This presentation provides updated infant health statistics for prosperity region 10 in the State of Michigan.

This presentation was prepared by the Maternal and Child Health Epidemiology Section, Michigan Department of Health and Human Services (MDHHS).

Data source: Michigan resident live birth files (12/12/2018) and infant mortality files (01/23/2019), Division for Vital Records and Health Statistics, MDHHS

Revised: June 2019
Infant Mortality Rate (IMR),
Prosperity Region 10, 2010-2017

The next several slides contain updated infant mortality rate statistics for prosperity region 10 in the State of Michigan.
Infant Mortality Rate, Prosperity Region 10, 2010-2017
(rate per 1,000 live births)

<table>
<thead>
<tr>
<th>Year</th>
<th># Live Births</th>
<th># Infant Death</th>
<th>IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>46,364</td>
<td>365</td>
<td>7.9</td>
</tr>
<tr>
<td>2011</td>
<td>46,124</td>
<td>353</td>
<td>7.7</td>
</tr>
<tr>
<td>2012</td>
<td>45,505</td>
<td>383</td>
<td>8.4</td>
</tr>
<tr>
<td>2013</td>
<td>46,451</td>
<td>374</td>
<td>8.1</td>
</tr>
<tr>
<td>2014</td>
<td>46,152</td>
<td>349</td>
<td>7.6</td>
</tr>
<tr>
<td>2015</td>
<td>46,444</td>
<td>356</td>
<td>7.7</td>
</tr>
<tr>
<td>2016</td>
<td>46,185</td>
<td>330</td>
<td>7.1</td>
</tr>
<tr>
<td>2017</td>
<td>45,693</td>
<td>384</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the infant mortality rates within prosperity region 10 from 2010 through 2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. The infant mortality rate in prosperity region 10 has fluctuated quite a bit over the last eight years, but appears to be on a downward trend from 2012 to 2016. In 2017, the infant mortality rate was 6.8 infant deaths per 1,000 live births for the State of Michigan and 8.4 infant deaths per 1,000 live births within prosperity region 10.
Infant Mortality Rate by Selected City of Residence at Birth, Michigan, 2017 (rate per 1,000 live births)

<table>
<thead>
<tr>
<th>City</th>
<th># Live Births</th>
<th># Infant Death</th>
<th>2017 IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portage</td>
<td>550</td>
<td>9</td>
<td>16.4</td>
</tr>
<tr>
<td>Detroit</td>
<td>9,644</td>
<td>137</td>
<td>14.2</td>
</tr>
<tr>
<td>Battle Creek</td>
<td>672</td>
<td>9</td>
<td>13.4</td>
</tr>
<tr>
<td>Flint</td>
<td>1,397</td>
<td>17</td>
<td>12.2</td>
</tr>
<tr>
<td>Taylor</td>
<td>809</td>
<td>9</td>
<td>11.1</td>
</tr>
<tr>
<td>Pontiac</td>
<td>1,072</td>
<td>11</td>
<td>10.3</td>
</tr>
<tr>
<td>Kalamazoo</td>
<td>958</td>
<td>9</td>
<td>9.4</td>
</tr>
<tr>
<td>Saginaw</td>
<td>788</td>
<td>6</td>
<td>7.6</td>
</tr>
<tr>
<td>Lansing</td>
<td>1,728</td>
<td>12</td>
<td>6.9</td>
</tr>
<tr>
<td>Grand Rapids</td>
<td>3,061</td>
<td>20</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. Selected city has more than 5 infant deaths.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the infant mortality rates by city of residence at birth within Michigan in 2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. This slide contains infant mortality rates for selected cities that had more than 5 infant deaths in 2017. In 2017, the infant mortality rate was 16.4 per 1,000 live births in Portage, 14.2 per 1,000 live births in Detroit, 12.2 per 1,000 live births in Flint, and 6.7 per 1,000 live births in Grand Rapids.
Infant Mortality Rates by Census Tract,
Prosperity Region 10, 2013-2017 (rate per 1,000 live births)

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average infant mortality rates by census tract within prosperity region 10 for 2013-2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births.

Light green: no live births;
Grey: no infant deaths;
Yellow: below the mean of rates in Michigan (0.1 - 6.8 deaths per 1,000 live births);
Light blue: between the mean and mean + one standard deviation of rates in Michigan (6.9 – 15.0 deaths per 1,000 live births);
Dark blue: above the mean + one standard deviation of rates in Michigan (15.1 – 142.9 deaths per 1,000 live births).
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average infant mortality rates by maternal race/ethnicity within prosperity region 10 for 2013-2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. For 2013-2017, there were some differences in infant mortality rates by maternal race and ethnicity within prosperity region 10, from a high of 13.2 deaths per 1,000 live births for Black non-Hispanic women to a low of 0 death per 1,000 live births for American Indian women. These statistics are comparable to the overall state rates by race and ethnicity with the exception of American Indian mothers (0 death per 1,000 live births in prosperity region 10 compared to 5.7 deaths per 1,000 live births for the State of Michigan overall).
Infant Mortality Rates by Maternal Age, Prosperity Region 10, 2013-2017 (rate per 1,000 live births)

Average Infant Mortality Rate by Maternal Age, Prosperity Region 10, 2013-2017

<table>
<thead>
<tr>
<th>Maternal Age</th>
<th># Live Births</th>
<th># Infant Deaths</th>
<th>IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20 years</td>
<td>11,910</td>
<td>155</td>
<td>13.0</td>
</tr>
<tr>
<td>20-29 years</td>
<td>116,448</td>
<td>981</td>
<td>8.4</td>
</tr>
<tr>
<td>≥30 years</td>
<td>102,557</td>
<td>649</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. For 2013-2017, the infant mortality rate for prosperity region 10 was 13.0 deaths per 1,000 live births among women aged less than 20 years, 8.4 deaths per 1,000 live births among women aged between 20 and 29 years, and 6.3 deaths per 1,000 live births among women aged over 30 years. These statistics are comparable to the overall state rates by maternal age.
Infant Mortality Rates by Maternal Education, Prosperity Region 10, 2013-2017 (rate per 1,000 live births)

