

2005 Berrien County Behavioral Risk Factor Survey



Health risk behaviors in
Berrien County compared to
Michigan and national figures

Acknowledgements

Data were collected for the 2005 Berrien County Behavioral Risk Factor Survey by the Institute for Public Policy and Social Research, Office for Survey Research, at Michigan State University. We are grateful to Larry Hembroff, Debra Rusz and the project teams who assisted them both. Projects of this magnitude are possible through a cooperative effort.

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Letter to Citizens of Berrien County

To the citizens of Berrien County:

We are grateful to the nearly 1,000 residents of Berrien County who gave up their time and a degree of their privacy for the larger goal of helping assess the current state of health in Berrien County. Health assessment is one of the three core functions of public health. At the local level, health assessment is centered on vital records such as birth and death certificate information. Analyses of these data sources have produced results that describe such things as maternal/child health, and overall causes of death. There are limited sources of health data that provide information on health behaviors and illness in the county. This is why the Berrien County Health Department administered a Behavioral Risk Factor Survey (BRFS). This survey was conducted to give a sense of the behaviors (smoking, obesity, disability) that lead to negative health outcomes and to produce prevalence estimates of certain diseases.

On an annual basis the Centers for Disease Control & Prevention (CDC) conduct a similar survey as part of their Behavioral Risk Factor Surveillance System (BRFSS). Each state is responsible for collecting their own data through the use of surveys that are then sent to the CDC to collate for national estimates. The surveys are random digit dial telephone interviews that are conducted throughout a given calendar year. In 2005, the Berrien County Health Department contracted with the Institute for Public Policy and Social Research (IPPSR) at Michigan State University (MSU) to survey 750 residents, up from 400 in 2002. Berrien County residents who were surveyed for the statewide BRFS were added to the Berrien County BRFS data yielding a total of 993 resident interviews. Results of the Berrien County BRFS closely fall in line with the findings at the state and national level—with a few surprises. The lack of health coverage seems to be a main contributor to access problems in Berrien County. There is also a significantly higher percentage of residents in Berrien County who are classified as obese compared to the state.

The results of this survey will be used by the Health Department and other various human service agencies in program planning initiatives. Thank you for your participation in this important public health endeavor.

Sincerely,
Laura E. Miles, M.P.H.
Epidemiologist
Berrien County Health Department

Methodology

Berrien County Health Department contracted with the Institute for Public Policy and Social Research (IPPSR) at Michigan State University (MSU) to obtain a sample of random telephone numbers, conduct the telephone interviews, and make initial data adjustments (data weighting). The survey itself was a hybrid of the 2005 Michigan survey with certain modules added and deleted. Data was collected between April 28, 2005 through December 15, 2005. The Behavior Risk Factor Survey (BRFS) is a survey of adults aged 18 years and older.

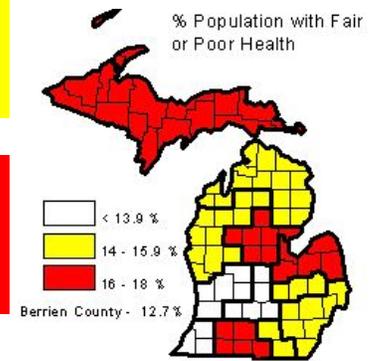
Every year a small percentage of Berrien County residents are surveyed through Michigan's BRFS efforts. In this project, 750 Berrien County residents were interviewed with the Berrien hybrid survey, and 243 Berrien County residents were interviewed through the Michigan survey as part of the state's efforts. Responses from both surveys were collated together, making the overall Berrien sample 993. Certain questions were asked to all 993 while other questions were only posed to 750 based on what survey was used.

The sample was created by using a random-digit-dial sampling procedure. African Americans and for the first time Hispanics were over-sampled in the 750 Berrien County specific sample to ensure the ability to do racial or ethnicity comparisons. Once the data was collected, it was weighted based on the probability of the telephone number being selected and the probability of an individual being selected in a given household. The overall response rate was 49.3%, the cooperation rate was 75.7%, and the refusal rate was 9.0%.

Estimates calculated are based on respondents who answered the question. Those who refused or did not know were excluded from the analysis. The stratification analyses are based on each given subgroup independent of other subgroups within that particular demographic. One particular analysis challenge was too few respondents under the age of 18 or minority populations reporting for certain risk behaviors. In the event that too few respondents reported a specific health behavior an asterisk * is used to indicate a population estimate is unavailable.

Perceived Health Status

Percentage of Berrien County who said their overall health was fair or poor.



MDCH Regional Estimates 2000–2004¹

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Fair or Poor Health	18.8%	18.6%	15.1	14.9

	General Health Fair or Poor ^a 2005	
	%	95% C.I.
Total	18.6	(15.3 - 22.3)
Age		
18- 50 years	10.8	(7.6 - 15.1)
45-54 years	18.4	(12.2 -26.8)
55-64 years	27.3	(19.0 - 37.7)
65-74 years	22.9	(14.6 - 34.0)
75 years +	43.3	(29.6 - 58.1)
Gender		
Male	15.1	(10.9 - 20.5)
Female	21.5	(17.0 - 26.8)
Race/Ethnicity		
White	17.0	(13.5 - 21.3)
Black	28.7	(20.4 - 38.7)
Hispanic	18.4	(15.1 - 22.2)
Education		
HS Graduate or Less	43.0	(30.7 - 56.3)
HS Graduate	15.8	(11.3 - 21.7)
At Least Some College	11.1	(8.1 - 15.0)
Income		
LT 20K	36.5	(27.0 - 47.2)
20K-34,999	19.4	(12.8 -28.2)
35K+		*

^a Among all respondents, the proportion who reported that their health, in general, was either fair or poor.

* Too few respondents who reported Fair or Poor Health in sub population.

Berrien County residents were asked to rate their overall health. Respondents ranked their own health as excellent, very good, good, fair or poor.

A higher percentage of residents who were older adults (75+) ranked their health as fair or poor. Similarly, adults who completed high school or less or earned less than \$20,000 a year reported a low self perception of health status.

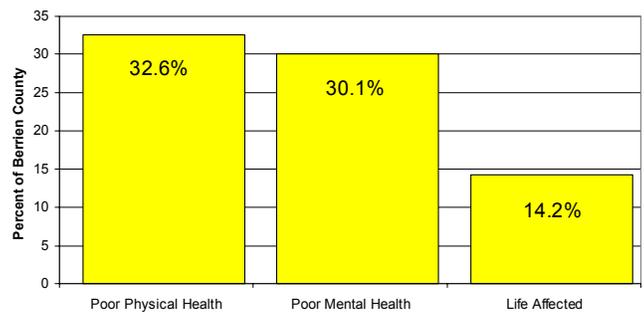
Although this question is subjective and is influenced by the physical or mental health of the respondent at the time of the question, perceived health status is recognized as a reliable and valid Quality of Life indicator.

According to regional estimates, Berrien County ranks among the highest for having a better perception of health when compared to other regions.¹

Interest in using this broad, subjective question dates from the mid-20th century, and stemmed from the realization that mortality was too insensitive to use as a health care outcome indicator in developed countries, that health has physical, mental, social and

spiritual dimensions; and that patients' perspectives of their health and health outcomes should be assessed. This was given impetus by the World Health Organization's abstract conceptualization of health in its 1946 constitution as "a state of complete physical, mental and social wellbeing, and not merely the absence of disease and infirmity", and by subsequent investigations of lay definitions of health, and variations in illness behavior.²

Poor Health in Past 30 Days, Berrien County 2005



Healthy Days

Percentage of Berrien County who reported poor mental or physical health in the past month.

	Poor Physical Health ^a		Poor Mental Health ^b		Life Affected ^c	
	2005		2005		2005	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	32.6	(25.1 - 41.1)	30.1	(23.1 - 38.1)	14.2	(10.2 - 19.6)
Age						
18 - 54 years	25.1	(16.5 - 36.2)	26.1	(18.5 - 35.5)	11.1	(7.0 - 17.1)
55+ years	45.7	(33.6 - 58.5)	32.0	(22.4 - 43.4)	20.4	(12.6 - 31.1)
Gender						
Male	26.2	(14.5 - 42.7)	34.9	(26.4 - 44.6)	9.4	(4.7 - 17.8)
Female	36.4	(27.5 - 46.5)	18.4	(9.2 - 33.6)	17.3	(11.8 - 24.7)
Race/Ethnicity						
White	30.3	(22.1 - 40.0)	28.9	(20.9 - 38.5)	12.0	(7.8 - 18.1)
Black	49.7	(32.8 - 66.6)	37.3	(24.0 - 32.8)	27.9	(16.6 - 42.9)
Hispanic	*		*		*	
Education						
HS Graduate or Less	24.1	(15.1 - 36.1)	39.0	(26.5 - 53.2)	20.8	(14.0 - 29.6)
At Least Some College	29.4	(16.8 - 46.1)	28.2	(16.5 - 43.9)	*	
Income						
LT 34,999K	37.8	(27.4 - 49.4)	36.1	(25.9 - 47.9)	22.2	(15.0 - 31.5)
35,000K +	*		*		*	

^a Among all respondents, the proportion who reported 15 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.

^b Among all respondents, the proportion who reported 15 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.

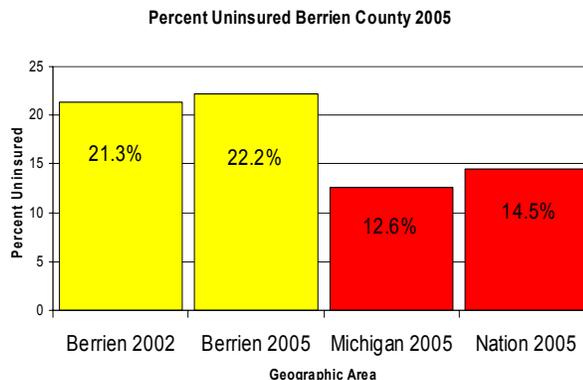
^c Among all respondents, the proportion who reported 15 or more days that poor physical or mental health kept them from doing usual activities, which includes self-care, work or recreation.

