

9.8 Special Reports

9.8.1 Nurse Family Partnership Needs Assessment 2006

(Edison, Northside and Eastside Neighborhoods; City of Kalamazoo, and Kalamazoo Township)

Table 1: Poverty and Low Income in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township, and Initial Target Neighborhoods, 1999

Geographic Area	Below Poverty Level		Below 185% of Poverty Level	
	Number	Percent	Number	Percent
State of Michigan	1,021,605	10.5%	2,246,674	23.2%
Kalamazoo County	27,483	12.0%	57,878	25.3%
City of Kalamazoo	16,641	24.3%	29,640	43.3%
Kalamazoo Township	2,365	11.0%	5,493	25.6%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	5,322	29.1%	9,420	51.5%
<i>Northside</i>	<i>2,106</i>	<i>36.8%</i>	<i>3,514</i>	<i>61.3%</i>
<i>Eastside</i>	<i>767</i>	<i>30.1%</i>	<i>1,379</i>	<i>54.1%</i>
<i>Edison</i>	<i>2,449</i>	<i>24.5%</i>	<i>4,527</i>	<i>45.3%</i>

Source: U.S. Census 2000, Summary File 3

Table 2: Educational Attainment Among Population Aged 25 Years and Older in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township, and Initial Target Neighborhoods, 2000

Geographic Area	Less than 9th grade (includes no schooling at all)		9th-12th but no diploma		HS grad or GED		Some college, no degree		College degree		Post-grad degree	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	299,014	4.7%	765,119	11.9%	2,010,861	31.3%	1,496,576	23.3%	1,326,792	20.7%	517,579	8.1%
Kalamazoo County	4,307	3.0%	11,967	8.3%	37,615	25.9%	35,150	24.2%	38,353	26.5%	17,603	12.1%
City of Kalamazoo	2,055	5.2%	4,263	10.7%	9,391	23.5%	8,732	21.9%	9,706	24.3%	5,737	14.4%
Kalamazoo Township	374	2.7%	1,327	9.6%	3,618	26.1%	3,673	26.5%	3,461	25.0%	1,400	10.1%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	923	9.1%	2,129	21.0%	3,345	32.9%	2,290	22.5%	1,283	12.6%	187	1.8%
<i>Northside</i>	<i>317</i>	<i>10.8%</i>	<i>826</i>	<i>28.2%</i>	<i>974</i>	<i>33.2%</i>	<i>578</i>	<i>19.7%</i>	<i>182</i>	<i>6.2%</i>	<i>53</i>	<i>1.8%</i>
<i>Eastside</i>	<i>104</i>	<i>8.3%</i>	<i>254</i>	<i>20.3%</i>	<i>462</i>	<i>37.0%</i>	<i>277</i>	<i>22.2%</i>	<i>119</i>	<i>9.5%</i>	<i>34</i>	<i>2.7%</i>
<i>Edison</i>	<i>502</i>	<i>8.4%</i>	<i>1,049</i>	<i>17.6%</i>	<i>1,909</i>	<i>31.9%</i>	<i>1,435</i>	<i>24.0%</i>	<i>982</i>	<i>16.4%</i>	<i>100</i>	<i>1.7%</i>

Source: U.S. Census 2000, Summary File 3

Table 3: Unemployment Rate in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township, and Initial Target Neighborhoods, 2000

Geographic Area	Number of labor force who are unemployed	Percent in labor force who are unemployed
State of Michigan	284,992	5.8%
Kalamazoo County	8,600	6.6%
City of Kalamazoo	5,287	12.5%
Kalamazoo Township	504	4.4%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	752	9.1%
<i>Northside</i>	268	11.9%
<i>Eastside</i>	102	9.5%
<i>Edison</i>	382	7.7%

Source: U.S. Census 2000, Summary File 3

Table 4: Means of Transportation to Work for Those Working Outside the Home in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township, and Initial Target Neighborhoods, 2000

Geographic Area	Car, Truck or Van		Public Transportation		Bicycle		Walking		Other means	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	4,217,141	95.6%	60,537	1.4%	10,034	0.2%	101,506	2.3%	23,389	0.5%
Kalamazoo County	108,725	94.9%	1,578	1.4%	303	0.3%	3,460	3.0%	475	0.4%
City of Kalamazoo	30,906	88.4%	1,138	3.3%	182	0.5%	2,514	7.2%	225	0.6%
Kalamazoo Township	10,102	95.8%	156	1.5%	47	0.4%	213	2.0%	25	0.2%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	6,325	88.9%	432	6.1%	34	0.5%	218	3.1%	103	1.4%
<i>Northside</i>	1,523	83.5%	189	10.4%	18	1.0%	59	3.2%	35	1.9%
<i>Eastside</i>	840	91.2%	76	8.3%	0	0.0%	5	0.5%	0	0.0%
<i>Edison</i>	3,962	90.7%	167	3.8%	16	0.4%	154	3.5%	68	1.6%

