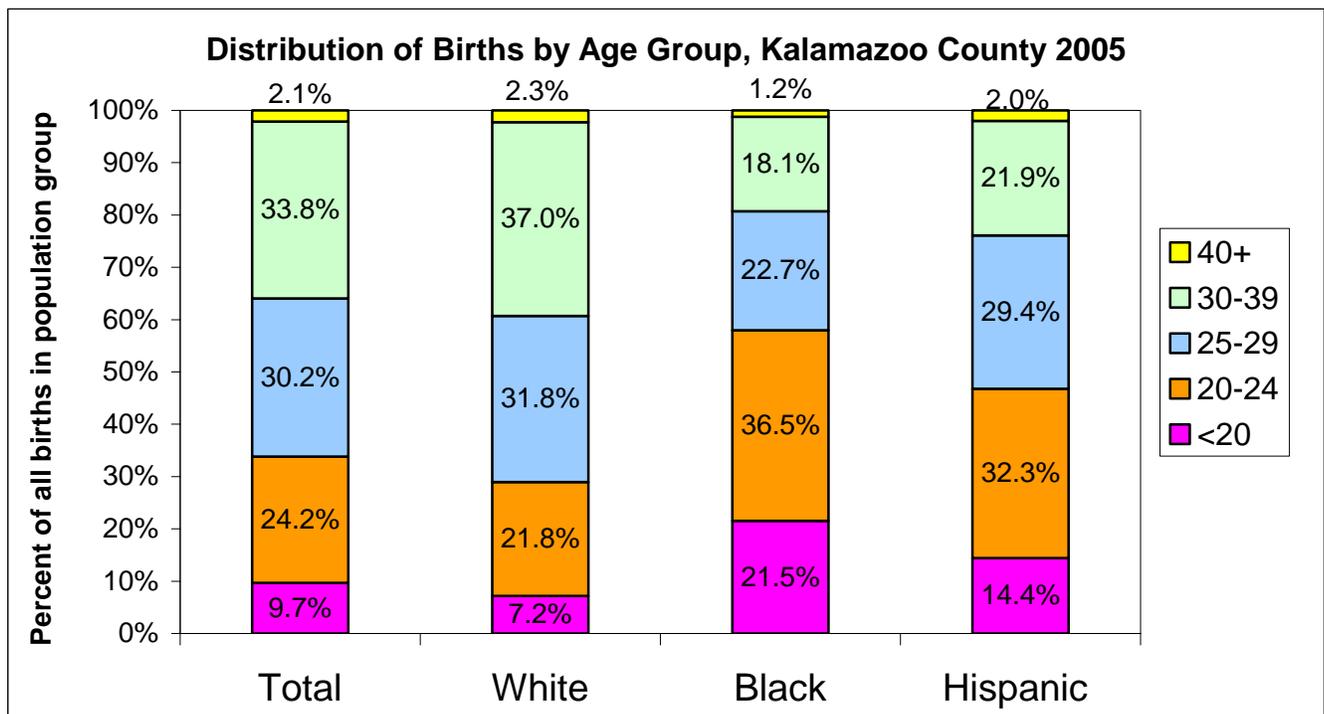


9.2 Maternal Characteristics

Because data are available for each baby that is born rather than for each mother giving birth, the percentage of babies born with a mother who has a specified characteristic is used as a proxy for the percentage of mothers (i.e. in instances of multiple births, more than one baby has the same mother, so mothers may be counted more than once). Since multiple births are rare, however, counting a small number of mothers more than once has minimal effect on calculations and so the percentage of babies born with mothers who have specific characteristics is a useful alternate measure for prevalence of maternal characteristics among the population of mothers giving birth.

9.2.1 Age of Females Giving Birth

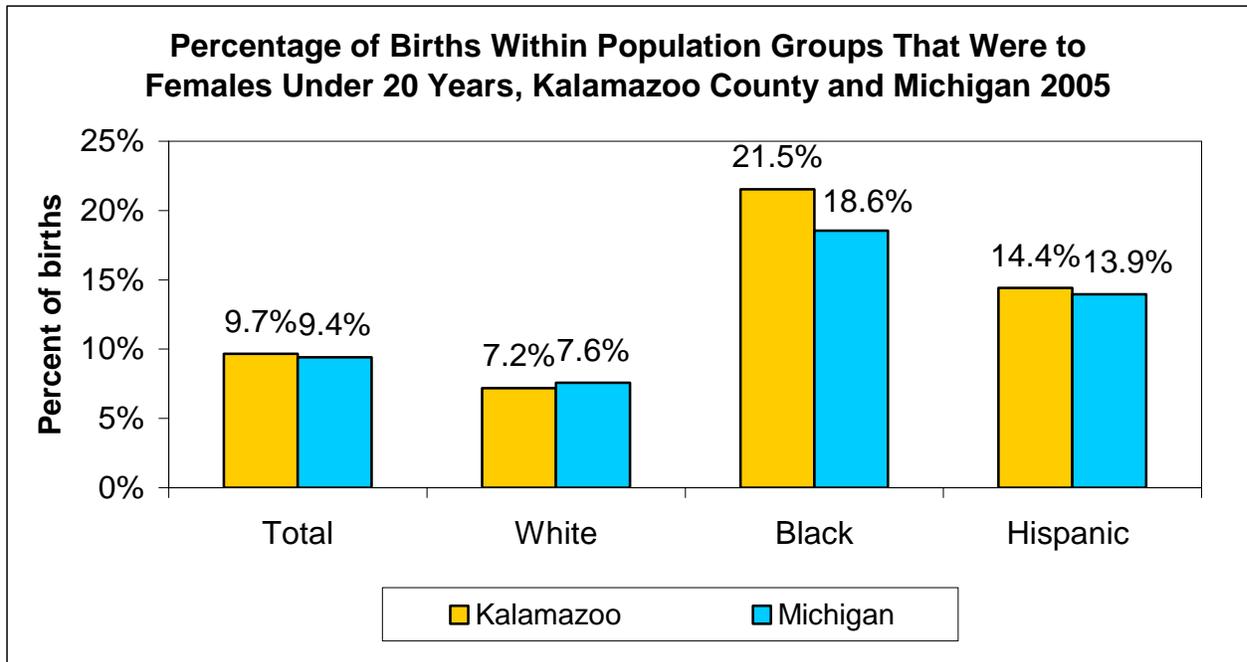
In Kalamazoo County in 2005, the average age for all females giving birth was 27.3 years, and among first-time moms the average age was 25.3 years. Similarly, the average age in Michigan for all females giving birth in 2005 was 27.5 years and the average age for first-time moms was 25.1 years. In Kalamazoo County, white females who were first-time moms were older on average than black females who were first-time moms (26.1 years vs. 21.2 years), and Hispanic first-time moms averaged 23.2 years of age.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

The largest percentage of births in Kalamazoo County in 2005 was to females aged 30 to 39 years (33.8%). Of all births, 9.7% were to females younger than 20 years. The proportion of births to females younger than 20 years was greatest among black females giving birth (21.5%).

The proportion of births to females younger than 20 years of age in Kalamazoo County was similar to the proportion in Michigan. The proportion of births that were to black females younger than 20 years was higher in Kalamazoo County than in Michigan.

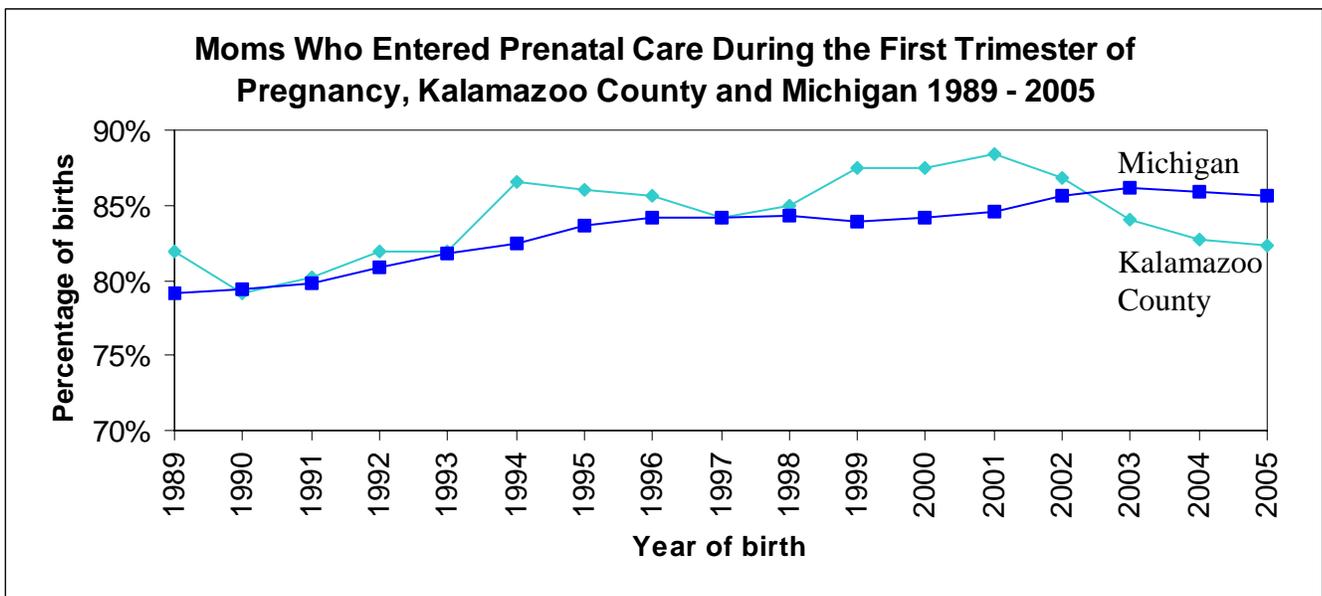


Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

9.2.2 Prenatal Care

Insufficient prenatal care is associated with pre-maturity and low birthweight, neonatal mortality, infant mortality and maternal mortality.¹ The percentage of women who enter prenatal care during the first trimester (first three months) of pregnancy is one indicator of prenatal care received. While the percentage in Michigan has improved in recent years, the percentage in Kalamazoo County has been decreasing since 2001. In 2005, the percentage of women receiving prenatal care during the first trimester of pregnancy in Kalamazoo County (82.4%) was lower than the rate in Michigan (85.6%).