* Too few respondents who reported poor physical or mental health in sub population.

It is evident that mental health is fundamentally interconnected with health outcomes. For example depression is a risk factor for cancer and heart disease. Unfortunately, in many communities around the U.S. mental health is not considered to be anywhere near the same degree of importance as physical health. Nearly a third of Berrien County reported more than two weeks of poor mental (30.2%) and physical health (32.6%) in the past month. The highest percentages of life being affected by poor mental or physical health were among women, residents over 55 years and the African American race. There are a number of effective interventions that have been shown to reduce the burden of both mental and physical disease among these populations. For this reason, it is dually important that health professionals as well as residents recognize that mental health influences a number of health behaviors (e.g. proper diet, adequate exercise, and avoiding cigarettes, excessive alcohol and risky sexual practices) which impact their overall health.³

Health Care Coverage

Percentage of Berrien County reporting no healthcare coverage.



% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
No Health Coverage	21.3 %	22.2 %	12.6 %	14.5 %

	No Health Care Coverage (Among 18-64 year olds) ^a		No Personal Health Provider ^b		No Health Care Access During Past 12 Months Due to Cost ^c	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	22.2	(17.5 - 27.7)	20.0	(16.0 - 24.7)	17.1	(13.5 - 21.5)
Age						
18 - 34 years	39.9	(29.1 - 51.7)	33.9	(23.8 - 45.6)	30.1	(20.5 - 41.9)
35 - 54 years	14.2	(10.0 - 19.8)	21.5	(15.6 - 28.9)	16.5	(11.6 - 22.9)
55+ years	*		*		*	
Gender						
Male	18.1	(12.0 - 26.4)	24.8	(18.3 - 32.7)	14.0	(9.1 - 21.0)
Female	26.1	(19.6 - 33.9)	15.7	(11.2 - 21.4)	19.9	(15.0 - 25.9)
Race/Ethnicity						
White	21.1	(16.0 - 27.4)	19.1	(14.6 - 24.5)	15.5	(11.6 - 20.3)
Black	31.4	(19.7 - 46.2)	28.5	(19.2 - 40.1)	28.5	(18.2 - 41.8)
Hispanic	*		*		*	
Education						
HS Graduate or Less	32.8	(24.8 - 41.9)	24.8	(18.7 - 32.1)	78.1	(70.9 - 83.9)
HS Graduate	26.0	(18.1 - 35.8)	24.6	(17.8 - 33.0)	81.3	(73.7 - 87.1)
At least some College	11.9	(8.1 - 17.2)	14.8	(10.2 - 20.9)	12.0	(8.4 - 16.8)
Income						
LT 20K	46.7	(33.6 - 60.4)	28.2	(18.7 - 40.1)	67.8	(56.3 - 77.4)
20K-34,999	26.4	(17.0 - 38.7)	*		*	
20K-49,999	22.6	(15.9 - 31.1)	19.0	(13.5 - 26.1)	16.8	(11.5 - 23.7)

^a Among those aged 18-64, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare.

^b Among all respondents, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider.

^c The proportion who reported that in the past 12 months, they could not see a doctor when they needed to due to the cost.

* Too few respondents who reported no coverage, personal provider or unaffordable health care.

The largest challenge of Berrien County residents to receive timely health care is having the ability to afford health insurance. Residents who are among the lowest income earners are the least likely to have any health coverage. A comparison of the uninsured Berrien County residents is significantly higher than state and national estimates. The advent of a county health plan in 2005 aims to reduce this gap and provide residents with a personal health provider. The most robust indicator of a person accessing health care is whether or not an individual has a personal health provider.⁴ County-wide only 20% of the population reports having a personal health provider.

Cigarette Consumption

Percentage of Berrien County currently smoking.



MDCH Regional Estimates 2000– 2004¹

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Current Smokers	23.7%	26.0%	22.0%	20.6%

	Current Smoker ^a 2005		Former Smoker ^b 2005		Never Smoked 2005		Quit Attempt ^d 2005	
	%	95% C.I.	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	26.0	(21.7 - 30.7)	26.1	(22.1 - 30.5)	48.0	(43.1 - 52.8)	62.6	(52.1 - 72.1)
Age								
18-34 years	42.2	(31.4 - 53.9)	*		46.4	(35.5 - 57.6)	71.9	(51.9 - 85.9)
35-54 years	20.2	(15.3 - 26.2)	26.5	(20.0 - 34.3)	53.3	(45.8 - 60.7)	54.1	(39.6 - 68.0)
55-74 years	24.2	(17.6 - 32.4)	39.2	(31.5 - 47.5)	36.6	(29.5 - 44.3)	58.6	(40.8 - 74.4)
75 years +	*		33.1	(22.0 - 46.5)	57.1	(42.4 - 70.7)	*	
Gender								
Male	26.0	(19.6 - 33.6)	33.2	(26.5 - 40.7)	40.8	(33.4 - 48.6)	61.3	(44.8 - 75.5)
Female	25.8	(20.4 - 32.1)	19.8	(15.6 - 24.8)	54.4	(48.2 - 60.5)	63.5	(49.9 - 75.2)
Race/Ethnicity								
White	25.2	(20.6 - 30.5)	27.5	(23.1 - 32.4)	47.3	(41.9 - 52.7)	59.4	(47.9 - 69.9)
Black	31.5	(20.5 - 45.1)	18.2	(10.8 - 28.9)	50.3	(38.7 - 61.9)	71.9	(37.5 - 91.6)
Hispanic	*		*		54.7	(30.4 - 77.0)	*	
Education								
Less than HS	45.5	(32.3 - 59.2)	*		36.5	(24.8 - 50.2)	63.8	(40.7 - 81.9)
HS Graduate	30.7	(23.6 - 38.9)	26.1	(19.5 - 33.9)	43.2	(35.3 - 51.5)	57.8	(42.6 - 71.6)
Some college	19.5	(13.5 - 27.2)	27.7	(20.2 - 36.7)	52.8	(43.7 - 61.7)	63.8	(44.4 - 79.5)
College graduate	*		31.5	(23.6 - 40.5)	59.6	(50.4 - 68.1)	*	
Income								
LT 20K	44.2	(33.7 - 55.2)	20.9	(14.1 - 29.8)	34.9	(25.7 - 45.5)	65.0	(47.1 - 79.4)
20K-34,999	33.3	(23.9 - 44.1)	25.7	(17.6 - 35.9)	41.0	(31.9 - 50.8)	64.7	(49.2 - 77.6)
35K-49,999	22.1	(13.9 - 33.4)	25.0	(16.7 - 35.7)	52.8	(41.3 - 64.1)		
50K-79,999	16.2	(8.5 - 28.9)	41.3	(27.9 - 56.0)	42.5	(30.0 - 56.0)		
75K+	*		29.3	(19.8 - 41.1)	63.2	(50.9 - 74.1)	*	

^a The proportion who reported that they smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

^b The proportion who reported that they smoked at least 100 cigarettes (5 packs) in their life, but they do not smoke cigarettes now.

^c Among all respondents, the proportion who have never smoked 100 cigarettes, nor do they smoke cigarettes now.

^d The proportion of current smokers, during the past 12 months, who have stopped smoking for one day or longer because you were trying to quit smoking.

* Too few respondents in sub population.

Cigarette Consumption

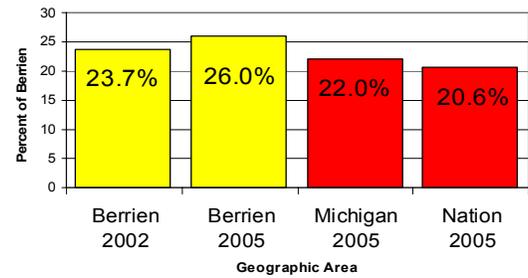
Numerous studies have demonstrated since the early 1900's the lethal effect of smoking on people who smoke and now more than ever evidence clearly illustrates the same effects of environmental smoke on non-smokers. The majority of Berrien County residents are non-smokers, with only 26% currently smoking. Most residents recognize the importance of avoiding cigarette smoke; among cigarette users, 62.5% have tried to quit in the last year. Berrien County residents (non-smokers and smokers) spent over \$55 million in direct health care costs related to smoking in 2003.⁵

Across the nation and state communities are becoming smoke-free. As of April 2006 there are 16 states with 100% smoke-free laws currently in effect for at least one of three areas: workplaces, restaurants, bars. Overall, 461 municipalities in 33 states have laws currently in effect for workplaces, restaurants and bars.⁶ In Michigan, 13 counties are currently smoke-free with a number of counties actively creating a smoke-free community. The Healthy Berrien Consortium, a group comprised of the major health care organizations is taking on the leadership role in establishing a smoke-free Berrien County.

The results of creating a smoke-free Berrien County will be demonstrated in the following ways:

- Fewer lung and bronchus cancer cases (leading causes of cancer deaths in Berrien).
- Fewer cardiovascular deaths (leading cause of death in Berrien).
- Fewer emphysema cases (3rd leading cause of preventable hospitalizations).
- Fewer congestive heart failure cases (leading cause of preventable hospitalizations).
- Fewer other forms of cancer.