Source: U.S. Census 2000, Summary File 3

Table 5: Travel Time to Work Among Those Using Public Transportation in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township and Initial Target Neighborhoods, 2000

Geographic Area	Less than 30 minutes		30-44 minutes		45-59 minutes		60 or more minutes	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	22,019	36.4%	14,326	23.7%	8,003	13.2%	16,189	26.7%
Kalamazoo County	723	45.8%	350	22.2%	283	17.9%	222	14.1%
City of Kalamazoo	484	42.5%	240	21.1%	270	23.7%	144	12.7%
Kalamazoo Township	110	70.5%	32	20.5%	5	3.2%	9	5.8%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	94	21.8%	144	33.3%	135	31.3%	59	13.7%
<i>Northside</i>	28	14.8%	87	46.0%	69	36.5%	5	2.6%
<i>Eastside</i>	24	31.6%	14	18.4%	10	13.2%	28	36.8%
<i>Edison</i>	42	25.1%	43	25.7%	56	33.5%	26	15.6%

Source: U.S. Census 2000, Summary File 3

Table 6: Population by Race in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township, and Initial Target Neighborhoods, 2000

Geographic Area	White alone		Black alone		American Indian or Alaska Native alone		Asian alone		Other race alone		Two or more races	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	7,960,342	80.1%	1,401,723	14.1%	60,842	0.6%	174,824	1.8%	133,672	1.3%	207,041	2.1%
Kalamazoo County	201,795	84.6%	21,748	9.1%	1,094	0.5%	4,315	1.8%	3,375	1.4%	6,276	2.6%
City of Kalamazoo	54,448	70.6%	15,213	19.7%	470	0.6%	1,641	2.1%	2,150	2.8%	3,170	4.1%
Kalamazoo Township	18,027	83.0%	2,509	11.5%	94	0.4%	304	1.4%	308	1.4%	484	2.2%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	7,652	40.7%	8,494	45.1%	142	0.8%	91	0.5%	962	5.1%	1,483	7.9%
<i>Northside</i>	601	10.4%	4,674	80.9%	18	0.3%	34	0.6%	132	2.3%	317	5.5%
<i>Eastside</i>	795	30.5%	1,537	58.9%	27	1.0%	0	0.0%	89	3.4%	162	6.2%
<i>Edison</i>	6,256	59.9%	2,283	21.9%	97	0.9%	57	0.5%	741	7.1%	1,004	9.6%

Source: U.S. Census 2000, Summary File 3

Table 7: Population of Hispanic Ethnicity in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township and Initial Target Neighborhoods, 2000

Geographic Area	Number	Percent of population that is Hispanic
State of Michigan	322,160	3.2%
Kalamazoo County	6,476	2.7%
City of Kalamazoo	3,362	4.4%
Kalamazoo Township	553	2.5%
Target Area Neighborhoods Combined (Northside, Eastside, and Edison)	1,556	8.3%
<i>Northside</i>	272	4.7%
<i>Eastside</i>	53	2.0%
<i>Edison</i>	1,231	11.8%

Source: U.S. Census 2000, Summary File 3

Table 8: Access to Health Care in Kalamazoo County, City of Kalamazoo, and in City by Race, 2004

Population	No medical home	No healthcare coverage	In past 12 months, needed care but couldn't get it due to cost
Kalamazoo County	22.9%	17.3%	14.5%
City of Kalamazoo	27.6%	23.8%	17.4%
White in City	25.3%	17.6%	13.9%
Black in City	30.9%	41.7%	24.3%

Source: Kalamazoo County Behavioral Risk Factor Survey, 2004 – 2005

Table 9: Sexually Transmitted Disease in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township and Target Area, 2006

Geographic Area	Chlamydia		Gonorrhea	
	Number of cases	Rate per 10,000 population	Number of cases	Rate per 10,000 population
State of Michigan	36,752	37.0	15,678	15.8
Kalamazoo County	1,317	55.2	570	23.9
City of Kalamazoo	761	98.7	392	50.8
Kalamazoo Township	125	57.5	55	25.3
Target Area Neighborhoods Combined, (Northside, Eastside, and Edison)	427	226.8	256	136.0
<i>Northside</i>	<i>187</i>	<i>323.8</i>	<i>111</i>	<i>192.2</i>
<i>Eastside</i>	<i>76</i>	<i>291.2</i>	<i>52</i>	<i>199.2</i>
<i>Edison</i>	<i>164</i>	<i>157.1</i>	<i>93</i>	<i>89.1</i>

Source: Michigan Disease Surveillance System, cases entered as of 1/29/07; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo, population and case counts from block groups included in neighborhood boundaries; block group shapefiles from Michigan Center for Geographic Information)

2000 US Census Summary File 3 Population used for consistency across geographic areas (more current estimates not available for neighborhood areas (block groups)).

