

Infant Health Statistics, Prosperity Region 6, Michigan

Prepared by Maternal and Child Health (MCH) 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
June 2019

8/23/2019

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This presentation provides updated infant health statistics for prosperity region 6 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 6, 2010-2017

8/23/2019

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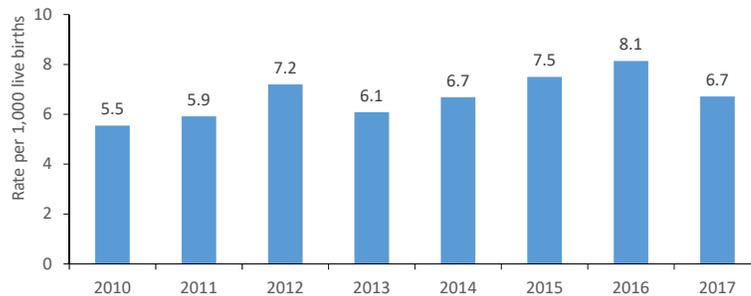
The next several slides contain updated infant mortality rate statistics for prosperity region 6 in the State of Michigan.

Infant Mortality Rate, Prosperity Region 6, 2010-2017

(rate per 1,000 live births)

Infant Mortality Rate per 1,000 Live Births,
Prosperity Region 6, 2010-2017

2017 Michigan Rate = 6.8



Year	# Live Births	# Infant Death	IMR
2010	9,739	54	5.5
2011	9,460	56	5.9
2012	9,306	67	7.2
2013	9,366	57	6.1
2014	9,424	63	6.7
2015	9,067	68	7.5
2016	9,214	75	8.1
2017	8,938	60	6.7

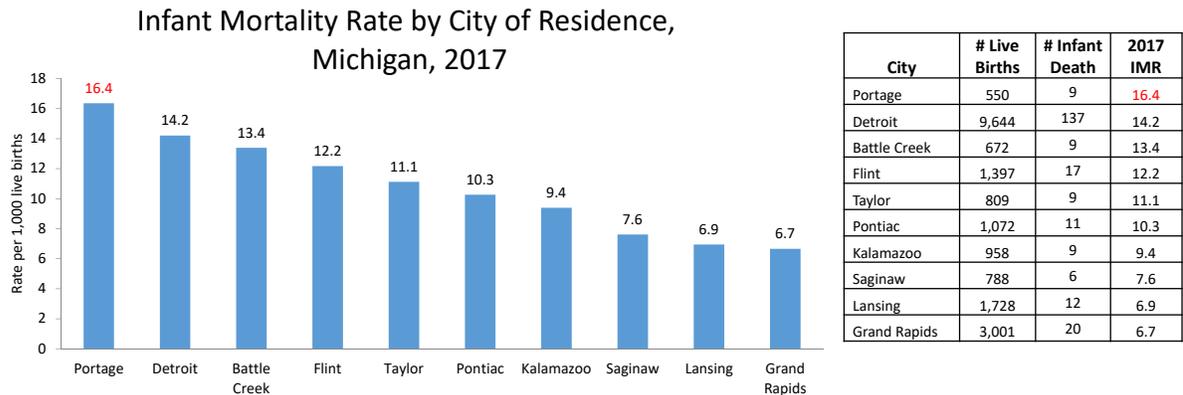
Infant mortality is defined as a death of a baby before his or her first birthday and is expressed as a rate per 1,000 live births.

Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 has fluctuated quite a bit over the last eight years, but appears to be on an upward trend from 2013 to 2016. In 2017, the infant mortality rate was 6.8 infant deaths per 1,000 live births for the State of Michigan and 6.7 infant deaths per 1,000 live births within prosperity region 6.

Infant Mortality Rate by Selected City of Residence at Birth, Michigan, 2017 (rate per 1,000 live births)



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.

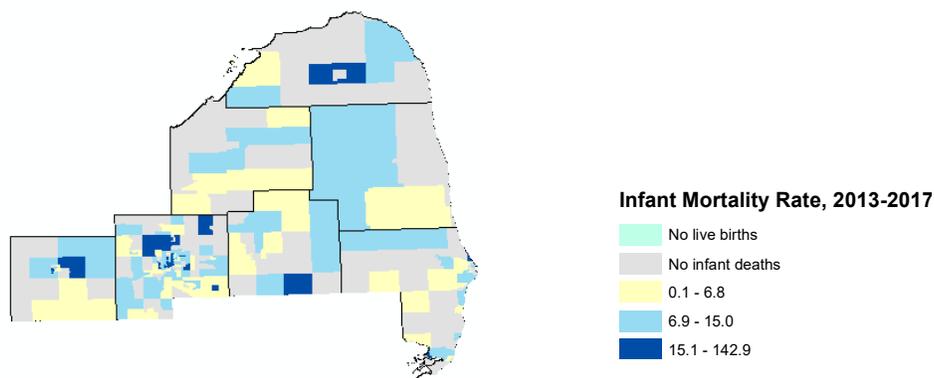
Selected city has more than 5 infant deaths.

8/23/2019
Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6, 2013-2017 (rate per 1,000 live births)



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.

8/23/2019
Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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;

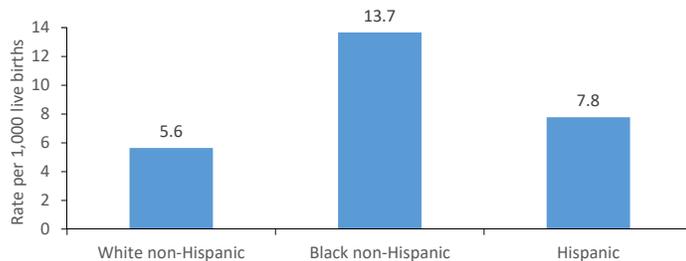
Yellow: below the mean of rates in Michigan (0.1 - 6.8 deaths per 1,000 live births);

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).

Infant Mortality Rates by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017 (rate per 1,000 live births)

Average Infant Mortality Rate by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017



Maternal Race/Ethnicity	# Live Births	# Infant Death	IMR
White non-Hispanic	35,647	201	5.6
Black non-Hispanic	7,247	99	13.7
Hispanic	1,800	14	7.8
Asian/Pacific Islander	344	DNS	DNS
American Indian	65	DNS	DNS

DNS: data not sufficient (0<N<6).

2013-2017 Michigan Rates

White, nH = 5.1

Black, nH = 13.0

Hispanic = 7.2

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.

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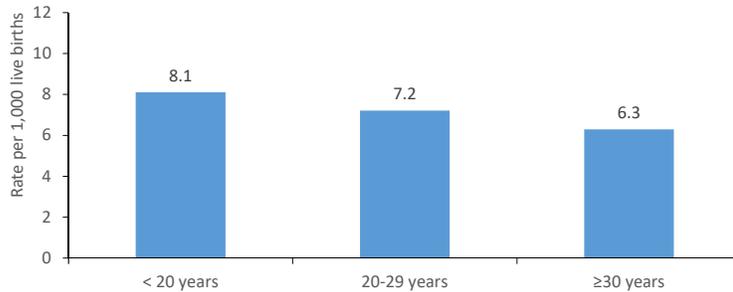
Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6, from a high of 13.7 deaths per 1,000 live births for Black non-Hispanic women to a low of 5.6 deaths per 1,000 live births for White non-Hispanic women. These statistics are comparable to the overall state rates by race and ethnicity.

Infant Mortality Rates by Maternal Age, Prosperity Region 6, 2013-2017 (rate per 1,000 live births)

Average Infant Mortality Rate by Maternal Age, Prosperity Region 6, 2013-2017



Maternal Age	# Live Births	# Infant Death	IMR
< 20 years	3,333	27	8.1
20-29 years	27,589	199	7.2
≥30 years	15,087	95	6.3

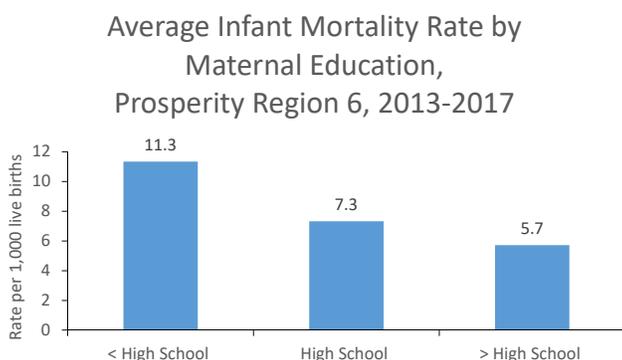
2013-2017 Michigan Rates
 < 20 years = 11.1
 20-29 years = 7.1
 ≥30 years = 5.7

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.

8/23/2019
 Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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 age within prosperity region 6 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 6 was 8.1 deaths per 1,000 live births among women aged less than 20 years, 7.2 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 6, 2013-2017 (rate per 1,000 live births)



Maternal Education	# Live Births	# Infant Death	IMR
< High School	5,999	68	11.3
High School	12,286	90	7.3
> High School	27,607	158	5.7

2013-2017 Michigan Rates
 < HS = 10.4
 HS = 8.3
 > HS = 5.1

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.

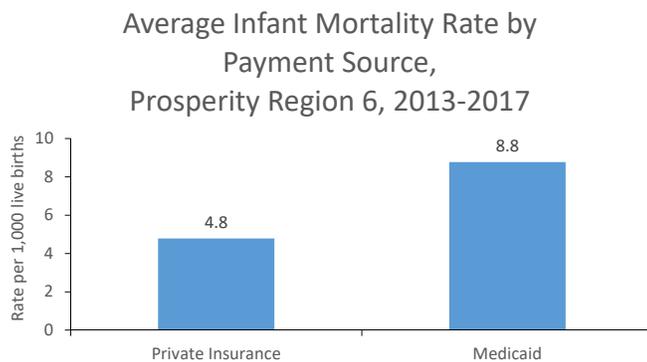
8/23/2019

Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was 11.3 deaths per 1,000 live births among women who did not finish high school, 7.3 deaths per 1,000 live births among women who just finished high school, and 5.7 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.