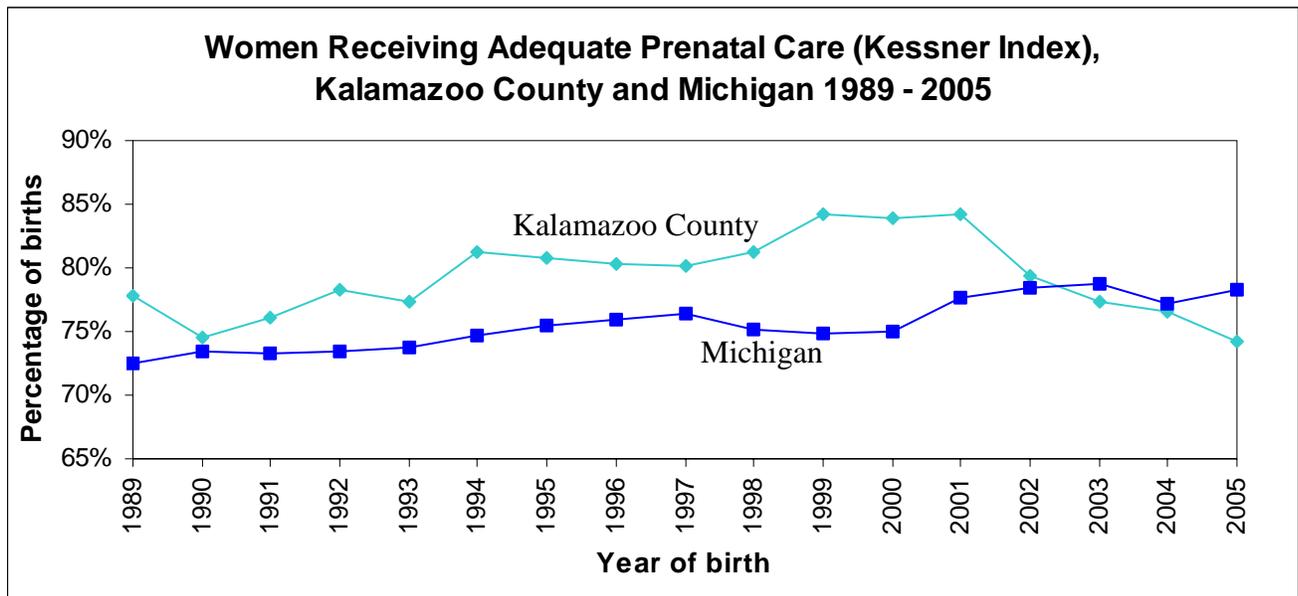
Healthy People
2010 Goal
Increase the proportion of women who receive prenatal care in the 1st trimester to **90%**.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

¹ Wilcox, LS, Marks Js. (1994). From Data to Action: CDC's Public Health Surveillance for Women, Infants, and Children. CDC maternal and child health monograph. Atlanta, GA: Centers for Disease Control and Prevention.

As an alternate indicator, the prenatal care a woman receives is classified as adequate, intermediate, or inadequate according to the Kessner index. The Kessner index is based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e. for shorter pregnancies, fewer prenatal visits constitute adequate care). Among all women giving birth in Kalamazoo County in 2005, 74.2% received adequate prenatal care according to the Kessner index. Although the percentage of moms receiving adequate prenatal care in Kalamazoo County was higher than the percentage in Michigan from 1991 until 2001, the county rate in 2005 was lower than the state rate (78.2%). The percentage of moms receiving adequate prenatal care according to the Kessner index in the state has been increasing in the recent years while the percentage in the county has been declining.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Since 1989 in Kalamazoo County, white moms have been more likely than black or Hispanic moms to receive prenatal care in the first trimester of pregnancy and adequate prenatal care according to the Kessner index.

Moms Who Entered Prenatal Care During the First Trimester of Pregnancy by Race and Hispanic Ethnicity, Kalamazoo County 1989 – 2005

Year	Total		White		Black		Hispanic	
	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI
1989	81.9%	1.3	85.7%	1.3	61.7%	4.2	59.5%	10.8
1990	79.2%	1.3	83.6%	1.3	55.6%	4.2	66.7%	9.4
1991	80.2%	1.3	85.0%	1.3	57.2%	4.1	64.4%	9.3
1992	81.9%	1.3	85.4%	1.3	64.0%	4.1	64.9%	9.5
1993	82.0%	1.3	85.7%	1.4	64.9%	4.0	69.1%	9.3
1994	86.6%	1.2	89.3%	1.2	70.7%	4.2	76.9%	8.1
1995	86.0%	1.2	89.4%	1.2	68.4%	4.2	76.8%	8.5
1996	85.7%	1.2	87.9%	1.3	72.6%	4.1	72.6%	8.5
1997	84.2%	1.3	87.6%	1.3	66.7%	4.2	60.0%	9.0
1998	84.9%	1.2	88.5%	1.2	66.8%	4.0	68.3%	8.1
1999	87.5%	1.2	89.8%	1.2	75.8%	3.8	66.2%	8.1
2000	87.5%	1.2	90.5%	1.1	71.5%	4.0	70.2%	7.5
2001	88.3%	1.1	91.3%	1.1	73.7%	3.8	74.6%	7.4
2002	86.9%	1.2	89.6%	1.2	73.4%	3.9	79.7%	6.4
2003	84.1%	1.3	87.5%	1.3	66.9%	4.0	76.8%	6.5
2004	82.7%	1.3	86.2%	1.4	65.1%	4.1	67.8%	6.9
2005	82.4%	1.3	86.4%	1.4	66.3%	3.9	75.4%	6.0

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Who Entered Prenatal Care During the First Trimester of Pregnancy by Race and Hispanic Ethnicity, Michigan 1989 – 2005

Year	Total		White		Black		Hispanic	
	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI	% With early prenatal care	+/- 95% CI
1989	79.1%	0.2	83.1%	0.2	64.3%	0.5	67.8%	1.4
1990	79.4%	0.2	83.2%	0.2	65.7%	0.5	66.0%	1.4
1991	79.8%	0.2	83.9%	0.2	65.2%	0.5	69.6%	1.4
1992	80.8%	0.2	84.9%	0.2	65.6%	0.6	70.4%	1.4
1993	81.8%	0.2	85.7%	0.2	66.9%	0.6	71.7%	1.4
1994	82.4%	0.2	85.9%	0.2	68.1%	0.6	72.3%	1.3
1995	83.6%	0.2	86.8%	0.2	69.5%	0.6	71.3%	1.3
1996	84.2%	0.2	87.0%	0.2	71.5%	0.6	73.1%	1.3
1997	84.2%	0.2	87.2%	0.2	70.5%	0.6	73.8%	1.2
1998	84.3%	0.2	87.1%	0.2	71.1%	0.6	72.8%	1.2
1999	83.9%	0.2	87.0%	0.2	70.0%	0.6	71.9%	1.1
2000	84.2%	0.2	87.2%	0.2	70.0%	0.6	71.6%	1.1
2001	84.5%	0.2	87.9%	0.2	69.3%	0.6	71.2%	1.0
2002	85.6%	0.2	88.7%	0.2	71.2%	0.6	77.4%	1.0
2003	86.1%	0.2	89.0%	0.2	72.7%	0.6	77.6%	0.9
2004	85.8%	0.2	88.8%	0.2	72.0%	0.6	78.6%	0.9
2005	85.6%	0.2	88.6%	0.2	71.7%	0.6	78.8%	0.9

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Receiving Adequate Prenatal Care (Kessner Index) by Race and Hispanic Ethnicity, Kalamazoo County 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI
1989	77.8%	1.4	82.2%	1.4	54.7%	4.2	54.4%	11.0
1990	74.5%	1.4	79.3%	1.5	49.2%	4.3	59.4%	9.8
1991	76.0%	1.4	81.6%	1.4	49.8%	4.1	57.4%	9.6
1992	78.3%	1.4	82.4%	1.4	57.2%	4.2	55.7%	9.9
1993	77.3%	1.5	81.7%	1.5	56.6%	4.2	61.7%	9.8
1994	81.3%	1.4	85.0%	1.4	60.2%	4.5	69.2%	8.9
1995	80.9%	1.4	85.1%	1.4	58.3%	4.5	70.5%	9.2
1996	80.3%	1.4	83.4%	1.4	62.5%	4.4	67.9%	8.9
1997	80.2%	1.4	84.4%	1.4	57.9%	4.4	54.3%	9.1
1998	81.2%	1.4	85.5%	1.4	60.2%	4.2	60.9%	8.5
1999	84.3%	1.3	87.3%	1.3	69.5%	4.0	59.5%	8.4
2000	84.0%	1.3	87.4%	1.3	65.2%	4.2	67.4%	7.7
2001	84.2%	1.3	87.7%	1.3	67.2%	4.0	68.6%	7.8
2002	79.3%	1.4	82.9%	1.5	62.9%	4.3	69.3%	7.3
2003	77.4%	1.5	81.4%	1.5	58.3%	4.2	68.7%	7.1
2004	76.6%	1.5	81.1%	1.5	54.9%	4.3	61.2%	7.2
2005	74.2%	1.5	78.5%	1.6	56.2%	4.1	66.5%	6.5

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Receiving Adequate Prenatal Care (Kessner Index) by Race and Hispanic Ethnicity, Michigan 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI	% Received adequate care	+/- 95% CI
1989	72.5%	0.2	76.7%	0.2	57.2%	0.6	58.9%	1.5
1990	73.4%	0.2	77.5%	0.2	59.0%	0.5	58.4%	1.5
1991	73.3%	0.2	77.8%	0.2	57.6%	0.5	61.5%	1.4
1992	73.4%	0.2	78.4%	0.2	55.1%	0.6	61.3%	1.5
1993	73.8%	0.2	78.8%	0.2	55.6%	0.6	63.1%	1.4
1994	74.6%	0.2	79.2%	0.2	57.2%	0.6	63.4%	1.4
1995	75.5%	0.2	80.5%	0.2	55.1%	0.6	61.5%	1.4
1996	75.9%	0.2	80.1%	0.2	58.4%	0.6	63.3%	1.3
1997	76.3%	0.2	80.3%	0.2	59.9%	0.6	63.4%	1.3
1998	75.2%	0.2	79.4%	0.2	57.6%	0.6	60.5%	1.2
1999	74.9%	0.2	79.5%	0.2	56.1%	0.6	60.4%	1.2
2000	75.0%	0.2	79.4%	0.2	57.2%	0.6	59.9%	1.2
2001	77.6%	0.2	81.3%	0.2	61.9%	0.6	61.7%	1.1
2002	78.4%	0.2	81.9%	0.2	63.1%	0.6	68.8%	1.1
2003	78.7%	0.2	82.2%	0.2	63.9%	0.6	70.1%	1.0
2004	77.2%	0.2	80.8%	0.2	62.3%	0.6	69.4%	1.0
2005	78.2%	0.2	81.7%	0.2	63.6%	0.6	70.8%	1.0

