



RIGHT START IN MICHIGAN 2010

Mothers and Infants in Michigan Communities: The Other Half

Recent Michigan birth records reveal broad inequities among Michigan communities for mothers and their infants. These communities represent roughly half of Michigan births and 80 percent of minority births. Racial disparities persist and some key measures present troubling trends.

On seven of eight measures, African American mothers and infants had worse rates than their white peers, and on five of the measures Hispanics had higher rates than their white counterparts. Babies born to mothers in economically disadvantaged communities also face substantially more risk than their counterparts in more affluent settings.

Such findings are particularly challenging in light of the demographic shifts towards more children of color, more extensive poverty, shrinking resources for maternal and infant health initiatives, and the need to expand the state's highly educated and skilled workforce. This pattern of disadvantage in maternal and infant health measures transfers into a readiness gap entering kindergarten and later an achievement gap as children progress through school.

As the Michigan Legislature struggles with the ongoing structural deficit resulting from insufficient state revenues for basic state services and seeks to establish priorities, programs that enhance maternal and infant well-being should logically be placed at the top of the list. Unfortunately many key programs focused on this outcome have been cut in recent years.

Without ensuring that early childhood provides the foundation for long-term health and education outcomes, the state will be hard-pressed to meet its

goals of a better educated workforce and a strong economic turnaround fueled by high-skilled jobs.

Babies born in 2008 will enter kindergarten in 2013—and what will have happened in that five-year period will shape the architecture of their brains in ways that will have a lasting impact on the life chances of these children, as has been demonstrated by numerous studies. The circumstances into which they have been born—the housing and neighborhoods in which they live, the resources in their families and communities—will either enhance or diminish their capacity to enter school ready to learn.

The foundation of early childhood starts before birth. Birth certificates provide key information about the circumstances of the state's infants including the following examined in this report:

- Births to teens (under the age of 20)
- Repeat births to teens (as % teen births)
- Non-marital births
- Mother with no diploma or GED
- Late or no prenatal care
- Mother smoked during pregnancy
- Low-birthweight baby (less than 5.5 pounds)
- Preterm births (less than 37 weeks pregnancy)

These key measures have been included for over a decade in the national KIDS COUNT and state Right Start reports, but the 2008 numbers reflect the first full-year of data from Michigan's revised birth certificate. The revision means some indicators can no longer be compared with previous years. Data about maternal education, prenatal care, and smoking during

pregnancy are now collected differently on the new certificate. For example, maternal education is no longer reported simply as the number of years of education but is now mostly defined by the credential awarded, such as a high school diploma or bachelor's degree.

The latest information on the key Right Start indicators has been compiled for all Michigan counties, as well as the state's largest communities, and is available at the KIDS COUNT Data Center (www.kidscount.org). This analysis focuses on the status and trends of these measures in the 69 communities (cities and townships) with population over 25,000.

County level data often mask the large disparities among communities, particularly in the densely populated counties where most children, especially minority children, are born and live. Unlike several measures in the Kids Count data book, sub-county birth data are readily available and statistically reliable.

This report begins with an overview of the latest data for the state and then reviews trends between 2000 and 2008.¹ The discussion compares rates and trends for the state's largest racial/ethnic groups.

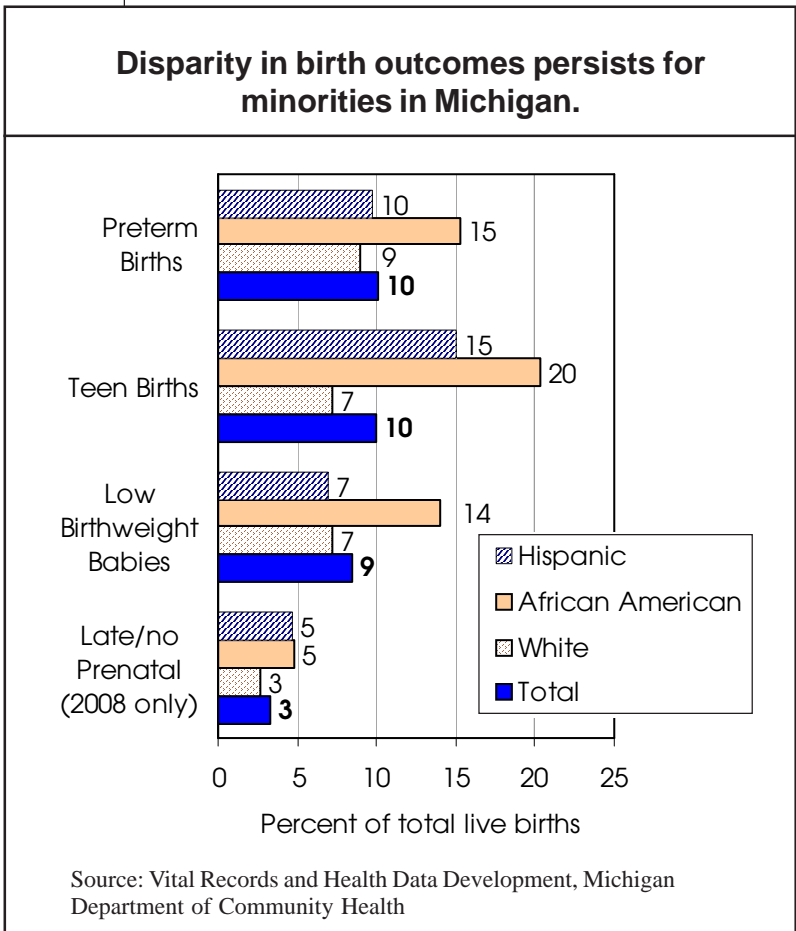
The analysis assigns each community a risk status of high, moderate or low, based on the relationship of the community's average rates on the eight indicators (and the percentage of Medicaid births) to the state median rates on these measures. The percentage of births paid for by Medicaid is also included as a measure of economic insecurity. Pregnant women without health insurance and in households with income below 185 percent of the federal poverty level qualify for Medicaid to cover costs of prenatal care and delivery.²

Two key indicators—teen births and preterm births—are examined for overall

trends in rates between 2000 and 2008 as well as by race and ethnicity for those communities with large enough numbers of minority births to be statistically reliable.³ Taking a closer look at the variation on these measures by community can provide insight into outcomes for program efforts at the local level.

Maternal and Infant Health in Michigan

While the disparity in maternal/infant risk factors varies considerably, rates for African American infants and mothers tend to be the worst (highest) except for maternal smoking during pregnancy. African American babies are much more likely to be born preterm (less than 37 weeks gestation) and low-birthweight (less than 5½ pounds) than either white or Hispanic babies, putting them at high risk for infant mortality. Infants



¹ The years referenced as 2000 and 2008 represent three-year averages: 1998-2000 and 2006-2008 respectively.

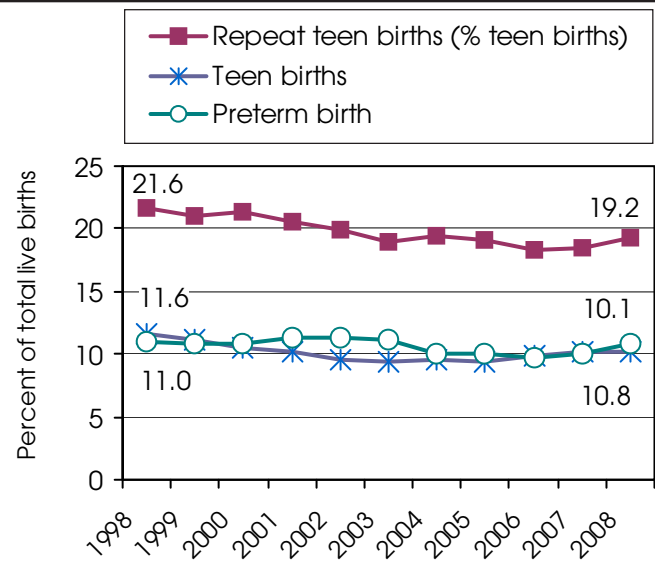
² Roughly \$27,356 for a single parent with one child.