Average Infant Mortality Rate by Maternal Education, Prosperity Region 10, 2013-2017

<table>
<thead>
<tr>
<th>Maternal Education</th>
<th># Live Births</th>
<th># Infant Death</th>
<th>IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; High School</td>
<td>28,731</td>
<td>334</td>
<td>11.6</td>
</tr>
<tr>
<td>High School</td>
<td>55,051</td>
<td>543</td>
<td>9.9</td>
</tr>
<tr>
<td>&gt; High School</td>
<td>144,412</td>
<td>805</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average infant mortality rates by maternal education within prosperity region 10 for 2013-2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. For 2013-2017, the infant mortality rate for prosperity region 10 was 11.6 deaths per 1,000 live births among women who did not finish high school, 9.9 deaths per 1,000 live births among women who just finished high school, and 5.6 deaths per 1,000 live births among women who had more than a high school education. These statistics are comparable to the overall state rates by maternal education.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average infant mortality rates by payment source within prosperity region 10 for 2013-2017. Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births. Payment source refers to source of expected payment that pregnant women use at delivery. For 2013-2017, the infant mortality rate for prosperity region 10 was higher among women using Medicaid as the payment source (9.8 deaths per 1,000 live births) than women using private insurance (5.8 deaths per 1,000 live births). This comparison looks very similar when looking at the overall state rates by payment source.
Low Birthweight (LBW),
Prosperity Region 10, 2010-2017

The next several slides contain updated low birthweight statistics for prosperity region 10 in the State of Michigan.
Low Birthweight, Prosperity Region 10, 2010-2017

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the incidence of low birthweight within prosperity region 10 from 2010 through 2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100. The incidence of low birthweight in prosperity region 10 has remained relatively stable over the last eight years. In 2017, the incidence of low birthweight was 8.8% for the State of Michigan and 9.9% for prosperity region 10.
Low Birthweight by Census Tract, Prosperity Region 10, 2013-2017

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of low birthweight by census tract within prosperity region 10 for 2013-2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100.

Light green: no live births;
Grey: no low birthweight births;
Yellow: below the mean of rates in Michigan (0.1% - 8.5%);
Light blue: between the mean and mean + one standard deviation of rates in Michigan (8.6% - 12.5%);
Dark blue: above the mean + one standard deviation of rates in Michigan (12.6% - 50.0%).
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of low birthweight by maternal race/ethnicity within prosperity region 10 for 2013-2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100. For 2013-2017, there were some differences in the incidence of low birthweight by maternal race and ethnicity within prosperity region 10, from a high of 14.4% for Black non-Hispanic women to a low of 4.9% for American Indian women. When looking at the State of Michigan as a whole, White non-Hispanic women report the lowest incidence of low birthweight at 7.0% and Black non-Hispanic women report the highest incidence at 14.3%.

<table>
<thead>
<tr>
<th>Maternal Race/Ethnicity</th>
<th># Live Births</th>
<th># LBW</th>
<th>LBW %</th>
</tr>
</thead>
<tbody>
<tr>
<td>White non-Hispanic</td>
<td>127,427</td>
<td>9,254</td>
<td>7.3</td>
</tr>
<tr>
<td>Black non-Hispanic</td>
<td>70,937</td>
<td>10,213</td>
<td>14.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13,840</td>
<td>1,028</td>
<td>7.4</td>
</tr>
<tr>
<td>American Indian</td>
<td>265</td>
<td>13</td>
<td>4.9</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>12,285</td>
<td>1,167</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS.
## Low Birthweight by Maternal Age, Prosperity Region 10, 2013-2017

![Chart showing average percent low birthweight by maternal age](chart.png)

<table>
<thead>
<tr>
<th>Maternal Age</th>
<th># Live Births</th>
<th># LBW</th>
<th>LBW %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20 years</td>
<td>11,910</td>
<td>1,393</td>
<td>11.7</td>
</tr>
<tr>
<td>20-29 years</td>
<td>116,448</td>
<td>11,354</td>
<td>9.8</td>
</tr>
<tr>
<td>≥30 years</td>
<td>102,557</td>
<td>9,493</td>
<td>9.3</td>
</tr>
</tbody>
</table>

### Average Percent Low Birthweight (Birthweight <2,500 Grams) by Maternal Age, Prosperity Region 10, 2013-2017

- < 20 years: 11.7%
- 20-29 years: 9.8%
- ≥30 years: 9.3%

Low birthweight rate is defined as number of births with baby birthweight <2,500 grams per 100 live births.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of low birthweight by maternal age within prosperity region 10 for 2013-2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100. For 2013-2017, the incidence of low birthweight for prosperity region 10 was 11.7% among women aged less than 20 years, 9.8% among women aged between 20 and 29 years, and 9.3% among women aged over 30 years. These statistics are comparable to the overall state rates by maternal age.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of low birthweight by maternal education within prosperity region 10 for 2013-2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100. For 2013-2017, the incidence of low birthweight for prosperity region 10 was 12.0% among women who did not finish high school, 11.4% among women who just finished high school, and 8.4% among women who had more than a high school education. These statistics are comparable to the overall state rates by maternal education.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of low birthweight by payment source within prosperity region 10 for 2013-2017. Low birthweight is defined as a birthweight of a baby less than 2,500 grams. The incidence of low birthweight is calculated as the number of low birthweight divided by the number of live births multiplied by 100. Payment source refers to source of expected payment that pregnant women use at delivery. For 2013-2017, the incidence of low birthweight for prosperity region 10 was higher among women using Medicaid as the payment source (11.2%) than women using private insurance (8.4%). This comparison looks very similar when looking at the overall state rates by payment source.
Very Low Birthweight (VLBW),
Prosperity Region 10, 2010-2017