Infant Mortality Rates by Payment Source, Prosperity Region 6, 2013-2017 (rate per 1,000 live births)



Payment Source	# Live Births	# Infant Death	IMR
Private Insurance	21,109	101	4.8
Medicaid	24,178	212	8.8

2013-2017 Michigan Rates
Private Insurance = 5.0
Medicaid = 8.7

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.

8/23/2019

Data source: Michigan resident live birth files and infant mortality files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was higher among women using Medicaid as the payment source (8.8 deaths per 1,000 live births) than women using private insurance (4.8 deaths per 1,000 live births). This comparison looks very similar when looking at the overall state rates by payment source.

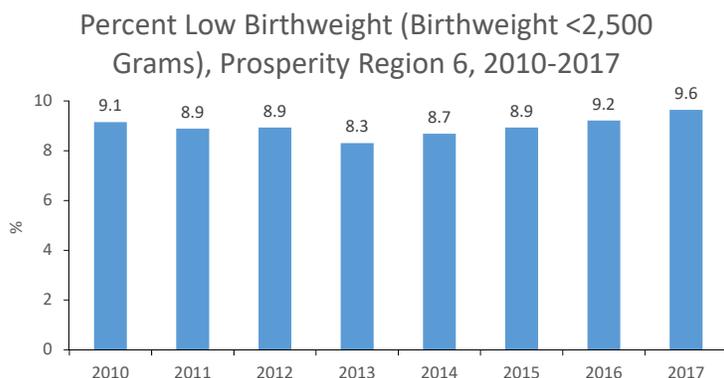
Low Birthweight (LBW), Prosperity Region 6, 2010-2017

8/23/2019

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The next several slides contain updated low birthweight statistics for prosperity region 6 in the State of Michigan.

Low Birthweight, Prosperity Region 6, 2010-2017



2017 Michigan Percent = 8.8

Year	# Live Births	# LBW	LBW %
2010	9,739	891	9.1
2011	9,460	841	8.9
2012	9,306	831	8.9
2013	9,366	778	8.3
2014	9,424	818	8.7
2015	9,067	810	8.9
2016	9,214	849	9.2
2017	8,938	862	9.6

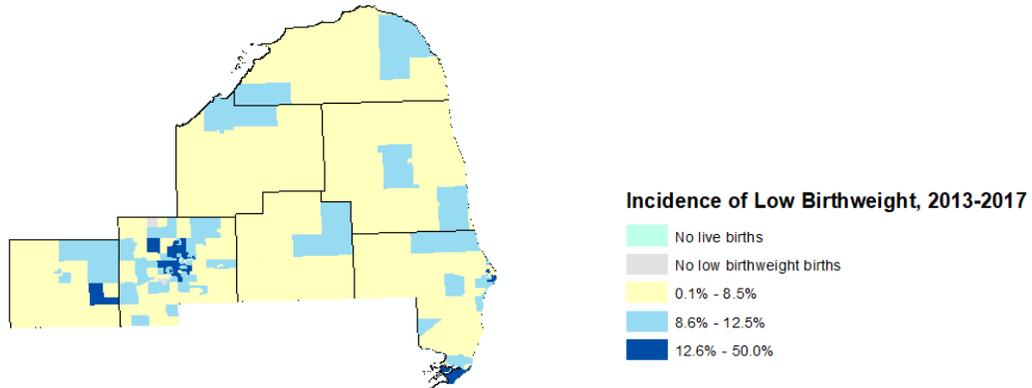
Low birthweight rate is defined as number of births with baby birthweight <2,500 grams per 100 live births.

Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 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 9.6% for prosperity region 6.

Low Birthweight by Census Tract, Prosperity Region 6, 2013-2017



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

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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;

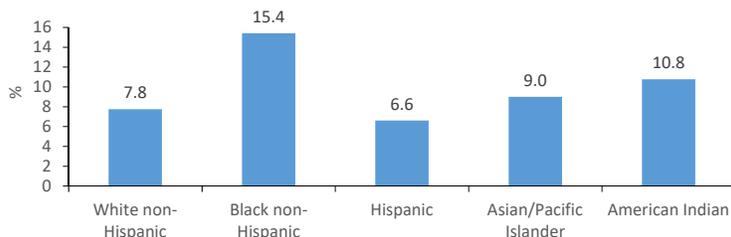
Yellow: below the mean of rates in Michigan (0.1% - 8.5%);

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%).

Low Birthweight by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017

Average Percent Low Birthweight (Birthweight <2,500 Grams) by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017



Maternal Race/Ethnicity	# Live Births	# LBW	LBW %
White non-Hispanic	35,647	2,763	7.8
Black non-Hispanic	7,247	1,117	15.4
Hispanic	1,800	119	6.6
Asian/Pacific Islander	344	31	9.0
American Indian	65	7	10.8

2013-2017 Michigan Percentages
 White, nH = 7.0
 Black, nH = 14.3
 Hispanic = 7.3
 Asian/Pacific Islander = 9.0
 American Indian = 7.9

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

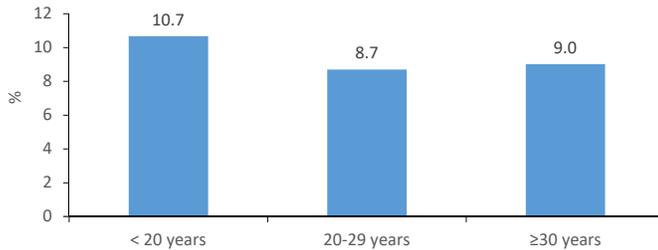
8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6, from a high of 15.4% for Black non-Hispanic women to a low of 6.6% for Hispanic 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%.

Low Birthweight by Maternal Age, Prosperity Region 6, 2013-2017

Average Percent Low Birthweight (Birthweight <2,500 Grams) by Maternal Age, Prosperity Region 6, 2013-2017



Maternal Age	# Live Births	# LBW	LBW %
< 20 years	3,333	356	10.7
20-29 years	27,589	2,400	8.7
≥30 years	15,087	1,361	9.0

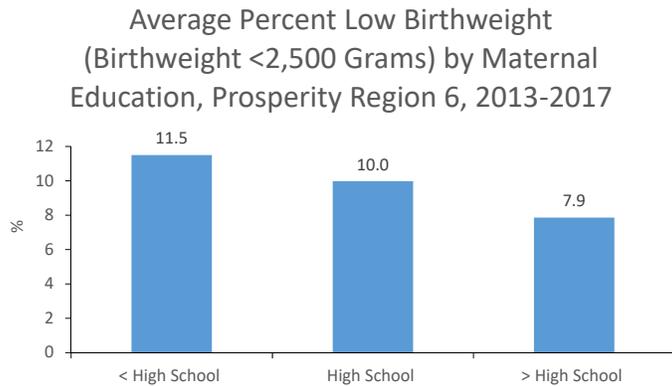
2013-2017 Michigan Percentages
 < 20 years = 10.4
 20-29 years = 8.4
 ≥30 years = 8.4

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

8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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 6 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 6 was 10.7% among women aged less than 20 years, 8.7% among women aged between 20 and 29 years, and 9.0% among women aged over 30 years. These statistics are comparable to the overall state rates by maternal age.

Low Birthweight by Maternal Education, Prosperity Region 6, 2013-2017



Maternal Education	# Live Births	# LBW	LBW %
< High School	5,999	690	11.5
High School	12,286	1,226	10.0
> High School	27,607	2,171	7.9

2013-2017 Michigan Percentages
 < HS = 11.0
 HS = 9.8
 > HS = 7.4

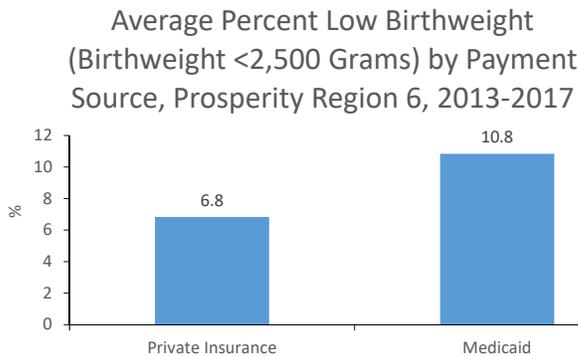
Low birthweight rate is defined as number of births with baby birthweight <2,500 grams per 100 live births.

8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was 11.5% among women who did not finish high school, 10.0% among women who just finished high school, and 7.9% among women who had more than a high school education. These statistics are comparable to the overall state rates by maternal education.

Low Birthweight by Payment Source, Prosperity Region 6, 2013-2017



Payment Source	# Live Births	# LBW	LBW %
Private Insurance	21,109	1,443	6.8
Medicaid	24,178	2,620	10.8

2013-2017 Michigan Percentages
Private Insurance = 7.2
Medicaid = 10.1

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

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was higher among women using Medicaid as the payment source (10.8%) than women using private insurance (6.8%). This comparison looks very similar when looking at the overall state rates by payment source.

Very Low Birthweight (VLBW), Prosperity Region 6, 2010-2017

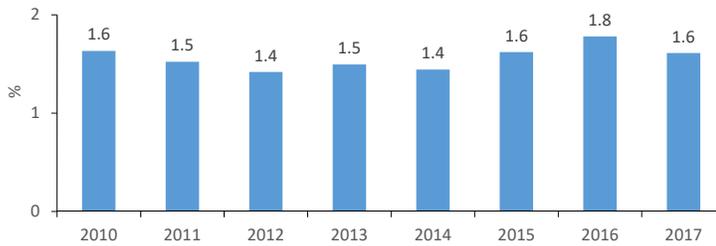
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The next several slides contain updated very low birthweight statistics for prosperity region 6 in the State of Michigan.