Table 10: Infant Mortality Rates per 1,000 Live Births in Michigan, Kalamazoo County, and Target Area by Race and Hispanic Ethnicity*, 2001 – 2005

Geographic Area	Total		White		Black		Hispanic	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Michigan	5,229	8.0	3,002	5.9	1,987	17.6	353	9.2
Kalamazoo County	140	9.0	88	7.0	50	19.0	8	9.5
City of Kalamazoo	69	9.9	30	6.4	37	17.8	<3	NA **
Kalamazoo Township	16	10.4	5	11.9	<3	NA **	<3	NA **
Target Area Neighborhoods Combined, 2000- 2004 (Northside, Eastside, and Edison)	23	12.9	5	6.1	18	19.0	1	4.1
<i>Northside</i>	<i>8</i>	<i>13.7</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>
<i>Eastside</i>	<i>7</i>	<i>28.5</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>
<i>Edison</i>	<i>8</i>	<i>8.5</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>	<i>NA **</i>

*Hispanic ethnicity not exclusive of race (white and black include both non-Hispanic and Hispanic persons).

**NA: Not available due to small numbers

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File and Death File; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo)

Table 11: Prenatal Care in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township 2005, and Initial Target Neighborhoods 2004

Geographic Area	No prenatal care in 1st trimester		Kessner Index of Prenatal Care*					
			Adequate prenatal care		Intermediate prenatal care		Inadequate prenatal care	
	Births	Percent	Births	Percent	Births	Percent	Births	Percent
Michigan	17,919	14.4	99,210	78.2	18,590	14.7	9,058	7.1
Kalamazoo County	543	17.6	2,292	74.2	611	19.8	187	6.1
City of Kalamazoo	310	22.4%	949	68.2%	324	23.3%	119	8.5%
Kalamazoo Township	50	17.7%	208	73.8%	65	23.0%	9	3.2%
Target Area Neighborhoods Combined, 2004 (Northside, Eastside, and Edison)	115	32.8%	207	58.5%	101	28.5%	46	13.0%
<i>Northside</i>	48	40.3%	60	50.4%	37	31.1%	22	18.5%
<i>Eastside</i>	15	31.9%	29	59.2%	13	26.5%	7	14.3%
<i>Edison</i>	52	28.1%	118	63.4%	51	27.4%	17	9.1%

* Prenatal care is classified using the Kessner Index, a classification of prenatal care 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).

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo)

Table 12: Maternal Smoking, Preterm Births, and Low Birth Weight in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township 2005, and Initial Target Neighborhoods 2004

Geographic Area	Mom smoked during pregnancy		Preterm (<37 weeks)		Low birth weight (<2,500 g)		Very low birth weight (<1,500 g)	
	Births	Percent	Births	Percent	Births	Percent	Births	Percent
Michigan	17,471	13.8	12,746	10.8	10,665	8.4	2,140	1.7
Kalamazoo County	530	17.0	347	11.4	291	9.3	59	1.9
City of Kalamazoo	300	21.4%	168	12.3%	155	11.0%	31	2.2%
Kalamazoo Township	44	15.6%	26	9.5%	28	9.9%	9	3.2%
Target Area Neighborhoods Combined, 2004 (Northside, Eastside, and Edison)	99	27.6%	68	18.9%	50	13.9%	11	3.1%
<i>Northside</i>	44	36.4%	31	25.6%	26	21.5%	5	4.1%
<i>Eastside</i>	9	18.0%	7	14.0%	5	10.0%	1	2.0%
<i>Edison</i>	46	24.5%	30	16.0%	19	10.1%	5	2.7%

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo)

Table 13: Race and Hispanic Ethnicity of Women Giving Birth in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township 2005, and Initial Target Neighborhoods 2004

Geographic Area	White moms		Black moms		Hispanic moms	
	Births	Percent	Births	Percent	Births	Percent
Michigan	99,117	77.7%	22,365	17.5%	8,396	6.6%
Kalamazoo County	2,437	78.2%	576	18.5%	201	6.5%
City of Kalamazoo	918	65.3%	444	31.6%	117	8.4%
Kalamazoo Township	218	77.3%	60	21.3%	18	6.5%
Target Area Neighborhoods Combined, 2004 (Northside, Eastside, and Edison)	165	46.0%	194	54.0%	49	13.6%
<i>Northside</i>	25	20.7%	96	79.3%	5	4.1%
<i>Eastside</i>	22	44.0%	28	56.0%	8	16.0%
<i>Edison</i>	118	62.8%	70	37.2%	36	19.1%

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo)

Table 14: Maternal Characteristics of Women Giving Birth in Michigan, Kalamazoo County, City of Kalamazoo, Kalamazoo Township 2005, and Initial Target Neighborhoods 2004