The next several slides contain updated very low birthweight statistics for prosperity region 10 in the State of Michigan.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the incidence of very low birthweight within prosperity region 10 from 2010 through 2017. Very low birthweight is defined as a birthweight of a baby less than 1,500 grams. The incidence of very low birthweight is calculated as the number of very low birthweight divided by the number of live births multiplied by 100. The incidence of very low birthweight in prosperity region 10 has remained relatively stable over the last eight years. In 2017, the incidence of very low birthweight was 1.5% for the State of Michigan and 1.9% in prosperity region 10.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of very low birthweight by maternal race/ethnicity within prosperity region 10 for 2013-2017. Very low birthweight is defined as a birthweight of a baby less than 1,500 grams. The incidence of very low birthweight is calculated as the number of very low birthweight divided by the number of live births multiplied by 100. For 2013-2017, there were some differences in the incidence of very low birthweight by maternal race and ethnicity within prosperity region 10, from a high of 3.3% for Black non-Hispanic women to a low of 1.2% for White non-Hispanic women. When looking at the State of Michigan as a whole, White non-Hispanic women report the lowest incidence of very low birthweight at 1.1% and Black non-Hispanic women report the highest incidence at 3.2%.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of very low birthweight by maternal age within prosperity region 10 for 2013-2017. Very low birthweight is defined as a birthweight of a baby less than 1,500 grams. The incidence of very low birthweight is calculated as the number of very low birthweight divided by the number of live births multiplied by 100. For 2013-2017, the incidence of very low birthweight for prosperity region 10 was 2.5% among women aged less than 20 years, 1.9% among women aged between 20 and 29 years, and 1.8% among women aged over 30 years. These statistics are comparable to the overall state rates by maternal age.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of very low birthweight by maternal education within prosperity region 10 for 2013-2017. Very low birthweight is defined as a birthweight of a baby less than 1,500 grams. The incidence of very low birthweight is calculated as the number of very low birthweight divided by the number of live births multiplied by 100. For 2013-2017, the incidence of very low birthweight for prosperity region 10 was 2.3% among women who did not finish high school, 2.3% among women who just finished high school, and 1.6% among women who had more than a high school education. These statistics are comparable to the overall state rates by maternal education.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of very low birthweight by payment source within prosperity region 10 for 2013-2017. Very low birthweight is defined as a birthweight of a baby less than 1,500 grams. The incidence of very low birthweight is calculated as the number of very low birthweight divided by the number of live births multiplied by 100. Payment source refers to source of expected payment that pregnant women use at delivery. For 2013-2017, the incidence of very low birthweight for prosperity region 10 was higher among women using Medicaid as the payment source (2.2%) than women using private insurance (1.6%). This comparison looks very similar when looking at the overall state rates by payment source.
Preterm Birth (PTB), Prosperity Region 10, 2010-2017

The next several slides contain updated preterm birth statistics for prosperity region 10 in the State of Michigan.
Preterm Birth, Prosperity Region 10, 2010-2017

Preterm birth rate is defined as number of births delivered before 37 completed weeks of gestation per 100 live births. Gestational age is based on the obstetric estimate of gestation.

<table>
<thead>
<tr>
<th>Year</th>
<th># Live Births</th>
<th># PTB</th>
<th>PTB %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>46,364</td>
<td>5,255</td>
<td>11.3</td>
</tr>
<tr>
<td>2011</td>
<td>46,124</td>
<td>5,007</td>
<td>10.9</td>
</tr>
<tr>
<td>2012</td>
<td>45,505</td>
<td>5,021</td>
<td>11.0</td>
</tr>
<tr>
<td>2013</td>
<td>46,451</td>
<td>4,895</td>
<td>10.5</td>
</tr>
<tr>
<td>2014</td>
<td>46,152</td>
<td>4,750</td>
<td>10.3</td>
</tr>
<tr>
<td>2015</td>
<td>46,444</td>
<td>4,873</td>
<td>10.5</td>
</tr>
<tr>
<td>2016</td>
<td>46,185</td>
<td>5,036</td>
<td>10.9</td>
</tr>
<tr>
<td>2017</td>
<td>45,693</td>
<td>5,105</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the incidence of preterm birth within prosperity region 10 from 2010 through 2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100. The incidence of preterm birth in prosperity region 10 has remained relatively stable over the last eight years. In 2017, the incidence of preterm birth was 10.2% for the State of Michigan and 11.2% in prosperity region 10.
Preterm birth rate is defined as the number of births delivered before 37 completed weeks of gestation per 100 live births. Gestational age is based on the obstetric estimate of gestation.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of preterm birth by census tract within prosperity region 10 for 2013-2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100.

- Light green: no live births;
- Grey: no preterm births;
- Yellow: below the mean of rates in Michigan (0.1% - 9.9%);
- Light blue: between the mean and mean + one standard deviation of rates in Michigan (10.0% - 13.7%);
- Dark blue: above the mean + one standard deviation of rates in Michigan (13.8% - 42.9%).
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of preterm birth by maternal race/ethnicity within prosperity region 10 for 2013-2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100. For 2013-2017, there were some differences in the incidence of preterm birth by maternal race and ethnicity within prosperity region 10, from a high of 14.4% for Black non-Hispanic women to a low of 8.6% for Asian/Pacific Islander women. When looking at the State of Michigan as a whole, Asian/Pacific Islander women report the lowest incidence of preterm birth at 8.6% and Black non-Hispanic women report the highest incidence at 14.2%.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of preterm birth by maternal age within prosperity region 10 for 2013-2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100. For 2013-2017, the incidence of preterm birth for prosperity region 10 was 11.2% among women aged less than 20 years, 10.3% among women aged between 20 and 29 years, and 11.1% among women aged over 30 years. These statistics were slightly higher than the comparable overall state rates by maternal age.