³ The years referenced as 2000 and 2008 represent three-year averages: 1998-2000 and 2006-2008 respectively.

born to minority mothers in Michigan are significantly more likely to be born to a teen mother and with late or no prenatal care than those born to white non-Hispanic mothers. This last finding is particularly troubling since access to early and consistent prenatal care is a key strategy to improve the chances of a healthy birth.

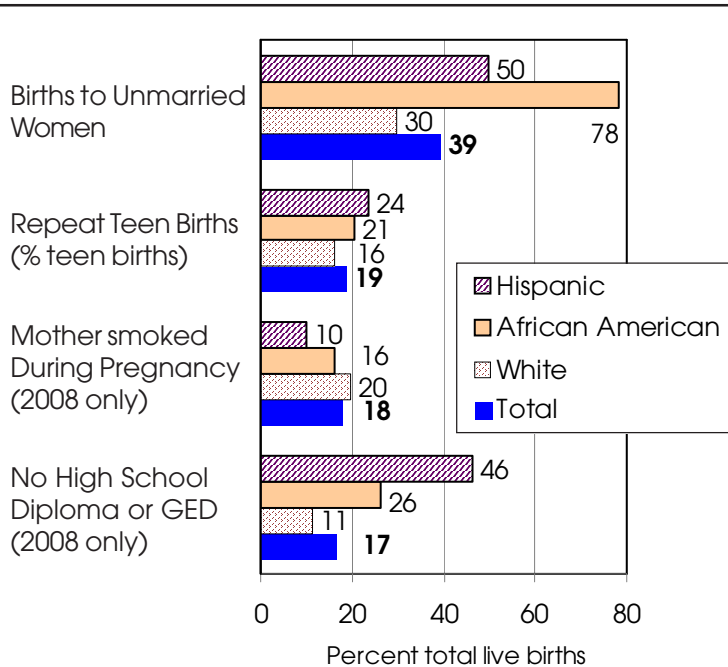
The two indicators that reflected the most dramatic variation by race were births to unmarried women and those to women without a high school diploma. African American infants were roughly two and one-half times more likely to be born to an unmarried mother compared with whites while Hispanic babies were four times more likely than their white non-Hispanic counterparts to be born to a woman who had neither a high school diploma nor a GED. Michigan Hispanic mothers who were born outside the U.S. were more than twice as likely as those born in the country not to have one

Michigan improvements in maternal and infant health have begun to reverse direction.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

Large differences occurred among Michigan racial/ethnic groups on several key maternal/infant risk indicators.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

of these credentials—64 percent compared with 29 percent of native-born.⁴

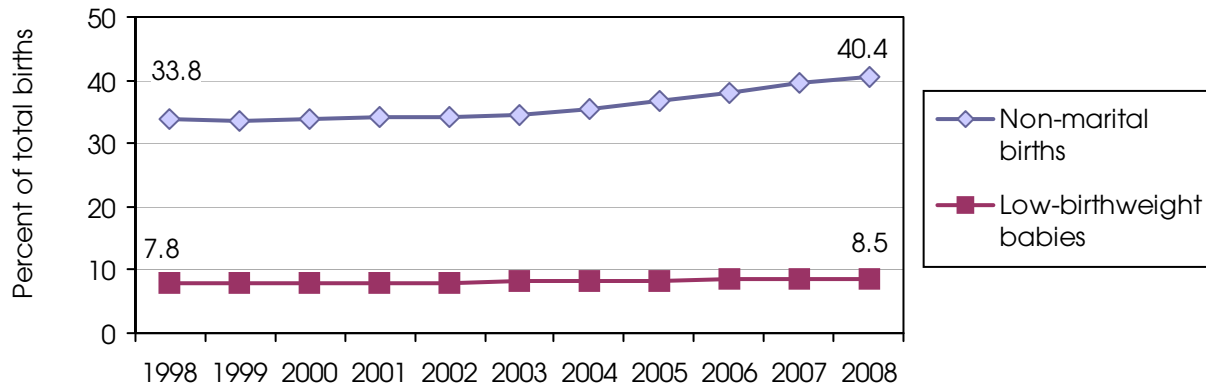
Trends for three of the five indicators of maternal and infant well-being that could be reviewed in Michigan reflected improvement between 2000 and 2008. Two indicators—preterm births and teen births (as a percent of all births)—which reflected improvement over the trend period reversed their downward trajectory between 2006 and 2008. The percentage of births to teens who had a previous child, while still lower in 2008 than in 2000 (21% lower), has essentially stalled since 2003—hovering between 18-19 percent of teen births.

Two measures, the percentages of births to unmarried mothers and babies born at low-birthweight, worsened over the trend period. Births to unmarried mothers jumped from 34 percent to 40 percent of all births, and the percent of babies born weighing less than five and one-half pounds rose from 8 percent to 9 percent of births.⁵ In 2008 roughly half of the babies born too soon were also born too small.

⁴ Roughly half of all Michigan Hispanic mothers were born inside the U.S. (2008).

⁵ These are single-year rates rather than three-year averages.

Percentage of non-marital births and low-birthweight babies increased in Michigan.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

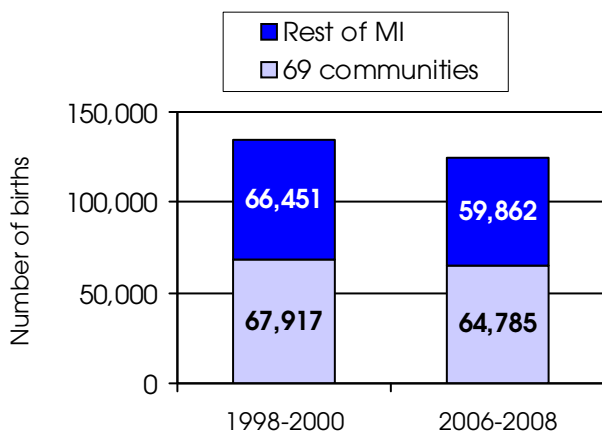
Births declined between 2000 and 2008.

The total number of births in Michigan dropped between 2000 and 2008—from 134,400 to 124,600 births. The decline occurred in Michigan communities with a population of 25,000 or over as well as outside those population centers. In 2008 about half of all state

births were to mothers in those communities, as were 80 percent of births to minority mothers.

While births in the African American community comprise Michigan’s largest minority group (18%), Hispanic births (7%) now represent the fastest growing. Between 2000 and 2008 births to Hispanic mothers jumped by one-third—from roughly 6,400 to 8,600 births. During the same period births to white women declined by 15 percent and births to African American women decreased by 6 percent.⁶

Roughly half of Michigan babies are born to mothers living in communities with population over 25,000.

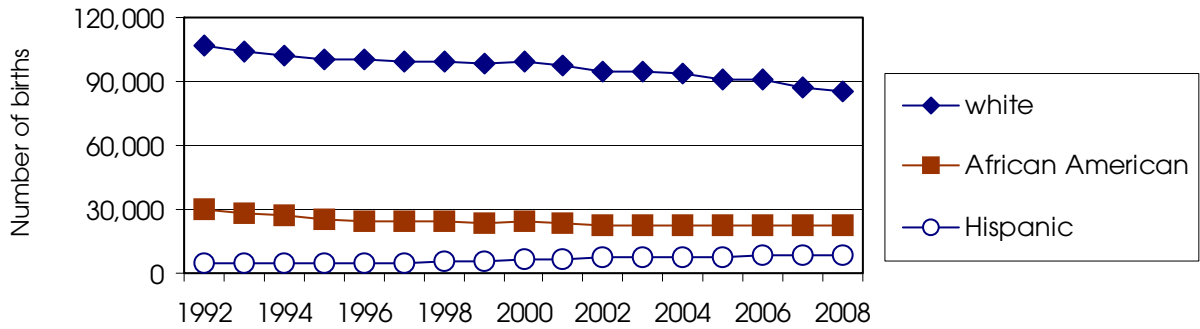


Source: Vital Records and Health Data Development, Michigan Department of Community Health

Births to the state’s two major minority groups are concentrated in roughly 12 Michigan communities, reflecting the segregated housing patterns in the state. Almost two of every three African American births occurred in only nine communities with Detroit alone representing almost half (44%) of these births. In contrast, Hispanic births are dispersed over many communities across the state with only 40 percent concentrated in the 10 communities with the largest percentages of total Hispanic births. As the state’s largest city, Detroit also had the largest concentration of Hispanic births; one-quarter of Hispanic births occurred in Detroit and Grand Rapids. Births to both major minority groups were concentrated in seven communities while the other five had a substantial percentage of only one.