Geographic Area	Births to teens (<20)		Births to unmarried moms		Births to moms 25 years and older with less than HS diploma or GED	
	Births	Percent	Births	Percent	Births	Percent
Michigan	11,994	9.4%	46,824	36.7%	7,183	8.6%
Kalamazoo County	301	9.7%	1,207	38.7%	113	5.5%
City of Kalamazoo	192	13.7%	755	53.7%	69	9.1%
Kalamazoo Township	22	7.8%	97	34.4%	11	5.7%
Target Area Neighborhoods Combined, 2004 (Northside, Eastside, and Edison)	89	24.8%	259	72.1%	37	23.0%
<i>Northside</i>	28	23.1%	102	84.3%	11	20.8%
<i>Eastside</i>	13	26.0%	37	74.0%	2	11.1%
<i>Edison</i>	48	25.5%	120	63.8%	24	26.7%

Source: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File; neighborhood statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo)

9.8.2 Healthy Babies Healthy Start Needs Assessment, 2007

(Zip code areas 49001, 49007 and 49048)

Socioeconomic status is inversely related to health status. The lower one's income, the greater the negative impact on the health status of children and their families. Often low socioeconomic status coincides with a lack of access to health care, health insurance, unhealthy living conditions, and health risk factors such as smoking, poor nutrition and lack of physical activity.

Income, Education, Unemployment

The poverty rate in the target area was 21% in 1999, which was higher than the rate in Kalamazoo County overall (12%) (see table 1). The population living at less than 185% of the poverty level comprised 40.6% of the population in the target area (43% of the population in the City and 25% of the County population).

Lack of education limits job opportunities, income, and advancement. The level of educational attainment among the population aged 25 years and older was lower in the target area in 2000 than in the city or the county (see table 2). In the target area, 20% of adults had no high school diploma or GED, and only 26% had a college degree. By comparison, the level of educational attainment in the city and county overall were much higher (only 16% in the City and 11% in the County had no high school diploma, and 39% in the City and County had a college degree).

Unemployment rates in the target area were also elevated compared to the rest of the county in 2000; 8% of those in the labor force were unemployed in the target area compared with 7% in the county and 6% in Michigan (see table 3). Because unemployment rates include only those individuals who have been actively seeking employment, this rate likely underestimates the percentage of the population who would like to be working but have given up job-seeking out of frustration.

Transportation

Among those in the target area who are employed, the typical means of transportation to work is by car, truck or van, but public transportation also is relied upon by 3% of the population and 4% of the population walks, bikes or uses another means to get to work (see table 4). Among the population working outside the home who depend on public transportation to get to work, one quarter spend 30 to 44 minutes getting to work, another quarter spend between 45 and 59 minutes getting to work, and for 11% of those utilizing public transportation, it takes more than an hour to get to work (see table 5).

Access to Healthcare

Indicators for access to healthcare are worse for the population living in the target area than for the population living in the rest of the county. Among adult residents in the target area, 32% reported they did not have a specific provider they regularly went to for health care (a medical home) in 2004 (see table 6). The percentage of adults between the ages of 18 and 64 years without healthcare coverage was 26% in the target area. Among adults in the target area, 22% reported in 2004 that in the previous twelve months there had been a time when they needed medical care but could not get it due to the cost.

Child Abuse and Neglect

Although rates of child abuse and neglect are not available below the county level, compared to the rest of Michigan, Kalamazoo County ranks 74th out of 83 counties (only nine counties have higher rates of confirmed abuse and neglect). In 2004 there were 4,386 cases of abuse or neglect that were investigated, and 1,252 of the investigations resulted in confirmed cases of abuse or neglect. In Kalamazoo County, this is a rate of 21.9 confirmed cases per 1,000 children. In comparison, the rate in Michigan in 2004 was 11.7 confirmed cases per 1,000 children.

Reproductive Health, Birth Characteristics, and Infant Mortality

The incidence of sexually transmitted disease is higher in the target area than in Kalamazoo County or Michigan (see table 7). In 2006, the incidence of chlamydia in the target area was 143.8 cases per 10,000 population; this was 2.6 times higher than the rate in the county overall and 3.9 times higher than the rate in Michigan. The incidence of gonorrhea in 2006 was 73.7 cases per 10,000 population in the target area, or 3.1 times higher than the rate in the county and 4.7 times higher than the rate in Michigan.

Infant mortality in the target area (12.0 deaths per 1,000 live births) was higher than in the county overall (9.0 per 1,000 births) or in Michigan (8.0 per 1,000 births) between 2001 and 2005 (see table 8). The disparity in infant mortality by race contributes to the elevated infant mortality rate in target area; the infant mortality rate for black babies in the target area in this time period was 19.2 per 1,000 births and the rate among white babies was 8.8 per 1,000 births. Neonatal and postneonatal infant mortality rates in the target area were both higher than the rates in the county or in Michigan between 2001 and 2005 (see tables 9 and 10).

There is a need to reduce the prevalence of maternal risk factors for infant mortality, including insufficient prenatal care for mothers, tobacco use during pregnancy, low birth weight, premature births, and teen births in the target area.