Average Percent Preterm Birth (Estimated Gestational Age <37 Weeks) by Maternal Education, Prosperity Region 10, 2013-2017

<table>
<thead>
<tr>
<th>Maternal Education</th>
<th># Live Births</th>
<th># PTB</th>
<th>PTB %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; High School</td>
<td>28,731</td>
<td>3,475</td>
<td>12.1</td>
</tr>
<tr>
<td>High School</td>
<td>55,051</td>
<td>6,576</td>
<td>11.9</td>
</tr>
<tr>
<td>&gt; High School</td>
<td>144,412</td>
<td>14,091</td>
<td>9.8</td>
</tr>
</tbody>
</table>

2013-2017 Michigan Percentages
- < HS = 11.3
- HS = 10.9
- > HS = 9.2

Preterm birth rate is defined as number of births delivered before 37 completed weeks of gestation per 100 live births. Gestational age is based on the obstetric estimate of gestation.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of preterm birth by maternal education within prosperity region 10 for 2013-2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100. For 2013-2017, the incidence of preterm birth for prosperity region 10 was 12.1% among women who did not finish high school, 11.9% among women who just finished high school, and 9.8% among women who had more than a high school education. These statistics were slightly higher than the comparable overall state rates by maternal education.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of preterm birth by payment source within prosperity region 10 for 2013-2017. Preterm birth is defined as a birth of a baby less than 37 completed weeks of gestation. Gestational age is based on the obstetric estimate of gestation. The incidence of preterm birth is calculated as the number of preterm births divided by the number of live births multiplied by 100. Payment source refers to source of expected payment that pregnant women use at delivery. For 2013-2017, the incidence of preterm birth for prosperity region 10 was higher among women using Medicaid as the payment source (11.5%) than women using private insurance (10.0%). The difference between the Medicaid and private insurance preterm birth percentages is a bit lower in prosperity region 10 when compared to the State of Michigan as a whole.
Birth Defects Prevalence, 
by Race/ethnicity and Prosperity Region, 2016

The next two slides contain updated birth defects prevalence statistics for the State of Michigan as a whole and by Michigan prosperity region.
Throughout birth years 2006-2016, the birth defect prevalence rate for Michigan remained fairly steady at an average rate of 1,189.3 cases per 10,000 live births.

In 2016, the race-specific birth defect prevalence rate for cases born to black mothers (1,485.9 cases per 10,000 live births) exceeded that of cases born to white mothers (925.6 cases per 10,000 live births) and cases born to mothers of "other” races (1,372.5 cases per 10,000 live births).

In 2016, the ethnicity-specific birth defect prevalence rate for cases born to a mother reporting Arabic ethnicity (1,330.1 cases per 10,000 live births) was greater than that of cases born to a mother reporting Hispanic ethnicity (1,016.9 cases per 10,000 live births).

The average overall birth defects prevalence for the State of Michigan during 2006-2016 was 1,189.3 cases per 10,000 live births.

In 2016, the birth defects prevalence among black mothers (at 1,485.9 cases per 10,000 live births) and mothers of other races (at 1,372.5 cases per 10,000 live births) was higher than that of white mothers (at 925.6 cases per 10,000 live births).

Furthermore, the birth defects prevalence among Hispanic (at 1,016.9 cases per 10,000 live births) and Arabic mothers (at 1,330.1 cases per 10,000 live births) was greater than that of white mothers (at 925.6 cases per 10,000 live births) in 2016.

Disclaimer: Data are based on passive reporting which means it is the responsibility of facilities to identify and report cases of birth defects. Not all facilities report cases as completely and timely as would be the ideal. Children diagnosed and treated in facilities in other states may be missed which will significantly affect the completeness of data for Michigan’s borderer counties.
Birth Defect Prevalence Rates by Prosperity Region: MBDR, 2016

- The State of Michigan is broken up into 10 prosperity regions based on shared geographic, demographic, and economic interests.
- In 2016, Michigan prosperity regions 6 and 10 reported the highest birth defect prevalence rates of 1,248.1 and 1,411.7 cases per 10,000 live births.
- The prosperity region that reported the lowest birth defect prevalence was region 1 with a prevalence rate of 405.6 cases per 10,000 live births.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Cases</th>
<th>Prevalence Rate (per 10,000 live births)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>113</td>
<td>405.6</td>
</tr>
<tr>
<td>2</td>
<td>224</td>
<td>753.4</td>
</tr>
<tr>
<td>3</td>
<td>103</td>
<td>600.6</td>
</tr>
<tr>
<td>4</td>
<td>1,339</td>
<td>679.4</td>
</tr>
<tr>
<td>5</td>
<td>321</td>
<td>550.7</td>
</tr>
<tr>
<td>6</td>
<td>1,150</td>
<td>1,248.1</td>
</tr>
<tr>
<td>7</td>
<td>414</td>
<td>772.8</td>
</tr>
<tr>
<td>8</td>
<td>620</td>
<td>679.0</td>
</tr>
<tr>
<td>9</td>
<td>1,258</td>
<td>1,201.4</td>
</tr>
<tr>
<td>10</td>
<td>6,520</td>
<td>1,411.7</td>
</tr>
<tr>
<td>Total</td>
<td>12,062</td>
<td>1,063.9</td>
</tr>
</tbody>
</table>

*All statewide data reported from the Michigan Birth Defects Registry (MBDR) for birth year 2016
**Total reported birth defect cases for all diagnostic groupings per 10,000 live births
***Prevalence rates are based on births to mothers living in Michigan at the time of delivery.
****Regions approximate prosperity region boundaries

This slide uses data from the Michigan Birth Defects Registry and details birth defects prevalence by prosperity region for 2016.

In 2016, regions 10, 6, and 9 reported the highest birth defects prevalence (at 1,411.7, 1,248.1, and 1,201.4 cases per 10,000 live births, respectively), while regions 1, 5, and 3 reported the lowest birth defects prevalence (at 405.6, 550.7, and 600.6 cases per 10,000 live births, respectively).

Disclaimer: Data are based on passive reporting which means it is the responsibility of facilities to identify and report cases of birth defects. Not all facilities report cases as completely and timely as would be the ideal. Children diagnosed and treated in facilities in other states may be missed which will significantly affect the completeness of data for Michigan’s borderer counties.
The next couple slides contain updated treated neonatal abstinence syndrome statistics for prosperity region 10 in the State of Michigan.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics and Michigan Inpatient Database, this slide shows the incidence of treated neonatal abstinence syndrome (NAS) within prosperity region 10 from 2010 through 2016. Infants with treated NAS were identified by any diagnosis of the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis code of 779.5 (drug withdrawal syndrome in newborn) through September 2015 or Tenth Revision (ICD-10-CM) diagnosis code of P96.1 (neonatal withdrawal symptoms from maternal use of drugs of addiction) starting in October 2015. In 2016, the incidence of neonatal abstinence syndrome in prosperity region 10 was 690.7 per 100,000 live births.

