539 | 40.0 | 38.4-41.7 | 2.1 |
| | 1 | 1,979 | 120,984 | 27.9 | 26.4-29.3 | 2.7 |
| | 2-3 | 2,121 | 116,727 | 26.9 | 25.4-28.3 | 2.7 |
| | 4 or more | 461 | 22,941 | 5.3 | 4.5-6.0 | 7.1 |

Table 23a. Rao-Scott Chi-Square Test, Number of sleep hazards by geographic location, MI PRAMS 2012-2015

| Comparison | Rao-Scott Chi-Square | DF | Pr>ChiSq | F Value | Num DF | Den DF | Pr>F |
|------------------------|----------------------|----|----------|---------|--------|--------|---------|
| Overall | 48.70 | 6 | <0.0001 | 8.12 | 6 | 41730 | <0.0001 |
| Detroit vs Outer Wayne | 32.10 | 3 | <0.0001 | 10.70 | 3 | 4911 | <0.0001 |
| Detroit vs Rest MI | 62.31 | 3 | <0.0001 | 20.77 | 3 | 18750 | <0.0001 |
| Outer Wayne vs Rest MI | 1.16 | 3 | 0.7623 | 0.39 | 3 | 18069 | 0.7623 |

Figure 23. Number of sleep hazards in Detroit, Outer Wayne County, and the rest of Michigan, MI PRAMS 2012-2015



MI PRAMS strengths and limitations

Strengths: MI PRAMS is a population-based survey administered using a standard procedure and a validated survey instrument. Women share their personal information in the context of a confidential research study and disclose substance use at rates greater than that seen in other perinatal data sources. Multiple years of survey data were pooled to provide more statistical power in these estimates. This survey oversampled mothers of low birth weight infants and African-American mothers. The pool of possible responders is drawn from all certificates of live birth. Because there is data on non-responders, statistical adjustments are made to adjust for possible non-responder bias.

Limitations: While regional analysis provides population-level data for new areas within the state, dividing the overall pool of responders limits the power to detect statistically significant differences. Estimates for regions with the fewest responders and estimates for rare behaviors and experiences are less precise at the sub-state level. Pooling together multiple survey years into one data set removes the ability to test for trends over time. Although the survey collects data close to the time of delivery (two to six months postpartum), there is the possibility for recall bias. The survey is collected at one point in time and does not allow for measuring differences over time in individuals. The survey instrument is administered only in English.

PRAMS data requests and contact information

The mission of Michigan PRAMS is to collect high-quality data and provide analytic products that help facilitate positive changes for Michigan mothers and babies. If these results have been useful for you or your organization, please let us know! Your reports of how PRAMS data has been useful to your organization are vital to keeping PRAMS running.

If you need different analyses to help make positive changes for the mothers and babies that you serve, please contact the PRAMS project coordinator:

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To access or collaborate on Michigan PRAMS data, email
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