One characteristic that reduces the risk of infant mortality is receiving prenatal care early and throughout pregnancy. A higher percentage of women in the target area (34.9%) did not receive adequate prenatal care during pregnancy (according to the Kessner scale¹) than the percentage in Kalamazoo County overall (25.9%) or in Michigan (21.8%) in 2005 (see table 11). Late or no prenatal care was more common in the target area than in the county or the state; 25.1% of moms in the target area did not receive prenatal care in the 1st trimester of pregnancy, compared to 17.6% in the county and 14.4% in Michigan.

Smoking during pregnancy was more prevalent in the target area in 2005 than in Kalamazoo County or in Michigan (see table 12). In the target area, 23.6% of moms smoked while 17.0% of moms in county and 13.8% of moms in the state smoked during pregnancy.

Among births in the target area in 2005, 12.4% had low birthweight; in comparison 9.3% of births in Kalamazoo County and 8.4% of births in Michigan were low birthweight (see table 12). The rate of very low birthweight was 1.5 times higher in the target area (2.8% of births were very low birthweight) as the rate in the county overall (1.9% of births).

¹ Prenatal care is classified using the Kessner Index, a classification of prenatal care 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).

Preterm births at less than 37 weeks gestation were more common in the target area than in the county or state, contributing to the incidence of low birthweight and increased infant mortality in these areas. In 2005, 13.5% of births in the target area were preterm, compared with 11.4% of births in Kalamazoo County and 10.8% of births in Michigan (see table 12).

Of all births in the target area in 2005, 13.5% were to teen mothers. In comparison, only 9.7% of births in Kalamazoo County and 9.4% of births in Michigan were to teen mothers (see table 12).

Some risk factors that are associated with increased infant mortality are not targets for the Healthy Babies Healthy Start Program; rather, these characteristics identify mothers most at risk in the community, and the profile of the target area demonstrates the need for this intervention. Such risk factors include mother's race, marital status, poverty, and educational attainment.

Having an African American mother is a risk factor for increased infant mortality in Kalamazoo County as it is in many communities in Michigan and nationwide. During 2005, 34.9% of births were to African American moms in the target area (see table 13).

Infants with teen mothers are also at increased risk of dying. In 2005, 13.5% of births in the target area were to moms younger than 20 years (see table 14). In comparison, only 9.7% of moms in Kalamazoo County and 9.4% of moms in Michigan were younger than 20.

Marital status also impacts infant health; a women who is not married may be under increased stress without the social and economic support of a spouse. During 2005, 55.2% of births in the target area were to single moms; this was 1.4 times higher than the rate in Kalamazoo County overall (38.7%) (see table 14).

A mother's educational level also impacts infant health; women who have not received a high school diploma or GED are under increased economic stresses due to lack of employment opportunities. In the target area, 10.8% of moms aged 25 years or older who gave birth in 2005 did not have a high school diploma or GED (see table 14). This was almost twice the rate in the county (only 5.5% of moms in Kalamazoo County age 25 years or older did not have a high school diploma or GED).

Table 1: Poverty and Low Income in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 1999

Geographic Area	Below Poverty Level		Below 185% of Poverty Level	
	Number	Percent	Number	Percent
State of Michigan	1,021,605	10.5%	2,246,674	23.2%
Kalamazoo County	27,483	12.0%	57,878	25.3%
City of Kalamazoo	16,641	24.3%	29,640	43.3%
Target Area Zip Codes* Combined (49001, 49007)	10,973	20.9%	21,302	40.6%
49001	6,708	16.4%	14,156	34.6%
49007	4,265	36.8%	7,146	61.6%

*Zip code 49048 not in existence at time of 2000 Census

Source: U.S. Census 2000, Summary File 3

Table 2: Educational Attainment Among Population Aged 25 Years and Older in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 2000

Geographic Area	Less than 9th grade (includes no schooling at all)		9th-12th but no diploma		HS grad or GED		Some college, no degree		College degree		Post-grad degree	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	299,014	4.7%	765,119	11.9%	2,010,861	31.3%	1,496,576	23.3%	1,326,792	20.7%	517,579	8.1%
Kalamazoo County	4,307	3.0%	11,967	8.3%	37,615	25.9%	35,150	24.2%	38,353	26.5%	17,603	12.1%
City of Kalamazoo	2,055	5.2%	4,263	10.7%	9,391	23.5%	8,732	21.9%	9,706	24.3%	5,737	14.4%
Target Area Zip Codes* Combined (49001, 49007)	1,882	5.9%	4,414	13.8%	9,568	29.9%	7,988	25.0%	6,044	18.9%	2,053	6.4%
49001	1,389	5.4%	3,226	12.5%	7,739	29.9%	6,675	25.8%	5,187	20.0%	1,655	6.4%
49007	493	8.1%	1,188	19.5%	1,829	30.1%	1,313	21.6%	857	14.1%	398	6.5%

*Zip code 49048 not in existence at time of 2000 Census

Source: U.S. Census 2000, Summary File 3

Table 3: Unemployment Rate in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 2000