Current Smokers, Berrien County 2005

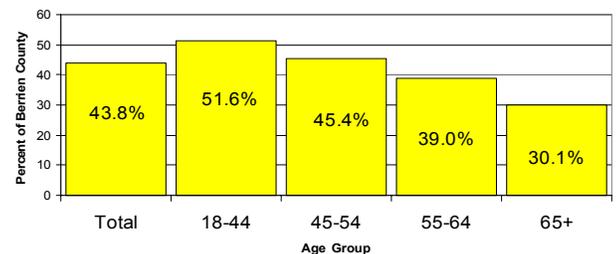


Physical Activity

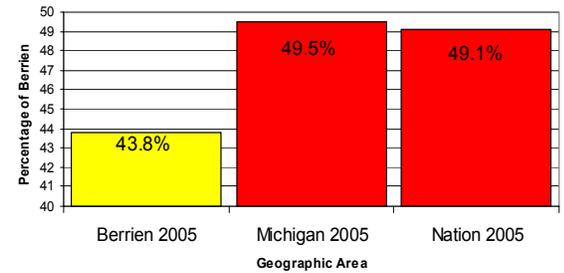
Regular physical activity has numerous benefits ranging from reducing high blood pressure to minimizing the risk of dying from heart disease. Importantly, many people fail to consider that physical activity does not need to be strenuous to be beneficial. Although there is little variation in the percent of Berrien County residents who reported no physical activity in 2002 (31.8%) compared to 2005 (27.8%), there is an increasing number of people who are participating in activities or exercises such as running, calisthenics, golf, gardening or walking outside of their regular job.

The Centers for Disease Control & Prevention recommends moderate physical activity for at least 30 minutes a day for 5 or more days of the week. In Berrien County, 1/3 (33.6%) of the community are successful with this recommendation. Alternatively, adults can engage in vigorous physical activity for at least 20 minutes a day for 3 or more days of the week and achieve the same health benefits. In Berrien County, 43.8% of adults comply with the recommendations of moderate or vigorous activity. Those who reported achieving the recommended physical activity typically earn higher incomes, have a higher education and are male. Subpopulations within Berrien County that need encouragement in completing the recommended physical activities are females, the Hispanic ethnicity and residents who earn less than \$20,000 a year.

Percent Compliant with Physical Activity Recommendations
Berrien County 2005



Moderate or Vigorous Physical Activity
Berrien County 2005



Physical Activity

Percentage of Berrien County complying with physical activity recommendations (Moderate or Vigorous).

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Moderate or Vigorous Physical Activity	N/A	43.8%	49.5%	49.1%

	No Physical Activity ^a		Moderate Activity ^b		Vigorous Activity ^c		Complies with Moderate or Vigorous Physical Activity ^d	
	%	95% C.I.	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	27.8	(23.5 - 32.5)	33.6	(29.2 - 38.4)	28.4	(24.0 - 33.2)	43.8	(39.1 - 48.7)
Age								
18 -44 years	21.7	(15.3 - 29.8)	38.0	(30.4 - 46.2)	36.2	(28.6 - 44.6)	51.6	(43.3 - 59.8)
25-34 years	20.6	(12.1 - 33.0)	33.5	(22.9 - 46.2)	42.4	(29.8 - 56.1)	54.7	(41.4 - 67.3)
35-44 years	17.2	(10.7 - 26.6)	42.9	(32.0 - 54.4)	32.1	(22.9 - 43.0)	54.5	(43.3 - 65.4)
45-54 years	22.8	(15.9 - 31.6)	39.3	(29.8 - 49.7)	31.2	(22.3 - 41.7)	45.4	(35.6 - 55.5)
55-64 years	28.3	(19.4 - 39.3)	26.6	(18.7 - 36.4)	*		39.0	(28.8 - 50.1)
65 years +	45.0	(35.6 - 54.7)	23.0	(16.7 - 30.9)	*		30.1	(22.8 - 38.5)
Gender								
Male	24.3	(18.3 - 31.5)	36.0	(28.8 - 43.8)	33.2	(26.0 - 41.2)	48.0	(40.4 - 55.7)
Female	30.8	(25.1 - 37.2)	31.8	(26.5 - 37.6)	24.1	(19.3 - 29.7)	40.4	(34.7 - 46.4)
Race/Ethnicity								
White	27.2	(22.4 - 32.6)	35.5	(30.5 - 40.9)	27.8	(23.1 - 33.0)	44.2	(38.9 - 49.7)
Black	34.8	(25.2 - 45.7)	21.8	(14.4 - 31.5)	29.5	(18.7 - 43.2)	41.1	(29.9 - 53.4)
Hispanic	*		*		*		32.4	(16.2 - 54.5)
Education								
Less than HS	51.7	(38.5 - 64.8)	*		*		*	
HS Graduate	32.9	(25.6 - 41.2)	28.4	(21.7 - 36.3)	18.7	(13.3 - 25.7)	35.1	(27.8 - 43.2)
Some college	16.8	(11.2 - 24.4)	43.7	(34.8 - 53.0)	40.7	(31.8 - 50.2)	54.7	(45.8 - 63.4)
College graduate	*		42.9	(34.1 - 52.1)	35.3	(26.9 - 44.7)	55.2	(46.4 - 63.7)
Income								
LT 20K	36.7	(26.7 - 47.9)	24.0	(16.6 - 33.5)	*		30.1	(21.8 - 39.9)
20K-34,999	31.0	(22.5 - 40.9)	32.6	(23.7 - 42.8)	30.3	(21.3 - 41.1)	45.8	(36.0 - 56.0)
35K-74,999	20.2	(14.1 - 28.3)	39.1	(28.4 - 51.0)	*		52.8	(43.9 - 61.6)
35K-49,999	*		*		*		48.3	(37.0 - 59.8)
50K-74,999	*		*		*		57.7	(44.1 - 70.2)
75K+	*		51.2	(38.9 - 63.3)	44.4	(32.2 - 57.3)	57.7	(23.8 - 47.2)

^a Among all respondents, the proportion who reported not participating in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise.

^b Among respondents, the proportion who reported moderate physical activities for at least 30 minutes, 5 times per week.

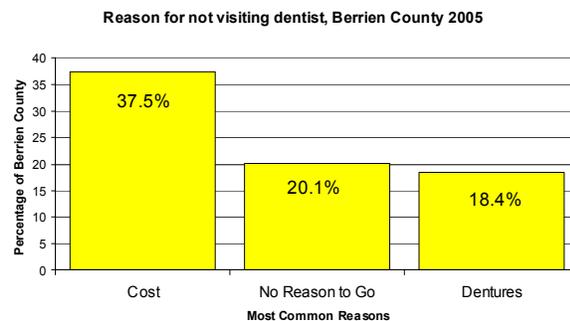
^c Among all respondents, the proportion who reported vigorous physical activity for 20 minutes, 3 times per week.

^d Among all respondents, the proportion who are physical active for the recommended time each week.

* Too few respondents who reported no physical activity in subpopulation.

Oral Health

Percentage of Berrien County who did not have dental coverage.



% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
No Dental Insurance	54.6	48.6	N/A	N/A

	No Dental Visit in Past Year ^a		No Dental Clean in Past Year ^b		No Dental Insurance ^c		
	%	95% C.I.	%	95% C.I.	%	95% C.I.	
Total	32.4	(27.0 - 38.3)	36.9	(31.3 - 42.9)	48.6	(42.7 - 54.5)	
Age							Age
18-34 years	32.2	(20.0 - 46.6)	39.6	(26.7 - 54.1)	*		18-24 years
35-54 years	29.7	(22.1 - 38.6)	31.4	(23.7 - 40.2)	51.4	(40.3 - 62.4)	25-34 years
55-74 years	29	(20.6 - 39.3)	36.7	(27.6 - 46.9)	40.7	(31.7 - 50.4)	35-44 years
75+ years		*		*	33.4	(26.1 - 41.7)	45-54 years
					46.5	(37.9 - 55.3)	55-64 years
					64.1	(54.9 - 72.5)	65-74 years
					69.1	(58.0 - 78.4)	75 years +
Gender							
Male	28.5	(21.0 - 37.4)	31.2	(23.4 - 40.3)	39.3	(30.6 - 48.8)	
Female	36.3	(29.2 - 44.1)	42.3	(34.9 - 50.0)	56.9	(46.3 - 63.8)	
Race/Ethnicity							
White	32.1	(26.1 - 38.8)	35.8	(29.6 - 42.5)	50.6	(43.9 - 57.2)	
Black	38.7	(26.3 - 52.7)	49.5	(35.2 - 63.8)	48.8	(34.7 - 63.1)	
Hispanic		*		*	65.2	(39.9 - 84.5)	
Education							
Less than HS	56.8	(39.3 - 72.7)	66.0	(48.0 - 80.3)	73.5	(58.0 - 84.7)	
HS Graduate	41.2	(31.8 - 51.2)	45.9	(36.1 - 56.0)	48.8	(38.9 - 58.8)	
Some college	23.5	(15.7 - 33.7)	26.7	(18.4 - 36.9)	42.7	(32.6 - 53.5)	
College graduate		*		*	37.1	(27.1 - 48.3)	
Income							
LT 20K	56.0	(43.4 - 67.9)	63.5	(56.0 - 70.3)	74.9	(64.5 - 83.1)	
20K-34,999	43.3	(31.4 - 56.0)	40.3	(32.6 - 48.5)	57.0	(44.0 - 69.1)	
35K+		*	20.6	(14.1 - 29.0)	27.1	(22.0 - 33.0)	

^a The proportion who reported that they had not visited a dentist or dental clinic for any reason in the past year.

^b The proportion who reported that they did not get their teeth cleaned in the past year.

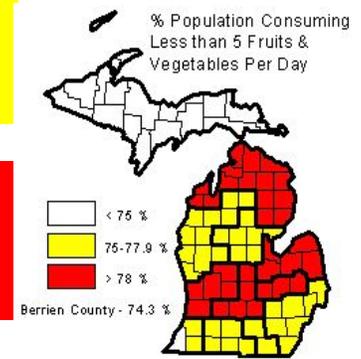
^c The proportion who reported that they do not have any dental insurance coverage.

* Too few respondents in subpopulation.