Very Low Birthweight, Prosperity Region 6, 2010-2017

Percent Very Low Birthweight (Birthweight
<1,500 Grams), Prosperity Region 6, 2010-
2017



2017 Michigan Percent = 1.5

Year	# Live Births	# VLBW	VLBW %
2010	9,739	159	1.6
2011	9,460	144	1.5
2012	9,306	132	1.4
2013	9,366	140	1.5
2014	9,424	136	1.4
2015	9,067	147	1.6
2016	9,214	164	1.8
2017	8,938	144	1.6

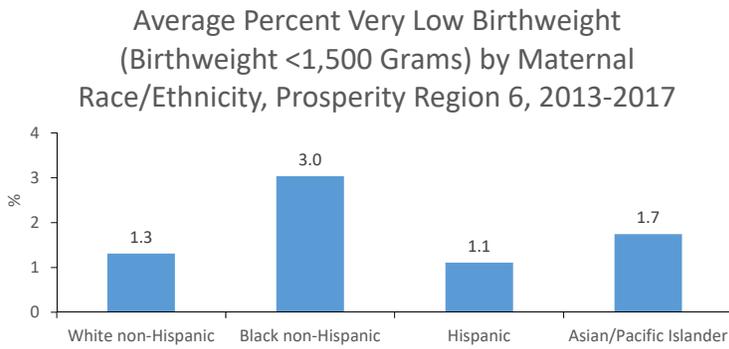
Very low birthweight rate is defined as number of births with baby birthweight <1,500 grams per 100 live births.

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 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 1.6% in prosperity region 6.

Very Low Birthweight by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017



Maternal Race/Ethnicity	# Live Births	# VLBW	VLBW %
White non-Hispanic	35,647	467	1.3
Black non-Hispanic	7,247	220	3.0
Hispanic	1,800	20	1.1
Asian/Pacific Islander	344	6	1.7
American Indian	65	DNS	DNS

DNS: data not sufficient (0<N<6).

2013-2017 Michigan Percentages

White, nH = 1.1

Black, nH = 3.2

Hispanic = 1.3

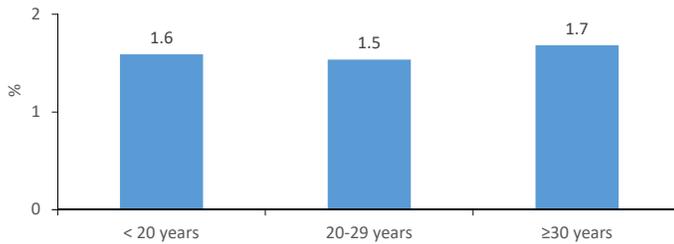
Asian/Pacific Islander = 1.2

Very low birthweight rate is defined as number of births with baby birthweight <1,500 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 very low birthweight by maternal race/ethnicity within prosperity region 6 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 6, from a high of 3.0% for Black non-Hispanic women to a low of 1.1% for 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%.

Very Low Birthweight by Maternal Age, Prosperity Region 6, 2013-2017

Average Percent Very Low Birthweight (Birthweight <1,500 Grams) by Maternal Age, Prosperity Region 6, 2013-2017



Maternal Age	# Live Births	# VLBW	VLBW %
< 20 years	3,333	53	1.6
20-29 years	27,589	424	1.5
≥30 years	15,087	254	1.7

2013-2017 Michigan Percentages

< 20 years = 2.0

20-29 years = 1.5

≥30 years = 1.5

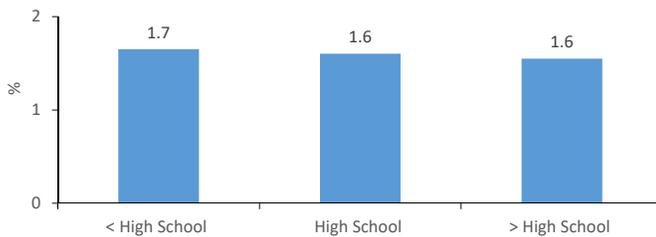
Very low birthweight rate is defined as number of births with baby birthweight <1,500 grams per 100 live births.

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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 6 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 6 was 1.6% among women aged less than 20 years, 1.5% among women aged between 20 and 29 years, and 1.7% among women aged over 30 years. These statistics are comparable to the overall state rates by maternal age.

Very Low Birthweight by Maternal Education, Prosperity Region 6, 2013-2017

Average Percent Very Low Birthweight
(Birthweight <1,500 Grams) by Maternal
Education, Prosperity Region 6, 2013-2017



Maternal Education	# Live Births	# VLBW	VLBW %
< High School	5,999	99	1.7
High School	12,286	197	1.6
> High School	27,607	428	1.6

2013-2017 Michigan Percentages	
< HS	1.9
HS	1.8
> HS	1.3

Very low birthweight rate is defined as number of births with baby birthweight <1,500 grams per 100 live births.

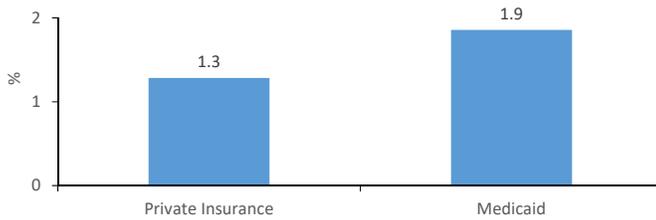
8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was 1.7% among women who did not finish high school, 1.6% 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.

Very Low Birthweight by Payment Source, Prosperity Region 6, 2013-2017

Average Percent Very Low Birthweight (Birthweight <1,500 Grams) by Payment Source, Prosperity Region 6, 2013-2017



Payment Source	# Live Births	# VLBW	VLBW %
Private Insurance	21,109	271	1.3
Medicaid	24,178	449	1.9

2013-2017 Michigan Percentages
Private Insurance = 1.3
Medicaid = 1.8

Very low birthweight rate is defined as number of births with baby birthweight <1,500 grams per 100 live births.

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was higher among women using Medicaid as the payment source (1.9%) than women using private insurance (1.3%). This comparison looks very similar when looking at the overall state rates by payment source.

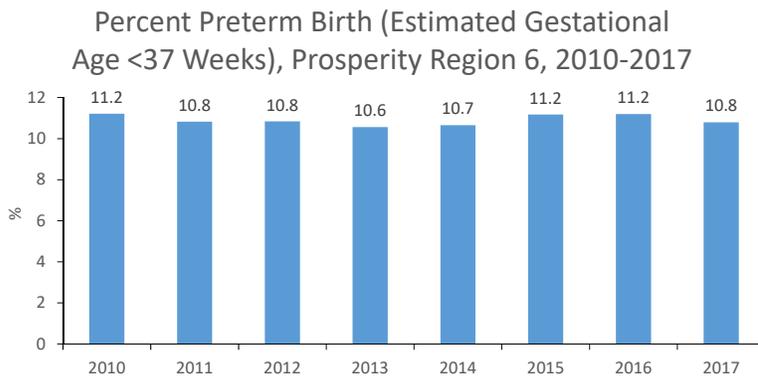
Preterm Birth (PTB), Prosperity Region 6, 2010-2017

8/23/2019

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The next several slides contain updated preterm birth statistics for prosperity region 6 in the State of Michigan.

Preterm Birth, Prosperity Region 6, 2010-2017



2017 Michigan Percent = 10.2

Year	# Live Births	# PTB	PTB %
2010	9,739	1,092	11.2
2011	9,460	1,024	10.8
2012	9,306	1,009	10.8
2013	9,366	989	10.6
2014	9,424	1,004	10.7
2015	9,067	1,013	11.2
2016	9,214	1,032	11.2
2017	8,938	965	10.8

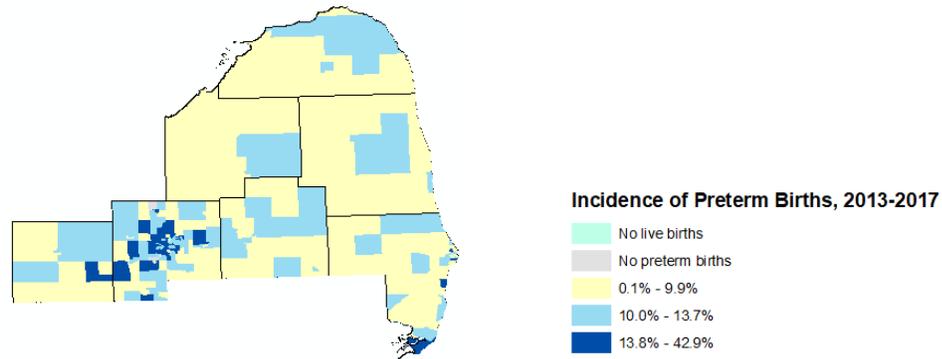
Preterm birth rate is defined as number of births delivered before 37 completed weeks of gestation per 100 live births. Gestational age is based on the obstetric estimate of gestation.

Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 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 10.8% in prosperity region 6.

Preterm Birth by Census Tract, Prosperity Region 6, 2013-2017



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.

8/23/2019

Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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;

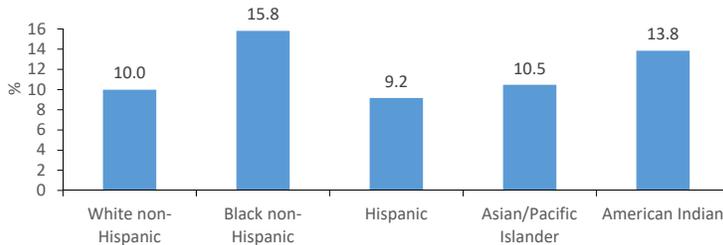
Yellow: below the mean of rates in Michigan (0.1% - 9.9%);

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%).

Preterm Birth by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017

Average Percent Preterm Birth (Estimated Gestational Age <37 Weeks) by Maternal Race/Ethnicity, Prosperity Region 6, 2013-2017



Maternal Race/Ethnicity	# Live Births	# PTB	PTB %
White non-Hispanic	35,647	3,561	10.0
Black non-Hispanic	7,247	1,146	15.8
Hispanic	1,800	165	9.2
Asian/Pacific Islander	344	36	10.5
American Indian	65	9	13.8

2013-2017 Michigan Percentages

White, nH = 8.9
 Black, nH = 14.2
 Hispanic = 9.1
 Asian/Pacific Islander = 8.6
 American Indian = 10.9

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.

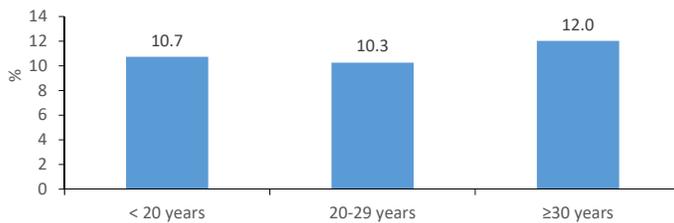
8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6, from a high of 15.8% for Black non-Hispanic women to a low of 9.2% for Hispanic 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%.