⁶ There were insufficient numbers of births to other racial/ethnic groups to calculate statistically reliable rates on these measures.

In Michigan only Hispanic births have risen since 2000.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

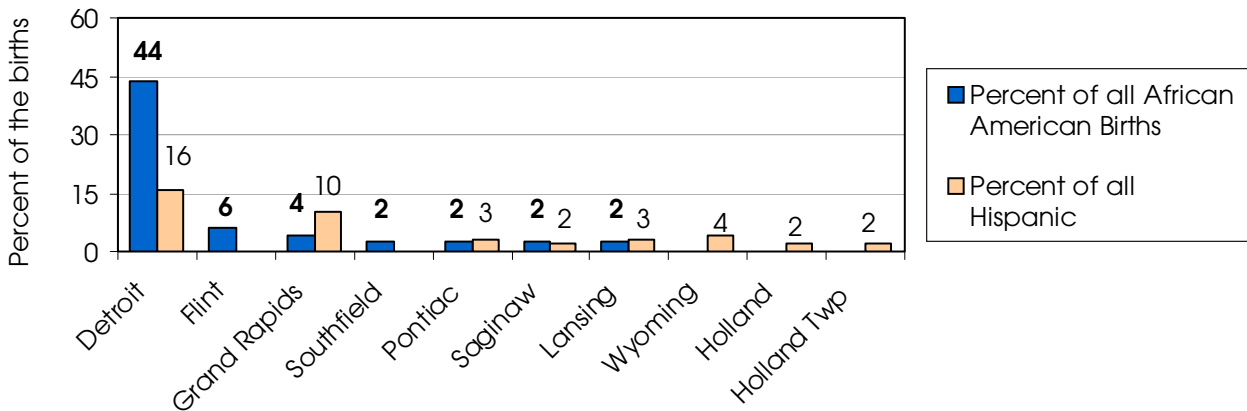
Two of every five births in Michigan communities occurred to mothers living in those cities classified as high-risk.

The 69 Michigan communities for which birth data are available were reviewed on the eight risk factors for maternal and infant health, plus the percentage of Medicaid births (a proxy for low income), and sorted into risk groups. Just over half the communities (38) are in the low-risk group. These communities had average rates across all indicators at or below the

communities' median rate. (The median rate is that where half of communities fall below and half above on each indicator.)⁷ The low-risk communities were home to roughly 18 percent of all state newborns in 2008. (See Appendix A and B.)

Several low-risk communities, such as Midland, Dearborn Heights, and Southfield, were at or just below the median; so they could easily rise into the moderate risk group. West Bloomfield Township and Commerce Township, on the other hand, had the

Births to the two major minority groups in Michigan cluster in 10 communities



Source: Vital Records and Health Data Development, Michigan Department of Community Health

⁷ The median rate for communities was lower than the state average on all measures.

lowest risk of all Michigan communities with average rates on these maternal and infant well-being indicators 57 percent below the communities' median.

The 18 communities grouped as moderate-risk represented roughly 14 percent of all the births in the state. They ranged from Grand Rapids and Burton, which barely slipped below high-risk with an average rate 49 percent above the communities' median, to Redford Township with an average rate only 3 percent above the communities' median.

Relatively few communities—only 13—were classified as high-risk with average rates at least 50 percent higher than the communities' median. This group had the largest share of state births (21%)—essentially representing one of every five births. This group included some communities with the largest numbers of births, which suggests concentrations of disadvantage, further intensifying the negative impact on infants and their families.

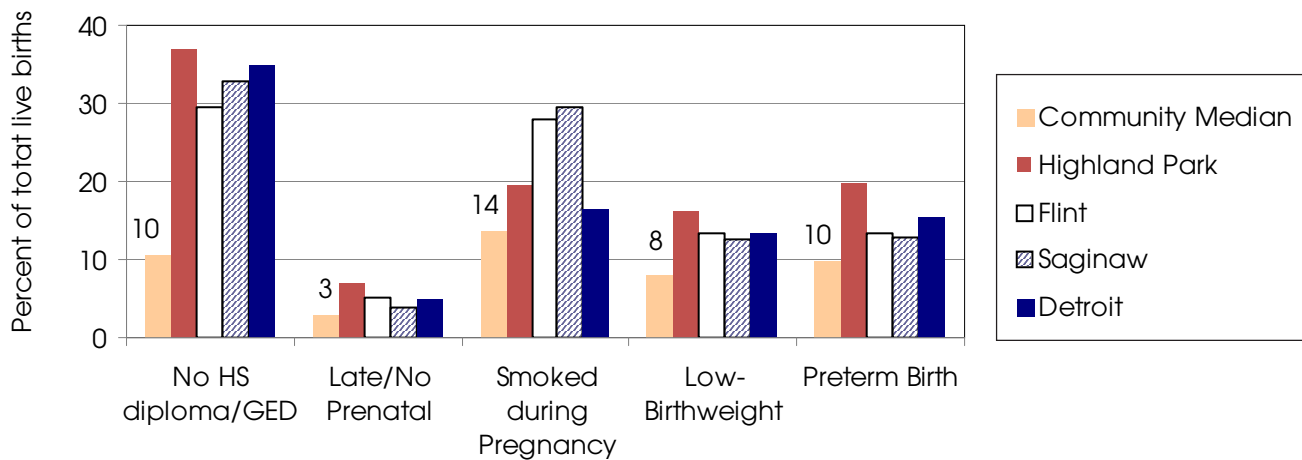
Even more troubling, four highly segregated communities—Highland Park, Saginaw, Flint and Detroit—representing 13 percent of all births in the state—reflected average rates roughly double the state median. A substantial majority of births in these communities were to minority women. In fact, in

Highland Park and Detroit, minority births represented almost all births—roughly 98 percent and 93 percent, respectively, and in Flint and Saginaw, close to two-thirds—62 percent and 65 percent, respectively. The level of disadvantage is compounded in these communities where virtually all aspects of maternal and infant health were significantly worse than the communities' median.

In almost half of the 13 high-risk communities, over one-third of births were to minority women, but other communities with relatively large shares of minority births, such as Southfield, Oak Park, Holland Township and Holland, did not fall into this high-risk group; so concentrations of minority births is clearly not the only critical factor involved. Furthermore, some high-risk cities, such as Bay City, Jackson, and Battle Creek had relatively small shares of minority births—15 percent, 26 percent and 29 percent, respectively.

Race and disadvantage often converge. All 13 Michigan communities with the highest maternal poverty, as reflected in the percentage of births covered by Medicaid, matched the list of high-risk communities for maternal and infant health except for Dearborn.⁸

Highest-risk Michigan communities reflected significantly higher rates of mothers without a high school diploma or GED.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

⁸ Dearborn had a larger percentage of births covered by Medicaid than Detroit, Highland Park, and Inkster.

A key indicator that is uniformly high for all the highest-risk communities was the percentage of mothers without a high school diploma or GED. This is particularly troubling as more jobs will be requiring this credential at a minimum. Of note is the much higher incidence of maternal smoking during pregnancy in Flint and Saginaw compared with Detroit and Highland Park. Both low-birthweight and preterm births were substantially more prevalent in Highland Park than the other highest-risk communities.

Teen birth trends differed dramatically by race/ethnicity.

While teen births represent roughly one of every 10 births in a given year in Michigan, they have a double impact—posing a risk not only to the babies but also their young parents. Teenagers who become parents before the age of 20 are more likely to become single parents in an economy where a double income is almost mandatory to support a family. These young women are less likely ever to marry, and those who do marry at such a young age are at greater risk of divorce than those who postpone marriage.

