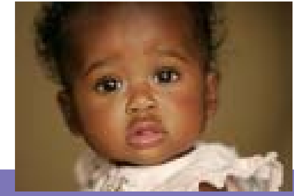

April 2012

Right Start in Michigan And Its Counties–2012

Right Start in Michigan 2012: A Closer Look at Maternal and Infant Well-Being

by **Jane Zehnder-Merrell**
Kids Count in Michigan Project Director

The report reviews the following indicators:

- Teen Births
- Repeat Teen Births (teen already a parent)
- Births to Unmarried Women
- Births to Mothers Without High School Diploma/GED
- Late or No Prenatal Care
- Smoking During Pregnancy
- Low-Birthweight Births (less than 5.5 pounds)
- Preterm Births (less than 37 weeks gestation)

ACKNOWLEDGEMENTS
This report was funded by the Annie E. Casey Foundation, the Detroit-based Skillman Foundation, and the Blue Cross Blue Shield Foundation as well as local United Ways. The findings and conclusions presented herein do not necessarily reflect their opinions.

1223 TURNER STREET • SUITE G 1• LANSING, MICHIGAN 48906-4361
517.487.5436/PHONE • 517.371.4546/FAX • WWW.MILHS.ORG
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Right Start in Michigan 2012:
A Closer Look at Maternal and Infant Well-Being

Unequal opportunity begins at birth. Not all Michigan babies are born in good health, and the risk of an unhealthy birth is greater among low-income and less-educated mothers. Women who have grown up in poverty and its attendant deprivations are also more likely to suffer from health problems before becoming pregnant. Inequalities in family and community resources often compound the birth inequities that then intensify during early childhood. While some improvements have occurred in Michigan, too many children still start life at a disadvantage.

Michigan's public policy leaders increasingly recognize the importance of an educated workforce, but achieving this goal must begin with more children arriving in kindergarten with healthy minds and bodies in order to be successful learners. More healthy births would be the "right start."

To focus on the importance of healthy births, Michigan Gov. Rick Snyder made infant mortality a key measure on his dashboard at the outset of his tenure. In June 2011 the governor issued an Executive Order to create the Office of Great Start within the Michigan Department of Education in recognition of the "need to create a coherent system of health and early learning that aligns, integrates and coordinates Michigan's investments from prenatal to third grade."[1] Over $10 million in federal funding authorized by the Affordable Care Act is allowing the state to build out a coordinated structure of Home Visiting as a component of the early childhood system at the state and local levels.

In October 2011, the Michigan Department of Community Health (MDCH) sponsored a summit to engage a wide range of stakeholders to propose strategies to increase infant survival. Based on these recommendations the MDCH will develop a work plan. Unfortunately the Governor's budget allows less than $1 million to implement strategies to reduce infant mortality, and even that amount has been rejected in the legislative appropriation subcommittees.

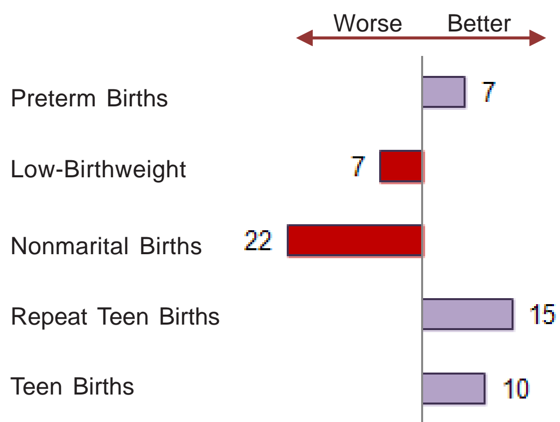
As the state endeavors to reduce its infant mortality rate, the first step must involve reviewing the trends in the risk factors for unhealthy births. For example, low-birthweight babies, those weighing less than 5.5 pounds, represent more than half of all infant deaths, and Michigan's 2008 rate ranked in the bottom half (36th) of the states. In recent years almost 10,000 low-birthweight babies have been born each year in Michigan, and the state saw worsening trends over the decade in low-birthweight rates.

Babies born too soon or too small are at much higher risk of dying before their first birthday or surviving with developmental delays, particularly neurodevelopmental problems, and chronic disease. Some maternal characteristics escalate the risk of an unhealthy birth. Parents who are too young or economically disadvantaged often struggle to provide for their children and are the most likely to report an unintended pregnancy. These same parents face the highest risk of infant death or disability. Effective programs to prevent unintended or unwanted pregnancies and to provide supports for new parents must be in place to assure a better start for the next generation.

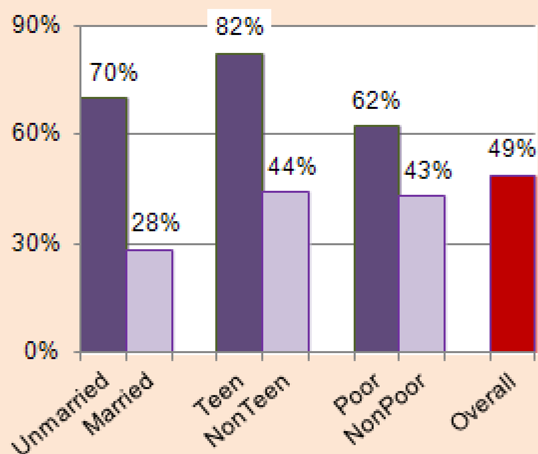
What are the trends in maternal and infant health in Michigan?

Over the previous decade Michigan made some progress in improving maternal and infant well-being with three of five key measures showing improvement.[2] The percentage of births to teens, repeat births to teens and preterm births (born at less than 37 weeks) all declined between 2000 and 2010, while the percentages of low-birthweight babies and births to

[1] Office of the Governor. Executive Order 2011-8. [http://www.michigan.gov/documents/snyder/EO-2011-8_357030_7.pdf]
[2] Three other measures could not be reviewed for the decade due to changes in the Michigan birth certificate in 2007.



Source: Vital Records and Health Data Development Section, Michigan Department of Community Health 2000 vs. 2010.



Source: Adam Thomas's Solutions for Preventing Unplanned Pregnancy. Tabulations of data recorded in Finer and Zoina (2011). Estimates correspond to calendar year 2006.

unmarried women increased.[3] The most substantial improvement occurred with the 15% drop in the percentage of births to teens who were already parents. They represented less than one-fifth (18%) of all teen births in 2010 compared with over one-fifth (21%) in 2000.