Data source: Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Bureau of Epidemiology and Population Health, Michigan Department of Health and Human Services, using data from the Michigan Inpatient Database obtained with permission from the Michigan Health and Hospital Association Service Corporation (MHASC).
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of treated neonatal abstinence syndrome (NAS) by maternal race/ethnicity within prosperity region 10 for 2012-2016. Infants with treated NAS were identified by any diagnosis of the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis code of 779.5 (drug withdrawal syndrome in newborn) through September 2015 or Tenth Revision (ICD-10-CM) diagnosis code of P96.1 (neonatal withdrawal symptoms from maternal use of drugs of addiction) starting in October 2015. In 2012-2016, there were some differences in the incidence of treated neonatal abstinence syndrome by maternal race and ethnicity, from a high of 834.0 per 100,000 live births for White non-Hispanic women to a low of 353.5 for Black non-Hispanic women.

Data source: Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Bureau of Epidemiology and Population Health, Michigan Department of Health and Human Services, using data from the Michigan Inpatient Database obtained with permission from the Michigan Health and Hospital Association Service Corporation (MHASC).
Sleep-Related Infant Death Rate
Michigan & Prosperity Region 10, 2010-2017

The next couple slides contain sleep-related infant death statistics for prosperity region 10 in the State of Michigan.
Overview of Sleep-Related Infant Deaths in Michigan

- Between 2010 and 2017 there were 1,136 sleep-related infant deaths in Michigan.
- The three-year moving average for sleep-related infant death decreased in 2015-2017, after having experienced an increasing trend for several years.
- Between 2010 and 2016 White infants experience lower sleep-related infant death rates as compared to Black infants and American Indian/Alaska Native infants.
- Between 2010 and 2016 Hispanic and non-Hispanic infants experienced similar sleep-related infant death rates.

Using data from the Michigan Public Health Institute (MPHI), Sudden Unexpected Infant Death (SUID) case registry this slide shows the three-year moving average and sleep-related infant death rate by race/ethnic demographic breakdown. A death is included in the MPHI SUID registry if it occurs in Michigan resident infants less than 1 year of age suddenly and unexpectedly. Sleep-related infant deaths include sudden infant death syndrome (SIDS), undetermined/sudden unexplained infant death (SUID), suffocation/positional asphyxia and other causes where the sleep-environment likely contributed to the death.

The three-year moving average increased from 12.2 per 10,000 live births in 2010 to 2012 to 13.3 per 10,000 live births in 2014 to 2016, before decreasing to 12.5 per 10,000 live births in 2015 to 2017.

Data from 2010 to 2016 show Black infants experience the highest rate of Sudden Unexpected Infant Death (27.6 per 10,000 live births) followed by American Indian and Alaska Native Infants (18.8 per 10,000 live births). White infants experience the lowest rate of Sudden Unexpected Infant Deaths at 9.5 per 10,000 live births.
Sleep-Related Infant Death Rate, Prosperity Region 10, 2010-2017 (rate per 10,000 live births)

- Between 2010 and 2017 there were 472 sleep-related infant deaths in Region Ten.
- The resulting sleep-related infant death rate in Region Ten was 12.8 per 10,000 live births.
- Wayne County experiences a higher (19.0 per 10,000 live births) sleep-related infant death rate as compared to other counties in Region Ten and Michigan.
- Between 2010 and 2017, the Region Ten sleep-related infant death rate was higher than the Michigan sleep-related death rate (12.5 per 10,000 live births).

Using data from the Michigan Public Health Institute, Sudden Unexpected Infant Death (SUID) case registry, this slide shows the sleep-related infant death rate in prosperity region ten as compared to other prosperity regions in the state. Between 2010 and 2017, prosperity region ten experienced a higher SUID rate as compared to Michigan overall, with a rate of 12.8 per 10,000 live births as compared to 12.5 per 10,000 live births for Michigan. Counties with data available in region ten experienced differing SUID rates, ranging from 19.0 per 10,000 live births in Wayne County to 5.3 per 10,000 live births in Macomb County.
The next slide contains maternal morbidity data for prosperity region 10 in the State of Michigan.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, Michigan Resident Inpatient files, this slide shows severe maternal morbidity per 10,000 delivery hospitalizations, broken down by race and ethnicity. Severe maternal morbidity includes unexpected outcomes of labor and delivery that result in significant short or long-term health consequences. When looking at prosperity region ten severe maternal morbidity by race, Black mothers experience the highest rate at 309.9 per 10,000 delivery hospitalizations, compared to a rate of 216.1 per 10,000 delivery hospitalizations for region ten overall.

Data source: Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Bureau of Epidemiology and Population Health, Michigan Department of Health and Human Services, using data from the Michigan Inpatient Database obtained with permission from the Michigan Health and Hospital Association Service Corporation (MHASC).
The next couple slides contain maternal mortality data for prosperity region 10 in the State of Michigan.
Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics and the Michigan Department of Health and Human Services, Michigan Maternal Mortality Surveillance Program, this slide shows the maternal mortality rate in prosperity region ten as compared to the rest of the prosperity regions in Michigan. Maternal mortality is classified as a death that occurs during pregnancy or within one year of pregnancy. Prosperity region ten experiences a higher maternal mortality rate than Michigan overall at 64.8 per 100,000 live births as compared to 59.7 per 100,000 live births for Michigan.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics and the Michigan Department of Health and Human Services, Michigan Maternal Mortality Surveillance Program, this slide shows maternal mortality rate by race and mortality type. Maternal mortality is classified as a death that occurs during pregnancy or within one year of pregnancy. Mortality type includes pregnancy-related (related to or aggravated by the pregnancy) and pregnancy associated (cause of death is unrelated to pregnancy).

Black mothers experience a maternal mortality rate of 112.2 per 100,000 live births as compared to a rate of 55.9 per 100,000 live births for White mothers in prosperity region ten. Of the cases reviewed in region four, 21.7 percent were pregnancy related.
Maternal Depression
Michigan & Prosperity Region 10, 2012-2015

The next few slides contain maternal depression data for prosperity region 10 in the State of Michigan.
Using data from the Michigan Department of Health and Human Services Pregnancy Risk Assessment Monitoring System (MI PRAMS), the following slides show the prevalence of depression before and after pregnancy by maternal race/ethnicity. Numbers are reported as the proportion of mothers of live births reporting a certain condition. Birth years 2012-2015 are combined to provide more precision for subgroup estimates.