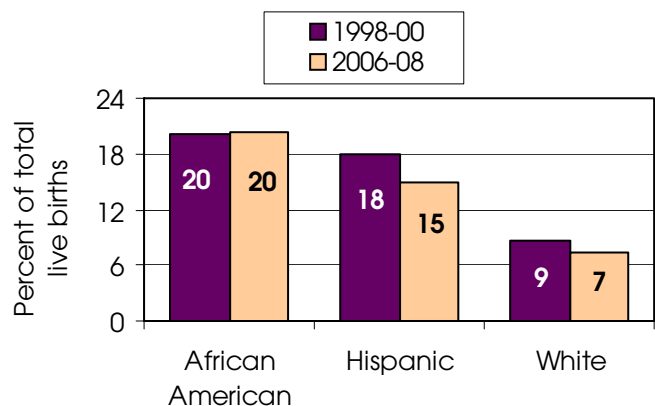
Roughly nine of every 10 Michigan’s teen mothers were unmarried at the birth of their child. Women who become parents as teens also tend to have lower levels of education and income than women who delay childbearing into their 20s. Just over half (53%) of Michigan’s teen mothers who gave birth in 2008 had not yet obtained a high school diploma or GED. Children born to teenagers face higher risks of poverty, growing up years with a single parent, problem behaviors, and early sexual activity compared with children born to older mothers.

Overall in Michigan the percentage of births to teenagers in 2008 reflected a one percentage point drop from 2000—from 11 percent to 10 percent. The shares of teen births among African Americans was almost triple that among whites (7%). Between 2000 and 2008 the percentage of births to teens remained

essentially the same for African Americans but fell among Hispanics and whites. The Hispanic community saw a substantial drop in the percentage of their births to teens—from 18 percent to 15 percent while the percentage among whites dropped from 9 percent to 7 percent of total births.

The percentages of births that were to teens in the 18 communities with a large enough African American population to provide statistically reliable rates ranged from 9 percent in Southfield to 31 percent in the city of Jackson. Teen births among Hispanics ranged from

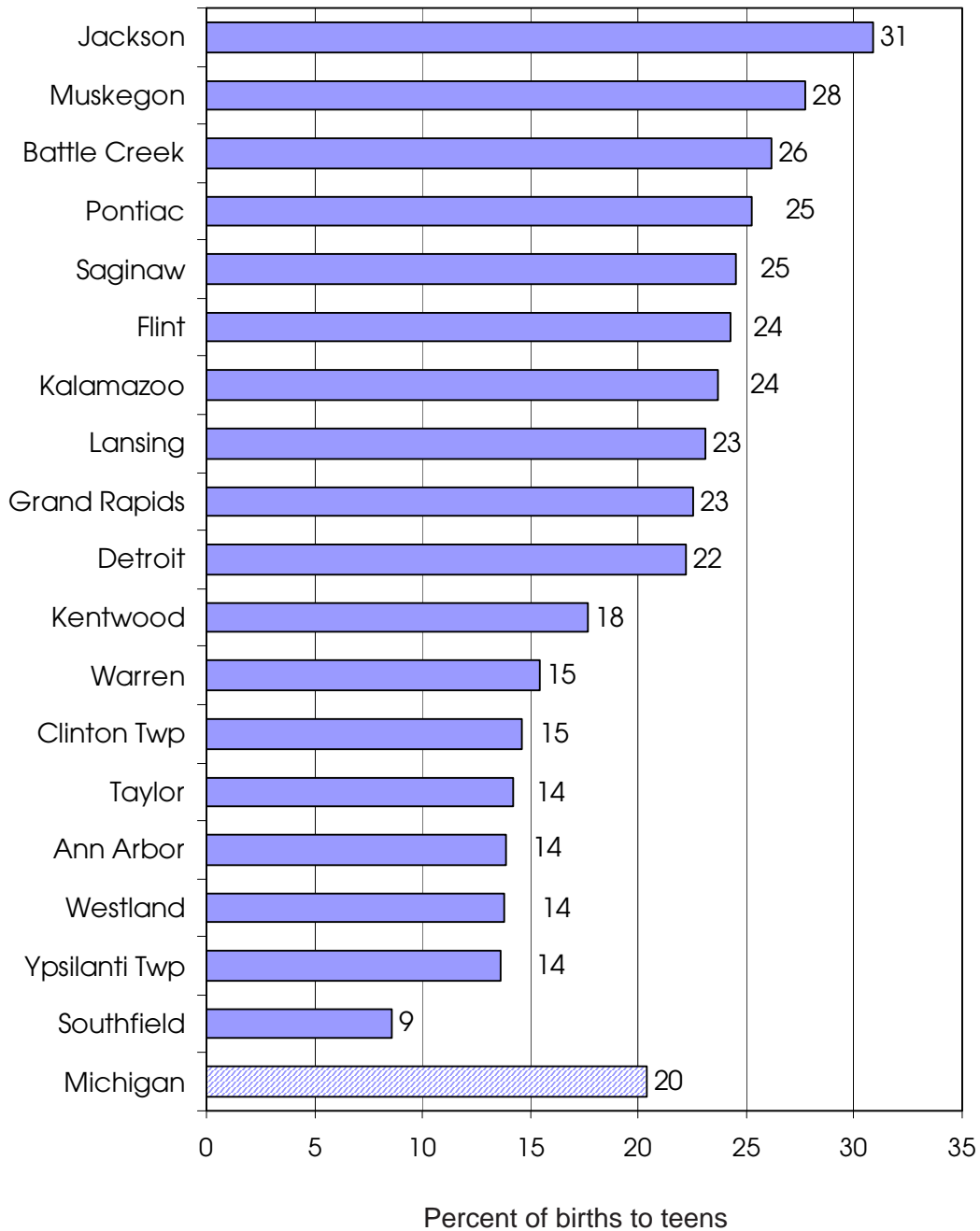
Percentage of births to teens was largest in African American community.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

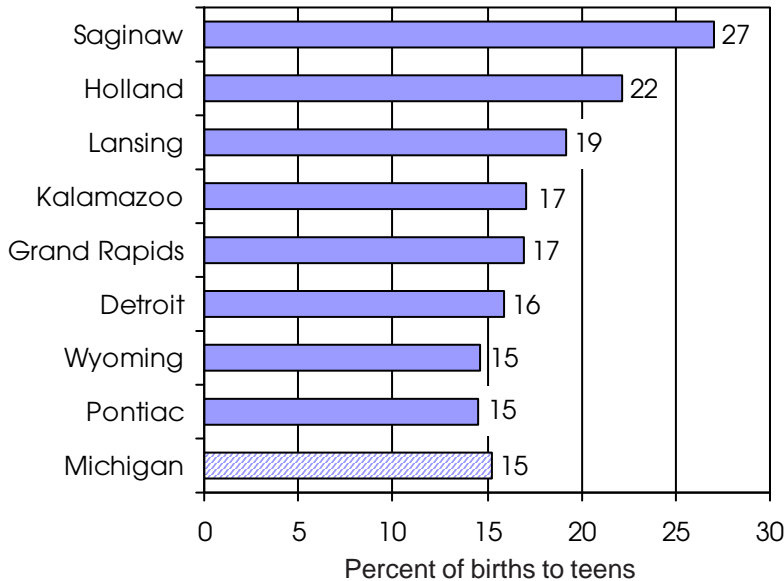
a low of 15 percent in Pontiac to 27 percent in Saginaw in the eight communities with large enough populations of Hispanics for reliable rates. The white teen birth percentage ranged from 2 percent in Ann Arbor to 14 percent in Pontiac. (See Appendix C.)

Roughly one of every four African American births was to a teenager in several Michigan Communities



Source: Vital Records and Health Data Development,
Michigan Department of Community Health

In 2008 Saginaw suffered from a significantly higher percentage of teen births among Hispanics than other Michigan communities.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

The percentages of teen births among African Americans rose between 2000 and 2008 in half of the 18 communities included in the analysis. Kentwood, Taylor, and Westland showed the largest increases. The townships of Clinton and Ypsilanti reflected the most substantial declines for this group.

The percentage of teen births among Hispanics declined in all communities except Detroit and Saginaw. Pontiac experienced the largest decline (34%) in the percentage of Hispanic births that were to teens while Saginaw sustained a substantial increase (36%). All communities except Saginaw and Westland saw declines in the percentages of births to

teens among whites with Ypsilanti Township reflecting the largest decline (53%).