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

9.2.3 Alcohol and Tobacco Use During Pregnancy

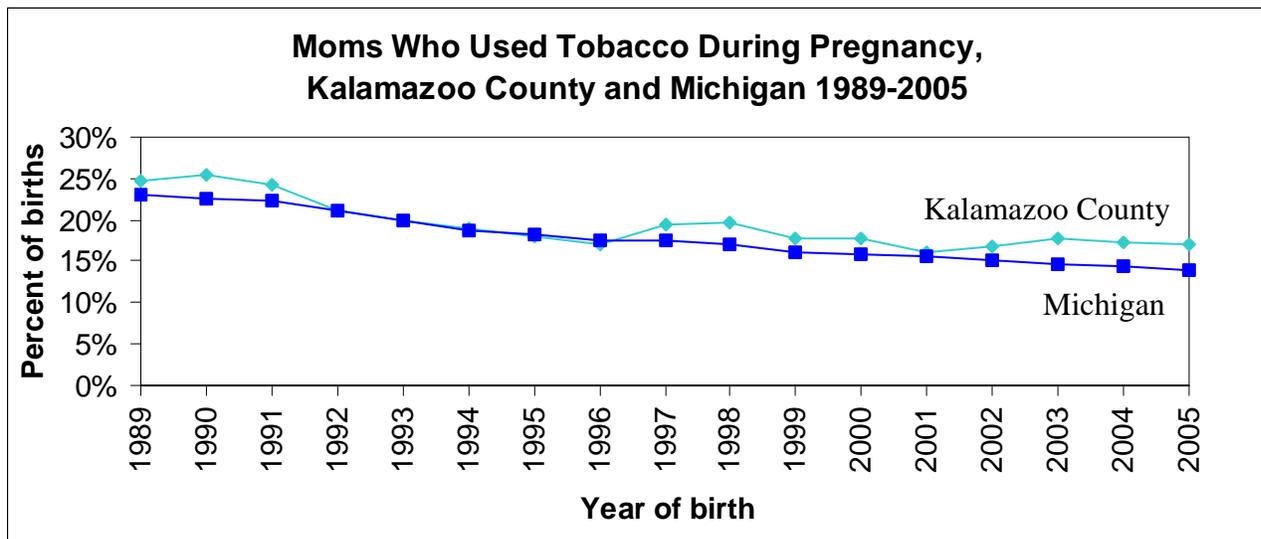
Prenatal exposure to alcohol can cause a spectrum of disorders; one of the most severe effects of drinking during pregnancy is Fetal Alcohol Syndrome (FAS). Fetal Alcohol Syndrome is one of the leading known preventable causes of mental retardation and birth defects.² Statistics on alcohol use during pregnancy show that reported use has declined over the past 15 years in both Kalamazoo County and in Michigan. In Kalamazoo County in 1989, 8.8% of women who gave birth reported that they had used alcohol during their pregnancy; in 2003, the rate was 0.5%. A major limitation of the data available on alcohol use during pregnancy is that alcohol use is self-reported by the mothers. The decrease in the percentage of moms reporting alcohol use in pregnancy may indicate a decrease in actual prevalence of the behavior, but it may also indicate a change in reporting of this behavior.

Cigarette smoking during pregnancy increases the risk of pregnancy complications, premature delivery, low birthweight, fetal deaths, and sudden infant death syndrome (SIDS).³ Smoking is the most important known preventable risk factor for low birthweight, a leading cause of fetal and neonatal deaths.⁴

Reported tobacco use during pregnancy has declined in Kalamazoo County among moms giving birth from the highest rate in the 1990s (25.5%) to 17.0% in 2005. However, since the late 1990's, rates have not continued to decline each year. In comparison with the reported smoking rate among Michigan moms who gave birth in 2005 (13.8%), the rate in Kalamazoo County was significantly higher.

Healthy People
2010 Goal

Reduce the proportion of women giving birth who report they smoked while pregnant to **1%**.



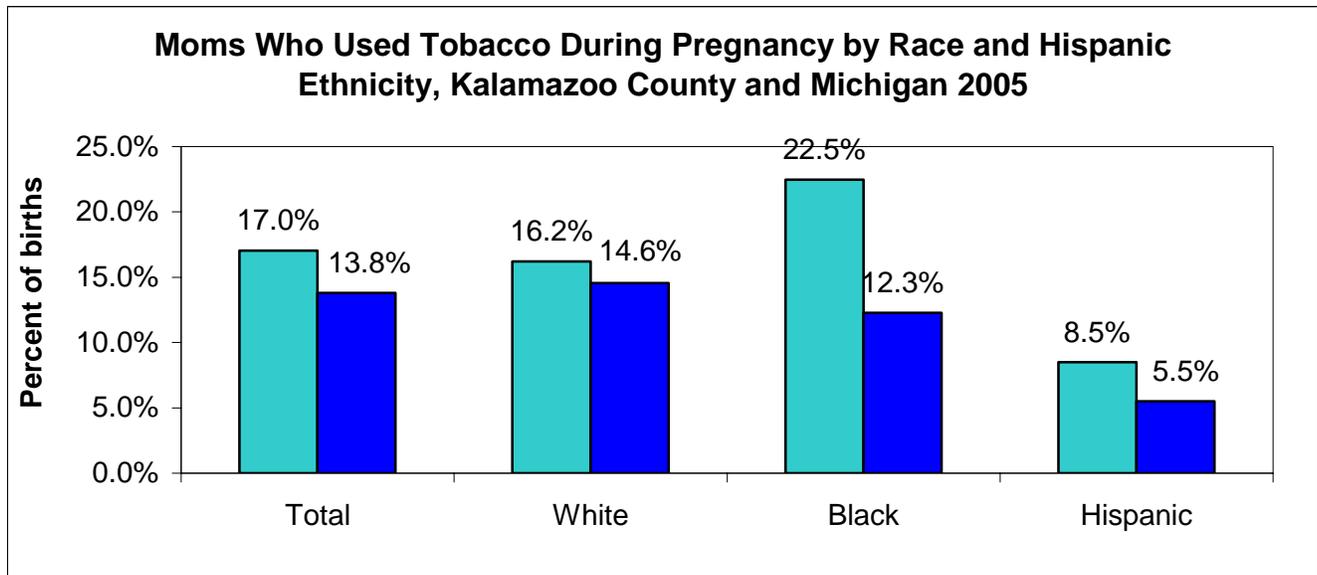
Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

² National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention.

³ Impact on Unborn Babies, Infants, Children, and Adolescents (The Health Consequences of Smoking: A Report of the Surgeon General). Centers for Disease Control and Prevention.

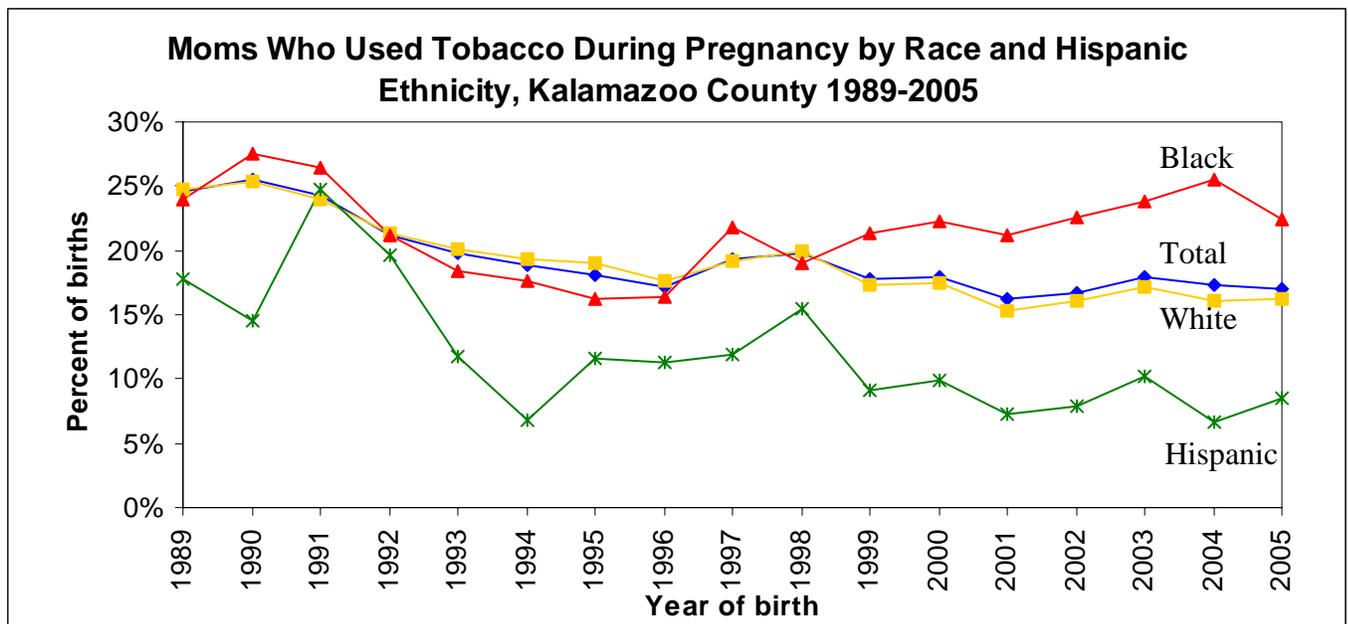
⁴ Smoking During Pregnancy: United States, 1990-2002. Centers for Disease Control and Prevention.

In Kalamazoo County in 2005, black moms were 1.4 times more likely to be smokers than white moms (22.5% of black moms smoked vs. 16.2% of white moms). In Michigan, the maternal smoking rate in 2005 was actually lower among black moms (12.3% smoked) than white moms (14.6% smoked).



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

In Kalamazoo County, Hispanic moms have had a lower rate of smoking during pregnancy than white or black moms for most of the past 15 years. Between 2001 and 2003, rates among all these groups increased. The smoking rate among black moms decreased in 2005, and rates among white and Hispanic moms decreased in 2004 (although rates in these two groups increased slightly in 2005).