Geographic Area	Number of labor force who are unemployed	Percent in labor force who are unemployed
State of Michigan	284,992	5.8%
Kalamazoo County	8,600	6.6%
City of Kalamazoo	5,287	12.5%
Target Area Zip Codes* Combined (49001, 49007)	2,325	8.3%
49001	1,581	7.2%
49007	744	12.0%

*Zip code 49048 not in existence at time of 2000 Census

Source: U.S. Census 2000, Summary File 3

Table 4: Means of Transportation to Work for Those Working Outside the Home in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 2000

Geographic Area	Car, Truck or Van		Public Transportation		Bicycle		Walking		Other means	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	4,217,141	95.6%	60,537	1.4%	10,034	0.2%	101,506	2.3%	23,389	0.5%
Kalamazoo County	108,725	94.9%	1,578	1.4%	303	0.3%	3,460	3.0%	475	0.4%
City of Kalamazoo	30,906	88.4%	1,138	3.3%	182	0.5%	2,514	7.2%	225	0.6%
Target Area Zip Codes* Combined (49901, 49007)	22,554	92.4%	815	3.3%	134	0.5%	748	3.1%	158	0.6%
49001	18,280	94.7%	436	2.3%	75	0.4%	397	2.1%	123	0.6%
49007	4,274	83.8%	379	7.4%	59	1.2%	351	6.9%	35	0.7%

*Zip code 49048 not in existence at time of 2000 Census

Source: U.S. Census 2000, Summary File 3

Table 5: Travel Time to Work Among Those Using Public Transportation in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 2000

Geographic Area	Less than 30 minutes		30-44 minutes		45-59 minutes		60 or more minutes	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
State of Michigan	22,019	36.4%	14,326	23.7%	8,003	13.2%	16,189	26.7%
Kalamazoo County	723	45.8%	350	22.2%	283	17.9%	222	14.1%
City of Kalamazoo	484	42.5%	240	21.1%	270	23.7%	144	12.7%
Target Area Zip Codes* Combined (49001, 49007)	312	38.3%	208	25.5%	202	24.8%	93	11.4%
49001	166	38.1%	95	21.8%	102	23.4%	73	16.7%
49007	146	38.5%	113	29.8%	100	26.4%	20	5.3%

*Zip code 49048 not in existence at time of 2000 Census

Source: U.S. Census 2000, Summary File 3

Table 6: Access to Health Care in Kalamazoo County, City of Kalamazoo, and in City by Race, 2004

Population	No medical home	No healthcare coverage	In past 12 months, needed care but couldn't get it due to cost
Kalamazoo County	22.9%	17.3%	14.5%
City of Kalamazoo	27.6%	23.8%	17.4%
White in City	25.3%	17.6%	13.9%
Black in City	30.9%	41.7%	24.3%
Target Area Zip Codes Combined (49001, 49007, 49048)	32.2%	26.1%	22.1%
All Other Zip Codes in Kalamazoo County	20.4%	14.2%	12.6%

Source: Kalamazoo County Behavioral Risk Factor Survey, 2004 – 2005

Table 7: Sexually Transmitted Disease in Michigan, Kalamazoo County, City of Kalamazoo, and Target Area, 2006

Geographic Area	Chlamydia		Gonorrhea	
	Number of cases	Rate per 10,000 population	Number of cases	Rate per 10,000 population
State of Michigan	36,752	37.0	15,678	15.8
Kalamazoo County	1,317	55.2	570	23.9
City of Kalamazoo	761	98.7	392	50.8
Target Area Zip Codes Combined (49001, 49007, 49048)	772	143.8	396	73.7

Source: Michigan Disease Surveillance System, cases entered as of 1/29/07; city and Zip code area statistics calculated using ESRI ArcMap GIS software (neighborhood shapefiles from City of Kalamazoo, Zip code shapefiles from Michigan Center for Geographic Information)

2000 US Census Summary File 3 Population used for consistency across geographic areas (more current estimates not available for Zip code areas).

Table 8: Infant Mortality Rates per 1,000 Live Births in Michigan, Kalamazoo County, and Target Area by Race and Hispanic Ethnicity*, 2001 – 2005

Geographic Area	Total		White		Black		Hispanic	
	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births
Michigan	5,229	8.0	3,002	5.9	1,987	17.6	353	9.2
Kalamazoo County	140	9.0	88	7.0	50	19.0	8	9.5
City of Kalamazoo	69	9.9	30	6.4	37	17.8	2	3.6
Target Area Zip Codes Combined (49001, 49007, 49048)	60	12.0	29	8.8	31	19.2	1	2.4

*Hispanic ethnicity not exclusive of race (white and black include both non-Hispanic and Hispanic persons).