Preterm Birth by Maternal Age, Prosperity Region 6, 2013-2017

Average Percent Preterm Birth (Estimated Gestational Age <37 Weeks) by Maternal Age, Prosperity Region 6, 2013-2017



Maternal Age	# Live Births	# PTB	PTB %
< 20 years	3,333	358	10.7
20-29 years	27,589	2,831	10.3
≥30 years	15,087	1,814	12.0

2013-2017 Michigan Percentages
 < 20 years = 10.4
 20-29 years = 9.4
 ≥30 years = 10.5

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.

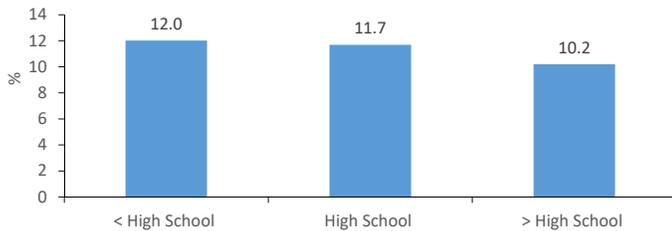
8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was 10.7% among women aged less than 20 years, 10.3% among women aged between 20 and 29 years, and 12.0% among women aged over 30 years. These statistics were slightly higher than the comparable overall state rates by maternal age.

Preterm Birth by Maternal Education, Prosperity Region 6, 2013-2017

Average Percent Preterm Birth (Estimated Gestational Age <37 Weeks) by Maternal Education, Prosperity Region 6, 2013-2017



Maternal Education	# Live Births	# PTB	PTB %
< High School	5,999	721	12.0
High School	12,286	1,436	11.7
> High School	27,607	2,815	10.2

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

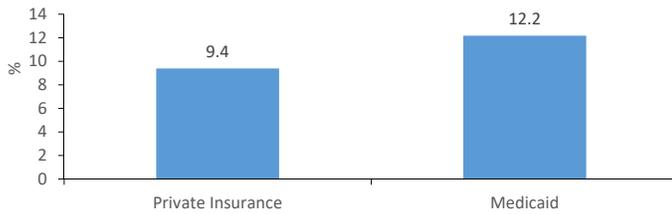
Preterm birth rate is defined as number of births delivered before 37 completed weeks of gestation per 100 live births. Gestational age is based on the obstetric estimate of gestation.

8/23/2019
 Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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 6 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 6 was 12.0% among women who did not finish high school, 11.7% among women who just finished high school, and 10.2% among women who had more than a high school education. These statistics were slightly higher than the comparable overall state rates by maternal education.

Preterm Birth by Payment Source, Prosperity Region 6, 2013-2017

Average Percent Preterm Birth (Estimated Gestational Age <37 Weeks) by Payment Source, Prosperity Region 6, 2013-2017



Payment Source	# Live Births	# PTB	PTB %
Private Insurance	21,109	1,983	9.4
Medicaid	24,178	2,943	12.2

2013-2017 Michigan Percentages
Private Insurance = 9.2
Medicaid = 10.9

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.

8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 6 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 6 was higher among women using Medicaid as the payment source (12.2%) than women using private insurance (9.4%). The difference between the Medicaid and private insurance preterm birth percentages is a bit larger in prosperity region 6 when compared to the State of Michigan as a whole.

Birth Defects Prevalence, by Race/ethnicity and Prosperity Region, 2016

8/23/2019

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The next two slides contain updated birth defects prevalence statistics for the State of Michigan as a whole and by Michigan prosperity region.

Birth Defect Prevalence Rates by Race/ethnicity: MBDR, 2016

- 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).

* Total reported birth defect cases for all diagnostic groupings per 10,000 live births
 **Maternal Race/ethnicity as reported on birth record

Figure 1. Statewide Maternal Race-Specific Birth Defect Prevalence Rates: MBDR, 2016

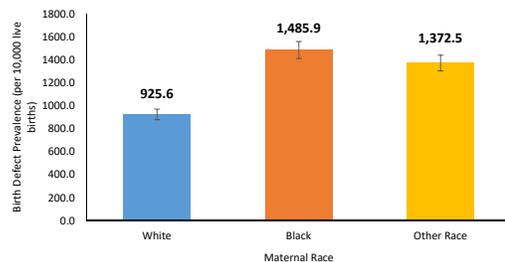
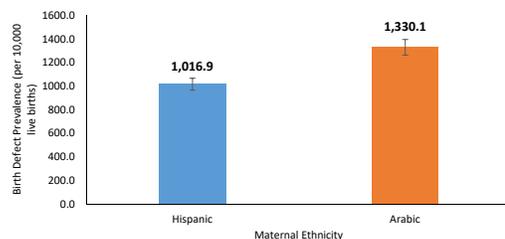


Figure 2. Statewide Maternal Ethnicity-Specific Birth Defect Prevalence Rates: MBDR, 2016



This slide uses data from the Michigan Birth Defects Registry and details the Michigan birth defects prevalence by maternal race and ethnicity for 2016.

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).

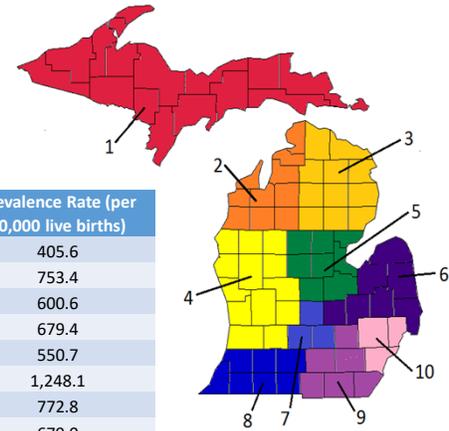
Furthermore, the birth defects prevalence among Hispanic (at 1,016.9 cases per 10,000 live births) and Arabic mothers (at 1,330.1 cases per 10,000 live births) was greater than that of white mothers (at 925.6 cases per 10,000 live births) in 2016.

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 border 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.

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



*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

Statewide Birth Defect Prevalence Rates by Prosperity Region with Prosperity Region Map: MBDR, 2016

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 boarder counties.

Treated Neonatal Abstinence Syndrome (NAS) Prosperity Region 6, 2010-2016

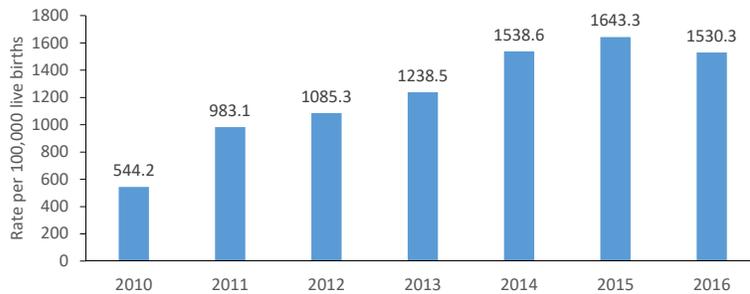
8/23/2019

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The next couple slides contain updated treated neonatal abstinence syndrome statistics for prosperity region 6 in the State of Michigan.

Neonatal Abstinence Syndrome, Prosperity Region 6, 2010-2016 (Rate per 100,000 Live Births)

Treated Neonatal Abstinence Syndrome Rate (per 100,000 Live Births), Prosperity Region 6, 2010-2016



Year	# Live Births	# NAS	NAS Rate
2010	9,739	53	544.2
2011	9,460	93	983.1
2012	9,306	101	1,085.3
2013	9,366	116	1,238.5
2014	9,424	145	1,538.6
2015	9,067	149	1,643.3
2016	9,214	141	1,530.3

8/23/2019

Data source: MDHHS Division for Vital Records and Health Statistics. Michigan resident live birth file linked to the Michigan Inpatient Hospital Database.

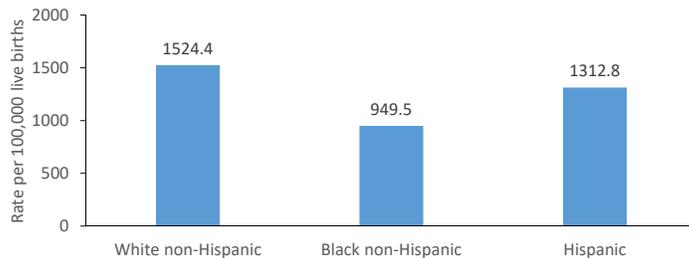
34

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 6 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 6 was 1,530.3 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).

Neonatal Abstinence Syndrome by Maternal Race/Ethnicity, Prosperity Region 6, 2012-2016

Average Treated Neonatal Abstinence Syndrome Rate (per 100,000 Live Births) by Maternal Race/Ethnicity, Prosperity Region 6, 2012-2016



Maternal Race/Ethnicity	# Live Births	# NAS	NAS Rate
White non-Hispanic	36,014	549	1,524.4
Black non-Hispanic	7,267	69	949.5
Hispanic	1,752	23	1,312.8
American Indian	64	DNS	DNS

DNS: data not sufficient (0<N<6).

8/23/2019

Data source: MDHHS Division for Vital Records and Health Statistics. Michigan resident live birth file linked to the Michigan Inpatient Hospital Database.

35

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 6 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 1,524.4 per 100,000 live births for White non-Hispanic women to a low of 949.5 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, 2010-2017 Prosperity Region 6, 2010-2015

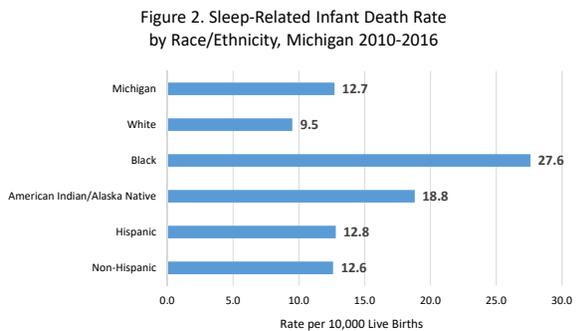
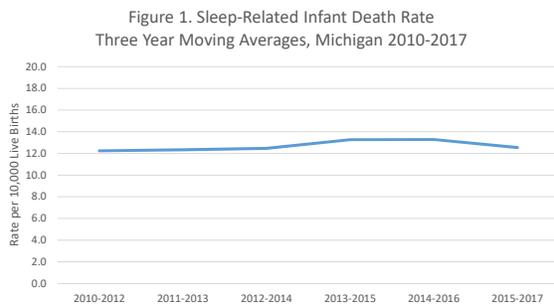
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The next couple slides contain sleep-related infant death statistics for prosperity region 6 in the State of Michigan.