While the percentage of teen births has declined, even so, relatively large numbers (12,000) of Michigan teenagers are affected each year. Many of these young women and their children will face considerable hardship and need substantial encouragement and assistance to complete secondary and postsecondary training or education and to provide a physically and emotionally nurturing environment for their youngsters. Most of these pregnancies were unintended, and the mothers unmarried. These findings suggest a lack of access to reliable contraception and education about family planning. Many of these young women live within severe social disadvantages that would have limited their opportunities even had they remained childless. Thus, teen births are a symptom as well as a cause of disadvantage.

The most dramatic change in the five measures that could be assessed over the time period was the 22% increase in births to unmarried women. Roughly two of every five Michigan births (41%) were to unmarried women in 2010 compared with roughly one-third in 2000. In 2010 this percentage represented roughly 48,700 babies annually. As the age of first marriage has risen, many more women remain single during their early 20s—prime childbearing years. At the same time the capacity of a single adult, particularly a woman, to support a family in Michigan eroded with falling wages and disappearing jobs. Furthermore, Michigan is one of the worst (42nd) states in the country for gender equity in wages: Michigan women earn only 74% of the male wage at a similar job, compared with the national average of 77%.[4]

National data show that the largest percentages of unintended pregnancies occur among teens and unmarried women—more than four of every five teen pregnancies and almost seven of every 10 among unmarried women.[5] Such unplanned pregnancies and births jeopardize the educational attainment and employment opportunities for these mothers, and studies have shown that children born

[3] Unless otherwise noted, percentages cited for 2000 and 2010 are based on the three-year periods 1998-2000 and 2008-10.

[4] Figure 2. State Median Annual Earnings and Earnings Ratio for Full-time, Year-round Workers, Ages 16 and Older, by State and Gender, 2010. The Simple Truth About the Gender Pay Gap. 12th Edition. American Association of University Women. April 2012. [http://www.aauw.org/learn/research/upload/simpletruthaboutpaygap1.pdf]

[5] Thomas, Adam. Policy Solutions for Preventing Unplanned Pregnancy. (CCF Brief #47). Washington, D.C.: Brookings Center for Children and Families. March 2012.

in these circumstances often suffer from poor outcomes in health, education and employment.[6] Not only does unintended pregnancy jeopardize the futures of mothers and children, it involves substantial cost to the society. Estimates suggest that national spending just on Medicaid-subsidized medical care related to unintended pregnancy totals more than $12 billion annually.[7] The labor and delivery costs alone are $11,000 per birth to Medicaid, assuming a healthy baby with no complications. Reducing unintended births could also yield substantial savings in other sectors such as special education services, child abuse/neglect and juvenile justice.

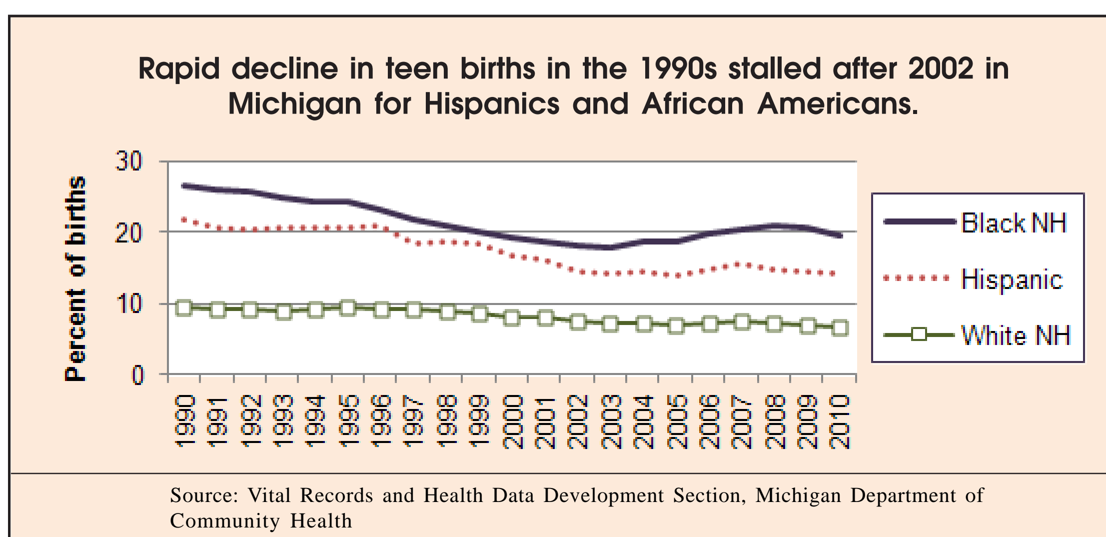
What are the differences in these trends by the mother's race/ethnicity?

In general, disadvantages at birth are more prevalent in Michigan's communities of color, specifically African American and Hispanic, compared with non-Hispanic whites.[8] African Americans in particular have experienced long-standing and substantial barriers to housing, employment and education—a discussion beyond the scope of this report. The fact that their infant mortality rate persists at triple that of non-Hispanic whites in Michigan reflects the scope of the difference in circumstances.

An unintended pregnancy or birth during the teenage years often disrupts the mother's educational or employment goals. These outcomes can be particularly devastating in communities of color that have double or triple the percentage of births to teenagers compared with whites (7%). Births to teens represented 20% of all African American births and 15% of Hispanic births in Michigan. White teens were also significantly less likely to have another child before the age of 20—only 15% of teen births compared with 21% of African American and 23% of Hispanic/Latino teen births were to a teen who was already a mother. While the percentages of teen births for whites and Hispanics in 2010 are still lower than they were in 2000, the annual data show a leveling over the 2000s rather than the dramatic declines in the 1990s, particularly among teens in communities of color.

Between 2000 and 2010 the percentage of births to teens dropped by almost 20% for both whites and Hispanics, while the share of teen births actually increased slightly in the African American community.

The good news is that the percentage of teen parents who are having another baby dropped over the decade for all racial/ethnic groups but most dramatically among African American teenage mothers, where the likelihood of a having another child before turning 20 declined from 27% of teen births in 2000 to 21% in 2010.