One of the top Ten Public Health Achievements of the 20th century was fluoridation of community drinking water. It remains the most equitable and cost effective method delivering fluoride to all, regardless of age, educational attainment or income level. Despite the decline in dental caries this largely preventable disease is still common. National data indicates that 94% of adults have experienced dental caries in their permanent teeth.⁷ In Berrien County, cost (37.5%), no reason to go (20.1%) and dentures (18.4%) were the most often reported reasons for delaying a dentist visit. Berrien County has fewer residents visiting a dentist in the past year (67.6%) compared to the state (76.9%) and nation.

Inadequate Fruit & Vegetable Consumption

Percentage of Berrien County who consumes less than 5 fruits and vegetables a day.



MDCH Regional Estimates 2000–2004¹

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Less than 5 per day	N/A	76.3%	77.2%	76.8%

Less than 5 Servings of Fruits & Vegetables Consumed per Day^a

	2005	
	%	95% C.I.
Total	76.3	(71.8 - 80.2)
Age		
18-24 years	77.9	(58.2 - 89.9)
25-34 years	74.6	(59.9 - 85.2)
35-44 years	79.0	(69.4 - 86.2)
45-54 years	78.1	(69.2 - 85.0)
55-64 years	79.4	(70.3 - 86.2)
65-74 years	73.6	(61.4 - 83.0)
75 years +	65.2	(49.3 - 78.3)
Gender		
Male	79.8	(72.4 - 85.6)
Female	73.2	(67.6 - 78.2)
Race/Ethnicity		
White	77.2	(72.4 - 81.4)
Black	69.3	(55.0 - 80.7)
Hispanic	75.9	(51.7 - 90.3)
Education		
Less than HS	76.0	(59.9 - 87.0)
HS Graduate	84.3	(77.9 - 89.1)
Some college	76.1	(68.1 - 82.6)
College graduate	63.3	(53.7 - 71.9)
Income		
LT 20K	79.6	(69.7 - 86.9)
20K-34,999	71.1	(60.4 - 79.9)
35K-49,999	81.5	(70.9 - 88.8)
50K-79,999	80.1	(69.0 - 87.9)
75K+	76.8	(66.2 - 84.8)

^a The proportion whose total reported daily consumption of fruits (including juice) and vegetables was less than 5 servings.

Five A Day for Better Health is a nation program that seeks to increase the number of daily servings of fruits and vegetables Americans eat to 5 or more.

Residents were asked how many servings of fruits and vegetables they usually ate during a week. Seventy-six percent of Berrien County failed to eat the recommended 5 servings a day.

Fruit and vegetable consumption is an important part of a health diet that is associated with the prevention of heart disease and may reduce the risk of cancer. Fruits and vegetables provide essential vitamins and minerals, fiber, and other substances that are important for good health. Most fruits and vegetables are naturally low in fat and calories and are filling. Most people believe that eating fruits and vegetables would make their lives healthier, so why isn't it done?

One argument is that fruits and vegetables are expensive, especially when purchased fresh. According to the USDA Economic Research Service, a consumer can meet the recommendations with as little as \$.64 a day. More than half of all the fruits and vegetables cost \$.25 or less per serving. Fruits and vegetables in their fresh form were least expensive when compared to their counter part.⁸

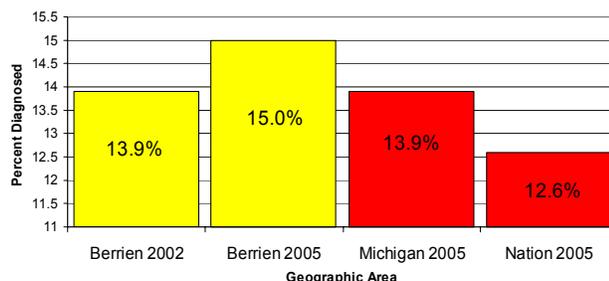
Berrien County's population is not significantly different from the state or nation. Regional estimates demonstrate Berrien County has a higher percentage of people consuming 5 fruits and

vegetables a day compared to other counties in our region, however the percent difference is not significant. Older adults 65 and older reported eating more fruits and vegetables than any other age group, but combined Berrien County residents lack in adequate fruit and vegetable servings.

Asthma

Percentage of Berrien County who have ever been told by a health professional they had asthma.

Ever Told That You Have Asthma
Berrien County, 2005



% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Ever diagnosed with asthma	13.9%	15.0%	13.9%	12.6%

	Ever Told Asthma ^a		Still Have Asthma ^b	
	2005	2005	2005	2005
	%	95% C.I.	%	95% C.I.
Total	15.0	(12.0 - 18.7)	9.5	(7.2 - 12.6)
Age				
18 - 44 years	13.1	(8.7 - 19.1)	*	
18 - 64 years	15.5	(12.0 - 19.8)	8.8	(6.3 - 12.3)
45 - 64 years	18.3	(13.1 - 24.9)	*	
65+ years		*	*	
Gender				
Male		*	*	
Female	19.6	(15.2 - 25.0)	12.8	(9.3 - 17.4)
Race/Ethnicity				
White	14.3	(11.0 - 18.4)	9.2	(6.6 - 12.7)
Black		*	*	
Hispanic		*	*	
Education				
HS Graduate or Less	15.7	(11.5 - 21.1)	10.5	(7.2 - 15.2)
At least some College	14.3	(10.3 - 19.6)		*
Income				
LT 34,999	16.5	(11.6 - 22.9)	13.9	(9.7 - 19.6)

^a Among all respondents, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.

^b The proportion who reported that they still had asthma.

* Too few respondents in subpopulation ever told they had asthma.

Science shows that asthma can be controlled. It has not shown what causes the disease or how it can be cured.

Medical records demonstrate that among Berrien County adults asthma is the 4th most common reason for preventable hospitalizations and the leading preventable hospitalization for patients under 18 years.

The hospitalizations are the result of unmanaged asthma. In the event of uncontrolled asthma, the lungs become inflamed and swollen. During an attack, muscles around the airway constrict, and less air passes in and out of the lungs. Excess mucus forms in the airways, clogging them even further.

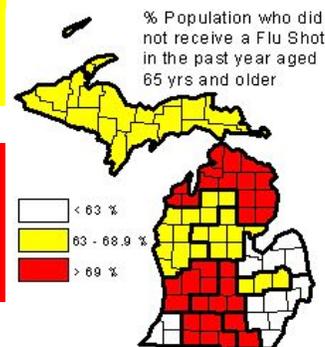
The National Heart, Lung and Blood Institute have developed a standard of care recognized by federal public health agencies, health-care providers, universities and nonprofit

organizations. Besides complying with prescribed medical regimens, asthmatics should avoid a variety of environmental exposures that may trigger attacks, such as house dust mites or environmental tobacco smoke.

It is estimated that 15% of Berrien County adults have been told by a doctor, nurse or other health care professional that they had asthma. Although there were too few minorities in Berrien County that reported being diagnosed by a doctor with asthma, the mortality rates nation wide illustrate the need for further asthma management education among low income minorities. Among all residents county-wide 9.5% reported that they still had asthma. The Southwest Michigan Asthma Coalition continues to provide asthma control courses and has worked to allow asthmatic students to have access to medication on school property in an effort to reduce the number of asthma related deaths.

Immunizations

Percentage of Berrien County receiving flu or pneumonia immunization in the past year, among residents 65 and older.



MDCH Regional Estimates 2000–2004¹

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Flu shot among adults 65+ years	N/A	61.7%	67.1%	65.7%

	Had Flu Shot in Past Year ^a		Ever Had Pneumonia Vaccine ^b	
	%	95% C.I.	%	95% C.I.
Total	61.7	(52.4 - 70.2)	64.2	(55.0 - 72.4)
Age				
65-74 years	45.8	(34.4 - 57.7)	53.8	(41.8 - 65.4)
75 years +	77.8	(63.9 - 87.4)	75.0	(62.1 - 84.5)
Gender				
Male	59.3	(45.0 - 72.1)	63.5	(52.7 - 75.0)
Female	63.2	(50.9 - 74.0)	64.7	(52.7 - 75.0)
Race/Ethnicity				
White	62.1	(51.8 - 71.3)	69.0	(59.3 - 77.3)
Black		*		*
Hispanic		*		*
Education				
High School Graduate or Less	63.1	(50.3 - 74.3)	62.6	(50.0 - 73.8)
At Least Some College	59.2	(45.9 - 71.3)	66.2	(52.8 - 77.5)
Income				
LT 35K	70.3	(52.0 - 88.6)	72.5	(57.3 - 83.9)
35K+		*		*

^a Among those aged 65 years and older, the proportion who reported that they had a flu shot or flu nasal spray during the past 12 months.

^b Among those aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine.

* Too few respondents who reported flu or pneumonia vaccine in subpopulation.

Over the past several years, public health agencies have had to deal with a number of immunization challenges ranging from a vaccine distribution delay, payor issues and multiple new vaccines and vaccine combinations.

The past 2005-2006 influenza season Berrien County Health Department vaccinated nearly 6,000 residents. At the largest clinic held this year, it was demonstrated that 200 people per hour could be processed and vaccinated.

In addition to the influenza vaccination there were 309 people that received a pneumonia vaccine. Pneumonia vaccines are generally given once.

Among elderly persons not living in nursing homes or similar chronic-care facilities, influenza vaccine is 30%--70% effective in preventing hospitalization for pneumonia and influenza.⁹ Among older persons who do reside in nursing homes, influenza vaccine is most effective in preventing severe illness, secondary complications, and deaths. Among this population, the vaccine can be 50%--60% effective in preventing influenza-related hospitalization or pneumonia and 80% effective in preventing influenza-related death, although the effectiveness in preventing influenza illness often ranges from 30% to 40%.¹⁰

There is virtually no difference between the number of people who received the influenza vaccine in 2002 compared to 2005, 73.5% and 73.1% respectively. Among the African American population it is estimated that 80.8% of the adult population did not receive influenza vaccine compared to their white (71.6%) and Hispanic (67.4%) counter parts in 2005. Berrien County high risk adults (65 and older) have less influenza vaccine coverage than Michigan and the United States. The Healthy People 2010 goal is to reach 90% annual influenza vaccination coverage among adults 65 years and older.