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.

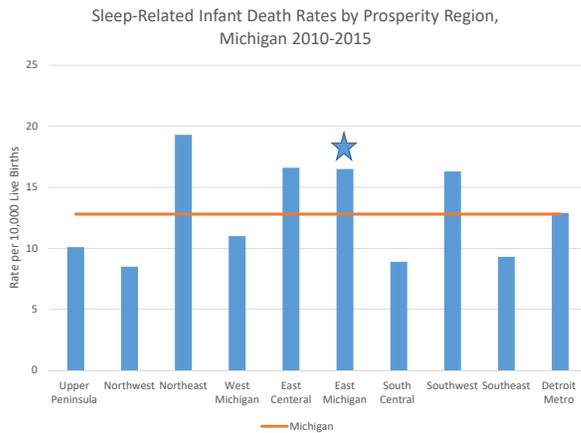


Using data from the Michigan Public Health Institute (MPHI), Sudden Unexpected Infant Death (SUID) case registry this slide shows the three-year moving average and sleep-related infant death rate by race/ethnic demographic breakdown. A death is included in the MPHI SUID registry if it occurs in Michigan 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 6, 2010-2015 (rate per 10,000 live births)



- Between 2010 and 2015 there were **93** sleep-related infant deaths in Region Six.
- Between 2010 and 2015 the sleep-related infant death rate in Region Six was 16.5 per 10,000 live births.
- During this same time period, the Region Six sleep-related infant death rate was **higher** than the Michigan sleep-related death rate (12.8 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 six as compared to other prosperity regions in the state. Between 2010 and 2015, prosperity region six experienced a higher SUID rate as compared to Michigan overall, with a rate of 16.5 per 10,000 live births as compared to 12.8 per 10,000 live births for Michigan.

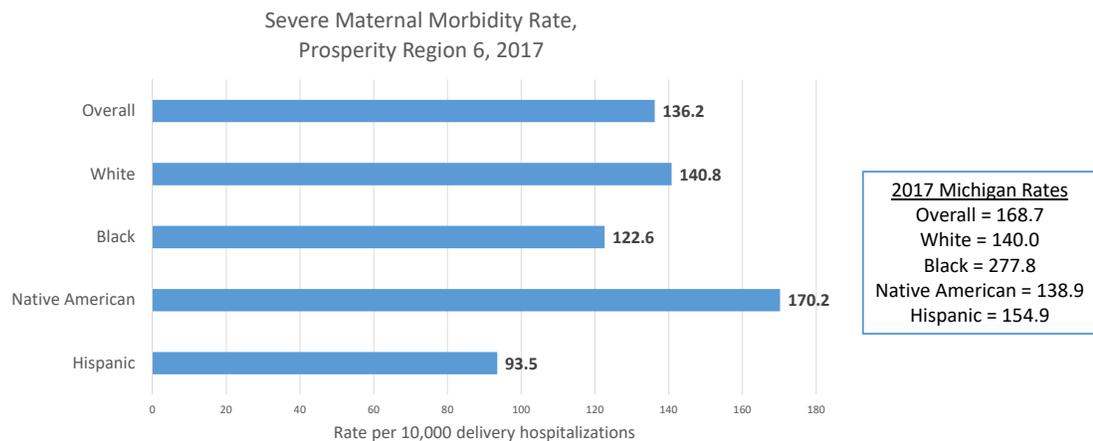
Severe Maternal Morbidity Rate Prosperity Region 6, 2017

8/23/2019

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The next slide contains maternal morbidity data for prosperity region 6 in the State of Michigan.

Severe Maternal Morbidity, Prosperity Region 6, 2017 (rate per 10,000 delivery hospitalizations)



* Statistics for other races are suppressed due to insufficient sample sizes.

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 six severe maternal morbidity by race, Native American mothers experience the highest rate at 170.2 per 10,000 delivery hospitalizations, compared to a rate of 136.2 per 10,000 delivery hospitalizations for region six 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).

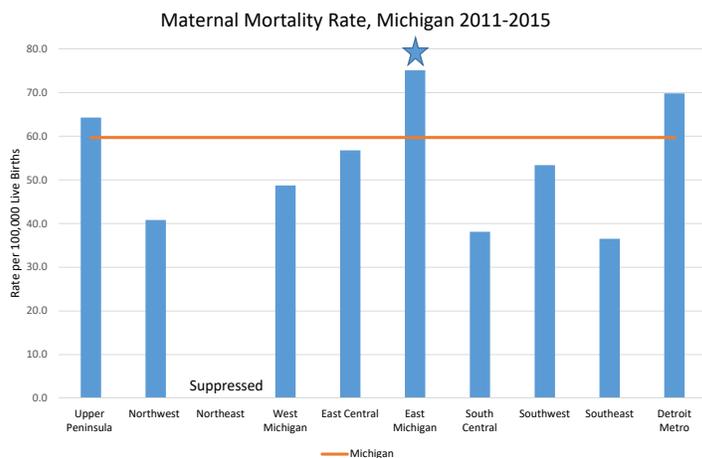
Maternal Mortality Rate Prosperity Region 6, 2011-2015

8/23/2019

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The next two slides contains maternal mortality data for prosperity region 6 in the State of Michigan.

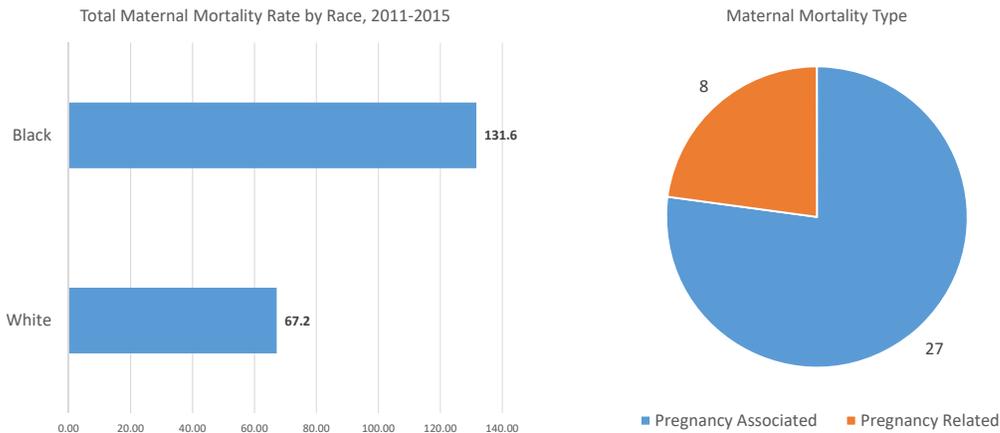
Maternal Mortality Rate, Prosperity Region 6, 2011-2015 (rate per 100,000 live births)



- Maternal deaths include deaths that occur during pregnancy, at delivery or within one year of pregnancy.
- Total maternal mortality includes both pregnancy associated mortality (unrelated to the pregnancy) and pregnancy-related mortality (related to or aggravated by the pregnancy).
- In Region Six there were **35** maternal deaths between 2011 and 2015
- The resulting maternal mortality rate equals **77.2 per 100,000** live births

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 six 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 six experiences a higher maternal mortality rate than Michigan overall at 77.2 per 100,000 live births as compared to 59.7 per 100,000 live births for Michigan.

Maternal Mortality Characteristics, Prosperity Region 6, 2011-2015



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)

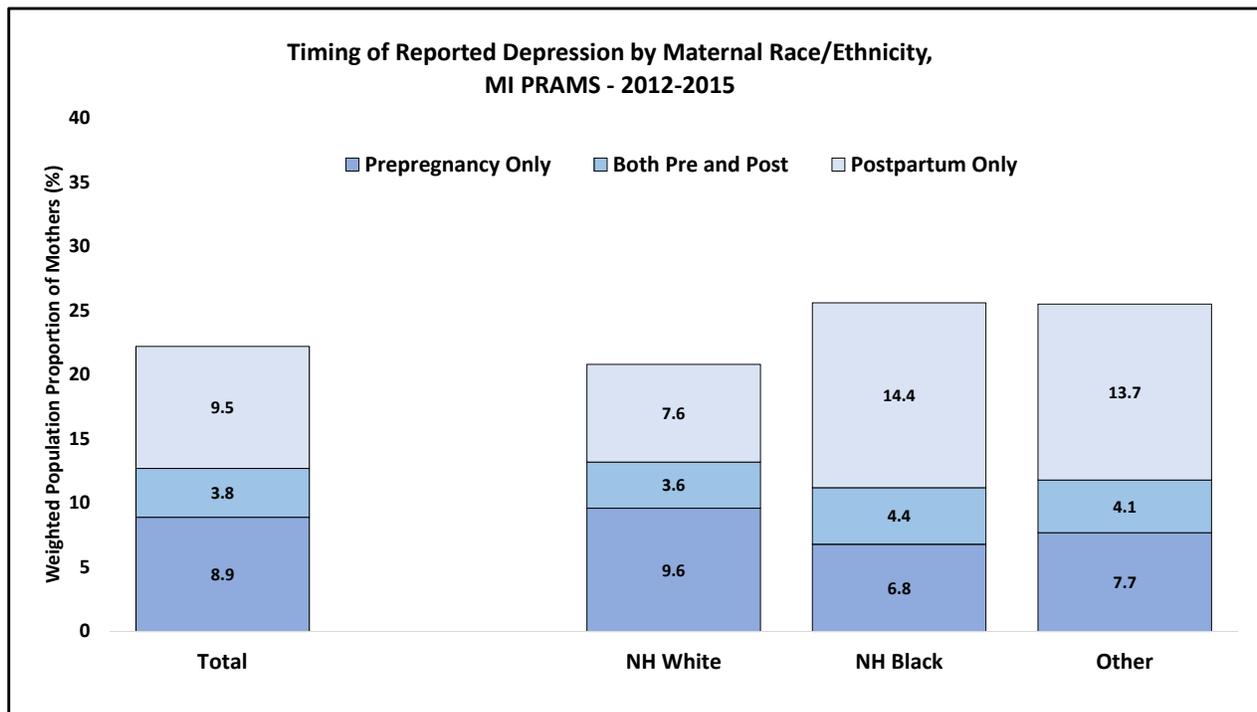
Black mothers experience a maternal mortality rate of 131.6 per 100,000 live births as compared to a rate of 67.2 per 100,000 live births for White mothers in prosperity region six. Of the cases reviewed in region six, 22.9 percent were pregnancy related.