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

Table 9: Neonatal Infant Mortality Rates per 1,000 Live Births in Michigan, Kalamazoo County, and Target Area by Race and Hispanic Ethnicity*, 2001 – 2005

Geographic Area	Total		White		Black		Hispanic	
	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births
Michigan	3,613	5.6	2,088	4.1	1,349	11.9	241	6.3
Kalamazoo County	100	6.4	64	5.1	35	13.3	8	9.5
City of Kalamazoo	47	6.7	19	4.1	27	13.0	2	3.6
Target Area Zip Codes Combined (49001, 49007, 49048)	45	9.0	21	6.4	24	14.9	1	2.4

*Hispanic ethnicity not exclusive of race (white and black include both non-Hispanic and Hispanic persons).

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

Table 10: Postneonatal Infant Mortality Rates per 1,000 Live Births in Michigan, Kalamazoo County, and Target Area by Race and Hispanic Ethnicity*, 2001 – 2005

Geographic Area	Total		White		Black		Hispanic	
	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births	Deaths	Rate per 1,000 births
Michigan	1,616	2.5	914	1.8	638	5.6	112	2.9
Kalamazoo County	40	2.6	24	1.9	15	1.9	0	0.0
City of Kalamazoo	22	3.2	11	2.4	10	4.8	0	0.0
Target Area Zip Codes Combined (49001, 49007, 49048)	15	3.0	8	2.4	7	4.3	0	0.0

*Hispanic ethnicity not exclusive of race (white and black include both non-Hispanic and Hispanic persons).

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

Table 11: Prenatal Care in Michigan, Kalamazoo County, and Target Area, 2005

Geographic Area	No prenatal care in 1 st trimester		Kessner Index of Prenatal Care*					
			Adequate prenatal care		Intermediate prenatal care		Inadequate prenatal care	
	Births	Percent	Births	Percent	Births	Percent	Births	Percent
Michigan	17,919	14.4%	99,210	78.2%	18,590	14.7%	9,058	7.1%
Kalamazoo County	543	17.6%	2,292	74.2%	611	19.8%	187	6.1%
City of Kalamazoo	310	22.4%	949	68.2%	324	23.3%	119	8.5%
Target Area Zip Codes Combined (49001, 49007, 49048)	254	25.1	665	65.1	261	25.5	96	9.4

• Prenatal care is classified using the Kessner Index, a classification of prenatal care 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).

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

Table 12: Maternal Smoking, Preterm Births, and Low Birth Weight in Michigan, Kalamazoo County, and Target Area, 2005

Geographic Area	Mom smoked during pregnancy		Preterm (<37 weeks)		Low birth weight (<2,500 g)		Very low birth weight (<1,500 g)	
	Births	Percent	Births	Percent	Births	Percent	Births	Percent
Michigan	17,471	13.8%	12,746	10.8%	10,665	8.4%	2,140	1.7%
Kalamazoo County	530	17.0%	347	11.4%	291	9.3%	59	1.9%
City of Kalamazoo	300	21.4%	168	12.3%	155	11.0%	31	2.2%
Target Area Zip Codes Combined (49001, 49007, 49048)	234	23.6	135	13.5	128	12.4	29	2.8

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

**Table 13: Race and Hispanic Ethnicity of Women Giving Birth
in Michigan, Kalamazoo County, and Target Area, 2005**

Geographic Area	White moms		Black moms		Hispanic moms	
	Births	Percent	Births	Percent	Births	Percent
Michigan	99,117	77.7%	22,365	17.5%	8,396	6.6%
Kalamazoo County	2,437	78.2%	576	18.5%	201	6.5%
City of Kalamazoo	918	65.3%	444	31.6%	117	8.4%
Target Area Zip Codes Combined (49001, 49007, 49048)	655	63.5	360	34.9	98	9.5

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

**Table 14: Maternal Characteristics of Women Giving Birth
in Michigan, Kalamazoo County, and Target Area, 2005**

Geographic Area	Births to teens (<20)		Births to unmarried moms		Births to moms 25 years and older with less than HS diploma or GED	
	Births	Percent	Births	Percent	Births	Percent
Michigan	11,994	9.4%	46,824	36.7%	7,183	8.6%
Kalamazoo County	301	9.7%	1,207	38.7%	113	5.5%
City of Kalamazoo	192	13.7%	755	53.7%	69	9.1%
Target Area Zip Codes Combined (49001, 49007, 49048)	139	13.5	569	55.2	61	10.8