Diabetes

Percentage of Berrien County who have ever been told by a doctor that they had diabetes.

64.8%

Never taken course to manage diabetes

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Ever diagnosed with diabetes	11.3%	9.1%	8.1%	7.3%

	Ever Told Diabetes ^a 2005	
	%	95% C.I.
Total	9.1	(6.9 - 12.1)
Age		
Less than 65 years	6.1	(4.3 - 8.7)
65 years +	20.0	(13.0 - 29.5)
Gender		
Male	7.6	(5.0 - 11.4)
Female	10.5	(7.2 - 15.2)
Race/Ethnicity		
White	8.1	(5.7 - 11.4)
Black	12.0	(6.9 - 20.0)
Hispanic		*
Education		
HS Graduate or Less	12.8	(9.0 - 17.9)
HS Graduate or Higher	6.5	(4.6 - 9.0)
Income		
LT 35K	11.0	(7.1 - 16.6)

Diabetes is a disease in which blood glucose levels are above normal. The pancreas, an organ that lies near the stomach, makes a hormone called insulin to help glucose get into the cells of our bodies. When you have diabetes, your body either does not make enough insulin or can not use its own insulin as well as it should. This causes sugar to build up in your blood.

Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. Diabetes is the fifth leading cause of death in Berrien County.

Although diabetes is preventable and controllable 14,844 (9.1%) Berrien County residents have been told by a doctor that they had diabetes. The increasing burden of diabetes and its complications is alarming. However, much of this burden could be prevented with early detection, improved delivery of care, and better education on diabetes self-

^a The proportion who reported that they were ever told by a doctor that they have diabetes. Women who had diabetes during pregnancy were excluded from this estimate.

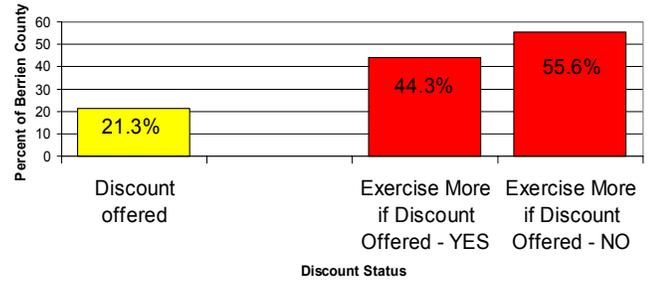
* Too few Hispanics ever told by doctor that they had diabetes.

management. Among diabetics in Berrien County 64.8% have never taken a course to manage diabetes. It is reported that 71% are taking pills to manage the disease and on average check their blood glucose 2 times per day. During 2005, the adult diabetic visited the doctor, specifically for diabetes 11 times on average.

Eating healthy, physical activity and blood glucose testing are the basic therapy for type 2 diabetes. People with diabetes should see a health care provider who will monitor their diabetes control and help them learn to manage their diabetes. In addition, people with diabetes may see endocrinologists, who may specialize in diabetes care; ophthalmologists for eye examinations; podiatrists for routine foot care; and dietitians and diabetes educators who teach the skills needed for daily diabetes management.

Berrien County remains higher than Michigan and the nation on the estimated number of people who have been diagnosed with diabetes. African American and adults 65 years and older are the most prevalent groups being diagnosed with diabetes in Berrien County.

Workplaces Offering Gym Discount
Compared To Employees Who Would Use Discount
Berrien County 2005



Weight Control

Percent of Berrien County trying to lose weight.

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Trying to lose weight	N/A	45.7%	44.9%	38.0%

	Trying to lose weight ^a		Physical activity to lose/maintain weight ^b		Diet change to lose/maintain weight ^c		Medical advice to lose weight ^d	
	%	95% C.I.	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	45.7	(39.8 - 51.6)	67.4	(61.0 - 73.2)	77.7	(71.0 - 83.2)	17.1	(13.5 - 21.5)
Age								
18 - 24 years	*		*		*			
18 - 29 years	52.9	(35.3 - 69.9)	82.6	(57.9 - 94.2)	62.1	(39.9 - 80.1)		
25 - 34 years	34.8	(22.1 - 50.2)	77.4	(57.0 - 89.8)	80.6	(63.8 - 90.7)		
35 - 44 years	63.5	(50.4 - 74.9)	76.4	(61.0 - 87.0)	78.3	(60.3 - 89.6)	*	
45 - 54 years	44.9	(33.6 - 56.7)	72.8	(60.2 - 82.6)	85.4	(75.0 - 91.9)		
55 - 64 years	48.3	(34.8 - 62.0)	58.6	(42.9 - 72.7)	81.7	(61.1 - 92.7)		
65+	29.1	(20.6 - 39.4)	41.4	(30.3 - 53.5)	75.4	(63.5 - 84.5)		
Gender								
Male	38.9	(30.2 - 48.5)	65.9	(54.8 - 75.4)	68.6	(56.8 - 78.4)	*	
Female	51.7	(44.4 - 58.9)	68.6	(60.9 - 75.3)	84.8	(77.5 - 90.1)	22.0	(16.8 - 28.4)
Race/Ethnicity								
White	46.0	(39.5 - 52.6)	67.3	(60.0 - 73.8)	77.7	(69.8 - 83.9)	14.0	(10.3 - 18.7)
Black	43.3	(30.2 - 57.4)	63.2	(49.1 - 75.3)	70.6	(56.1 - 81.8)	29.3	(18.7 - 42.7)
Hispanic	39.9	(18.7 - 65.7)	52.3	(23.4 - 79.7)	92.4	(84.1 - 96.6)	*	
Education								
Less than HS	43.4	(27.8 - 60.4)		*	69.6	(45.8 - 86.1)	15.2	(10.7 - 21.2)
HS Graduate	47.3	(37.5 - 57.3)	57.7	(46.2 - 68.4)	73.9	(61.2 - 83.6)		
Some college	41.9	(31.7 - 52.8)	76.2	(65.1 - 84.6)	79.4	(67.7 - 87.7)		
College graduate	51.1	(40.1 - 62.0)	82.9	(72.8 - 89.8)	86.9	(76.3 - 93.1)	19.0	(13.7 - 25.8)
Income								
LT 20K	57.5	(45.1 - 69.0)	59.3	(45.0 - 72.2)	76.5	(59.7 - 87.7)	32.9	(18.3 - 47.5)
20K-34,999	38.3	(27.6 - 50.3)	60.9	(47.0 - 73.3)	73.1	(58.4 - 84.0)		
35K-49,999	41.3	(28.5 - 55.4)	63.5	(47.7 - 76.8)	84.5	(71.2 - 92.3)		
50K-79,999	45.2	(28.4 - 63.2)	88.2	(67.9 - 96.4)	74.5	(50.4 - 89.4)	16.7	(12.1 - 22.4)
75K+	50.0	(35.8 - 64.2)	80.6	(65.2 - 90.2)	85.0	(69.0 - 93.5)		

^aAmong all respondents, those trying to lose weight.

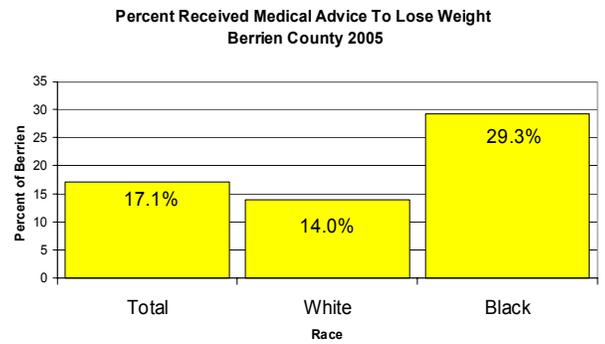
^bAmong respondents trying to lose weight, those who use physical activity to lose or maintain weight.

^cAmong respondents trying to lose weight, those who change their diet to lose/maintain weight.

^dAmong all respondents, those who were given medical advice to lose weight.

* Too few respondents in the subpopulation.

Weight Control



The struggle to lose weight is evident by the fact that nearly half (45.7%) of all Berrien County adults are currently trying to lose weight through exercise (67.4%), diet (77.7%) or a combination of the two. This is of course not always a personal decision; 17.2% of the adult population in Berrien County have been advised to lose weight by a medical professional. On January 12, 2005 the Department of Health & Human Services (DHHS) released the Dietary Guidelines for Americans, the federal government's science based advice to promote health through proper nutrition and physical activity.

The key recommendations continue to emphasize that in order to prevent gradual weight gain overtime, small decreases in food and beverage calories and an increase in physical activity is needed. The major change was the release of a re-configured food pyramid in coordination with the United States Department of Agriculture and DHHS. The pyramid accounts not only for food types but incorporates physical activity, variety, proportionality, moderation, and gradual improvement with a focus on personalization. The new pyramid, called-Mypyramid recognizes that not everyone meets the standard 2,000 calorie diet. Mypyramid continues to maintain the fundamental concept that weight control is a lifestyle decision and provides an interactive approach to personalizing daily food and exercise regimens. The food guidance system can be accessed through www.mypyramid.gov. Food groups that should be encouraged include:

- Sufficient fruit and vegetable consumption;
- Less than 10% of calories from saturated fat (< 300 mg/day cholesterol);
- Less than 2,300 mg (1 teaspoon of salt) of sodium per day;
- Moderate alcoholic beverages (1 beverage per day for women & up to 2 drinks per day for men).