Maternal Depression Michigan & Prosperity Region 6, 2012-2015

8/23/2019

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The next few slides contain maternal depression data for prosperity region 6 in the State of Michigan.

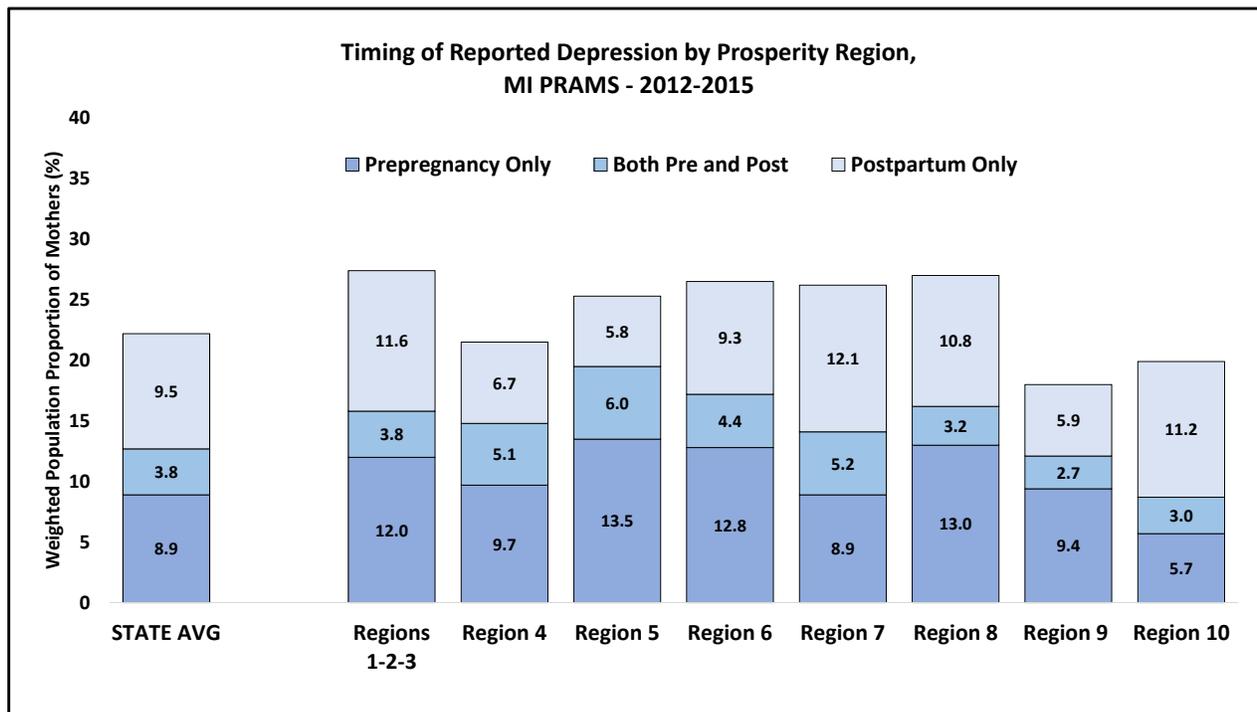


Using data from the Michigan Department of Health and Human Services Pregnancy Risk Assessment Monitoring System (MI PRAMS), the following slides show the prevalence of depression before and after pregnancy by maternal race/ethnicity. Numbers are reported as the proportion of mothers of live births reporting 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.

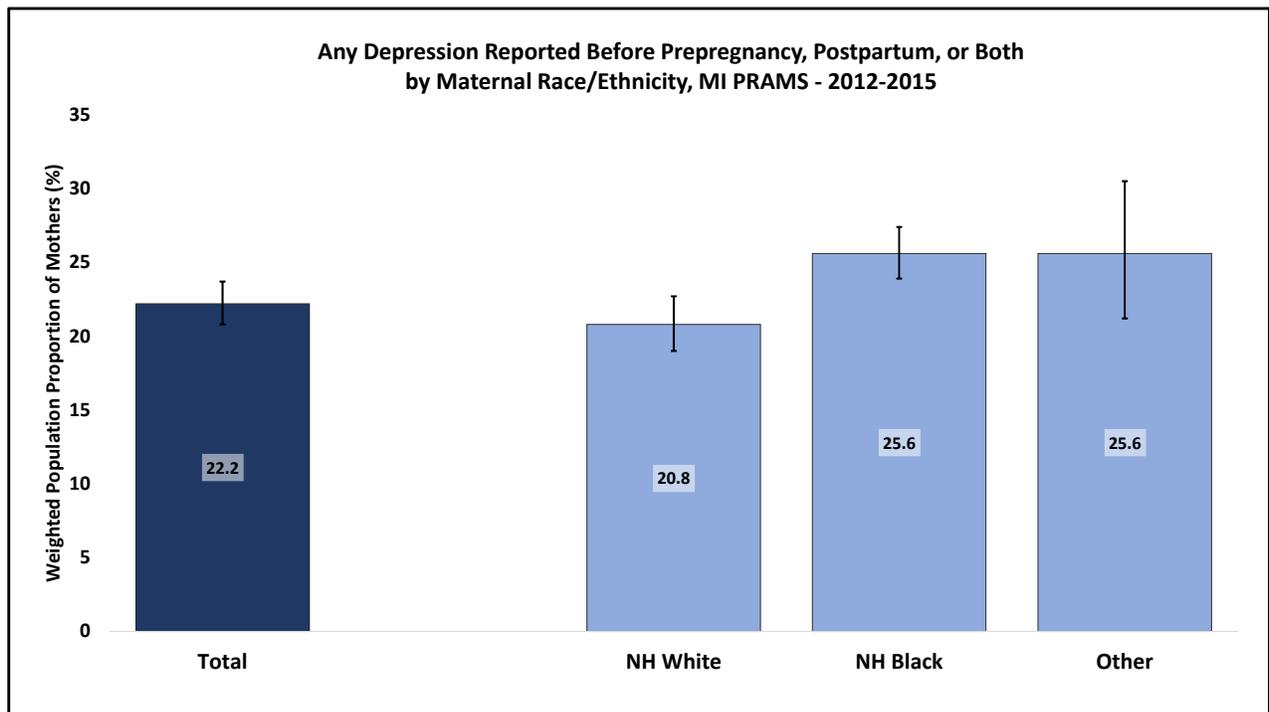
A small proportion of mothers reported depression both before and after pregnancy. There is variation by maternal race/ethnicity. Depression before pregnancy is relatively more common among NHW mothers than NHB mothers. Depression after pregnancy is relatively more common among mothers of NHB and Other 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:

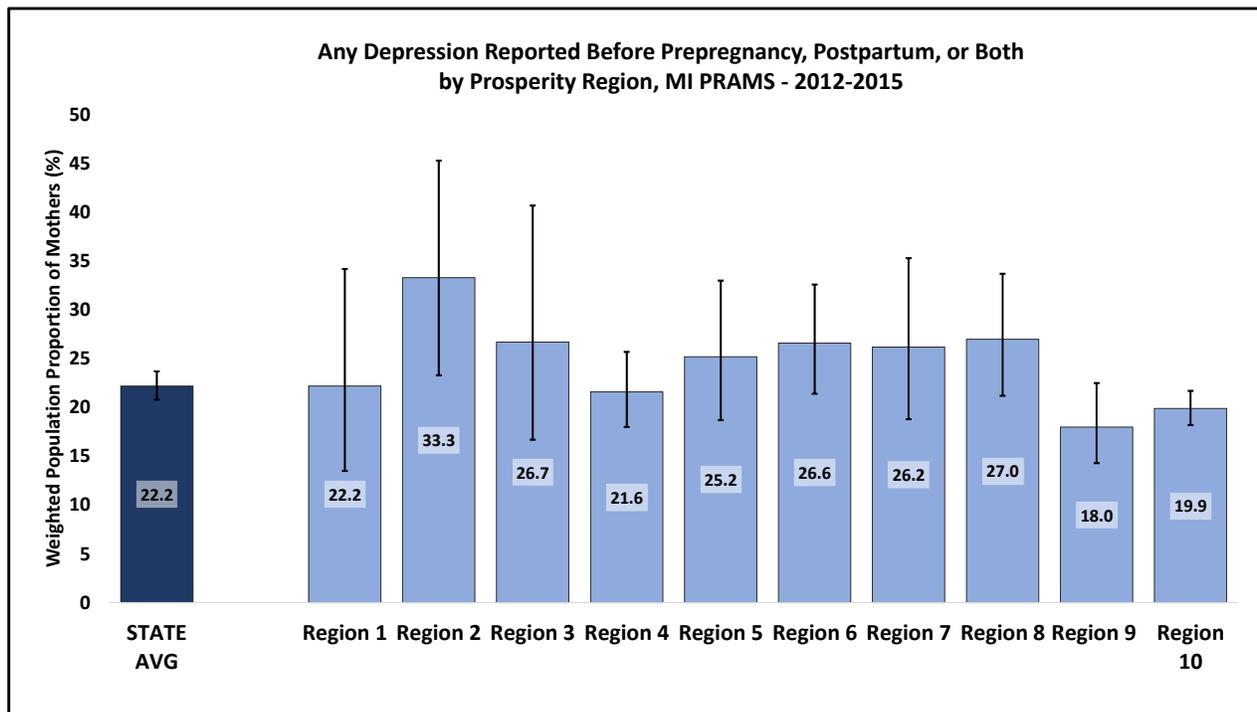
Between one quarter and one fifth of all Michigan mothers are affected by depression (22.2%).