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

**Moms Who Reported Tobacco Use During Pregnancy by Race and Hispanic Ethnicity,
Kalamazoo County 1989 – 2005**

Year	Total		White		Black		Hispanic	
	% Used tobacco	+/- 95% CI						
1989	24.7%	1.4	24.8%	1.6	24.0%	3.6	17.7%	8.4
1990	25.5%	1.4	25.4%	1.6	27.5%	3.8	14.6%	7.1
1991	24.3%	1.4	24.0%	1.6	26.5%	3.6	24.8%	8.4
1992	21.2%	1.4	21.4%	1.5	21.1%	3.5	19.6%	7.9
1993	19.8%	1.4	20.1%	1.6	18.4%	3.3	11.7%	6.5
1994	18.9%	1.4	19.4%	1.5	17.7%	3.5	6.9%	4.9
1995	18.1%	1.4	19.0%	1.5	16.2%	3.3	11.6%	6.4
1996	17.1%	1.3	17.6%	1.5	16.4%	3.4	11.2%	6.0
1997	19.3%	1.4	19.1%	1.5	21.8%	3.7	12.0%	5.9
1998	19.8%	1.4	20.0%	1.5	19.0%	3.3	15.5%	6.2
1999	17.8%	1.3	17.3%	1.5	21.3%	3.6	9.2%	4.9
2000	17.9%	1.3	17.4%	1.4	22.2%	3.7	9.9%	4.9
2001	16.2%	1.3	15.4%	1.4	21.2%	3.5	7.2%	4.3
2002	16.7%	1.3	16.0%	1.5	22.6%	3.7	7.9%	4.3
2003	17.9%	1.3	17.2%	1.5	23.8%	3.6	10.2%	4.6
2004	17.4%	1.3	16.1%	1.4	25.6%	3.8	6.7%	3.6
2005	17.0%	1.3	16.2%	1.5	22.5%	3.4	8.5%	3.9

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

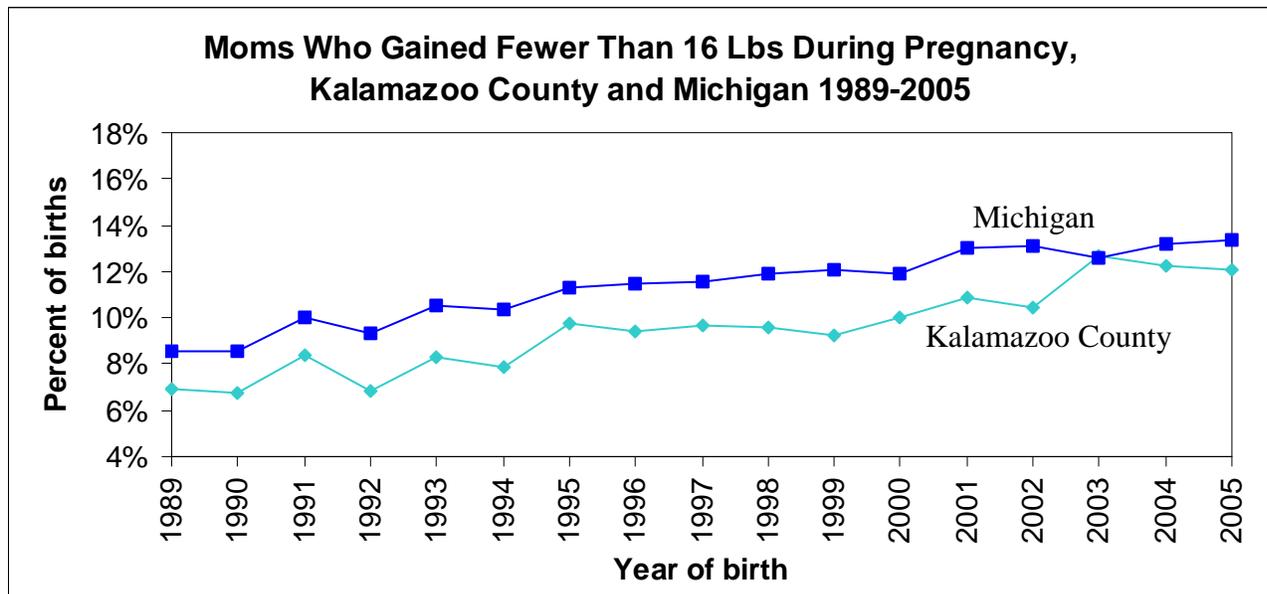
**Moms Who Reported Tobacco Use During Pregnancy by Race and Hispanic Ethnicity,
Michigan 1989 – 2005**

Year	Total		White		Black		Hispanic	
	% Used tobacco	+/- 95% CI						
1989	24.7%	1.4	24.8%	1.6	24.0%	3.6	17.7%	8.4
1990	25.5%	1.4	25.4%	1.6	27.5%	3.8	14.6%	7.1
1991	24.3%	1.4	24.0%	1.6	26.5%	3.6	24.8%	8.4
1992	21.2%	1.4	21.4%	1.5	21.1%	3.5	19.6%	7.9
1993	19.8%	1.4	20.1%	1.6	18.4%	3.3	11.7%	6.5
1994	18.9%	1.4	19.4%	1.5	17.7%	3.5	6.9%	4.9
1995	18.1%	1.4	19.0%	1.5	16.2%	3.3	11.6%	6.4
1996	17.1%	1.3	17.6%	1.5	16.4%	3.4	11.2%	6.0
1997	19.3%	1.4	19.1%	1.5	21.8%	3.7	12.0%	5.9
1998	19.8%	1.4	20.0%	1.5	19.0%	3.3	15.5%	6.2
1999	17.8%	1.3	17.3%	1.5	21.3%	3.6	9.2%	4.9
2000	17.9%	1.3	17.4%	1.4	22.2%	3.7	9.9%	4.9
2001	16.2%	1.3	15.4%	1.4	21.2%	3.5	7.2%	4.3
2002	16.7%	1.3	16.0%	1.5	22.6%	3.7	7.9%	4.3
2003	17.9%	1.3	17.2%	1.5	23.8%	3.6	10.2%	4.6
2004	14.3%	0.2	15.0%	0.2	13.1%	0.4	5.7%	0.5
2005	13.8%	0.2	14.6%	0.2	12.3%	0.4	5.5%	0.5

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

9.2.4 Maternal Weight Gain During Pregnancy

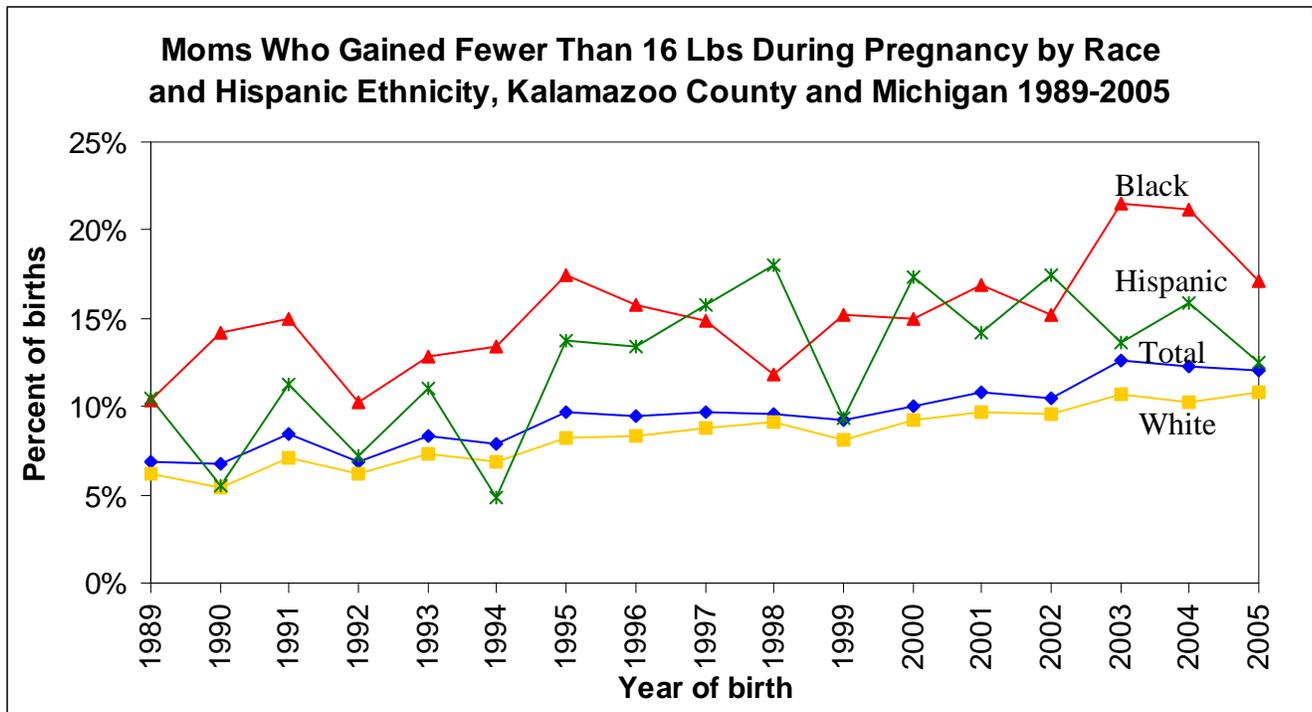
Gaining fewer than 16 lbs during pregnancy is a risk factor for having a low birthweight baby.⁵ The percentage of moms who gave birth in Kalamazoo County in 2005 who had gained fewer than 16 lbs was 12.1%. This was slightly better than the rate in Michigan in 2005 (13.3%). Since 1989, the percentage of pregnant moms who gained less than 16 lbs has almost doubled in Kalamazoo County. The rate in Kalamazoo County improved slightly in 2004 and 2005 from the high of 12.7% in 2003.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

The percentage of moms giving birth who had gained fewer than 16 lbs during pregnancy has been consistently higher among black moms than white moms over time in Kalamazoo County, although the rate among black moms declined in 2004 and 2005. In 2005, the percentage of black moms who gained less than 16 lbs was still 1.6 times higher than the percentage among white moms who gave birth (17.1% and 10.8%, respectively).