[6] Ibid.
[7] Ibid.
[8] In Michigan birth outcomes for only three racial/ethnic groups can be assessed with any degree of statistical reliability.

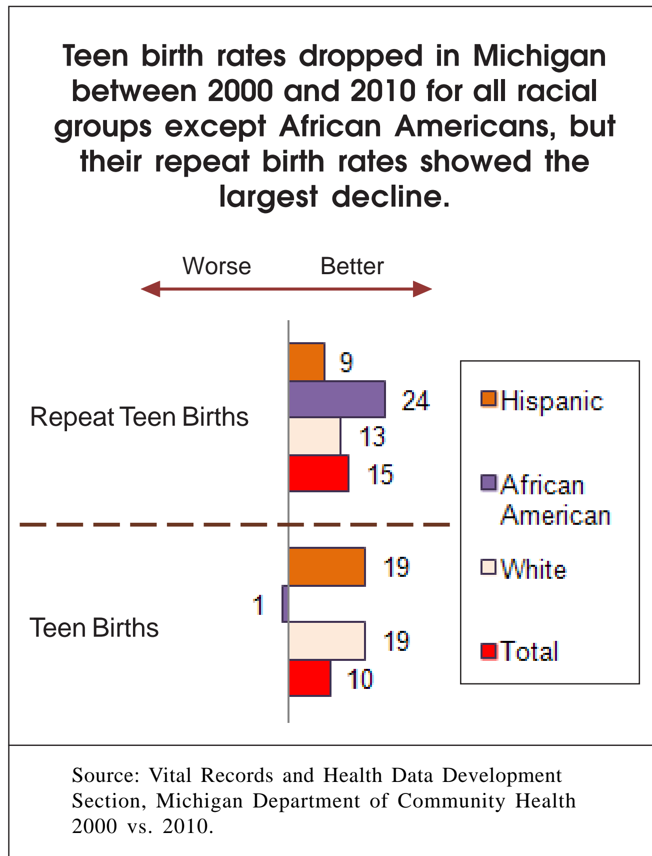
Between 2000 and 2010 all three racial/ethnic groups mirrored the overall state trends on three key indicators with declines in the percentages of preterm births and increases in nonmarital births and low-birthweight, except African Americans who experienced a slight decline in low-birthweight babies.

While the declines in the percentages of babies born too soon or too small are particularly critical, the pace of progress on these measures has slowed considerably for African Americans compared with the 1990s. Furthermore, despite the improvement, the African American rate (15%) of babies born before 37 weeks persisted significantly above than those of whites (9%) and Hispanics (10%). The risk of a preterm birth for white babies declined over the 2000s after rising in the 1990s.

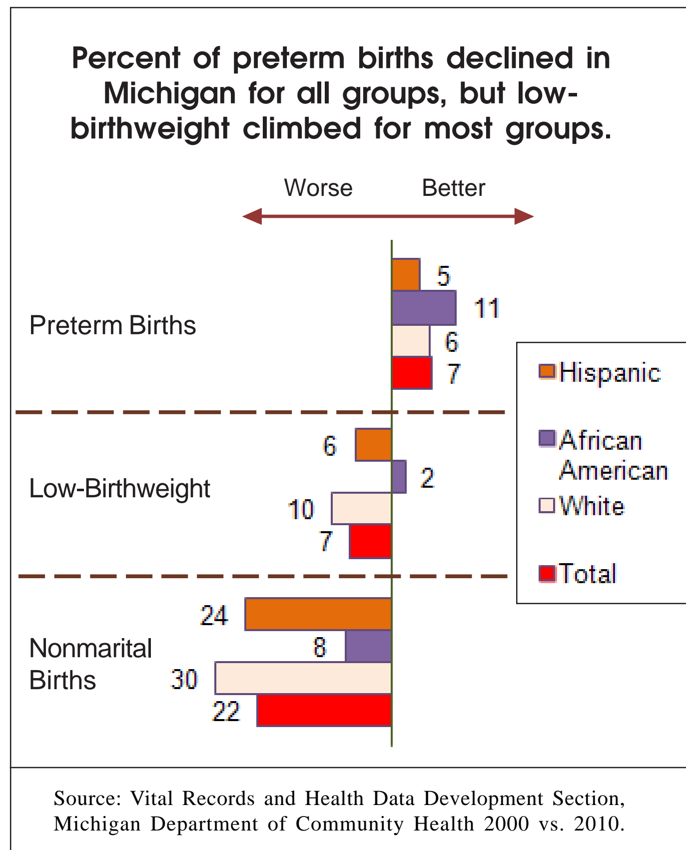
Babies born to African American mothers continued to have double the risk of being born at low-birthweight (14%) compared with whites (7%) or Hispanics (7%), although rates among whites and Hispanics rose in the first decade of the millennium.

Multiple factors have been identified as affecting unhealthy birth outcomes, that is, babies born too small or too soon. Social stressors such as living in a distressed neighborhood with high rates of unemployment and poverty as well as environmental factors such as relatively high concentrations of air pollution, especially particulate matter have been connected to preterm and low-birthweight.[9] African American communities were much more likely to be exposed to social and environmental stressors than non-Hispanic whites.

Lack of access to affordable child care poses a significant barrier to employment for low-income working women. Michigan has one of the lowest eligibility levels in the country for subsidized child care—only households with income less than 130% of the



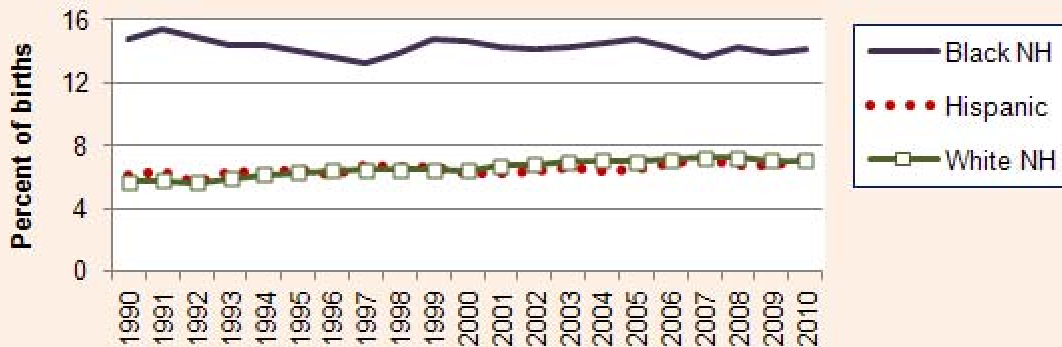
Source: Vital Records and Health Data Development Section, Michigan Department of Community Health 2000 vs. 2010.