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.

Smoking During Pregnancy, Prosperity Region 6

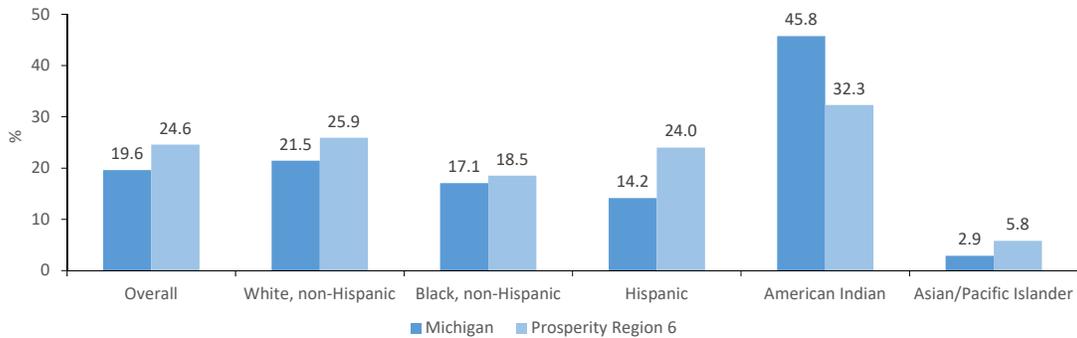
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The next few slides contain updated smoking during pregnancy statistics for prosperity region 6 in the State of Michigan.

Smoking During Pregnancy, Prosperity Region 6, 2013-2017

Average Percent Smoking During Pregnancy by Maternal Race/Ethnicity, Michigan and Prosperity Region 6, 2013-2017

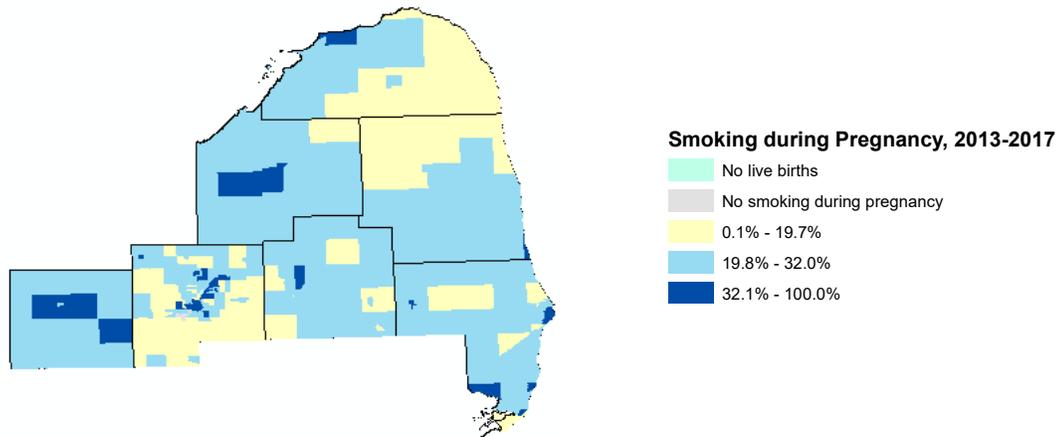


Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 smoking during pregnancy by maternal race/ethnicity within prosperity region 6 and Michigan for 2013-2017. The incidence of smoking during pregnancy is calculated as the number of women who smoked during pregnancy divided by the number of live births multiplied by 100. For 2013-2017, there were some differences in the incidence of smoking during pregnancy by maternal race and ethnicity, from a high of 45.8% for American Indian women to a low of 2.9% for Asian/Pacific Islander women for the state of Michigan, and from a high of 32.3% for American Indian women to a low of 5.8% for Asian/Pacific Islander women within prosperity region 6.

Smoking During Pregnancy by Census Tract, Prosperity Region 6, 2013-2017



8/23/2019
Data source: Michigan resident live birth files, Division for Vital Records and Health Statistics, MDHHS

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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 smoking during pregnancy by census tract within prosperity region 6 for 2013-2017. The incidence of smoking during pregnancy is calculated as the number of women who smoked during pregnancy divided by the number of live births multiplied by 100.

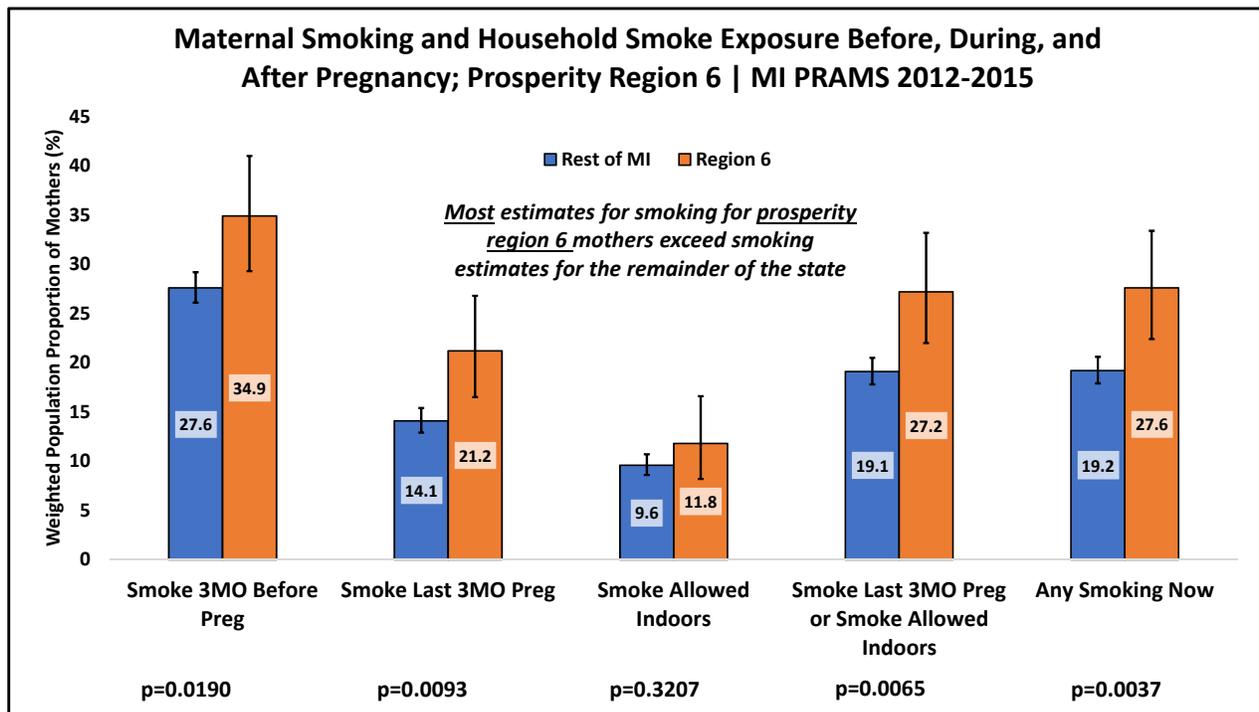
Light green: no live births;

Grey: no smoking during pregnancy;

Yellow: below the mean of rates in Michigan (0.1% - 19.7%);

Light blue: between the mean and mean + one standard deviation of rates in Michigan (19.8% - 32.0%);

Dark blue: above the mean + one standard deviation of rates in Michigan (32.1% - 100.0%).



Smoking data calculated from the Michigan Department of Health and Human Services Pregnancy Risk Assessment Monitoring System (MI PRAMS). Numbers are reported as the proportion of mothers of live births reporting any cigarette smoking or whether smoking was allowed in their home during pregnancy. Birth years 2012-2015 are combined to provide more precision for subgroup estimates.

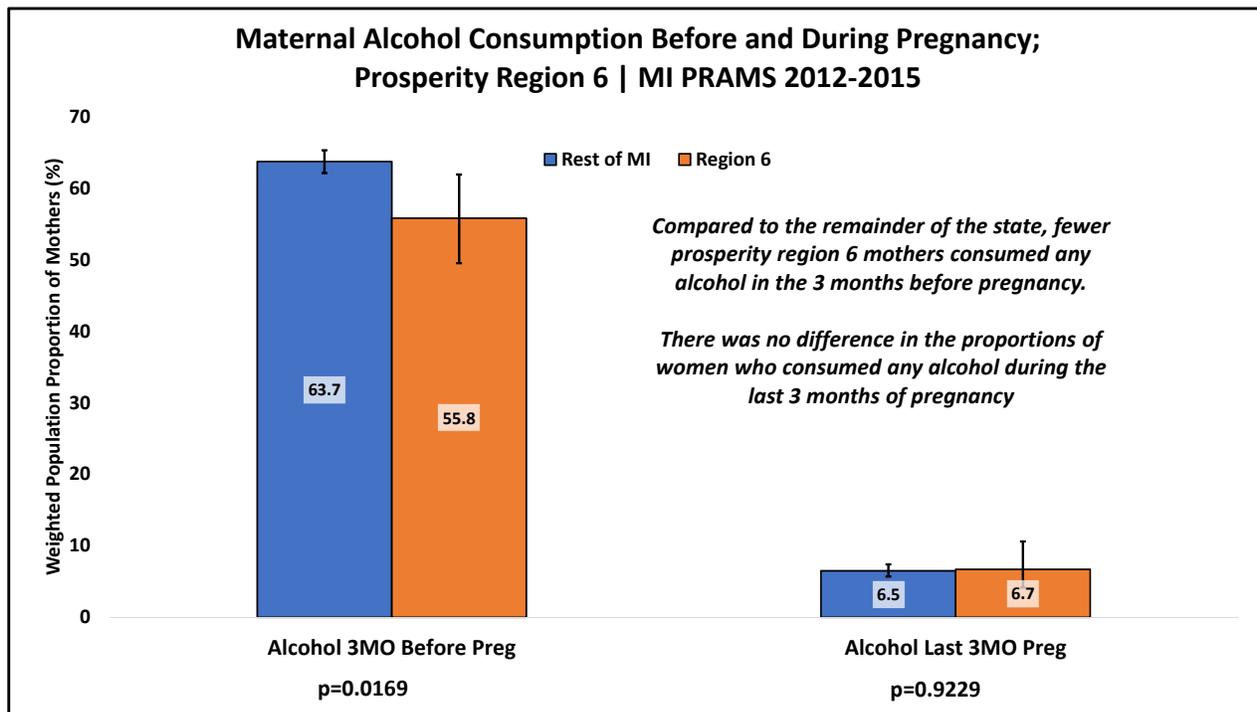
Smoking around pregnancy is a concern everywhere in the state, but this may be especially important for the mothers of prosperity region 6. For each smoking measure captured by MI PRAMS, significantly more of the mothers of PR6 reported smoking compared to the rest of the state.