⁵ National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Who Gained Fewer Than 16 Lbs During Pregnancy by Race and Ethnicity, Kalamazoo County 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Gained <16 lbs	+/- 95% CI	% Gained <16 lbs	+/- 95% CI	% Gained <16 lbs	+/- 95% CI	% Gained <16 lbs	+/- 95% CI
1989	6.9%	0.9	6.2%	0.9	10.3%	2.6	10.5%	6.9
1990	6.8%	0.8	5.4%	0.8	14.1%	3.0	5.6%	4.7
1991	8.4%	0.9	7.1%	1.0	15.0%	3.0	11.2%	6.2
1992	6.8%	0.9	6.2%	0.9	10.2%	2.6	7.2%	5.1
1993	8.3%	1.0	7.3%	1.0	12.9%	2.9	11.0%	6.4
1994	7.8%	0.9	6.9%	1.0	13.4%	3.1	4.9%	4.2
1995	9.7%	1.1	8.2%	1.1	17.5%	3.5	13.7%	6.9
1996	9.4%	1.1	8.3%	1.1	15.8%	3.5	13.4%	6.8
1997	9.7%	1.1	8.8%	1.1	14.9%	3.3	15.7%	6.9
1998	9.6%	1.0	9.1%	1.1	11.9%	2.8	18.0%	6.8
1999	9.3%	1.0	8.1%	1.1	15.2%	3.2	9.4%	5.0
2000	10.1%	1.1	9.2%	1.1	14.9%	3.2	17.4%	6.3
2001	10.8%	1.1	9.7%	1.2	16.9%	3.2	14.2%	5.9
2002	10.5%	1.1	9.5%	1.2	15.3%	3.2	17.4%	6.1
2003	12.7%	1.2	10.8%	1.2	21.6%	3.5	13.6%	5.3
2004	12.3%	1.2	10.2%	1.2	21.1%	3.6	15.9%	5.4
2005	12.1%	1.1	10.8%	1.2	17.1%	3.1	12.5%	4.6

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

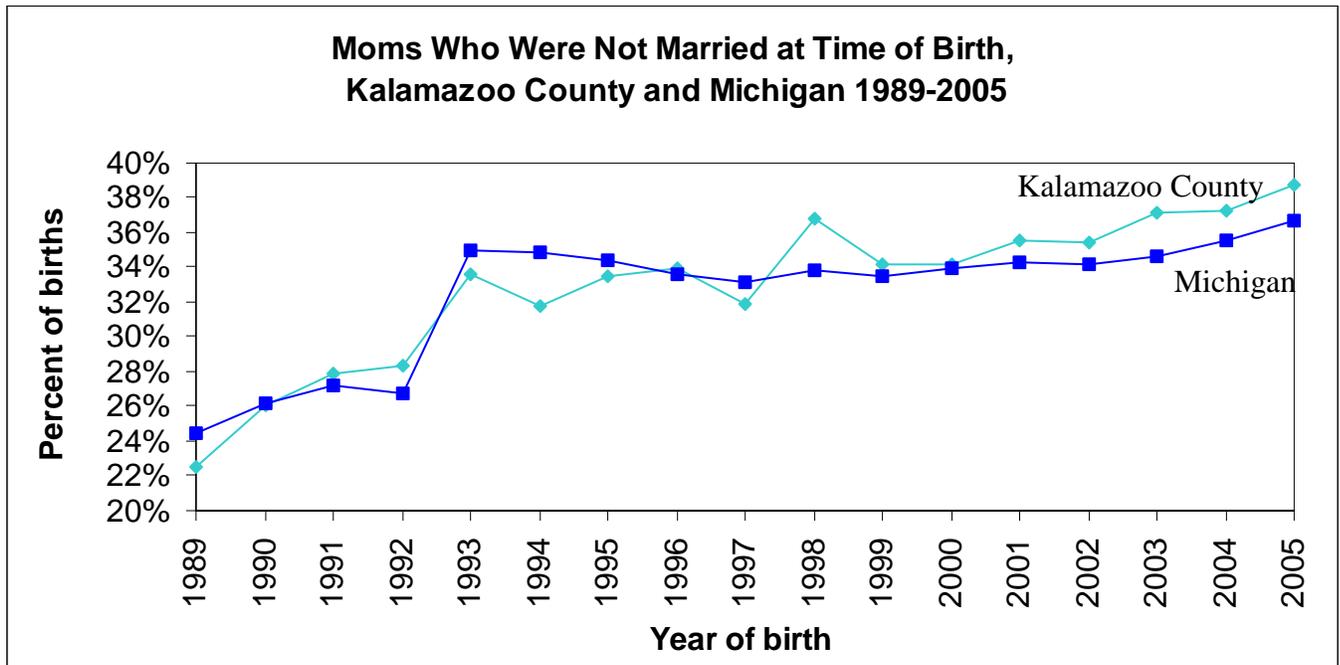
Moms Who Gained Fewer Than 16 Lbs During Pregnancy by Race and Ethnicity, Michigan 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Gained <16 lbs	+/- 95% CI						
1989	8.5%	0.2	7.1%	0.2	14.5%	0.4	9.3%	0.9
1990	8.6%	0.1	7.0%	0.2	14.6%	0.4	10.3%	1.0
1991	10.0%	0.2	8.1%	0.2	17.5%	0.5	11.7%	1.0
1992	9.3%	0.2	7.8%	0.2	15.3%	0.4	11.3%	1.0
1993	10.5%	0.2	9.1%	0.2	16.2%	0.5	12.2%	1.0
1994	10.3%	0.2	8.9%	0.2	16.4%	0.5	12.4%	1.0
1995	11.3%	0.2	10.0%	0.2	17.5%	0.5	14.3%	1.1
1996	11.4%	0.2	10.3%	0.2	16.6%	0.5	16.0%	1.1
1997	11.5%	0.2	10.5%	0.2	16.4%	0.5	15.9%	1.0
1998	11.9%	0.2	10.9%	0.2	16.5%	0.5	16.3%	1.0
1999	12.1%	0.2	11.0%	0.2	16.6%	0.5	15.8%	1.0
2000	11.9%	0.2	11.0%	0.2	16.0%	0.5	15.9%	0.9
2001	13.0%	0.2	12.0%	0.2	17.1%	0.5	18.0%	0.9
2002	13.1%	0.2	12.0%	0.2	18.5%	0.5	16.9%	0.9
2003	12.6%	0.2	11.5%	0.2	17.8%	0.5	16.2%	0.9
2004	13.2%	0.2	12.0%	0.2	18.1%	0.5	15.8%	0.8
2005	13.3%	0.2	12.2%	0.2	18.3%	0.5	16.5%	0.8

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

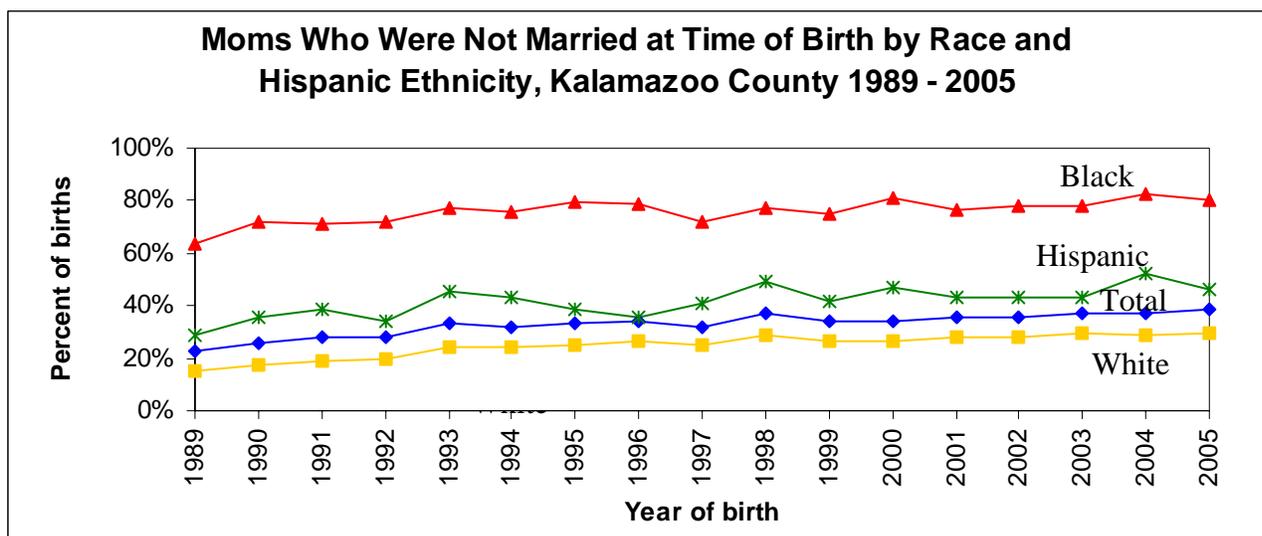
9.2.5 Marital Status

In 2005, 38.7% of moms who gave birth were not married. This rate was higher than the rate in Michigan (36.7%). The proportion of moms giving birth who are not married has been increasing over the past 15 years in both Kalamazoo County and Michigan.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Black moms giving birth have consistently been less likely to be married than Hispanic or white moms over time in Kalamazoo County. In 2005, 80.2% of black moms were unmarried; 46.3% of Hispanic moms and 29.9% of white moms were unmarried.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Who Were Not Married at Time of Birth by Race and Hispanic Ethnicity, Kalamazoo County 1989 – 2003

Year	Total		White		Black		Hispanic	
	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI
1989	22.6%	1.4	15.0%	1.3	63.7%	4.1	29.1%	10.0
1990	26.0%	1.4	17.7%	1.4	72.3%	3.8	35.4%	9.6
1991	27.9%	1.5	19.0%	1.5	71.5%	3.7	38.6%	9.5
1992	28.4%	1.5	19.9%	1.5	72.1%	3.8	34.0%	9.4
1993	33.6%	1.6	24.6%	1.7	77.4%	3.5	45.7%	10.1
1994	31.8%	1.6	24.3%	1.6	76.1%	3.9	42.9%	9.5
1995	33.4%	1.7	25.2%	1.7	79.6%	3.6	38.9%	9.8
1996	33.9%	1.7	26.5%	1.7	78.6%	3.8	35.5%	9.1
1997	31.9%	1.6	24.8%	1.7	72.2%	4.0	41.0%	8.9
1998	36.8%	1.7	28.8%	1.7	77.4%	3.6	49.6%	8.6
1999	34.2%	1.7	26.4%	1.7	75.3%	3.8	42.0%	8.5
2000	34.2%	1.6	26.2%	1.7	81.3%	3.5	47.2%	8.2
2001	35.5%	1.7	27.8%	1.7	76.3%	3.7	43.5%	8.3
2002	35.5%	1.7	27.8%	1.8	78.0%	3.7	43.1%	7.8
2003	37.1%	1.7	29.7%	1.8	77.7%	3.5	43.1%	7.5
2004	37.3%	1.7	29.0%	1.8	82.3%	3.3	52.2%	7.3
2005	38.7%	1.7	29.9%	1.8	80.2%	3.3	46.3%	6.9