Cholesterol Awareness

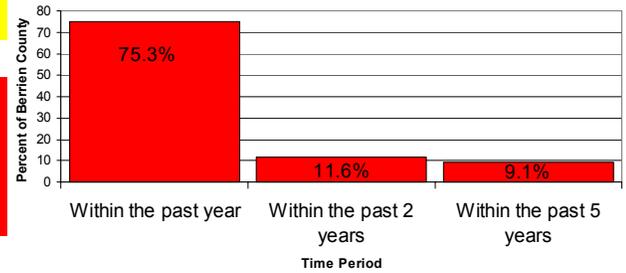
Total Cholesterol Levels (mg/dL)

Less than 200	Desirable
200-239	Borderline High
240 and above	High

Cholesterol is a modifiable risk factor, shown to reduce the incidence of heart disease by as much as 30%.¹¹ The process of modifying both bad and good cholesterol is through diet changes, increasing physical activity, weight control, drug therapy or a combination thereof.

Cholesterol awareness should start in early adulthood. Healthy People 2010 has set national goals to reflect this important health status indicator. High-risk adults 20 years and older with a total blood cholesterol level greater than or equal to 240 mg/dL should not exceed 17% of the population. Additionally at least 80% of the adult population should have checked their cholesterol within the past 5 years. Berrien County has the same percentage of adults with high cholesterol as the nation, 35.6% and is slightly better off when compared to Michigan adults. County-wide 79.3% of Berrien have had their cholesterol checked. Among the various subpopulations within Berrien County, the Hispanic population has fewer people checking their cholesterol when compared to Non-Hispanics. All residents combined earning greater than \$35,000, had a much lower percentage of high cholesterol compared to other residents. As residents age increased a higher percentage reported a being told by a doctor that they had high cholesterol.

The Last Time Cholesterol Level Was Checked
Berrien County 2005



Cholesterol Awareness

Percentage of Berrien County who have ever been told that they had high cholesterol.

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Told had high cholesterol	N/A	35.6%	38.9%	35.6%

	Cholesterol Ever Checked ^a		Cholesterol Checked in Past 5 Years ^b		Told had High Cholesterol ^c	
	2005		2005		2005	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	79.3	(74.7 - 83.3)	96.0	(93.0 - 97.7)	35.6	(30.8 - 40.8)
Age						
18-44 years	64.4	(55.9 - 72.2)	93.1	(86.5 - 96.6)	*	
25-34 years	61.3	(47.4 - 73.5)	92.5	(75.7 - 97.7)	*	
35-44 years	81.4	(71.7 - 88.3)	91.6	(82.2 - 96.3)	*	
45-54 years	83.1	(74.1 - 89.4)	96.8	(86.9 - 99.3)	30.9	(22.3 - 41.2)
55-64 years	96.7	(90.7 - 98.8)	94.2	(83.6 - 98.1)	48.2	(37.1 - 59.4)
65-74 years	96.5	(90.1 - 98.8)	100.0		55.1	(42.8 - 66.7)
75 years +	89.6	(78.3 - 95.4)	100.0		41.1	(28.0 - 55.5)
Gender						
Male	76.7	(68.9 - 83.0)	95.9	(90.8 - 98.2)	35.0	(27.4 - 43.5)
Female	81.6	(76.1 - 86.1)	96.0	(91.7 - 98.1)	36.1	(30.2 - 42.6)
Race/Ethnicity						
White	79.7	(74.4 - 84.1)	95.3	(91.8 - 97.3)	34.8	(29.7 - 40.3)
Black	73.8	(62.2 - 82.8)	100.0	-	38.1	(24.7 - 53.7)
Hispanic	61.8	(43.5 - 85.6)	98.3	(95.2 - 99.4)	*	
Education						
Less than HS	82.6	(70.5 - 90.5)	94.0	(81.8 - 98.2)	45.6	(30.8 - 61.3)
HS Graduate	69.4	(60.4 - 77.1)	97.1	(92.3 - 99.0)	35.1	(26.9 - 44.1)
Some college	80.4	(71.9 - 86.8)	96.1	(87.6 - 98.8)	30.2	(22.7 - 39.0)
College graduate	91.7	(85.0 - 95.5)	95.8	(90.0 - 98.3)	35.5	(27.4 - 44.6)
Income						
LT 20K	77.5	(66.0 - 86.0)	96.1	(87.9 - 98.8)	46.1	(34.6 - 58.0)
20K-34,999	71.2	(60.6 - 79.9)	93.9	(83.1 - 97.9)	33.9	(24.3 - 45.0)
35K-49,999	79.6	(69.4 - 87.0)	91.0	(76.6 - 96.9)		
50K-79,999	91.8	(79.3 - 97.0)	99.4	(96.6 - 99.9)	28.1	(21.9 - 35.2)
75K+	89.1	(75.5 - 95.6)	98.6	(94.0 - 99.7)		

^a Among all respondents, the proportion who reported ever having had their blood cholesterol checked.

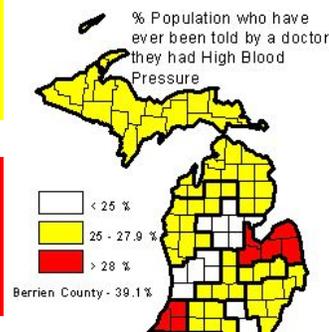
^b Among those who ever had their blood cholesterol checked, the proportion who reported that they have had their blood cholesterol checked within the past five years.

^c Among those who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional had told them that their cholesterol was high.

*Too few respondents in subpopulation.

Hypertension Awareness

Percentage of Berrien County ever told that they had high blood pressure.



MDCH Regional Estimates 2000–2004¹

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
High Blood Pressure	N/A	30.8%	27.8%	25.5%

	Ever Told High Blood Pressure ^a		Taking Medication ^b	
	%	95% C.I.	%	95% C.I.
Total	30.8	(26.7 - 35.3)	79.6	(72.1 - 85.4)
Age				
18-44 years	11.4	(7.6 - 16.8)	*	
45-54 years	27.2	(19.0 - 37.2)	76.5	(54.4 - 89.8)
55-64 years	44.6	(34.4 - 55.2)	87.0	(64.0 - 98.4)
65-74 years	52.6	(40.6 - 64.3)	92.5	(81.1 - 96.8)
75 years +	76.0	(64.1 - 84.9)	95.1	(95.1 - 100.0)
Gender				
Male	29.3	(23.3 - 36.1)	70.5	(57.2 - 81.0)
Female	32.1	(26.6 - 38.0)	86.8	(79.7 - 91.7)
Race/Ethnicity				
White	30.1	(25.5 - 35.1)	79.6	(71.2 - 86.0)
Black	33.8	(24.1 - 45.1)	74.4	(52.1 - 88.6)
Hispanic		*		*
Education				
Less than HS	45.3	(32.4 - 58.9)	88.8	(70.6 - 96.3)
HS Graduate	29.2	(22.9 - 36.4)	70.9	(57.8 - 81.3)
Some college	27.9	(21.1 - 35.8)	82.1	(64.1 - 92.2)
College graduate	23.9	(17.4 - 31.8)	75.9	(58.3 - 87.7)
Income				
LT 20K	43.8	(33.5 - 54.6)	78.4	(62.2 - 88.9)
20K-34,999	25.2	(18.3 - 33.7)	69.3	(51.9 - 82.5)
35K-49,999	33.0	(23.3 - 44.4)	81.6	(65.1 - 91.4)
50K+	22.3	(16.0 - 30.2)	77.3	(54.5 - 90.6)

^a Among all respondents, the proportion who reported that they were ever told by a doctor, nurse, or other health professional that they have high blood pressure. Women who had high blood pressure during pregnancy were excluded from this estimate.

^b Among those who were ever told that they had high blood pressure, the proportion who reported that they were currently taking medicine for their high blood pressure.

* Too few respondents in subpopulation.

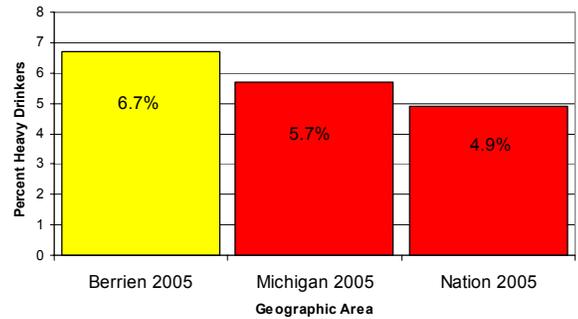
American consumes nearly 4,000 mg of sodium each day, far exceeding the current recommendation to consume no more than 2,400 mg per day (1 teaspoon of salt). A landmark study published in the New England Journal of Health, April 1997 showed that a diet in low sodium significantly and quickly lowered blood pressure.¹² The results affected not only individuals with high blood pressure but also significant changes were seen in groups considered to ingest “intermediate” amounts of sodium.

High blood pressure, commonly referred to as hypertension, is the result of a person’s heart working harder just to pump a normal amount of blood through the body. The higher pressure in the arteries may cause them to weaken and bleed, resulting in a stroke.

The added workload on the heart causes thickening of the heart muscle. Over time, the thickening damages the heart muscle so that it can no longer pump normally. This can lead to heart failure, damaged kidney or eyes and cause a variety of other chronic problems. The longer you have high blood pressure and the higher it is, the more likely it is you will develop problems.

Berrien County currently has a higher population proportion with high blood pressure compared to the state and nation. Regional hypertension estimates demonstrate that Berrien County is among the highest in the state of Michigan. People more often affected by this modifiable condition are older adults, with less than a high school education, earning less than \$20,000 annually.

It has been shown that the average



Alcohol Consumption

Percentage of Berrien County who have consumed alcoholic beverages such as beer, wine, malt beverages or liquor.