Source: Vital Records and Health Data Development Section, Michigan Department of Community Health 2000 vs. 2010.

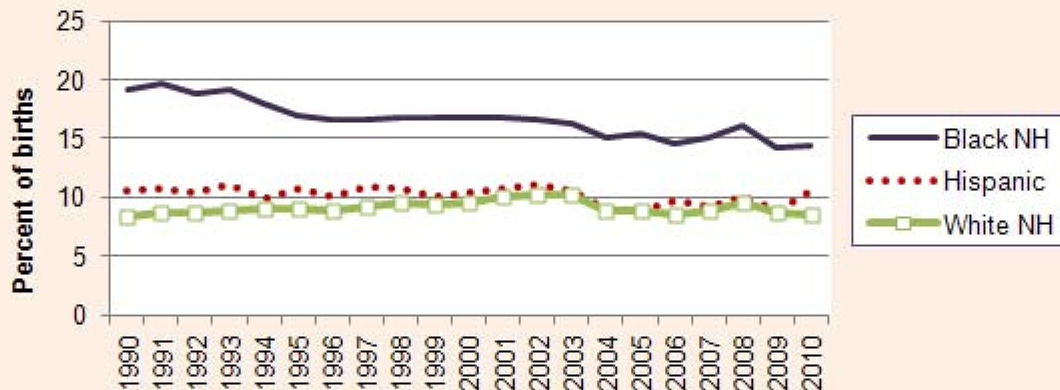
9 Miranda, Marie Lynn et al. "Environmental Contributions to Disparities in Pregnancy Outcomes." Epidemiologic Reviews. Volume 31. No. 1. October 21, 2009. [http://health-equity.pitt.edu/2773/1/67.full.pdf]

African Americans experienced consistently higher rates of low-birthweight babies over the past two decades.



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

African Americans experienced the largest decline in preterm births over the past two decades.



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

federal poverty level qualify. The average cost of full-time child care for a preschool child would consume almost half the total full-time gross year-round income at minimum wage. Most low-income workers also have the most rigid working conditions and least access to employment benefits such as health care, vacation or medical leave so any family emergency or illness jeopardizes their jobs.

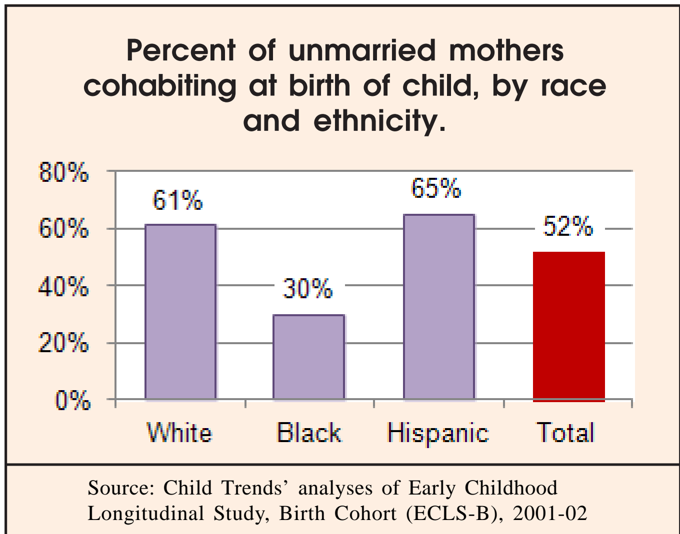
Recent analysis links the economic changes for male workers to the decline in marriage.[10] The 40-year decline in male earnings has disproportionately affected low- and middle-class men who are much less likely to be married these days than their higher-income counterparts. The real median income for male workers ages 30-50 dropped by 28% between 1970 and 2010, and their marriage rates have similarly

[10] Greenstone, Michael and Adam Looney. The Marriage Gap: The Impact of Economic and Technological Change on Marriage Rates. Up Front blog. Brookings. February 3, 2012. [http://www.brookings.edu/opinions/2012/0203_jobs_greenstone_looney.aspx]

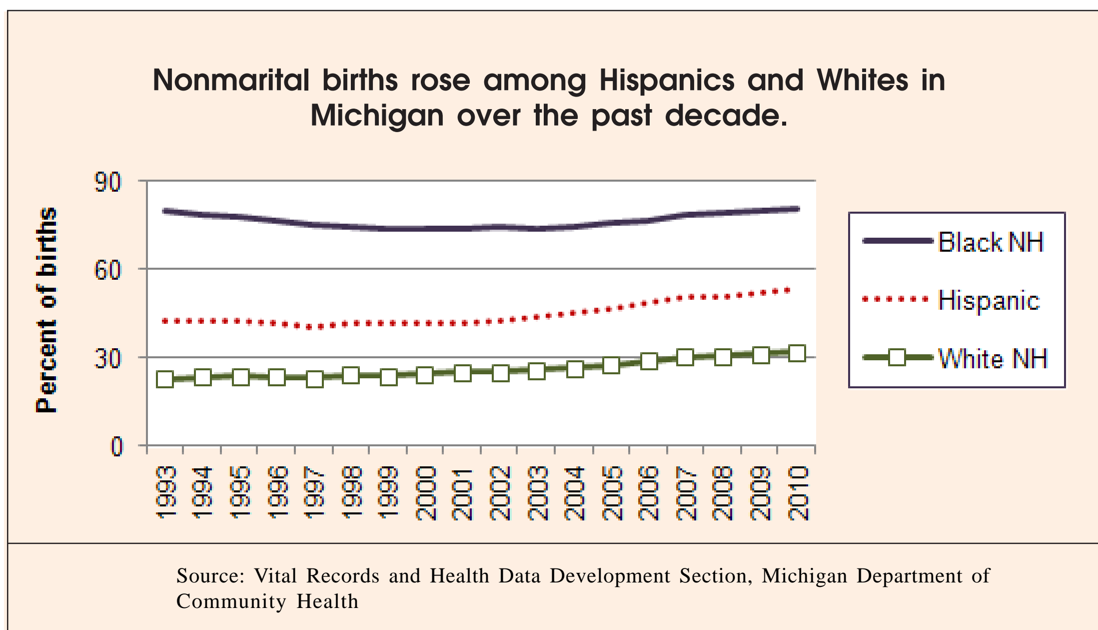
declined. Only 64% of male workers with median income were married in 2011, compared with 91% 40 years ago. The most effective approach to addressing the increase in poverty and the decline in marriage would involve improving economic opportunities for all Americans, particularly for low-skilled, less-educated workers, through better access to education and training, according to the report.