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

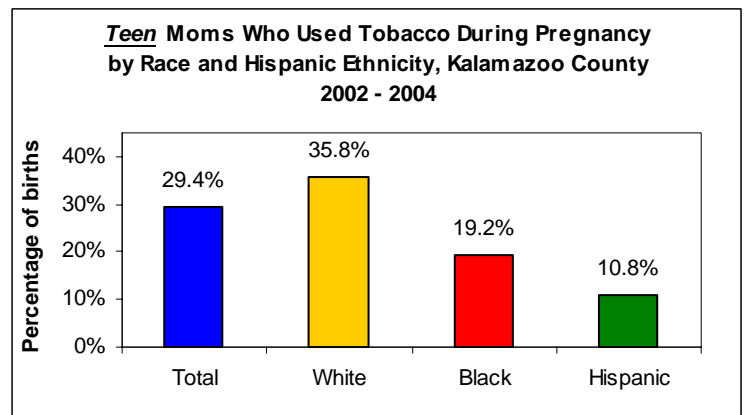
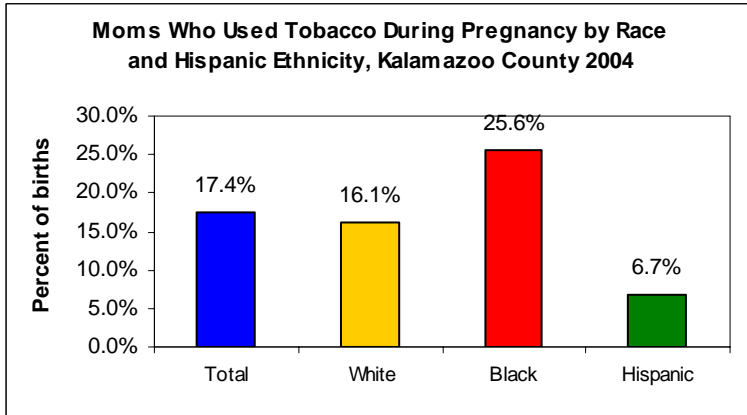
9.8.3 Epidemiology of Maternal Smoking Fact Sheet, 2006

(Fact sheet on the following page.)

Epidemiology of Maternal Smoking in Kalamazoo County

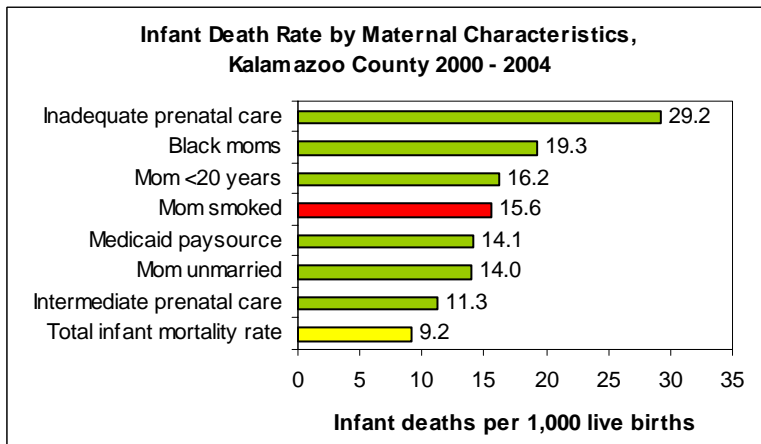
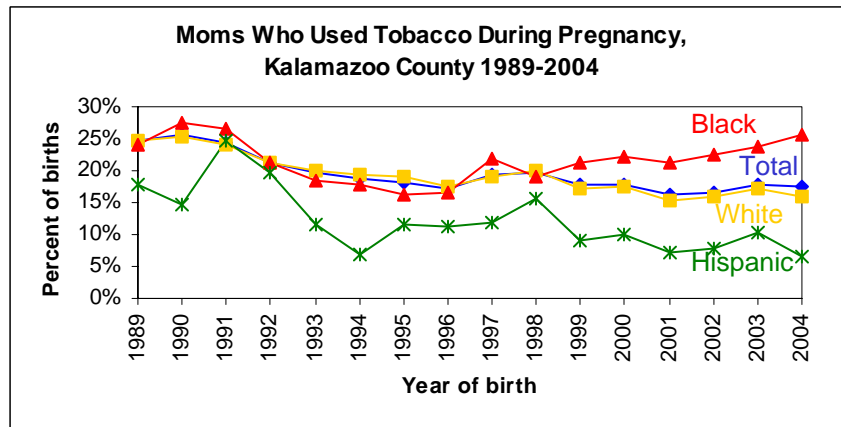
Maternal/Infant Health Professionals Training: Pregnancy and Smoking

Smoking Rates Among Moms Giving Birth in 2004 in Kalamazoo County and Michigan



Group giving birth		Total	White	Black	Hispanic
Kalamazoo County	All moms	17.4%	16.1%	25.6%	6.7%
	Teen moms*	29.4%	35.8%	19.2%	10.8%
Michigan	All moms	14.3%	15.0%	13.1%	5.7%
	Teen moms*	22.3%	29.1%	8.7%	8.2%

*2002 - 2004 average for teens



Adult Smoking Prevalence in Kalamazoo County, 2004

	Current Smokers
All adults	24.3%
Age	
18-24 years	38.0%
25-34 years	27.7%
35-44 years	19.6%
Sex	
Females	24.3%
Race	
White (male and female)	22.7%
Black (male and female)	35.1%

Sources: Michigan Department of Community Health, Division for Vital Records and Health Data Development, Live Birth File and Infant Death File; Kalamazoo County 2004 - 2005 Behavioral Risk Factor Survey.

Revised 2/13/07