For the state as a whole: 8.9% of mothers report depression before pregnancy but no postpartum depression; 3.8% reported depression before pregnancy and postpartum depression; and 9.5% reported postpartum depression but no depression before pregnancy. The top two numbers in each bar added together are the proportion of women reporting postpartum depression. For the state as a whole, 9.5% + 3.8% = 13.3% of women report depression after pregnancy.

Notably - most women who report postpartum depression did not report depression before pregnancy. Most women who reported depression before pregnancy did not go on to report postpartum depression.

A small proportion of mothers reported depression both before and after pregnancy. There is variation by maternal race/ethnicity. Depression before pregnancy is relatively more common among NHW mothers than NHB mothers. Depression after pregnancy is relatively more common among mothers of NHB and Other race/ethnicity compared to NHW mothers.
Depression by time [before pregnancy only, after pregnancy only, both] is available for sub-state prosperity regions.

Postpartum depression (top two numbers per column) is relatively less common among mothers in prosperity region 9 and is more common among mothers in prosperity region 10. This difference in prosperity region 10 is being driven by significantly more postpartum depression in Wayne County (data not shown).

Due to small numbers in each region, few differences are statistically significant. The most important thing to take from this slide is that no region of the state is without maternal depression before and after pregnancy.
Looking at women reporting depression either before pregnancy and/or after pregnancy:

Between one quarter and one fifth of all Michigan mothers are affected by depression (22.2%).

By maternal race/ethnicity:
About one fifth of NHW mothers (20.8%) are affected by depression around the time of pregnancy.
About one quarter of NHB (25.6%) or other race/ethnicity (25.6%) mothers are affected by depression.

The most important thing to take from this slide is that a considerable proportion of mothers of all race/ethnicities are affected by depression either before pregnancy, after pregnancy, or at both times.
Looking at women reporting depression either before pregnancy and/or after pregnancy:

Between one quarter and one fifth of all Michigan mothers are affected by depression (22.2%).

Depression may be relatively more common among mothers of prosperity region 2, but the difference may be attributable to chance (p=0.0504). Depression was relatively less common among mothers of prosperity region 9 (p=0.0383) and prosperity region 10 (p=0.0051). The difference for prosperity region 10 is being driven by less overall depression among mothers of Oakland County (data not shown).

The most important thing to take from this slide is that a considerable proportion of mothers in all prosperity regions are affected by depression either before pregnancy, after pregnancy, or at both times.
Newborn Screening Timeliness, Prosperity Region 10, 2018

The next two slides contain newborn screening timeliness data for prosperity region 10 in the State of Michigan.
NBS Timeliness by Race, Prosperity Region 10, 2018

- The Michigan Newborn Screening (NBS) program screens approximately 99.4% of births in Michigan each year for over 55 conditions.
- The blood spot is collected around 24 hours after birth.
- All screens are sent via courier service to the state lab in Lansing.
- Timely receipt of the specimens is imperative so that infants identified with conditions on the NBS panel receive immediate follow up.
- Data presented includes infants born at a Michigan hospital whose NBS record was linked to a Michigan live birth file.
- Race-specific rates should be interpreted with caution since differences likely reflect hospital-level performance factors.

Percent of specimens received less than 72 hours after collection

<table>
<thead>
<tr>
<th>Race</th>
<th>N</th>
<th>Received within 72 hours N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>20,035</td>
<td>19,506</td>
<td>97.4</td>
</tr>
<tr>
<td>Black</td>
<td>13,199</td>
<td>12,717</td>
<td>96.3</td>
</tr>
<tr>
<td>American Indian</td>
<td>1,26</td>
<td>121</td>
<td>96.0</td>
</tr>
<tr>
<td>Asian/Pacific Island</td>
<td>1,852</td>
<td>1,804</td>
<td>97.4</td>
</tr>
<tr>
<td>Arab descent</td>
<td>4,006</td>
<td>3,949</td>
<td>98.6</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>1,537</td>
<td>1,495</td>
<td>97.3</td>
</tr>
<tr>
<td>Missing</td>
<td>2,373</td>
<td>2,293</td>
<td>96.6</td>
</tr>
</tbody>
</table>

Using data from the NBS database, this slide shows the percent of specimens received by the State lab less than 72 hours after collection in prosperity region 10, by race. Timely receipt of the blood spots ensures that infants who screen positive receive early diagnosis and treatment. The percent of specimens received less than 72 hours after collection ranged from 96.0%-98.6%
NBS Timeliness by Race, Prosperity Region 10, 2018

• The appropriate day metric is used to hold birth hospitals accountable for getting their NBS specimens to the State lab as quickly as possible.

• Since specimens need time to dry before transport, specimens collected at least 5 hours before their hospital specific courier pick up time should arrive at the lab the following day. Specimens collected less than 5 hours before their hospital specific courier pick up time should arrive at the lab two days after collection.

• Race-specific rates should be interpreted with caution since differences likely reflect hospital-level performance factors.

Percent of specimens received on the appropriate day

<table>
<thead>
<tr>
<th>Race</th>
<th>N</th>
<th>Received by appropriate day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N%</td>
</tr>
<tr>
<td>White</td>
<td>20,035</td>
<td>17,984</td>
</tr>
<tr>
<td>Black</td>
<td>13,199</td>
<td>11,254</td>
</tr>
<tr>
<td>American Indian</td>
<td>126</td>
<td>112</td>
</tr>
<tr>
<td>Asian/Pacific Island</td>
<td>1,852</td>
<td>1,665</td>
</tr>
<tr>
<td>Arab descent</td>
<td>4,006</td>
<td>3,685</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>1,537</td>
<td>1,357</td>
</tr>
<tr>
<td>Missing</td>
<td>2,373</td>
<td>2,083</td>
</tr>
</tbody>
</table>

Using data from the NBS database, this slide shows the percent of specimens received on the appropriate day in prosperity region 10, by race. The appropriate day is calculated by using the hospital specific courier pick up time. The appropriate day metric is used to hold birth hospitals accountable for getting their NBS specimens to the State lab as quickly as possible. Timely receipt of the blood spots ensures that infants who screen positive receive early diagnosis and treatment. The percent of specimens received on the appropriate day ranged from 85.3%-92.0%.
Percent of Children (19-35 Months Old) Receiving all Recommended Vaccinations, Prosperity Region 10, 2018

The next couple slides contain updated data from the Michigan Care Improvement Registry (MCIR) for the State of Michigan and by prosperity region.
This slide uses data from the Michigan Care Improvement Registry (MCIR) and details the percent of children (19-35 months old) that received the recommended 4313314 vaccination series in a timely manner by maternal race. These data are current as of May 25th, 2019.