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Heavy Drinking ^b	N/A	6.7%	5.7%	4.9%

	Consumed alcohol in past 30 days ^a 2005		Binge Drinking ^c 2005	
	%	95% C.I.	%	95% C.I.
Total	53.0	(48.1 - 57.8)	13.9	(10.1 - 17.6)
Age			35-54 years	
18-24 years	*		14.2	(9.9 - 20.0)
25-34 years	57.1	(43.9 - 69.4)		
35-44 years	66.2	(55.6 - 75.4)		
45-54 years	55.2	(45.1 - 64.9)	*	
55-64 years	51.0	(40.3 - 61.6)		
65-74 years	*			
75 years +	*			
Gender				
Male	63.5	(55.7 - 70.7)	18.7	(13.6 - 25.2)
Female	43.9	(37.9 - 50.1)	*	
Race/Ethnicity				
White	55.9	(50.5 - 61.2)	14.5	(10.9 - 18.9)
Black	41.3	(38.8 - 53.7)	*	
Hispanic	31.8	(12.0 - 61.3)	*	
Education				
Less than HS		*	13.7	(9.1 - 20.1)
HS Graduate	50.7	(42.5 - 58.8)		
Some college	58.2	(49.3 - 66.6)	13.6	(9.9 - 18.5)
College graduate	60.8	(51.6 - 69.2)		
Income				
LT 20K	43.6	(33.1 - 54.6)	17.7	(12.2 - 24.9)
20K-34,999	54.0	(43.8 - 63.8)		
35K-49,999	49.7	(38.3 - 61.1)		
50K-79,999	65.0	(51.2 - 76.8)	13.0	(8.7 - 18.8)
75K+	73.7	(63.2 - 82.1)		

^a Among all respondents who reported consuming at least one alcoholic beverage such as beer, wine, a malt beverage or liquor during the past 30 days.

^b Among all respondents who reported consuming, on average, more than two alcoholic beverages per day for men or more than one alcoholic beverage per day for women.

^c The proportion of respondents who reported consuming five or more drinks per occasion at least once in the previous month.

* Too few respondents in this subpopulation.

Alcohol dependence has been defined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders. The criteria is widely recognized by all Substance Abuse & Mental Health federal agencies. The alcohol dependency criteria is met when a person meets 3 or more of the symptoms:

- Tolerance (e.g., needing more alcohol to become intoxicated);
- Withdrawal;
- Alcohol use for longer periods than intended;
- Desire and/or unsuccessful efforts to cut down or control alcohol use;
- Considerable time spent obtaining or using alcohol, or recovering from its effects;
- Important social, work, or recreational activities given up because of use;
- Continued use of alcohol despite knowledge of problems caused by or aggravated by use.

Over half of Berrien County, 53% have consumed alcohol in the past 30 days. This is consistent with national estimates of 54.9% of the population. Berrien County has a higher proportion of heavy drinkers compared to the state and nation and has a lower proportion of binge drinkers 13.9%, compared to Michigan, 16.6% and the nation 14.4%. It is recognized that the estimates may be under reported as excessive drinking is socially undesirable.

Weight Status

Percentage of Berrien County whose body mass index was calculated as obese or overweight.

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and Above	Obese

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Categorized as Obese	21.0%	31.1%	26.2%	24.4%

	Obese ^a		Overweight ^b	
	%	95% C.I.	%	95% C.I.
Total	31.1	(26.7 - 35.8)	34.1	(29.6 - 38.8)
Age				
18-34 years	24.6	(16.8 - 34.6)	28.8	(19.5 - 40.2)
35-54 years	30.5	(23.9 - 38.0)	38.3	(31.2 - 45.9)
55+ years	36.7	(29.6 - 44.3)	33.3	(27.1 - 40.1)
Gender				
Male	26.9	(20.8 - 34.1)	43.7	(36.3 - 51.4)
Female	34.6	(28.8 - 40.9)	25.0	(20.1 - 30.6)
Race				
White	28.1	(23.4 - 33.3)	35.8	(30.7 - 41.2)
Black	48.2	(36.6 - 60.1)	27.9	(19.2 - 38.7)
Hispanic		*	30.8	(14.8 - 53.3)
Education				
Less than HS	46.3	(33.2 - 59.8)	16.5	(9.7 - 26.7)
HS Graduate	30.1	(23.2 - 38.0)	35.3	(27.6 - 43.9)
Some college	27.7	(20.5 - 36.2)	39.1	(30.5 - 48.5)
College graduate	22.6	(15.9 - 31.2)	41.4	(32.9 - 50.4)
Income				
LT 20K	37.3	(27.3 - 48.5)	37.3	(27.3 - 41.7)
20K-34,999	28.9	(20.6 - 38.9)	39.8	(30.4 - 50.1)
20K-49,999	35.9	(28.9 - 43.5)	33.6	(26.9 - 41.0)
50K+	20.1	(13.6 - 28.5)	41.5	(32.6 - 51.0)

Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)²]. Weight and height were self-reported. Pregnant women were excluded from this estimate.

^a The proportion of respondents whose BMI was greater than or equal to 30.0.

^b The proportion of respondents whose BMI was greater than or equal to 25.0, but less than 30.0.

* Too few Hispanic respondents in subpopulation.

To calculate your BMI divide your current weight in pounds by height in inches. Square height in inches and multiply by a conversion factor of 703. You are considered normal if the number you calculated is between 18.5—24.9.

In Berrien County there is a significantly higher proportion of obese individuals compared to 2002. Thirty-one percent of the county are considered obese, while 34.1% are overweight, according to the Centers for Disease Control & Prevention weight status classification system.

As of 2005, Mississippi leads the country in the percent of obese residents (30.9%). Michigan ranks 15th among all the states with over a quarter of the population considered obese.

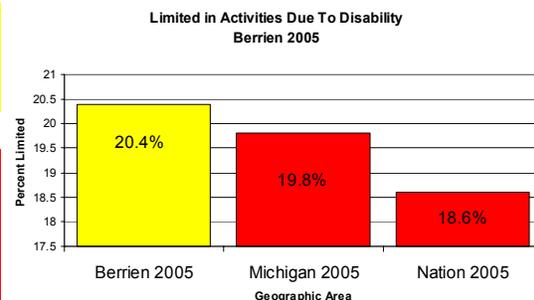
Body Mass Index (BMI) is a number calculated from residents reported weight and height. BMI does not measure body fat directly, but research has shown that BMI correlates to direct measures of body fat, such as underwater weighing and dual energy x-ray absorptiometry (DXA).^{24,25} BMI can be considered an alternative for direct measures of body fat.

Understanding weight status is an important health indicator as overweight and obese individuals are at increased risk for many diseases and health conditions, including the following:

- Hypertension
- High cholesterol
- Type 2 diabetes
- Coronary heart disease

Disability

Percentage of Berrien County limited physically, emotionally or mentally.



% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Limited by disability	N/A	20.4%	19.8%	18.6%

	Limited by emotional, physical or mental problems ^a		Health problem requiring special equipment ^b	
	%	95% C.I.	%	95% C.I.
Total	20.4	(17.0 - 24.2)	7.3	(5.3 - 9.9)
Age				
18-54 years	13.4	(10.1 - 17.7)	3.2	(1.8 - 5.4)
55+ years	33.4	(26.9 - 40.6)	15.1	(10.4 - 21.3)
Gender				
Male	16.6	(12.2 - 22.1)	4.3	(2.5 - 7.1)
Female	23.7	(18.9 - 29.2)	10.0	(6.8 - 14.4)
Race/Ethnicity				
White	20.7	(16.8 - 25.1)	6.8	(4.7 - 9.8)
Black	22.1	(15.0 - 31.3)	*	*
Hispanic	*		*	
Education				
Less than HS	35.5	(24.1 - 48.8)	8.1	(5.1 - 12.7)
HS Graduate	17.3	(12.5 - 23.4)		
Some college	16.4	(11.5 - 22.7)		
College graduate	16.6	(11.5 - 23.3)	*	*
Income				
LT 20K	41.4	(31.2 - 52.3)	17.2	(10.2 - 27.6)
LT 34,999K	27.9	(22.0 - 34.7)	10.5	(6.7 - 16.0)
35K+	12.5	(8.7 - 17.6)	*	*

^a Among all respondents, the proportion who are limited in any way in any activities because of physical, mental, or emotional problems.

^b Among all respondents, the proportion who have any health problem that requires the use of special equipment, such as a cane, a wheelchair, a special bed, or a special telephone.

* Too few respondents in subpopulation.

It was not until 1990 that Congress passed the American Disability Act (ADA) that prohibited discrimination on the basis of disability.

Today the intended beneficiaries of ADA remain commonly thought of as persons with mobility, vision, or hearing impairments. ADA, however, covers a vast number of health impairments. The Act defines a disability as “a physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment”¹³

Because limited, current data indicate that health disparities between people with and without disabilities are as pervasive as those recognized between ethnic minority groups Healthy People 2010 have built recommendations in 207 of the 467 objectives to address this disparity.

Surprisingly, 20.4% of Berrien County adults have a disability that

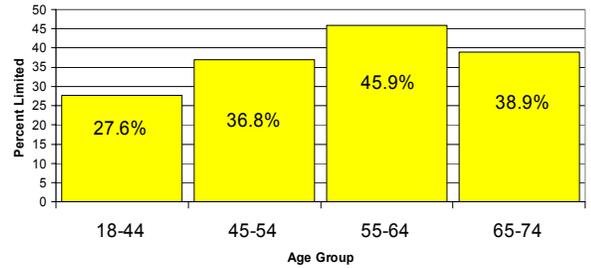
limits their activities. The Centers for Disease Control & Prevention has identified several factors and approaches to influence health outcomes among people with disabilities. These factors include reducing the physical barriers to accessing an environment, improving health behaviors such as limited physical activity and smoking, and providing routine health services such as mammograms and dental visits.¹⁴

Richard Carmon, the United States Surgeon General in 2005 described this need in his call to action, “The reality is that for too long we provided lesser care to people with disabilities. Today, we must redouble our efforts so that people with disabilities achieve full access to disease prevention and health promotion services.”

Arthritis

Percentage of Berrien County told by a health professional that they had arthritis.