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

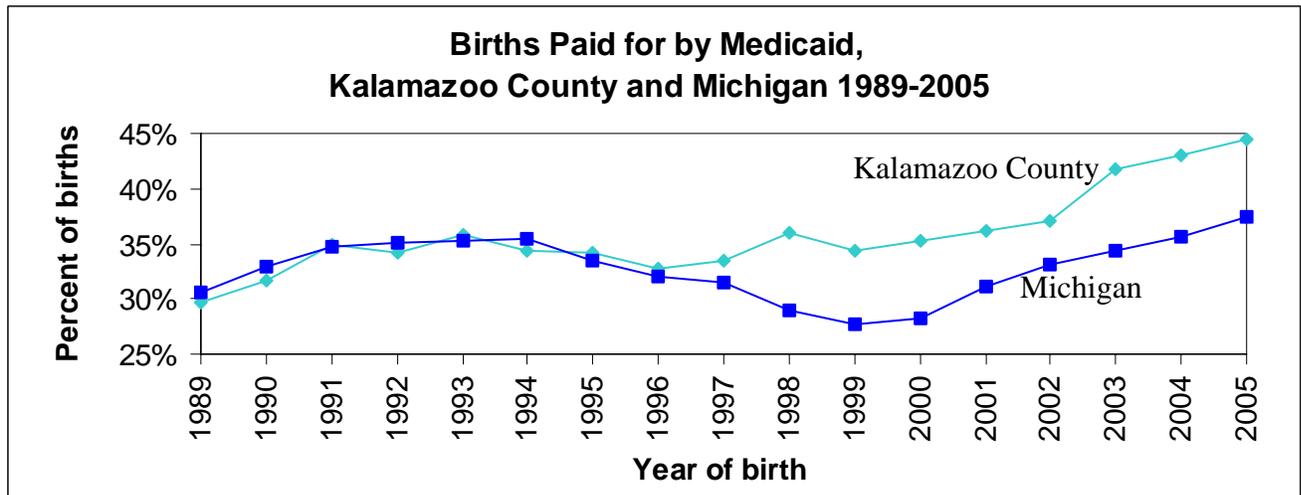
Moms Who Were Not Married at Time of Birth by Race and Hispanic Ethnicity, Michigan 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI	% Unwed	+/- 95% CI
1989	24.4%	0.2	13.4%	0.2	68.0%	0.5	30.3%	1.4
1990	26.1%	0.2	14.5%	0.2	70.4%	0.5	31.6%	1.4
1991	27.2%	0.2	15.2%	0.2	71.9%	0.5	31.8%	1.4
1992	26.7%	0.2	14.9%	0.2	72.2%	0.5	31.5%	1.4
1993	35.0%	0.3	23.7%	0.3	79.7%	0.5	42.7%	1.5
1994	34.9%	0.3	24.2%	0.3	78.9%	0.5	42.1%	1.5
1995	34.4%	0.3	24.6%	0.3	78.0%	0.5	42.6%	1.4
1996	33.7%	0.3	24.3%	0.3	76.6%	0.5	41.7%	1.4
1997	33.1%	0.3	23.9%	0.3	75.3%	0.5	40.3%	1.3
1998	33.8%	0.3	25.0%	0.3	74.7%	0.5	41.8%	1.3
1999	33.5%	0.3	24.9%	0.3	74.0%	0.6	41.4%	1.2
2000	33.9%	0.3	25.6%	0.3	74.1%	0.6	42.1%	1.2
2001	34.2%	0.3	26.2%	0.3	73.8%	0.6	42.0%	1.1
2002	34.1%	0.3	26.2%	0.3	74.3%	0.6	42.1%	1.1
2003	34.6%	0.3	27.0%	0.3	74.1%	0.6	43.8%	1.1
2004	35.6%	0.3	27.9%	0.3	74.7%	0.6	45.1%	1.1
2005	36.7%	0.3	29.0%	0.3	75.7%	0.6	46.6%	1.1

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

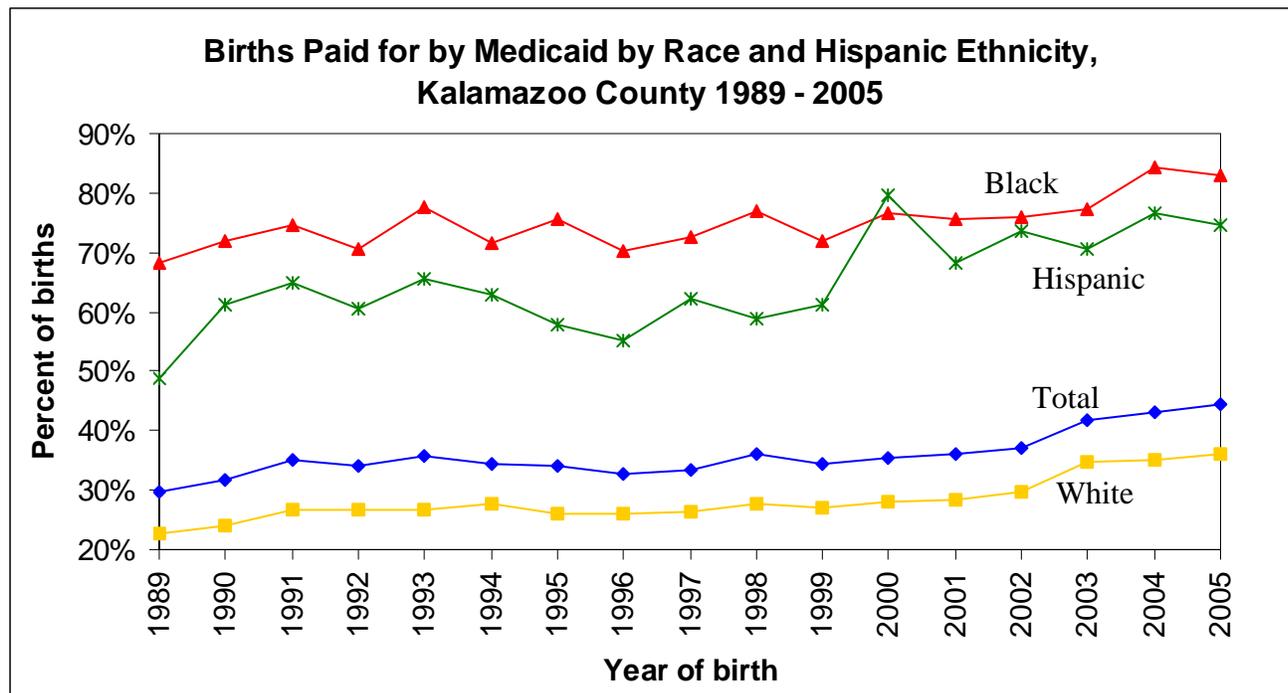
9.2.6 Medicaid as Payment Source for Delivery

The proportion of births paid for by Medicaid in Kalamazoo County was very similar to the proportion in Michigan from 1989 through the mid-1990s; however, since 1997, the proportion in Kalamazoo has been higher than the proportion in Michigan. The proportion in both Kalamazoo County and in Michigan has been increasing since 1999.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Since 1989, a higher percentage of births to black moms and Hispanic moms were paid for by Medicaid each year than the percentage of births to white moms.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Births Paid for by Medicaid by Race and Hispanic Ethnicity, Kalamazoo County 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Medicaid	+/- 95% CI						
1989	29.7%	1.5	22.6%	1.6	68.3%	4.0	48.7%	11.2
1990	31.6%	1.5	24.1%	1.6	71.8%	3.8	61.1%	9.8
1991	34.9%	1.6	26.8%	1.7	74.6%	3.6	65.0%	9.3
1992	34.1%	1.6	26.8%	1.7	70.7%	3.9	60.4%	9.8
1993	35.8%	1.7	26.9%	1.7	77.6%	3.5	65.6%	9.7
1994	34.3%	1.7	27.7%	1.7	71.5%	4.1	62.7%	9.4
1995	34.1%	1.7	26.1%	1.7	75.5%	3.9	57.9%	9.9
1996	32.7%	1.6	26.0%	1.7	70.1%	4.2	55.1%	9.4
1997	33.5%	1.7	26.3%	1.7	72.5%	4.0	62.1%	8.8
1998	36.0%	1.7	27.8%	1.7	76.8%	3.6	58.9%	8.5
1999	34.3%	1.7	27.1%	1.7	72.1%	3.9	61.1%	8.3
2000	35.2%	1.7	28.0%	1.7	76.7%	3.8	79.6%	6.6
2001	36.2%	1.7	28.5%	1.7	75.5%	3.7	68.1%	7.8
2002	37.2%	1.7	29.6%	1.8	75.9%	3.8	73.7%	7.0
2003	41.7%	1.7	34.6%	1.9	77.3%	3.6	70.7%	6.9
2004	42.9%	1.7	35.0%	1.9	84.4%	3.1	76.7%	6.2
2005	44.4%	1.7	35.9%	1.9	82.8%	3.1	74.5%	6.0

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

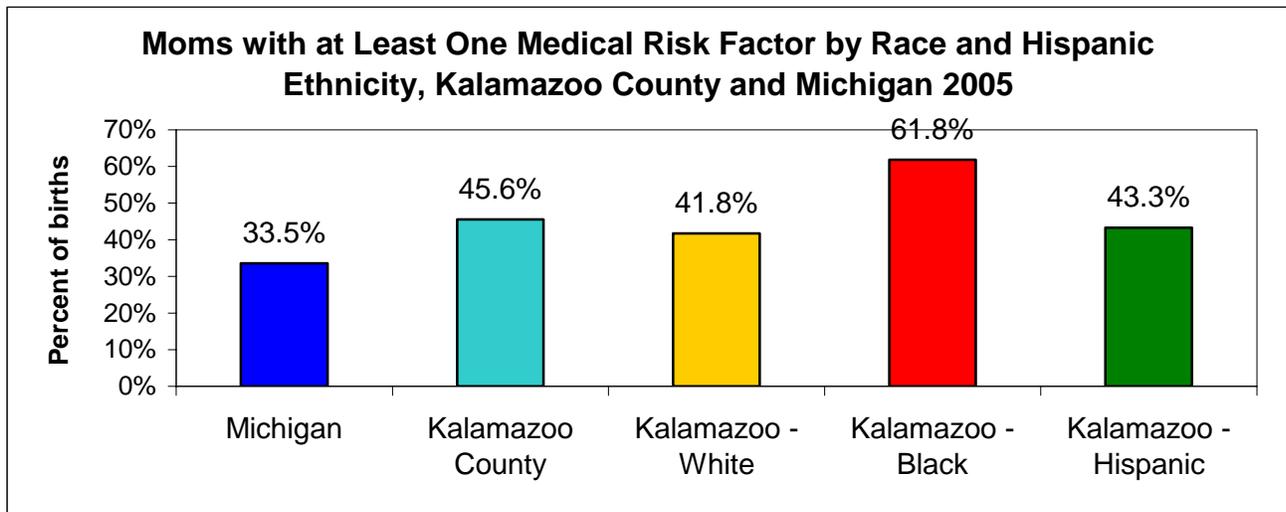
Births Paid for by Medicaid by Race and Hispanic Ethnicity, Michigan 1989 – 2005