Preterm Births

Babies born too soon are more likely to suffer from birth complications such as respiratory distress; to require intensive care and prolonged hospitalization; to incur higher medical costs; to die before their first birthday; and to suffer brain injury. While babies born very preterm (before the 32nd week of gestation) or moderately preterm (32 to 33 full weeks) face the greatest risk of such complications, “near term” or late preterm babies (34 to 36 full weeks) also sustain higher risk of such outcomes than babies born at term (38 to 41 full weeks). For example, the infant mortality rate among late preterm infants (7.7 per 1,000 live births) is three times higher than that among full-term infants (2.5 per 1,000 live births).⁹

Between 1990-1991 and 2005-2006 late preterm births rose significantly in all states. Over this period the Michigan rate escalated by 16 percent (from 6.7

percent to 7.8 percent)—substantially less than the national increase (25%). While many factors may be involved, recent studies suggest that the increase in induced labor and cesarean delivery at 34-36 weeks have influenced the trend.¹⁰ The percentage of late preterm births that were induced more than doubled during this period, and those delivered by cesarean climbed from 24 percent to 34 percent.¹¹

The infant mortality rate among late preterm infants is three times higher than that among full-term infants

⁹ Preterm Births in Rhode Island. Rhode Island Kids Count. Issue Brief. June 2007.

¹⁰ Joyce A. Martin et al, Born a Bit Too Early: Recent Trends in Late Preterm Births. NCHS Data Brief. No. 24. November 2009.

¹¹ Ibid.

Other factors leading to preterm births include medical risks such as infections and diabetes, multiple births, and the increased use of assisted reproductive technology. Behavioral and environmental factors such as substance abuse, stress, long working hours or hours of standing on the job, also have an impact.

Impact of Preterm Births

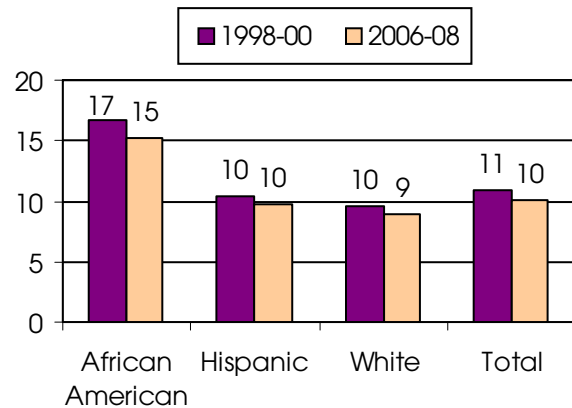
The ramifications of a preterm birth can persist through the first days, months and even years in costs to families, health care and education systems, and early intervention initiatives. In 2005 the estimated annual societal and economic burden associated with preterm birth in the United States was over \$26 billion, mostly due to medical care services in the first year.¹² The cost per infant born preterm was estimated at \$51,600. A premature baby spent an average of 17 days in the hospital at some point during their first year of life compared with roughly two days for a full-term infant.

Parents of preterm infants often face multiple challenges. Mothers of premature babies report higher levels of distress and symptoms of depression than mothers of full-term infants.¹³ Complications from a preterm birth often create a financial burden from medical costs, increase pressure on parental time and energy, and diminish opportunities for employment and social interaction. These stresses can affect other children in the family as well as the capacity to parent effectively.

Preterm births vary dramatically by race/ethnicity.

In Michigan the overall rate of preterm births in 2008 was 10 percent—having dropped from 11 percent in 2000. Among African American infants the

All three racial ethnic groups in Michigan reflected declines in preterm birth rates between 2000 and 2008.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

rate was substantially higher—15 percent, followed by the Hispanic rate (10%) and that of whites (9%). Between 2000 and 2008 preterm birth rates declined for the three largest racial/ethnic groups in Michigan.

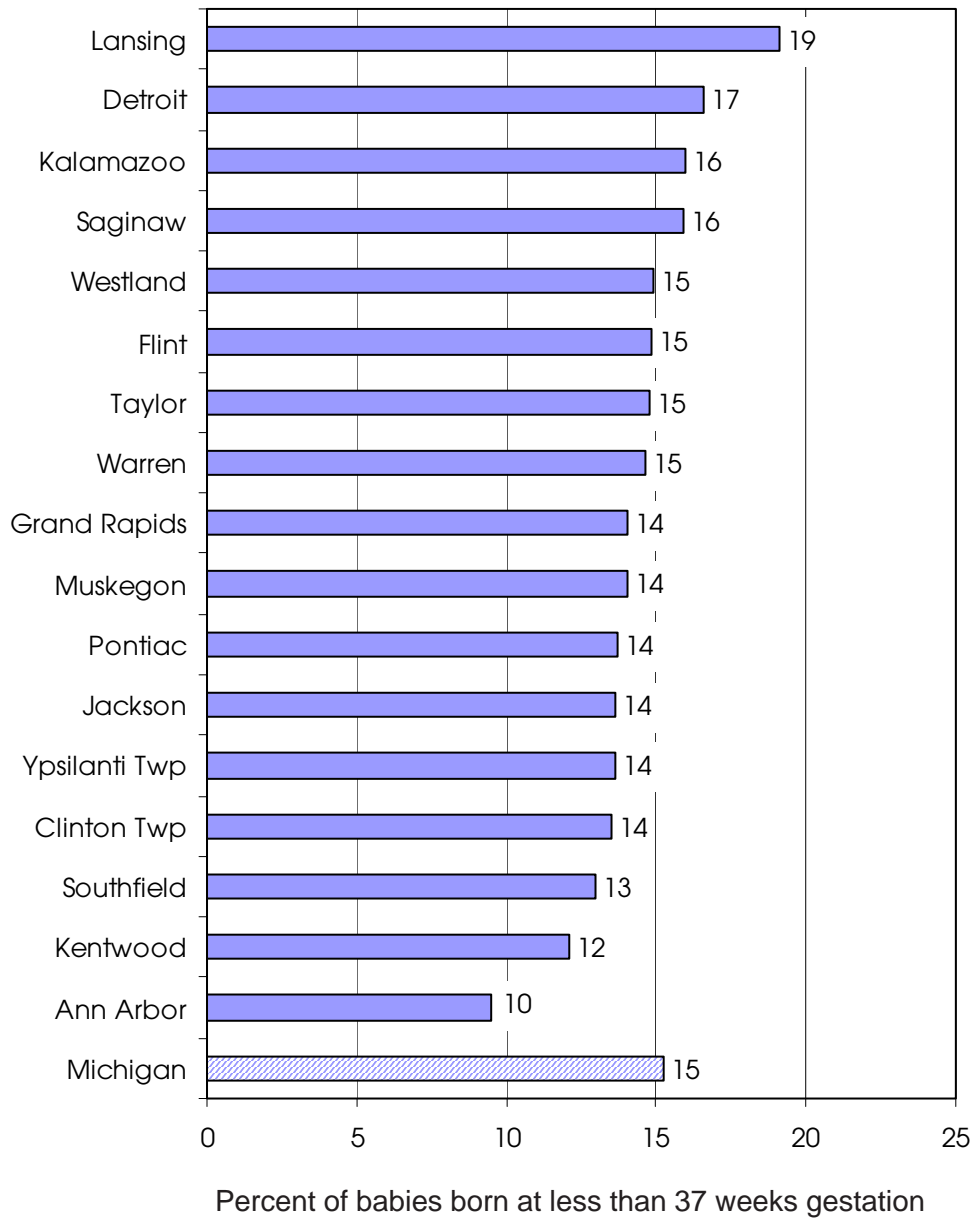
Among the selected 18 communities Lansing had the highest preterm birth rate for all three racial/ethnic groups. The African American rate reflected the widest range from 10 percent in Ann Arbor to 19 percent in Lansing compared with this; the Hispanic rate, from 9 percent in Wyoming to 14 percent in Lansing, and the white rate, from 7 percent in Ann Arbor to 12 percent in Lansing. (See Appendix D.)

In Michigan the overall rate of preterm births in 2008 was 10 percent—having dropped from 11 percent in 2000.

¹² Richard E. Behrman and Adrienne Stith Butler, *Preterm Birth: Causes, Consequences, and Prevention*. Institute of Medicine of the National Academies National Academies Press. July 2006.