National data show that the majority of non-marital births were to women living in a cohabiting union in 2001, but this likelihood varied considerably by race/ethnicity.[11] White (61%) and Hispanic (65%) women were twice as likely to be cohabiting at the time of the birth compared with African American (30%) women, according to an analysis of survey data by Child Trends.[12] The analysis also showed that unintended pregnancies differed most dramatically between married and unmarried women, regardless of cohabitation. Half of the cohabiting women reported the pregnancy was unintended—more than double the percentage of married women (20%) and only somewhat lower than unmarried women who were not cohabiting (65%).

Although the percentage of babies born to unmarried women escalated most dramatically among whites and Hispanics between 2000 and 2010, African Americans continued to have by far the highest rate with four of every five babies born to single women compared with one of every three white babies and one of every two Hispanic/Latino babies in 2010. Increased threats to public structures that support low-income families have not stemmed the rising rates of nonmarital births, but they will have a profound impact on the well-being of children.



Source: Child Trends' analyses of Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), 2001-02



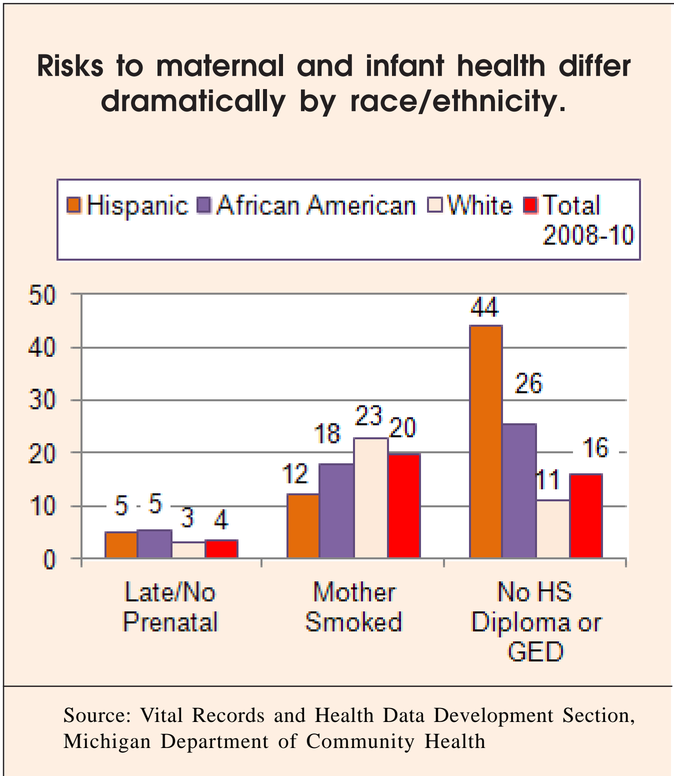
Source: Vital Records and Health Data Development Section, Michigan Department of Community Health

[11] Wildsmith, Eliabeth et al. Childbearing Outside of Marriage: Estimates and Trends in the United States. Child Trends Research Brief. Publication #2011-29. Washington D.C. Child Trends. November 2011.

[12] Ibid.

What are the racial/ethnic differences for the other key measures of maternal and infant health?

The other three key measures of maternal and infant health with rates only for recent years also reflect quite different results by race/ethnicity.[13] High school completion rates in communities of color are affected by multiple factors such as poverty, residential mobility, transportation and access to technology. New mothers in communities of color are also much less likely to have a high school diploma or GED; in fact, more than two of every five Hispanic mothers giving birth lacked a diploma or GED, and one of every four African American mothers. The lack of a high school credential limits access to jobs with benefits for women of color who are more likely to receive late or no prenatal care—5% compared with 3% of white women. The only risk factor with higher rates for white women than women in communities of color was the likelihood of smoking during pregnancy: 23% of white women reported smoking during pregnancy compared with 18% African American and 12% Hispanic.



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

What role does economic security/access to health care play?

A review of the overall rankings for maternal and infant well-being in Michigan counties shows that maternal and infant well-being is closely tied to access to medical care and the financial resources in the family. Six of the 10 counties with the best overall outcomes in maternal and infant health have the lowest percentages of women qualifying for Medicaid due to pregnancy. (Uninsured women with household income below 185% of the poverty level—$40,900 for a family of four and $31,500 for a family of three—qualify for Medicaid coverage for pregnancy and delivery services). Three of the other top 10 counties cluster in the northwest sector, which may suggest some geographic explanation. These counties also have relatively little diversity, particularly African American women and children, who have the highest risks on these measures. (For the ranking list of the counties, see appendix A.) In contrast, several of the counties with the worst overall rankings such as Wayne, Saginaw and Genesee, have large percentages of African Americans where

Most counties with best rankings on maternal and infant well-being have lowest percentages of Medicaid eligible deliveries (uninsured low-income women).