Maternal Alcohol Consumption, Prosperity Region 6, 2012-2015

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The next slide contains maternal alcohol consumption statistics for prosperity region 6 in the State of Michigan.



Alcohol use data calculated from the Michigan Department of Health and Human Services Pregnancy Risk Assessment Monitoring System (MI PRAMS). Numbers are reported as the proportion of mothers of live births reporting any alcohol consumption at a given time around pregnancy. Birth years 2012-2015 are combined to provide more precision for subgroup estimates.

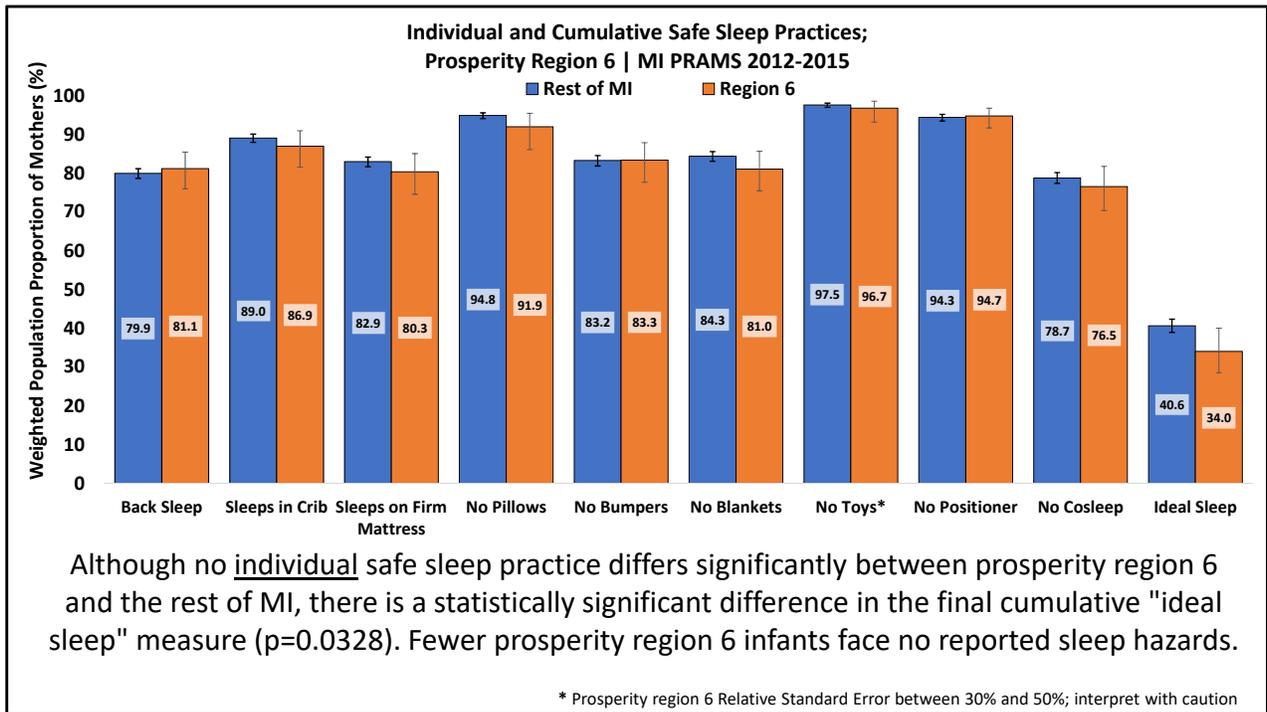
Compared to mothers in the rest of the state, alcohol consumption before pregnancy was less common among prosperity region 6 mothers. Alcohol consumption in the last 3 months of pregnancy did not differ significantly for the mothers of prosperity region 6. However, it is notable that between 6% and 7% of mothers reported any alcohol consumption during the last 3 months of pregnancy.

Safe Sleep Practices Prosperity Region 6, 2012-2015

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The next slide contains safe sleep statistics for prosperity region 6 in the State of Michigan.



MI PRAMS asks mothers about many individual safe sleep practices.

Individually, there are no safe sleep practices among prosperity region 6 mothers that differ significantly from the rest of the state. However, looking at a cumulative safe sleep measure (Ideal sleep, last columns), there is a significant difference between prosperity region 6 and the rest of MI.

For this graph, an infant is being "ideally slept" if he or she usually sleeps: Primarily on their back, in a crib, on a firm mattress, and without pillows, bumpers, blankets, toys, infant positioners, or other people.

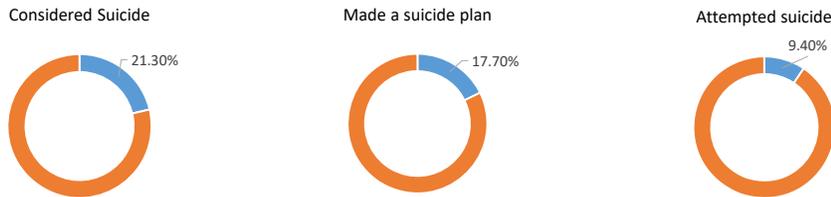
Youth and Young Adult Suicide Behaviors Michigan, 2017

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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:



- 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

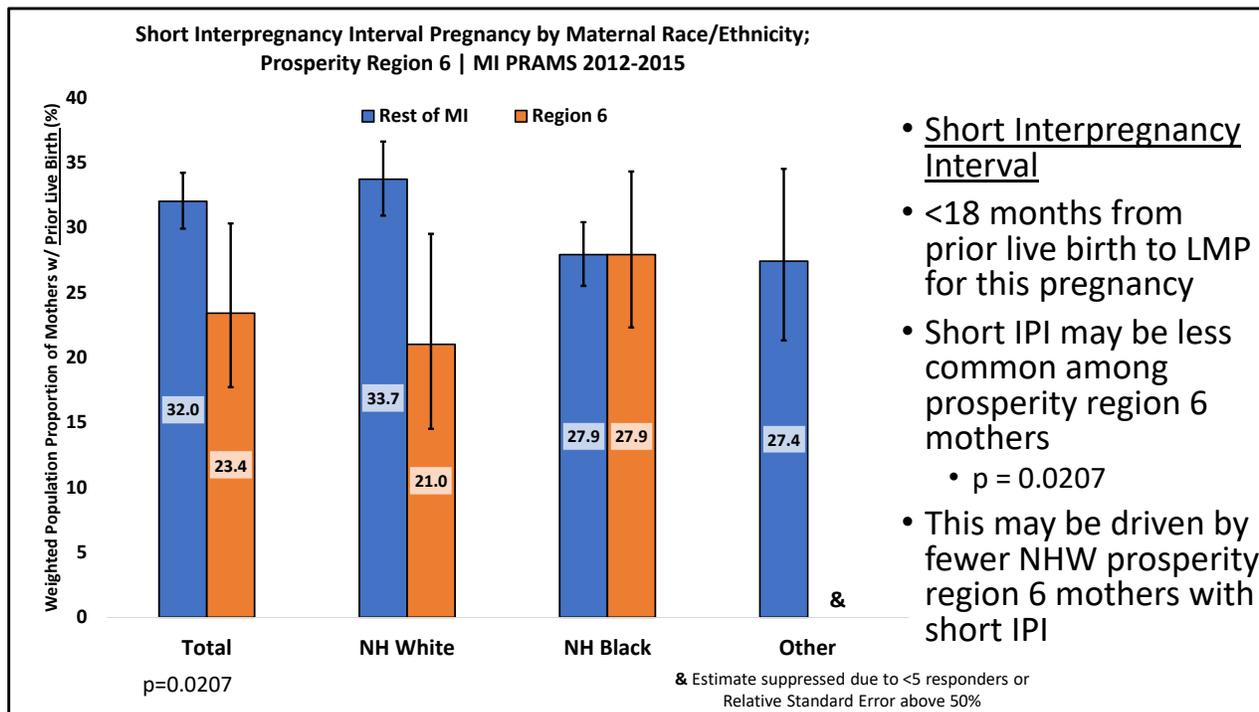
Using data from 2017 Youth Risk Behavior Surveillance Survey, this slide shows suicide ideation and attempts among Michigan high school students. When asked whether they have experienced a range of suicidal behavior questions in the past year, 21.3 percent of students answered “yes” to ever seriously 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.

Short Interpregnancy Interval, Prosperity Region 6, 2012-2015

8/23/2019

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The next slide contains short interpregnancy interval statistics for prosperity region 6 in the State of Michigan.



Interpregnancy interval (IPI) is estimated from the Michigan Department of Health and Human Services Pregnancy Risk Assessment Monitoring System (MI PRAMS). Because PRAMS does not have the end date of mother's last pregnancy (whether it ended in a stillbirth, miscarriage, or termination), IPI here is calculated by counting the number of months between mother's last live birth and her date of last menstrual period before this pregnancy. Thus technically the PRAMS estimate of IPI is an inter-live-birth interval.

Short IPI is defined as less than 18 months elapsed since mother's last live birth. The denominator is the proportion of Michigan mothers who have had a prior live birth. Birth years 2012-2015 are combined to provide more precision for subgroup estimates.

Short IPI may be less common among prosperity region 6 mothers (p=0.0207). This may be driven by less short IPI among prosperity region 6 NHW mothers.