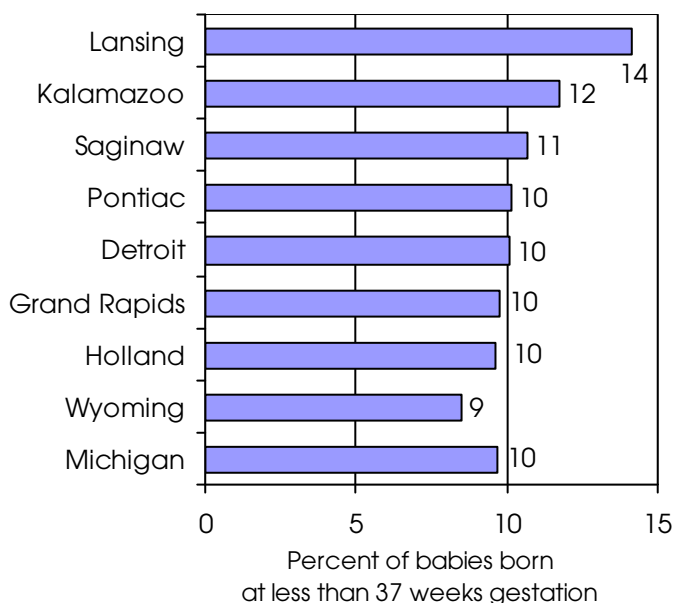
¹³ Joyce A. Martin.

Preterm birth rates for African American infants were highest in some of Michigan's most populous communities in 2008.



Source: Vital Records and Health Data Development,
Michigan Department of Community Health

Lansing reflected the highest preterm rate among Hispanic births in selected Michigan communities in 2008.



Source: Vital Records and Health Data Development, Michigan Department of Community Health

Between 2000 and 2008 Lansing was the only community in this analysis to experience substantial worsening of preterm rates across all three racial/ethnic groups.¹⁴ Other communities experienced more dramatic changes for the worse, but not across all groups. For example, Kalamazoo saw its Hispanic rate jump by 36 percent while its white rates declined by 12 percent. Ypsilanti Township reflected a similar pattern with rates for African Americans escalating 29 percent while white rates dropped 18 percent. The city of Holland experienced the largest worsening trend: a 53 percent increase in its preterm rate among whites.

Most (10 of the 18) communities in this analysis reflected declines in preterm births between 2000 and 2008. The city of Saginaw showed the most substantial improvement in its preterm birth rates

across all racial/ethnic groups. Pontiac and Clinton Township experienced the largest declines in preterm birth rates for any one group: roughly 30 percent among whites and among African Americans, respectively.

Summary and Conclusions

This review of trends in key maternal and infant indicators clearly reflects the existence of disparities from the very beginning of life for the state’s African American and Hispanic children. These children are more than twice as likely to be born to a teen parent and, even more critical, many African American infants are born too soon making them at elevated risk for developmental delay, chronic disease, and even death. A wide range of social, environmental, and economic factors contribute to the conditions that drive these outcomes, which vary substantially across communities.

The disadvantages that affect children of color are compounded by the concentration of their families in a relatively small number of communities. The reasons for the variations in outcomes and their geographic concentrations are beyond the scope of this report.

What is clear is that without some focused interventions to mitigate these birth circumstances, the disparities for Michigan’s minority children will persist through early childhood affecting their readiness and eventually their success in school, risk of dropout, and employment opportunities.

Unfortunately, Michigan’s investment in maternal and infant health has eroded substantially over the last several years. Between Fiscal Years 2002 and 2010 total appropriations for Family, Maternal and Child Health were cut in half—from \$60 million to \$30 million.¹⁵ General Fund appropriations for Family, Maternal and Child Health dropped from roughly \$21.7 million to \$3.5 million.

¹⁴ Flint and Holland reflected worsening for their two groups with statistically reliable rates.

¹⁵ Excluding WIC and Children’s Special Health Care Services

Among the programs that lost funding was Family Planning Services, which was cut by roughly \$4.2 million, eliminating services for 32,400 low-income Michigan residents. These services give Michigan mothers-to-be, including teens, access to health screenings; screening for sexually transmitted diseases; education; and short-term, long-term, and permanent contraception options. The services are delivered across the state through local health departments, hospitals, and private and non-profit agencies. Eliminating family planning services for low-income women during a recession will raise the number the number of unplanned or unwanted births for those who can least afford them.¹⁶

Over the last two Fiscal Years, payments to Medicaid providers who serve low-income children

and pregnant women were cut by 8 percent. With such a sizeable share of women and children dependent on the program to access health care, such cuts could lead to an increase in unhealthy births and infant mortality.

Further exacerbating the support necessary for low-income families, funding for the Nurse Family Partnership targeted to communities with the worst birth outcomes and large racial disparities was eliminated, as was the Infant Mortality Reduction program and an infant mortality review program in 14 communities with the highest infant mortality rates. These policy decisions will result in long-term costs to the state by perpetuating the inequities by race/ethnicity and income currently prevalent in birth circumstances and their subsequent outcomes.

¹⁶ Alison Walsh. *Michigan Maternal and Child Health Statistics, 2010*. Paragraph roughly quoted from section on Reproductive Health.

APPENDIX A

Risk Scores for Cities, 2006-08

Based on Average Percent Above Median for Medicaid Births and Right Start Indicators

	Avg. % Above Median	% of Births 2006-08	Avg. # Births 2006-08	# Ind. Above Median		Avg. % Above/Below Median	% of Births 2006-08	Avg. # Births 2006-08	# Ind. Above Median
Michigan				124,647					
HIGH RISK				20.5	25,586				
Highland Park	120	0.2	203	7					
Flint	107	1.9	2,348	8					
Saginaw	103	0.9	1,092	6					
Detroit	96	9.9	12,325	7					
Port Huron	82	0.5	595	6					
Jackson	81	0.7	934	5					
Pontiac	73	1.0	1,191	5					
Inkster	70	0.3	423	5					
Bay City	69	0.5	581	6					
Battle Creek	66	0.9	1,170	6					
Muskegon	64	0.8	1,001	5					
Kalamazoo	59	1.2	1,533	6					
Lansing	54	1.8	2,191	5					
MODERATE RISK				13.9	17,348				
Burton	49	0.3	370	4					
Grand Rapids	49	3.0	3,753	3					
Lincoln Park	42	0.4	527	3					
Mount Pleasant	40	0.2	305	2					
Taylor	39	0.7	856	4					
Flint Twp	33	0.2	270	0					
Wyoming	29	1.0	1,268	1					
Holland	27	0.5	587	2					
Wyandotte	20	0.2	296	1					
Holland Twp	20	0.5	607	2					
Westland	18	0.9	1,114	1					
Warren	15	1.3	1,679	0					
Kentwood	11	0.6	767	1					
Ypsilanti Twp	10	0.6	702	1					
Dearborn	10	1.5	1,815	3					
Roseville	8	0.5	619	1					
Clinton Twp	6	0.9	1,142	0					
Redford Twp	3	0.5	669	0					
					LOW RISK		17.5	21,850	
					Midland	0	0.4	478	0
					Dearborn Heights	0	0.6	780	0
					Southfield	0	0.6	790	1
					Oak Park	-2	0.3	376	0
					Portage	-2	0.5	616	1
					Eastpointe	-2	0.3	414	0
					Saginaw Twp	-2	0.3	421	0
					Southgate	-4	0.3	324	0
					Delta Twp	-6	0.2	282	0
					Madison Heights	-7	0.3	400	0
					White Lake Twp	-7	0.3	320	0
					Garden City	-10	0.3	326	0
					Plainfield Twp	-13	0.3	321	0
					Waterford Twp	-18	0.8	985	0
					Allen Park	-18	0.2	283	0
					Chesterfield Twp	-21	0.4	495	0
					Sterling Heights	-22	1.2	1,519	0
					East Lansing	-23	0.2	260	0
					Meridian Twp	-25	0.2	304	0
					Shelby Twp	-29	0.6	722	0
					Saint Clair Shores	-30	0.5	620	0
					Livonia	-31	0.7	878	0
					Grand Blanc Twp	-33	0.3	409	0
					Orion Twp	-33	0.2	195	0
					Ann Arbor	-34	1.1	1,338	1
					Farmington Hills	-38	0.7	815	0
					Novi	-39	0.5	596	0
					Bloomfield Twp	-39	0.1	169	0
					Canton Twp	-42	0.9	1,148	0
					Pittsfield Twp	-42	0.2	242	0
					Macomb Twp	-43	0.8	1,031	0
					Troy	-45	0.6	804	0
					Royal Oak	-46	0.6	746	0
					Georgetown Twp	-46	0.5	572	0
					Plymouth Twp	-49	0.1	173	0
					Rochester Hills	-52	0.6	788	0
					Commerce Twp	-57	0.3	344	0
					W. Bloomfield Twp	-57	0.5	568	0