The overall state percent was 74.3%, with Whites and Asian/Pacific Islanders reporting higher percentages (at 78.6% and 79.0%, respectively) than the state percent and Black and Multiracial children (at 62.4% and 70.2%, respectively) reporting lower percentages than the state percent.
This slide uses data from the Michigan Care Improvement Registry (MCIR) and details the percent of children (19-35 months old) that received the recommended 4313314 vaccination series in a timely manner by prosperity region. These data are current as of May 25th, 2019.

The overall state percent was 74.3%, with only prosperity regions 1 (at 74.1%), 6 (at 70.8%), and 10 (at 70.9%) reporting lower percentages than the state percent.
Safe Sleep Practices
Prosperity Region 10, 2012-2015

The next few slides contain updated safe sleep practices data from the Pregnancy Risk Assessment Monitoring System (PRAMS) for the State of Michigan and by prosperity region.
The group of columns on the left represent the total proportion of mothers who reported that their infant usually sleeps on his or her back for Michigan (excluding prosperity region 10), prosperity region 10, and the individual counties within prosperity region 10. The next three clusters of columns have breakdowns by maternal race/ethnicity.

Back sleeping is significantly less common for prosperity region 10 compared to the rest of Michigan (p=0.0001). However, there is no difference between Macomb and Oakland Counties and the rest of the state. The significant difference in prosperity region 10 is being driven by Wayne County (p=0.0001 vs rest of state).
The group of columns on the left represent the total proportion of mothers who reported that their infant usually sleeps on a firm mattress for Michigan (excluding prosperity region 10), prosperity region 10, and the individual counties within prosperity region 10. The next three clusters of columns have breakdowns by maternal race/ethnicity.

Firm mattress sleeping is significantly less common for prosperity region 10 compared to the rest of Michigan (p=0.0001). However, there is no difference between Macomb and Oakland Counties and the rest of the state. The significant difference in prosperity region 10 is being driven by Wayne County (p=0.0001 vs rest of state).
The group of columns on the left represent the total proportion of mothers who reported that their infant usually sleeps alone (i.e. no co-sleeping) for Michigan (excluding prosperity region 10), prosperity region 10, and the individual counties within prosperity region 10. The next three clusters of columns have breakdowns by maternal race/ethnicity.

Co-sleeping is no more or less common for prosperity region 10 compared to the rest of Michigan (p>0.05). Co-sleeping is more prevalent in Wayne County (p=0.0292 vs rest of state).
The next slide contains dental visit statistics during pregnancy for prosperity region 10 in the State of Michigan.
The group of columns on the left represent the total proportion of mothers who reported having their teeth cleaned during pregnancy for Michigan (excluding prosperity region 10), prosperity region 10, and the individual counties within prosperity region 10. The next three clusters of columns have breakdowns by maternal race/ethnicity.

Although there is no difference between prosperity region 10 and the rest of the state, looking at the county level we see significantly higher prevalence for pregnancy teeth cleaning for Macomb (p=0.0018) and Oakland (p=0.0110) counties and lower prevalence for Wayne (p=0.0002) County.

Statistical testing for race/ethnicity subgroups at the county level is difficult. Generally, pregnancy teeth cleaning is higher among NHW mothers than NHB. Non-white and non-black mothers in Wayne County may be a group of special interest for this health behavior.
The next slide contains teen birth rate statistics for prosperity region 10 in the State of Michigan.
Teen live birth rate is calculated by dividing the number of live births to mothers ages 15-19 years by the population of females ages 15-19 years in a given year and region.

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the live birth rate for mothers ages 15-19 in prosperity region 10 and the state of Michigan for 2017, with a breakout by self-identified maternal race (Non-Hispanic White, Non-Hispanic Black, and Hispanic). Teen live birth rate is calculated by dividing the number of live births to mothers ages 15-19 years by the population of females ages 15-19 years in a given year and region. In 2017, the non-Hispanic Black and Hispanic teen live birth rate in both prosperity region 10 and Michigan as a whole were higher than the non-Hispanic White teen live birth rates. While the non-Hispanic Black and Hispanic teen live birth rates were comparable between prosperity region 10 and the state as a whole, the non-Hispanic White teen live birth rate was 33% lower in prosperity region 10 than for all of Michigan.
The next slide contains updated gestational hypertension statistics for prosperity region 10 in the State of Michigan.
Gestational Hypertension, Prosperity Region 10, 2013-2017

Average Percent Gestational Hypertension by Maternal Race/Ethnicity, Michigan and Prosperity Region 10, 2013-2017

Using data from the Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the average incidence of gestational hypertension by maternal race/ethnicity within prosperity region 10 for 2013-2017. The incidence of gestational hypertension is calculated as the number of women who had gestational hypertension divided by the number of live births multiplied by 100. For 2013-2017, there were some differences in the incidence of gestational hypertension by maternal race and ethnicity, from a high of 7.3% for American Indian women to a low of 3.9% for Asian/Pacific Islander women for the State of Michigan, and from a high of 9.4% for American Indian women to a low of 4.0% for Hispanic and Asian/Pacific Islander women within prosperity region 10.
The next slide contains updated gestational diabetes statistics for prosperity region 10 in the State of Michigan.
The group of columns on the left represent the total proportion of mothers who reported having gestational diabetes (GDB) for Michigan (excluding prosperity region 10), prosperity region 10, and the individual counties within prosperity region 10. The next three clusters of columns have breakdowns by maternal race/ethnicity.