Top Ten in Overall Ranking on Maternal/ Infant Well-Being	County	% Women Eligible for Medicaid Delivery	Medicaid Rank (lowest %=1)
1	**Houghton**	**37.7**	**8**
2	**Ottawa**	**31.9**	**6**
3	**Livingston**	**24.5**	**2**
4	Leelanau	44.3	19
5	Midland	43.2	16
6	**Grand Traverse**	**44.9**	**21**
7	**Oakland**	**27.9**	**3**
8	Emmet	44.4	20
9	**Clinton**	**31.1**	**5**
9	**Washtenaw**	**29.0**	**4**

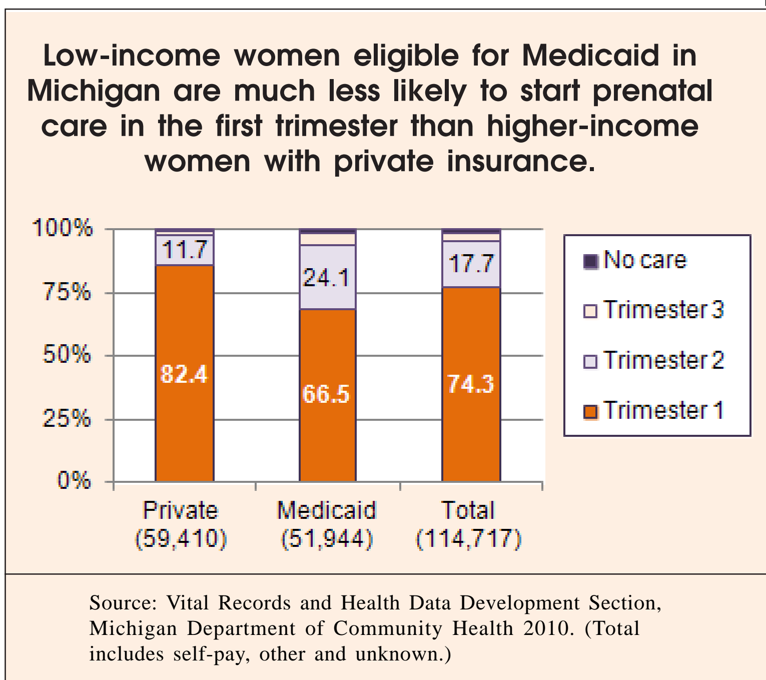
[13] Changes in the birth certificate implemented in 2007 in Michigan prevent trend analysis on these three measures.

the disadvantages of race and economic insecurity converge while others such as Clare and Lake have some of the highest child poverty rates.

Women who have private insurance are much more likely to receive prenatal care in the first trimester than those whose delivery is covered by Medicaid. Prenatal care serves as a vital link to other services that may be critical in the first trimester. Survey results show that roughly half of women who become eligible for Medicaid due to pregnancy were previously uninsured; income eligibility for Medicaid ranges from well below the poverty level (34%) for childless adults to almost double the poverty level (185%) for pregnant women.

Since Medicaid provider payments are so low, the process of finding a provider to accept the payment and getting a timely appointment within the first trimester can be challenging. Women eligible for Medicaid were twice as likely to start prenatal care in the second trimester (24%) as women with private insurance (12%). Uninsured women are more likely to enter a pregnancy with chronic conditions such as high blood pressure or diabetes that could jeopardize a healthy pregnancy and delivery. Another problem is that some tests or treatments that could dramatically reduce the risk of low-birthweight may not be covered by Medicaid or private insurance providers.

Overall women, who are disproportionately low-income and uninsured, will benefit greatly from the expanded access to health insurance, particularly Medicaid eligibility, authorized in the 2010 Patient Protection and Affordable Care Act (ACA). Research has documented that individuals who are insured are more likely to seek and receive care. Low-income women would have access to care before pregnancy so there would be less likelihood of delay in getting access to a provider and timely prenatal care.



Source: Vital Records and Health Data Development Section, Michigan Department of Community Health 2010. (Total includes self-pay, other and unknown.)

What can state policymakers do to improve maternal and infant health?

The Michigan House needs to authorize the appropriation of the federal grant for research and planning the design of the state health exchange, an organized marketplace for securing healthcare coverage. (If a state intends to operate its own exchange, comprehensive plans are due to the federal government in fall 2012 for approval by January 1, 2013.) The House needs to pass authorizing legislation establishing such an exchange; the governor and Senate have already supported this step. Some provisions of the 2010 Patient Protection and Affordable Care Act (ACA) that could greatly improve maternal and infant well-being in the state include the following:

- All individuals with incomes below 133% of poverty will become eligible for Medicaid based solely on income. Uninsured and low-income women, who are at highest risk for unhealthy births, will have access to care to address health issues before becoming pregnant. More women starting a pregnancy in better health could dramatically improve birth outcomes for disadvantaged mothers and babies.
- For those women with higher incomes who purchase coverage on the exchange, premium and cost sharing subsidies will be available on a sliding income scale. In addition, maternity and newborn care is one of the 10 categories of benefits that must be provided by insurers who sell policies on the exchange.

- Expanded eligibility for Medicaid family planning services that the federal government matches 90 cents for every 10 cents of state money—a potentially huge cost savings for the state when considering the cost of unintended pregnancies, which are particularly prevalent among teens and unmarried women. (Michigan has cut its pregnancy prevention investment by roughly 80% over the last three years—from $5 million to less than $1 million.)
- Michigan will receive $1.7 million for teen pregnancy prevention.[14]
- The mandated access to affordable insurance for pre-existing conditions could improve maternal and infant health by allowing access to care to address conditions that could jeopardize a pregnancy. With more frequent job changes, which often involve changes in health insurance plans, and many more Americans living with chronic health conditions such as hypertension or diabetes, a job/insurance benefit change has often meant major challenges in securing health insurance for anyone with a "pre-existing condition."

The governor and the Legislature need to provide adequate funding to implement the recommendations from the 2011 Summit on Infant Mortality.[15] The summary of the workgroup discussions included the following recommendations:

- ***Promote awareness of and attention to the influence of social determinants.*** The impact on infant mortality of policies that influence where women live, work, and play should be considered. The role of the Department of Environmental Quality to limit environmental exposures should be explored.
- ***Adopt an institutional/organizational focus on the life course***. Policymakers must make women's health throughout the life course (before and between pregnancies; during pregnancy; during infancy; and during childhood and adolescence) a priority. Policies and programs to improve preconception health and reduce unintended pregnancies should be implemented and sustained statewide. Specifically programs and approaches with proven results and a solid evidence base that offer women and their families social and medical supports throughout preconception, pregnancy, and motherhood. Some specific programs and strategies that were mentioned include Home Visiting, Safe Sleep, regionalization of perinatal services, and eliminating medically unnecessary deliveries before 39 weeks.

Policymakers need to strengthen the safety net programs such as food stamps and cash assistance that sustain low-income families and their children during economic downturns. Even in the best of times not all parents can find jobs. With rising rates of non-marital births more women are raising children on their own in an economy where two incomes are required in most circumstances in order even to meet basic needs.