Source: Michigan Department of Community Health, Vital Records and Health Data Development Section

APPENDIX B

Maternal and Infant Well Being in Michigan Communities by Risk Group, 2006-08 Average

Percent of Total Live Births									
	Medicaid Births	Teen Births	Repeat Teen Births ¹	Unwed Mother	No High School Diploma/GED*	Late/No Prenatal Care*	Smoked During Pregnancy*	Low-Birth-weight Babies	Preterm Birth
Community Median	35.0	7.2	16.0	32.8	10.5	2.7	13.7	8.0	9.6
HIGH RISK									
Highland Park	54.4	21.3	17.1	86.7	36.8	6.8	19.5	16.3	19.9
Flint	73.8	20.0	24.9	76.1	29.6	5.2	28.0	13.3	13.2
Saginaw	77.3	20.0	22.7	73.8	32.9	3.8	29.5	12.7	12.8
Detroit	56.3	20.5	20.3	76.1	35.0	5.0	16.5	13.2	15.3
Port Huron	62.1	15.1	27.7	58.7	26.9	3.5	38.3	8.9	11.6
Jackson	64.0	18.2	23.6	61.3	24.9	4.0	33.1	9.5	11.3
Pontiac	73.2	19.4	24.7	68.2	36.9	1.5	6.8	11.3	11.1
Inkster	53.2	15.1	21.2	65.2	21.2	5.7	19.7	11.7	13.1
Bay City	60.6	14.7	22.5	54.4	22.5	4.4	36.7	7.7	9.6
Battle Creek	61.2	15.8	24.5	55.9	23.1	3.6	29.9	8.6	9.5
Muskegon	69.1	17.2	21.8	61.2	23.9	2.6	22.6	9.4	10.1
Kalamazoo	60.8	13.4	19.8	53.3	21.1	4.4	24.6	9.7	11.0
Lansing	61.7	13.4	24.1	53.2	22.9	3.7	13.6	9.2	13.8
MODERATE RISK									
Burton	51.7	12.7	18.6	48.6	20.7	4.2	28.3	7.7	9.7
Grand Rapids	51.2	12.6	23.5	49.3	28.2	3.9	12.8	8.4	10.3
Lincoln Park	46.7	12.5	18.4	46.6	23.0	2.1	29.9	7.8	9.3
Mount Pleasant	45.7	10.0	20.9	48.6	13.0	5.9	22.8	8.1	10.4
Taylor	49.4	11.1	14.8	53.9	18.9	2.5	26.5	9.2	11.2
Flint Twp	48.7	10.1	19.5	47.6	12.0	3.8	20.5	10.2	11.7
Wyoming	43.4	10.7	19.8	41.4	23.8	3.2	13.1	7.6	9.8
Holland	48.8	13.5	20.9	39.0	23.9	2.5	8.6	6.3	10.0
Wyandotte	35.0	9.5	n/a	42.2	13.1	n/a	24.5	7.4	8.1
Holland Twp	41.5	11.1	14.9	32.7	24.9	3.6	4.8	8.1	10.4
Westland	36.6	9.0	14.8	41.4	12.7	3.3	20.7	8.6	10.6
Warren	38.6	8.5	11.3	39.7	14.0	2.8	19.8	9.8	10.4
Kentwood	35.7	8.9	17.2	37.9	13.8	4.2	11.9	6.7	8.8
Ypsilanti Twp	35.5	7.3	15.5	37.4	8.8	4.7	14.4	8.9	9.9
Dearborn	57.1	5.3	15.6	10.0	21.9	5.3	7.0	6.9	8.0
Roseville	34.4	7.5	10.3	40.9	11.8	1.7	23.2	9.9	10.7
Clinton Twp	36.0	7.4	19.2	38.5	10.3	1.8	17.8	8.9	9.9
Redford Twp	30.1	6.7	10.7	36.2	10.5	2.9	20.3	9.1	10.1

¹Percent of teen births

*2008 only

n/a=not available

Source: Michigan Department of Community Health, Vital Records and Health Data Development Section



APPENDIX B

Maternal and Infant Well Being in Michigan Communities by Risk Group, 2006-08 Average

Percent of Total Live Births									
	Medicaid Births	Teen Births	Repeat Teen Births ¹	Unwed Mother	No High School Diploma/GED*	Late/No Prenatal Care*	Smoked During Pregnancy*	Low-Birth-weight Babies	Preterm Birth
Community Median	35.0	7.2	16.0	32.8	10.5	2.7	13.7	8.0	9.6
LOW RISK									
Midland	40.4	6.3	14.4	31.5	11.2	1.8	20.0	7.7	9.5
Dearborn Heights	43.3	6.2	16.0	25.6	13.4	2.8	15.0	6.8	8.3
Southfield	35.7	6.9	11.9	46.3	7.4	2.3	7.6	12.2	11.5
Oak Park	36.2	9.3	17.5	37.3	8.3	2.4	8.1	8.5	8.9
Portage	32.0	7.4	27.4	29.0	8.3	2.4	13.9	6.3	7.9
Eastpointe	26.8	7.6	9.9	39.0	9.0	2.0	13.3	11.2	11.7
Saginaw Twp	35.9	7.3	16.5	33.3	7.3	2.1	16.0	8.6	9.7
Southgate	31.7	7.5	9.7	34.3	10.7	n/a	19.7	6.7	7.8
Delta Twp	36.9	6.7	14.8	32.8	9.8	n/a	6.0	7.6	12.7
Madison Heights	31.2	6.0	15.3	27.8	9.8	n/a	13.7	8.3	9.2
White Lake Twp	28.1	4.9	n/a	28.8	10.8	1.8	17.5	8.4	10.1
Garden City	29.3	5.2	n/a	32.2	7.2	n/a	18.0	6.5	9.1
Plainfield Twp	25.5	7.1	14.9	29.0	7.7	n/a	11.7	7.2	9.1
Waterford Twp	31.7	6.0	15.9	29.9	11.1	0.8	10.1	6.7	7.8
Allen Park	20.8	4.8	15.0	26.1	7.1	n/a	17.7	6.1	7.6
Chesterfield Twp	23.0	5.0	12.3	22.0	7.9	1.2	13.7	8.6	9.6
Sterling Heights	30.6	3.4	13.7	16.7	10.2	1.5	8.3	8.9	10.1
East Lansing	30.9	2.8	n/a	17.1	5.2	3.6	n/a	5.5	10.4
Meridian Twp	28.5	4.2	n/a	22.0	6.7	n/a	5.1	7.0	12.7
Shelby Twp	23.6	3.2	13.0	18.3	7.7	1.0	13.1	7.4	9.2
St. Clair Shores	17.8	3.3	n/a	24.2	5.9	1.3	13.8	7.3	9.3
Livonia	15.6	3.4	n/a	17.2	4.5	2.5	12.6	6.5	9.4
Grand Blanc Twp	19.8	4.0	14.3	17.5	3.3	n/a	9.0	7.0	9.4
Orion Twp	17.1	3.9	n/a	18.1	3.4	n/a	13.5	8.0	7.5
Ann Arbor	18.1	2.7	12.0	15.9	3.8	4.3	4.6	6.4	7.0
Farmington Hills	16.9	2.5	15.0	15.3	5.0	1.2	6.4	9.0	7.9
Novi	13.8	2.1	15.8	14.1	3.9	1.3	7.2	8.6	9.0
Bloomfield Twp	4.3	n/a	n/a	5.5	n/a	n/a	n/a	8.9	9.9
Canton Twp	15.4	2.8	n/a	15.3	4.7	1.7	7.5	7.2	8.2
Pittsfield Twp	11.8	1.5	n/a	11.0	3.7	2.7	n/a	7.4	8.4
Macomb Twp	15.1	2.6	n/a	11.8	5.4	n/a	8.0	6.8	8.5
Troy	12.3	1.7	16.7	9.4	3.2	1.4	4.8	7.9	8.3
Royal Oak	10.3	1.8	15.0	12.3	2.3	0.8	7.8	7.8	8.9
Georgetown Twp	11.3	3.4	13.8	10.8	3.3	1.3	4.8	6.2	9.0
Plymouth Twp	10.0	1.4	n/a	8.3	n/a	n/a	9.4	6.0	8.9
Rochester Hills	12.7	1.9	n/a	10.7	4.1	n/a	4.5	6.8	8.4
Commerce Twp	8.5	1.9	n/a	10.1	3.3	n/a	5.4	6.0	7.4
W. Bloomfield Twp	9.8	1.1	n/a	8.5	2.4	n/a	2.8	7.9	8.6