PRAMS asks two questions about diabetes -whether a mother had diabetes before pregnancy, and whether she developed GDB during her pregnancy. The numbers reported here are women who answered that they developed GDB during pregnancy - excluding a small number of women who had already answered that they also had diabetes before pregnancy.

There is no significant difference in GDB between prosperity region 10 and the rest of the state, and no significant differences at the county level.

Statistical testing for race/ethnicity subgroups at the county level is difficult. It is possible that GDB is more prevalent among NHB mothers than NHW mothers in Macomb county. GDB may be more prevalent among NHW mothers than NHB mothers in Wayne County.
The next several slides contain updated perinatal periods of risk (PPOR) statistics for prosperity region 10 in the State of Michigan.
This slide shows the feto-infant mortality rate within prosperity region 10 in Michigan from 2013-2017 for each of the four periods based on both birth weight and age at death: maternal health/prematurity, maternal care, newborn care, and infant health.

From 2013 to 2017 within prosperity region 10, the feto-infant mortality rate was 3.10 per 1,000 live births in the maternal health and prematurity period, 1.66 per 1,000 live births in the maternal care period, 1.31 per 1,000 live births in the newborn care period, and 1.91 per 1,000 live births in the infant health period.
This slide shows the feto-infant excess mortality rate within prosperity region 10 in Michigan from 2013-2017 for each of the four periods based on both birth weight and age at death: maternal health/prematurity, maternal care, newborn care, and infant health. The excess mortality rate is calculated by subtracting the mortality rate of the reference group from the mortality rate of the population group. The reference group is White non-Hispanic Michigan women, over 20 years and less than 40 years old, and at least 13 years education or intending to use private insurance at delivery.

From 2013 to 2017 within prosperity region 10, the excess feto-infant mortality rate was 1.27 per 1,000 live births in the maternal health and prematurity period, 0.18 per 1,000 live births in the maternal care period, 0.32 per 1,000 live births in the newborn care period, and 0.86 per 1,000 live births in the infant health period.
This slide shows the feto-infant mortality rate trend by PPOR period within prosperity region 10 in Michigan from 2013 to 2017.

From 2013 to 2017, in prosperity region 10, the feto-infant mortality rate in the maternal health and prematurity period was higher than the other periods and increased from 2013 to 2014, declined from 2014 to 2016, and then increased in 2017. The rate in the newborn care period went down from 2013 to 2014, then increased in 2015, and then declined from 2015 to 2017. The rate in the infant health period has been on a slow increase from 2013 to 2017. The rate in the maternal care period declined from 2013 to 2014 and then increased from 2014 to 2017.
This slide shows the feto-infant excess mortality rate trend by PPOR period within prosperity region 10 in Michigan from 2013 to 2017. The excess mortality rate is calculated by subtracting the mortality rate of the reference group from the mortality rate of the population group. The reference group is White non-Hispanic Michigan women, over 20 years and less than 40 years old, and at least 13 years education or intending to use private insurance at delivery.

From 2013 to 2017, in prosperity region 10, the feto-infant mortality excess rate in the maternal health and prematurity period was higher than the other periods and increased from 2013 to 2014, went down from 2014 to 2016, and then increased in 2017. The rate in the newborn care period went down from 2013 to 2014, then increased in 2015, and then declined from 2015 to 2017. The rate in the infant health period has been on a slow increase from 2013 to 2017. The rate in the maternal care period declined from 2013 to 2014 and then increased from 2014 to 2017.
The next slide contains youth and young adult suicide data for prosperity region 10 in the State of Michigan.
Youth and Young Adult Suicide Rate, Prosperity Region 10, 2013-2017
(rate per 100,000 youth and young adults)

- Youth and young adult suicides are defined as suicides that occur in population ages 10 to 24 years.
- Between 2013 and 2017 there were 379 youth and young adult suicides in Region Ten.
- The Region Ten youth and young adult suicide rate is similar to the Michigan rate.
- White youth (10.9 per 100,000) experience higher rates of suicide as compared to Black youth (8.3 per 100,000) in Region Ten.
- In Region Ten, Wayne County (10.7 per 100,000) experienced a higher rate of youth suicide as compared to Macomb (10.1 per 100,000) and Oakland (9.0 per 100,000) Counties.

Using data from Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, this slide shows the suicide rate for Michigan prosperity regions, focusing on prosperity region 10. Youth and young adult suicides are defined as suicides that occur in population ages 10 to 24 years. Between 2013 and 2017 prosperity region 10 (10.0 per 100,000) experienced a similar youth and young adult suicide rate as compared to Michigan overall (10.2 per 100,000). White youth in prosperity region 10 (10.9 per 100,000) experienced higher suicide rates as compared to Black youth in region ten (8.3 per 100,000).
The next slide contains youth and young adult suicide behavior data for the State of Michigan.
Suicidal Ideation and Attempts Among Michigan High School Students in 2017:

- 21.3% Considered Suicide
- 17.7% Made a suicide plan
- 9.4% Attempted suicide

- Of those students that considered suicide, **63 percent** made a suicide plan.
- Of those students that made a suicide plan, **42 percent** attempted suicide.
- Of those students that attempted suicide, **33 percent** needed to be seen by a healthcare professional.
- Of those students that attempted suicide, **46 percent** had attempted more than once.
- White students were more likely to seriously consider suicide (**36.7 percent**) as compared to Black students (**15.8 percent**).
- A slightly higher percentage of White students (**36.7 percent**) reported feeling sad or hopeless as compared to Black students (**33.3 percent**) (data not shown).

Data Source: Youth Risk Behavior Survey, Michigan Department of Education

Using data from 2017 Youth Risk Behavior Surveillance Survey, this slide shows suicide ideation and attempts among Michigan high school students. When asked whether they have experienced a range of suicidal behavior questions in the past year, 21.3 percent of students answered “yes” to ever seriously attempting suicide, 17.7 percent answered “yes” to having made a suicide plan, and 9.4 percent attempted suicide at least one time. Of those that attempted suicide, 33 percent needed to be seen by a healthcare professional and 46 percent had attempted more than once.