Year	Total		White		Black		Hispanic	
	% Medicaid	+/- 95% CI						
1989	30.6%	0.2	23.2%	0.2	59.0%	0.6	50.0%	1.5
1990	32.9%	0.2	25.2%	0.3	60.9%	0.5	52.8%	1.5
1991	34.7%	0.2	27.3%	0.3	61.3%	0.5	55.8%	1.5
1992	35.2%	0.2	28.0%	0.3	61.7%	0.6	55.7%	1.5
1993	35.3%	0.3	28.6%	0.3	60.8%	0.6	55.9%	1.5
1994	35.4%	0.3	28.6%	0.3	62.2%	0.6	57.9%	1.5
1995	33.4%	0.3	27.5%	0.3	58.5%	0.6	56.0%	1.4
1996	32.0%	0.3	26.4%	0.3	56.7%	0.6	56.4%	1.4
1997	31.4%	0.3	25.8%	0.3	56.7%	0.6	55.0%	1.3
1998	29.0%	0.2	24.3%	0.3	50.3%	0.6	51.8%	1.3
1999	27.7%	0.2	23.4%	0.3	47.9%	0.6	52.7%	1.3
2000	28.3%	0.2	24.2%	0.3	48.3%	0.6	55.3%	1.2
2001	31.1%	0.3	27.2%	0.3	50.3%	0.6	60.4%	1.1
2002	33.1%	0.3	29.1%	0.3	53.1%	0.7	61.3%	1.1
2003	34.4%	0.3	30.7%	0.3	53.3%	0.7	64.8%	1.1
2004	35.6%	0.3	32.2%	0.3	52.5%	0.7	66.5%	1.1
2005	37.4%	0.3	34.0%	0.3	54.2%	0.7	68.7%	1.0

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

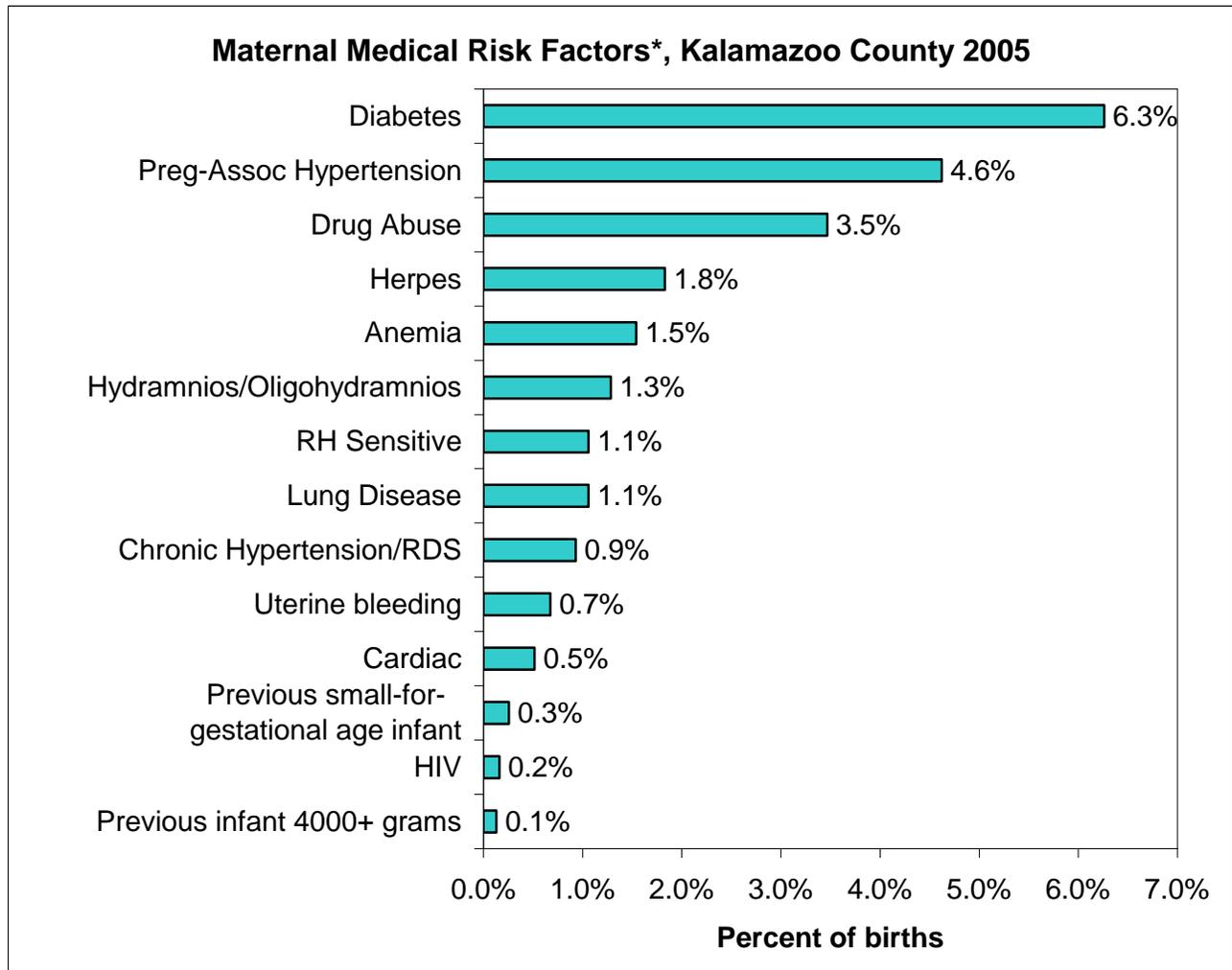
9.2.7 Maternal Medical Risk Factors

Management of maternal medical risk factors during pregnancy is important for the health of both the baby and mother. Approximately 46% of moms giving birth in Kalamazoo County in 2005 had one or more medical risk factors. The percentage of moms with at least one medical risk factor was higher in Kalamazoo County than in Michigan, but this may reflect differences in documentation of these risk factors at various facilities throughout the state rather than actual differences in prevalence. Comparisons among population groups within Kalamazoo County have greater validity. In 2005, a higher percentage of black moms giving birth than white or Hispanic moms had at least one medical risk factor.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

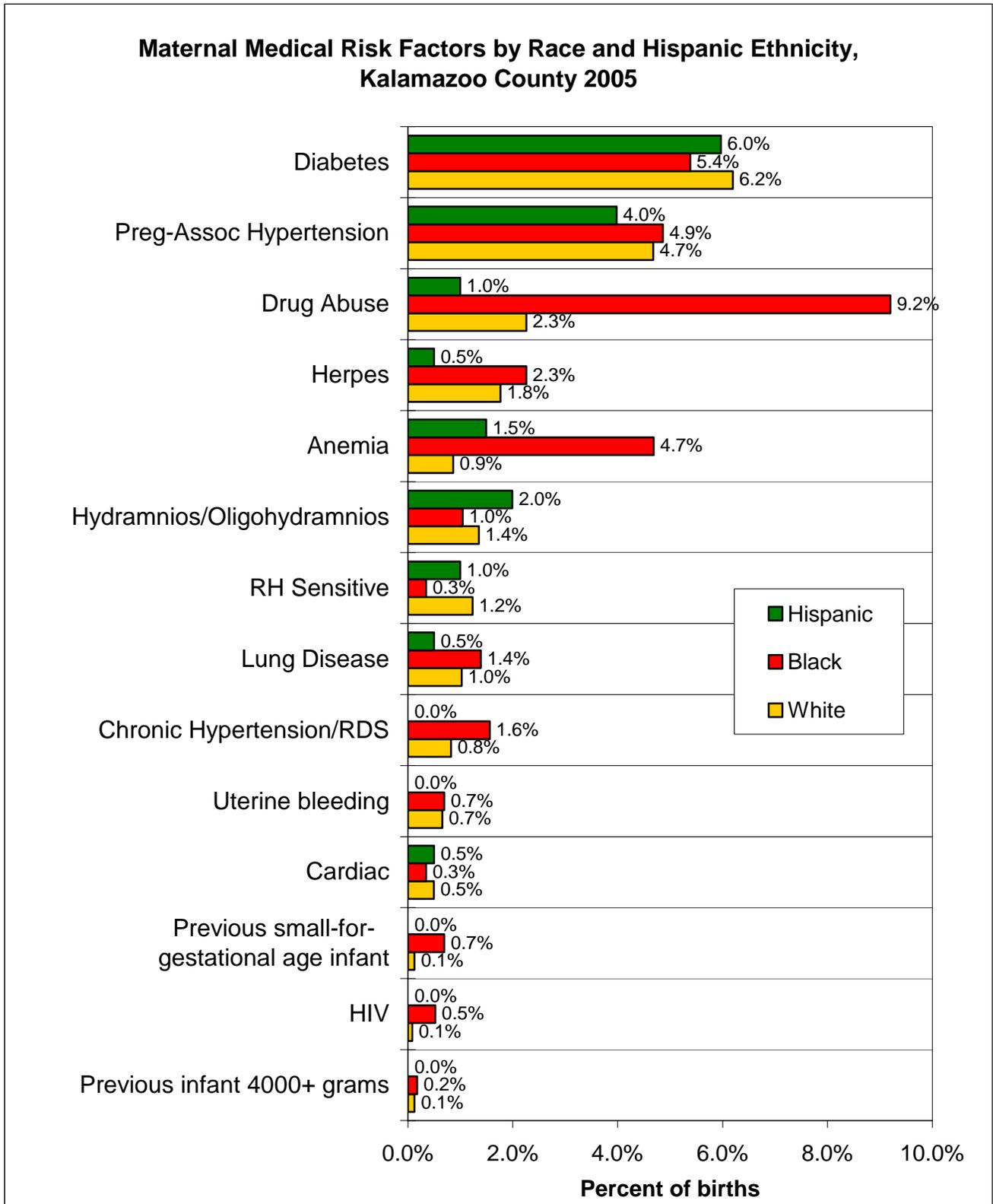
Medical risk factors that were most prevalent among all Kalamazoo County moms giving birth in 2005 were diabetes (6.3%) and pregnancy-associated hypertension (4.6%), followed by drug abuse (3.5%), herpes (1.8%) and anemia (1.5%).