¹Percent of teen births

*2008 only

n/a=not available

Source: Michigan Department of Community Health, Vital Records and Health Data Development Section



APPENDIX C

Teen Births by City and Race

City	Race	TEEN BIRTHS				
		Average 1998-00	Percent* 1998-00	Average 2006-08	Percent* 2006-08	Percent Change
Michigan	African American	4,828	20.1	4,577	20.4	1.1
	Hispanic	1,139	17.9	1,289	15.0	-16.1
	White	8,568	8.6	6,344	7.2	-16.1
Detroit	African American	2,497	19.1	2,181	22.2	16.2
	Hispanic	168	16.3	217	15.9	-2.3
	White	212	12.7	112	12.4	-2.8
Grand Rapids	African American	253	28.2	197	22.6	-19.9
	Hispanic	147	20.9	144	17.0	-18.7
	White	207	9.0	124	6.4	-28.7
Lansing	African American	123	22.0	123	23.1	5.2
	Hispanic	52	21.4	47	19.2	-10.4
	White	148	10.9	116	9.3	-14.8
Kalamazoo	African American	114	26.4	106	23.7	-10.3
	Hispanic	22	23.7	22	17.1	-28.0
	White	98	9.6	75	8.2	-13.9
Pontiac	African American	138	21.8	138	25.3	15.8
	Hispanic	38	19.8	40	14.5	-26.6
	White	76	16.4	48	14.4	-12.1
Saginaw	African American	157	25.5	134	24.5	-3.9
	Hispanic	43	22.4	41	27.0	20.8
	White	68	10.5	42	11.0	4.9
<i>Ann Arbor</i>	<i>African American</i>	<i>27</i>	<i>18.9</i>	<i>19</i>	<i>13.9</i>	<i>-26.5</i>
	<i>White</i>	<i>21</i>	<i>2.3</i>	<i>12</i>	<i>1.5</i>	<i>-36.2</i>
Battle Creek	African American	53	26.8	57	26.1	-2.5
	White	119	15.2	112	13.5	-10.8
Clinton Twp	African American	17	20.2	31	14.6	-27.6
	White	64	6.1	47	5.6	-8.5
Flint	African American	389	24.7	330	24.2	-1.8
	White	200	15.1	124	13.9	-8.3
Jackson	African American	47	27.7	54	30.9	11.5
	White	141	19.8	102	14.9	-25.0
Kentwood	African American	16	14.8	26	17.7	19.2
	White	44	7.3	28	5.8	-20.1
Muskegon	African American	72	28.2	85	27.7	-1.6
	White	103	16.4	67	11.6	-29.7
<i>Southfield</i>	<i>African American</i>	<i>42</i>	<i>7.8</i>	<i>48</i>	<i>8.6</i>	<i>10.5</i>
	<i>White</i>	<i>10</i>	<i>3.2</i>	<i>4</i>	<i>2.4</i>	<i>-25.2</i>
Taylor	African American	15	9.9	28	14.2	43.6
	White	99	13.4	62	10.5	-22.0
Warren	African American	8	13.3	43	15.5	15.9
	White	115	7.5	88	7.1	-5.4
Westland	African American	9	9.4	30	13.8	47.5
	White	80	7.9	61	7.9	0.7
Ypsilanti Twp	African American	12	18.5	29	13.6	-26.5
	White	16	7.9	16	3.7	-52.7
Holland	Hispanic	62	23.1	42	22.2	-3.7
	White	45	9.2	31	8.8	-4.4
Wyoming	Hispanic	28	17.9	48	14.6	-18.3
	White	107	11.9	67	8.3	-30.2

*Percent of total live births

Bold=High Risk. Normal=Medium Risk. Italics=Low Risk.

Source: Michigan Department of Community Health, Vital Records and Health Data Development Section

APPENDIX D

Preterm Births by City and Race

City	Race	PRETERM BIRTHS				
		Average 1998-00	Percent* 1998-00	Average 2006-08	Percent* 2006-08	Percent Change
Michigan	African American	4,014	16.7	3,431	15.3	-8.8
	Hispanic	662	10.4	833	9.7	-6.7
	White	9,489	9.6	7,854	9.0	-6.2
Detroit	African American	2,390	18.3	1,628	16.6	-9.4
	Hispanic	108	10.5	138	10.1	-3.6
	White	211	12.7	91	10.1	-20.6
Grand Rapids	African American	147	16.4	123	14.0	-14.4
	Hispanic	84	11.9	83	9.8	-18.3
	White	208	9.0	171	8.9	-1.9
Lansing	African American	83	14.8	102	19.1	28.8
	Hispanic	27	11.3	35	14.2	25.8
	White	137	10.1	152	12.2	20.9
Kalamazoo	African American	59	13.6	71	16.0	17.0
	Hispanic	8	8.6	15	11.7	35.9
	White	101	9.9	80	8.7	-11.6
Pontiac	African American	97	15.4	75	13.7	-10.9
	Hispanic	23	11.7	28	10.2	-13.2
	White	56	12.1	27	8.2	-32.3
Saginaw	African American	115	18.7	87	15.9	-15.0
	Hispanic	25	12.8	16	10.7	-16.8
	White	69	10.8	34	8.9	-16.9
<i>Ann Arbor</i>	<i>African American</i>	<i>13</i>	<i>9.5</i>	<i>13</i>	<i>9.5</i>	<i>0.6</i>
	<i>White</i>	<i>64</i>	<i>7.0</i>	<i>55</i>	<i>6.9</i>	<i>-1.2</i>
Battle Creek	African American	28	14.3	30	13.9	-2.4
	White	69	8.7	68	8.2	-6.2
Clinton Twp	African American	16	19.4	28	13.5	-30.4
	White	104	10.0	78	9.4	-6.0
Flint	African American	194	12.3	202	14.8	20.4
	White	114	8.6	98	11.0	27.5
Jackson	African American	23	13.9	24	13.6	-1.7
	White	71	10.0	73	10.6	6.1
Kentwood	African American	17	16.4	18	12.1	-26.4
	White	52	8.7	37	7.8	-10.9
Muskegon	African American	34	13.2	43	14.0	5.9
	White	55	8.9	43	7.5	-15.9
<i>Southfield</i>	<i>African American</i>	<i>80</i>	<i>14.9</i>	<i>72</i>	<i>13.0</i>	<i>-13.0</i>
	<i>White</i>	<i>24</i>	<i>7.8</i>	<i>14</i>	<i>7.8</i>	<i>-0.7</i>
Taylor	African American	26	17.2	29	14.8	-14.1
	White	90	12.1	60	10.2	-15.7
Warren	African American	12	20.0	40	14.6	-26.9
	White	153	10.0	118	9.6	-3.8
Westland	African American	13	13.7	32	14.9	8.9
	White	91	9.0	73	9.5	6.1
Ypsilanti Twp	African American	7	10.6	29	13.6	28.6
	White	20	9.8	34	8.0	-18.3
Holland	Hispanic	21	7.9	18	9.6	21.8
	White	33	6.7	36	10.3	53.2
Wyoming	Hispanic	13	8.2	28	8.5	4.1
	White	86	9.6	79	9.9	3.4

*Percent of total live births

Bold=High Risk. Normal=Medium Risk. Italics=Low Risk.

Source: Michigan Department of Community Health, Vital Records and Health Data Development Section