Policymakers need to consider the impact of their decisions on communities of color. The social/economic and racial disparities linked to risks in maternal and infant health must be elevated. Poverty rates are much higher in communities of color. Women living in households with incomes below the poverty level are much more likely to have babies born too soon or too small. Furthermore, at all educational, economic and age levels, African American women have double the low-birthweight incidence of white women, while those of Hispanic and Asian women mirror white rates. All of these inequities play a role in the disproportionate risk of infant death among African Americans, and reflect long-standing and persistent racial disadvantage.

The importance of addressing broad inequities rooted in racial/ethnic identity cannot be overstated. As diversity has increased in the state, and the economy has faltered, increasing opportunities for healthy birth and childhood is the best route to producing a vibrant, strong and educated workforce among the next generation.

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[14] Federal funding for these programs comes at an opportune moment, as state funding for these purposes was reduced by over one-third between Fiscal Years 2009 and 2013.

[15] Public Sector Consultants Inc. Michigan Call to Action to Reduce and Prevent Infant Mortality *Infant Mortality Summit: Work Group Recommendations*. Revised December 2011.

Appendix A — Right Start Overall Rank for Counties, 2008-10 (rate = % of total live births)

Overall		Mother<20		Unmarried		No Dip/GED		Late/No PNC		Smoked		Low BWt		Preterm	
Rank	County	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
	Michigan	**9.9**	—	**41.3**	—	**15.9**	—	**3.6**	—	**19.8**	—	**8.5**	—	**10.1**	—
1	Houghton	5.7	6	23.6	3	4.9	2	2.9	26	24.6	23	5.5	6	7.5	11
2	Ottawa	7.0	10	23.9	4	11.7	23	2.2	12	9.8	1	6.3	14	8.0	22
3	Livingston	4.7	1	22.1	2	4.8	1	3.0	29	22.3	15	6.7	24	8.2	23
4	Leelanau	8.4	22	32.0	11	11.2	19	2.9	26	21.0	13	4.3	1	7.3	9
5	Midland	7.6	14	33.0	15	9.8	14	1.9	7	23.9	21	6.9	31	7.6	13
6	Grand Traverse	7.0	10	31.5	10	9.4	12	1.8	5	22.9	19	6.6	21	9.2	44
7	Oakland	5.3	3	26.8	6	8.5	8	1.7	3	11.2	2	8.1	57	9.8	56
8	Emmet	8.2	20	33.0	15	7.0	5	2.0	8	30.4	47	6.5	18	8.7	33
9	Clinton	5.1	2	24.2	5	7.0	5	2.8	22	12.8	4	7.2	39	11.0	73
9	Washtenaw	5.3	3	28.2	7	6.9	4	3.9	44	14.4	6	8.2	58	8.4	28
11	Allegan	8.5	25	32.5	13	14.2	39	3.8	43	18.5	10	6.2	12	8.6	30
12	Macomb	5.9	7	32.0	11	10.1	15	2.4	14	17.7	9	8.6	70	9.5	52
13	Charlevoix	7.1	12	35.6	20	8.9	9	3.6	41	30.8	48	6.3	14	8.8	35
14	Dickinson	8.4	22	40.4	38	10.8	17	2.1	10	25.4	27	7.6	47	7.9	19
15	Benzie	7.9	16	32.9	14	11.6	22	2.5	15	25.6	29	7.6	47	9.1	40
16	Otsego	8.7	27	41.0	45	12.5	29	1.2	1	31.1	54	6.5	18	7.5	11
17	Barry	11.2	52	34.6	18	12.8	32	2.8	22	24.8	25	5.8	9	8.6	30
18	Presque Isle	8.4	22	37.9	31	13.7	37	*	*	30.9	50	6.7	24	7.4	10
19	Menominee	10.6	44	30.5	8	17.5	51	2.5	15	25.4	27	8.2	58	6.3	5
20	Eaton	8.1	18	37.3	29	10.4	16	3.2	33	17.0	7	7.2	39	10.3	67
21	Monroe	9.8	36	36.3	22	12.5	29	4.8	66	22.3	15	6.8	27	7.8	16
22	Marquette	5.4	5	34.0	17	6.2	3	4.1	53	27.7	34	7.3	42	9.9	60
23	Montmorency	6.9	8	39.4	33	8.9	9	3.9	44	40.9	77	6.9	31	7.9	19
24	Huron	7.6	14	37.2	27	9.5	13	2.3	13	28.9	38	7.7	50	10.5	68
25	Cheboygan	11.3	54	44.7	63	13.5	35	1.7	3	34.9	67	5.3	5	6.2	4
26	Missaukee	9.9	38	37.2	27	18.8	64	4.0	47	27.9	35	5.5	6	7.9	19
27	Iron	11.3	54	44.0	59	13.6	36	3.6	41	29.8	42	4.5	3	6.1	2
28	Shiawassee	9.5	33	39.4	33	14.0	38	2.6	19	29.9	44	7.1	36	9.1	40
29	Ionia	9.1	30	37.8	30	13.3	34	4.4	57	22.3	15	6.2	12	10.8	70
30	Isabella	9.7	34	40.9	44	11.8	24	5.5	71	26.3	32	6.7	24	8.3	25
31	Lapeer	8.1	18	35.4	19	12.0	25	3.5	37	26.7	33	8.3	63	10.2	66
32	Kent	9.1	30	38.5	32	18.2	59	3.3	34	12.5	3	7.4	44	9.9	60
32	Lenawee	11.1	51	39.5	35	15.2	43	3.5	37	21.6	14	7.1	36	9.3	46
34	Hillsdale	8.9	28	35.6	20	21.8	72	6.1	76	29.8	42	6.3	14	7.7	14
35	Sanilac	8.6	26	36.3	22	15.8	48	5.6	73	30.3	45	6.8	27	8.4	28
36	Mason	10.9	48	43.0	55	12.4	28	4.2	54	28.0	36	7.1	36	7.8	16
37	Delta	7.9	16	40.6	43	8.4	7	4.5	58	32.0	59	7.5	46	9.3	46
38	Chippewa	10.5	43	44.5	62	12.5	29	2.6	19	39.7	74	5.5	6	9.3	46
39	Tuscola	10.0	41	36.7	24	12.0	25	2.8	22	32.2	60	7.8	51	9.9	60
40	Mackinac	6.9	8	40.1	37	9.3	11	2.8	22	31.6	57	9.7	78	12.1	79
41	Kalamazoo	9.8	36	41.5	47	13.2	33	4.0	47	18.6	11	8.3	63	9.8	56
42	Newaygo	13.1	68	42.7	52	18.8	64	2.5	15	29.5	40	6.4	17	9.1	40
43	Oscoda	11.0	50	31.2	9	40.5	82	10.5	79	34.2	65	5.1	4	7.2	8
44	Ingham	9.9	38	42.7	52	14.9	42	3.3	34	14.2	5	7.9	54	11.8	78
45	Montcalm	12.1	61	40.4	38	17.8	56	4.0	47	28.8	37	6.6	21	9.3	46
46	Osceola	12.5	63	40.5	41	22.2	74	4.2	54	34.5	66	4.4	2	6.5	7
47	Schoolcraft	13.1	68	45.1	64	14.6	40	3.3	34	38.0	70	7.0	33	6.1	2
48	Gogebic	11.2	52	46.4	68	11.2	19	2.1	10	31.9	58	7.0	33	11.0	73
48	Gratiot	10.6	44	41.8	48	12.0	25	4.6	61	30.9	50	7.2	39	9.3	46
50	Ogemaw	11.4	56	42.6	51	15.7	47	4.3	56	39.4	73	5.8	9	8.3	25
51	Antrim	11.5	57	39.9	36	15.6	46	3.0	29	29.6	41	8.4	67	9.3	46
52	Alger	7.4	13	50.2	73	11.5	21	5.1	69	35.5	68	7.8	51	8.8	35
53	Wexford	10.9	48	43.2	57	17.7	52	5.5	71	33.3	63	6.8	27	7.7	14
54	Branch	11.5	57	42.3	50	27.7	78	9.5	78	26.1	30	5.8	9	8.7	33