*Other medical risk factors were present in 27.9% of all births

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

The prevalence of medical risk factors differed by race and Hispanic ethnicity in 2005. A higher percentage of black moms (9.2%) than white (2.3%) or Hispanic moms (1.0%) had drug abuse noted as a medical risk factor. The prevalence of anemia was higher among black moms (4.7%) than Hispanic (1.5%) or white moms (0.9%).



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

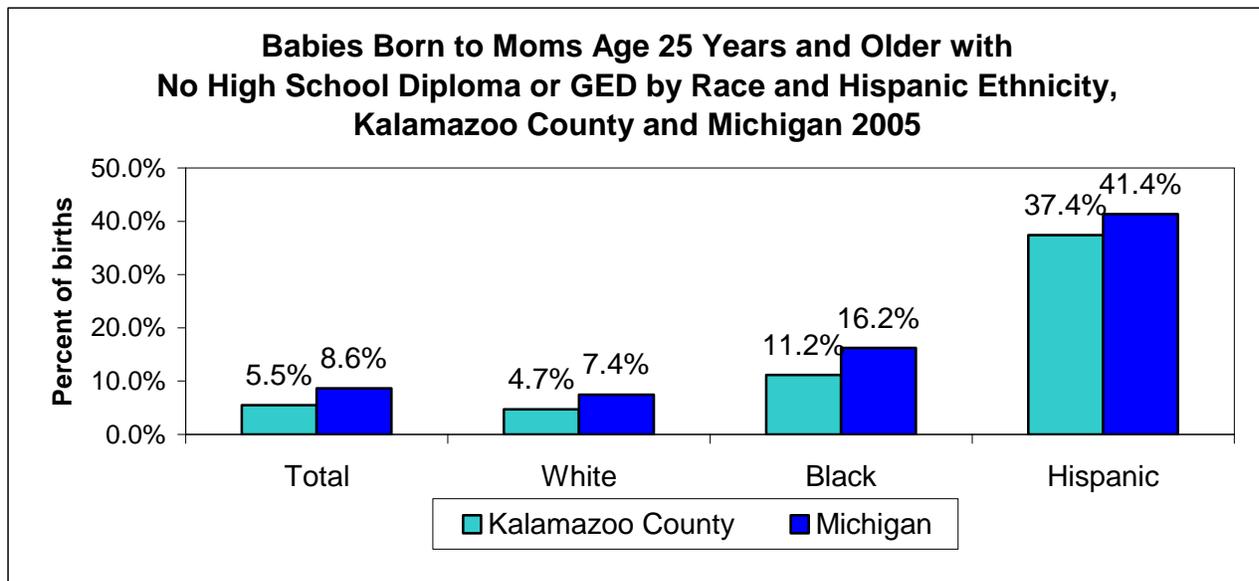
9.2.8 Maternal Education

Mothers' self-report of educational attainment is given at the time of birth and appears on the birth certificate. Because teen mothers may either still be in school or may attain their high school diploma or GED on a delayed schedule, the analysis of maternal education in this report is restricted to include only mothers age 25 years and older. This avoids to some extent the impact of confounding with rates of teen pregnancy, which would otherwise inflate the levels of low maternal educational attainment at both the state and county levels.

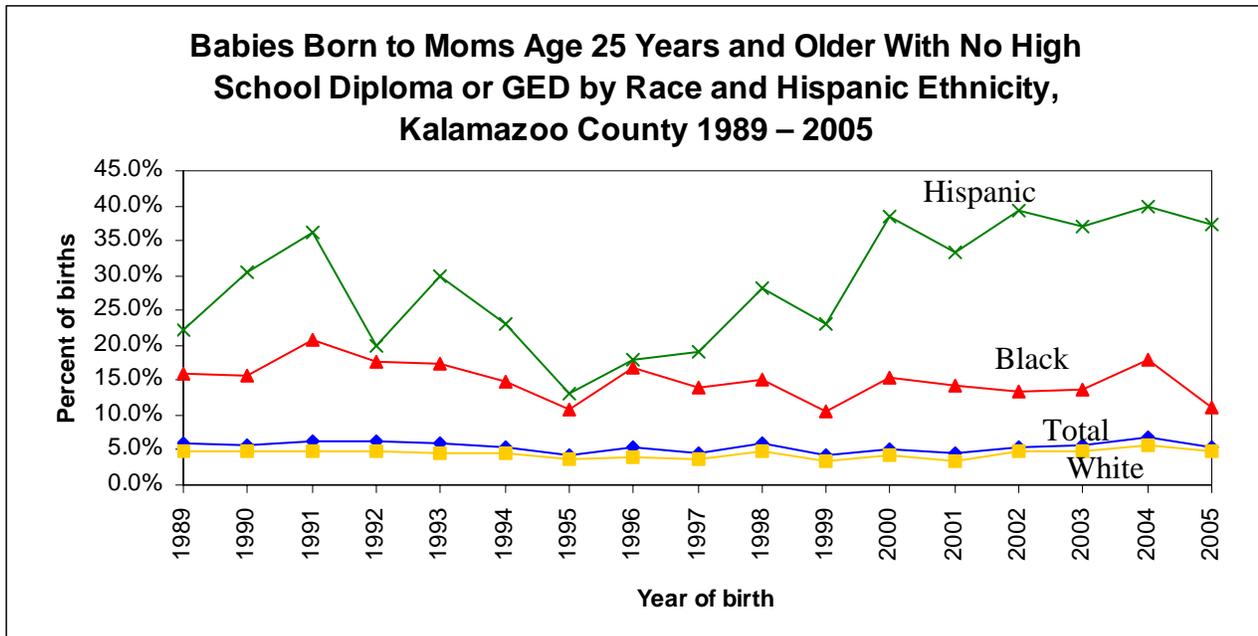
The GED, or the General Educational Development tests, is a general equivalency diploma that can be earned in lieu of a high school diploma once a student has dropped out of school. Students must perform in at least the 40th percentile of high school seniors nationwide on a series of tests covering writing skills, social studies, science, literature and the arts and mathematics in order to qualify for their GED.

The most common issue with self-reported data is the underreporting of socially undesirable behavior (or the overreporting of favorable behavior). Because people are less willing to disclose behavior or personal histories they think will be looked down upon, self-reported data may underestimate the true prevalence for a given indicator. Nonetheless, the prevalence of mothers 25 years and older without a high school diplomas or GED has remained fairly consistently around five to six percent for the past fourteen years.

In 2005, a greater percentage of mothers age 25 or older in Kalamazoo County (94.5%) had a high school diploma or GED than in Michigan (91.4%). Prevalence of not having a high school diploma or GED has varied by race and ethnicity over time, with Hispanic mothers least likely to have received a high school diploma or GED, followed by black mothers. In 2005, Hispanic mothers in Kalamazoo County were eight times less likely to have completed high school or received a GED than white mothers, and black mothers were 2.4 times less likely than white mothers to have a high school diploma or GED.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.



Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

Moms Age 25+ Without a High School Diploma or GED by Race and Hispanic Ethnicity, Kalamazoo County 1989 – 2005

Year	Total		White		Black		Hispanic	
	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI
1989	5.9%	1.0	4.8%	0.9	16.0%	4.9	22.2%	13.6
1990	5.6%	1.0	4.7%	0.9	15.6%	5.3	30.6%	15.0
1991	6.3%	1.0	4.8%	1.0	20.7%	5.4	36.2%	13.7
1992	6.2%	1.1	4.8%	1.0	17.6%	5.3	20.0%	12.4
1993	5.9%	1.0	4.5%	1.0	17.4%	5.2	30.0%	14.2
1994	5.4%	1.0	4.7%	1.0	14.9%	5.3	23.1%	11.5
1995	4.3%	0.9	3.7%	0.9	10.9%	4.5	13.0%	9.7
1996	5.3%	1.0	4.1%	0.9	16.8%	5.3	18.0%	9.6
1997	4.7%	0.9	3.6%	0.9	13.8%	4.9	19.0%	10.1
1998	5.8%	1.0	4.7%	1.0	15.0%	4.8	28.1%	11.0
1999	4.3%	0.9	3.5%	0.9	10.4%	4.1	23.0%	10.6
2000	5.2%	1.0	4.3%	0.9	15.3%	5.3	38.3%	12.3
2001	4.6%	0.9	3.4%	0.9	14.3%	4.8	33.3%	11.6
2002	5.5%	1.0	4.7%	1.0	13.4%	4.6	39.2%	10.8
2003	5.7%	1.0	4.7%	1.0	13.6%	4.4	37.1%	10.0
2004	6.7%	1.1	5.6%	1.1	18.0%	5.2	39.8%	9.9
2005	5.5%	1.0	4.7%	1.0	11.2%	4.0	37.4%	9.2

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.

**Moms Age 25+ Without a High School Diploma or GED by Race and Hispanic Ethnicity,
Michigan 1989 – 2005**

Year	Total		White		Black		Hispanic	
	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI	% No H.S. Diploma/GED	+/- 95% CI
1989	8.8%	0.2	7.0%	0.2	18.6%	0.7	28.0%	2.0
1990	8.9%	0.2	7.0%	0.2	19.1%	0.7	28.1%	2.0
1991	8.8%	0.2	6.8%	0.2	20.0%	0.7	27.1%	1.9
1992	8.5%	0.2	6.5%	0.2	20.0%	0.7	24.5%	1.9
1993	8.5%	0.2	6.7%	0.2	19.4%	0.7	25.6%	1.9
1994	7.7%	0.2	5.9%	0.2	18.1%	0.7	27.0%	1.9
1995	7.4%	0.2	5.7%	0.2	16.8%	0.7	27.2%	1.9
1996	7.1%	0.2	5.5%	0.2	16.0%	0.7	28.8%	1.8
1997	7.0%	0.2	5.6%	0.2	15.4%	0.7	28.1%	1.7
1998	7.3%	0.2	5.8%	0.2	16.1%	0.7	31.2%	1.7
1999	7.2%	0.2	5.8%	0.2	15.1%	0.7	33.5%	1.7
2000	7.5%	0.2	6.2%	0.2	15.7%	0.7	35.1%	1.6
2001	7.7%	0.2	6.5%	0.2	15.6%	0.7	37.7%	1.6
2002	8.0%	0.2	6.7%	0.2	15.9%	0.7	39.9%	1.6
2003	8.2%	0.2	6.6%	0.2	15.7%	0.7	40.6%	1.5
2004	8.3%	0.2	7.2%	0.2	15.7%	0.7	41.4%	1.5
2005	8.6%	0.2	7.4%	0.2	16.2%	0.7	41.4%	1.4

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File.