Appendix A — Right Start Overall Rank for Counties, 2008-10 (rate = % of total live births)

Overall Rank	County	Mother<20 Rate	Mother<20 Rank	Unmarried Rate	Unmarried Rank	No Dip/GED Rate	No Dip/GED Rank	Late/No PNC Rate	Late/No PNC Rank	Smoked Rate	Smoked Rank	Low BWt Rate	Low BWt Rank	Preterm Rate	Preterm Rank
55	Alpena	11.9	59	42.2	49	16.3	50	1.4	2	41.1	78	9.1	76	8.2	23
56	Kalkaska	11.9	59	43.1	56	18.3	61	1.8	5	39.0	72	8.3	63	8.3	25
56	Mecosta	8.9	28	40.5	41	21.7	71	7.3	77	33.0	62	6.8	27	8.8	35
56	Saint Joseph	10.6	44	40.4	38	28.7	80	4.8	66	24.9	26	6.5	18	10.6	69
59	Bay	10.7	47	44.4	61	15.2	43	2.5	15	32.5	61	8.3	63	9.8	56
60	Saint Clair	9.2	32	43.4	58	15.3	45	3.1	31	31.0	53	8.2	58	11.1	75
61	Manistee	10.4	42	46.2	67	17.7	52	3.5	37	36.9	69	7.6	47	9.1	40
62	Arenac	9.9	38	45.8	65	14.6	40	2.0	8	30.9	50	9.7	78	12.4	81
63	Jackson	12.8	65	48.6	71	17.7	52	3.9	44	30.3	45	8.2	58	8.9	38
64	Van Buren	12.9	67	44.3	60	24.9	76	6.0	75	19.8	12	7	33	9.8	56
65	Baraga	12.5	63	58.6	83	17.7	52	4.7	64	44.4	80	7.3	42	6.0	1
66	Gladwin	9.7	34	36.8	26	28.5	79	11.3	80	31.1	54	9.0	75	8.9	38
67	Iosco	12.1	61	46.0	66	15.9	49	4.6	61	42.8	79	6.6	21	10.1	63
68	Oceana	14.2	77	42.9	54	28.7	80	4.5	58	24.3	22	8.2	58	9.5	52
69	Cass	13.4	70	50.8	75	25.8	77	4.0	47	31.1	54	7.8	51	9.2	44
70	Muskegon	13.5	72	51.8	76	18.7	63	2.9	26	30.8	48	8.7	71	10.1	63
71	Roscommon	15.3	80	53.5	79	18.8	64	2.7	21	46.1	81	7.4	44	9.5	52
72	Berrien	12.8	65	48.4	70	22.1	73	4.7	64	22.5	18	8.8	73	10.1	63
72	Calhoun	13.8	75	51.8	76	17.8	56	4.5	58	26.2	31	7.9	54	11.2	76
74	Alcona	13.4	70	41.3	46	18.4	62	3.5	37	40.3	76	8.5	69	10.9	71
75	Genesee	13.6	73	54.4	80	18.0	58	4.0	47	23.8	20	10.3	80	12.7	82
76	Clare	13.9	76	46.9	69	20.8	69	5.6	73	38.0	70	7.9	54	8.6	30
76	Lake	14.2	77	53.4	78	18.2	59	5.1	69	40.2	75	8.4	67	7.8	16
78	Saginaw	14.4	79	55.2	81	20.1	68	3.1	31	29.1	39	9.6	77	10.9	71
79	Wayne	13.6	73	55.2	81	23.7	75	4.8	66	17.2	8	10.7	81	11.7	77
80	Crawford	16.8	82	48.9	72	21.3	70	4.0	47	46.6	82	8.8	73	9.5	52
81	Luce	15.4	81	50.3	74	19.0	67	4.6	61	46.7	83	8.7	71	12.3	80
	Keweenaw	*	*	15.8	1	*	*	*	*	24.6	23	*	*	*	*
	Ontonagon	8.3	21	36.7	24	11.0	18	*	*	33.9	64	*	*	6.4	6

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

Calculations by the Michigan League for Human Services

Restricted to the 7 indicators for which at least 80 counties have a rate and the 81 counties with a rate for at least 6 indicators.

* No data available.

Note: A decline represented by a negative percentage change is good news as all these measures of risk.

"NOT white non-Hispanics" includes African Americans, Hispanics, American Indians, Asians, Pacific Islanders, and other non-Hispanics.