Limited Usual Activities Among Doctor Diagnosed Arthritis by Age Group, Berrien County 2005



% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Diagnosed with Arthritis	N/A	33.8%	30.8%	27.0%

	Ever Told had Arthritis ^a		Symptoms of Arthritis in past 30 days ^b	
	%	95% C.I.	%	95% C.I.
Total	33.8	(29.4 - 38.5)	46.3	(41.5 - 51.2)
Age				
18-44 years	15.0	(10.3 - 21.2)	32.9	(25.7 - 41.0)
45-54 years	34.4	(25.5 - 44.7)	51.0	(41.0 - 60.9)
55-64 years	47.7	(36.9 - 58.7)	53.5	(42.5 - 64.2)
65-74 years	53.3	(41.4 - 64.8)	65.7	(54.0 - 75.8)
75 years +	71.1	(58.7 - 81.0)	60.8	(46.7 - 73.3)
Gender				
Male	28.8	(22.5 - 36.0)	43.7	(36.2 - 51.4)
Female	38.3	(32.6 - 44.4)	48.7	(42.7 - 54.7)
Race/Ethnicity				
White	35.1	(30.2 - 40.4)	45.3	(40.0 - 50.7)
Black	25.1	(17.3 - 35.1)	46.9	(35.2 - 58.8)
Hispanic	*		40.9	(19.4 - 66.6)
Education				
Less than HS	49.1	(35.9 - 62.3)	56.6	(43.1 - 69.2)
HS Graduate	31.2	(24.5 - 38.7)	43.5	(35.7 - 51.7)
Some college	33.0	(24.9 - 42.2)	53.6	(44.5 - 62.4)
College graduate	24.5	(18.1 - 32.3)	40.7	(32.4 - 49.7)
Income				
LT 20K	43.2	(33.0 - 54.1)	52.1	(41.1 - 62.9)
20-34,999K	40.9	(31.4 - 51.0)	49.0	(39.0 - 59.1)
20-49,999K	34.7	(27.9 - 42.3)	45.5	(38.0 - 53.2)
50K+	25.1	(17.8 - 34.2)	41.1	(32.3 - 50.5)

It is projected by 2030 nearly 67 million adults (25%) will have doctor diagnosed arthritis in the United States. Most of the cases will be among adults aged 65 and older, however 1/3 are expected among the working adults 44-64 years old.¹⁵

Berrien County currently exceeds the state and national estimates of doctor diagnosed arthritis. This age related condition affects predominately individuals 45 years and older. Residents who are female reported a higher prevalence of doctor diagnosed arthritis, 38.3% compared to their male counter part 28.8%. Largely, adults who have less than a high school education also have a higher arthritis prevalence.

Although physical activity is a recommended therapy for people with arthritis, levels among adults with arthritis are insufficient, and those with arthritis have worse activity profiles than their peers without arthritis.¹⁶

Simple steps that can reduce the burden of arthritis include a timely diagnosis and self management. People experiencing joint pain should consult

a physician because early diagnosis

^a Among all respondents, the proportion who reported that they were ever told by a doctor, nurse, or other health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

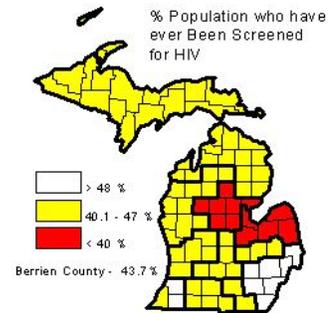
^b Among all respondents, the proportion who reported in the past 30 days, having symptoms of pain, aching, or stiffness in or around a joint, excluding neck and back stiffness.

* Too few respondents in subpopulation.

and appropriate management are important for self management of the condition. Numerous self management courses are offered including: Arthritis Foundation Self Help Course, Chronic Disease Self Management Program, Arthritis Foundation Exercise Program, Arthritis Foundation Aquatic Program, EnhanceFitness, & Buenos Dias, Arthritis. These courses listed are all CDC recommended evidence based programs proven to improve the quality of life of people with arthritis.

HIV Testing

Percentage of Berrien County who have or have not ever tested for HIV among adults 18-64 years.



MDCH Regional Estimates 2000– 2004¹

	Berrien 2002	Berrien 2005	Michigan 2000	National 2000
Have ever tested for HIV	39.3%	41.0%	49.5%	45.7%

	Have never been Tested for HIV ^a	
	%	95% C.I.
Total	59.0	(53.3 - 64.5)
Age		
18-24 years		*
18-34 years	45.0	(33.7 - 56.8)
25-34 years	28.7	(17.4 - 43.5)
35-44 years	53.1	(41.6 - 64.2)
45-54 years	69.4	(59.9 - 77.5)
55-64 years	76.4	(64.3 - 85.4)
Gender		
Male	67.6	(59.0 - 75.2)
Female	50.7	(43.6 - 57.7)
Race		
White	60.5	(54.1 - 66.6)
Black	48.3	(34.8 - 62.0)
Hispanic	45.5	(24.4 - 68.5)
Education		
HS Graduate or Less	59.3	(50.7 - 67.4)
Some college	61.0	(50.6 - 70.5)
College graduate	55.3	(44.9 - 65.3)
Income		
LT 20K	43.3	(30.3 - 57.3)
20-34,999K	45.8	(34.5 - 57.6)
35-49,999K	66.4	(53.0 - 77.5)
50-79,999K	67.7	(53.2 - 79.4)
75K+	67.5	(55.1 - 77.9)

^a Among those aged 18 - 64 years, the proportion who reported that they had never been tested for HIV, not including tests that were part of a blood donation.

* Too few respondents in subpopulation.

Early knowledge of HIV infection is recognized as a critical component in controlling the spread of HIV infection. Studies have demonstrated that many infected persons decrease behaviors associated with HIV transmission once they are aware of their positive HIV status. Furthermore, evidence demonstrates that HIV infected persons who are unaware of their infection do not reduce risk behaviors.¹⁷

Among residents 18-64 years, 92.5% ranked importance of knowing HIV status as “very important,” as opposed to somewhat important, not important at all, or dependent on risk.

Berrien County has the 3rd highest HIV estimated prevalence rate in Michigan, after Ingham and Wayne County. As of April 2006, an estimated 280 residents are infected with HIV in Berrien County. Currently a total of 200 residents have been diagnosed with the infectious virus of which 47% have progressed to AIDS. Historically white homosexual men were predominantly infected with the HIV infection, however in Berrien County African American/Black women make up the majority of the infections.

Although these statistics are alarming, 59% of the adult population have never been tested for HIV in Berrien County. The risk that this incurable disease, most commonly transmitted sexually, may infect our young adults is alarming as hundreds of sexually transmitted infections in the 15-24 year olds are reported annually. Berrien County continues to rank among the highest in Chlamydia and Gonorrhea rates in adolescents and young adults compared to other counties in Michigan.

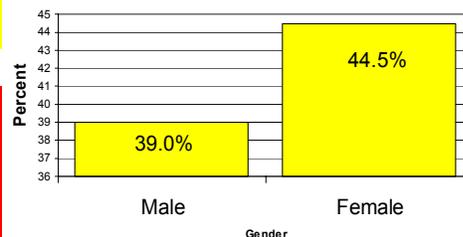
Among residents tested for HIV, 44.6% were tested by a private doctor; 24.8% were tested at a hospital and 22.7% were tested at a clinic. Too few reported being tested for HIV through a home-kit, jail, or at a drug treatment facility to calculate a prevalence estimate.

Approximately 23.9% of residents tested for HIV did so for the purpose of knowing whether or not they were infected with the virus. HIV Testing was also performed on 28.2% as part of a routine checkup.

Colorectal Cancer Screening

Percentage of Berrien County who have never had a blood stool test or a sigmoid/colonoscopy, among residents 50 years or older.

Never Had A Blood Stool Test By Gender
Berrien County, 2005



% Population	Berrien 2002	Berrien 2005	Michigan 2004	Nation 2004
Never had a sigmoid/colonoscopy test	53.5%	33.9%	39.6%	46.6

	Never Had Blood Stool Test ^a		Never had Sigmoid/Colonoscopy ^b	
	%	95% C.I.	%	95% C.I.
Total	41.8	(34.4 - 49.7)	33.9	(27.1 - 41.5)
Age				
50-59 years	52.7	(39.8 - 65.2)	49.0	(36.4 - 61.7)
60+ years	34.3	(25.9 - 43.7)	23.8	(17.2 - 32.1)
Gender				
Male	39.0	(28.1 - 51.1)	30.3	(20.4 - 42.5)
Female	44.5	(34.9 - 54.5)	36.9	(28.0 - 46.9)
Race/Ethnicity				
White	42.4	(34.5 - 50.8)	30.6	(23.6 - 38.7)
Black		*		*
Hispanic		*		*
Education				
HS Graduate or Less	43.0	(33.0 - 53.7)	33.6	(24.6 - 44.0)
At least some College	40.7	(30.2 - 52.1)	35.9	(24.6 - 45.7)
Income				
LT 34,999K	36.8	(26.9 - 47.9)	36.3	(29.0 - 44.3)
35K+	40.1	(27.7 - 53.9)	32.5	(23.5 - 43.0)

Colorectal cancer is the second leading cancer related cause of death in the United States and the third leading cancer causing death in male and females in Berrien County.

Screening for colon cancer saves lives. According to the CDC, if everyone over the age of 50 years were screened regularly as many as 60% of deaths from colon cancer could be prevented. That's a lot of lives saved considering that 56,603 people died from colon cancer in 2002 in the United States. In Berrien County during the period 2001-2003 an average of 13 adults under the age of 50, 55 adults 50-74 years and 50 adults older than 75 years were diagnosed with colon cancer.¹⁸

Reducing the number of deaths from colorectal cancer depends on detecting and removing precancerous colorectal polyps, as well as detecting and treating the cancer in its early stages. It is recommended to get screened soon after turning 50 years old and regularly thereafter.

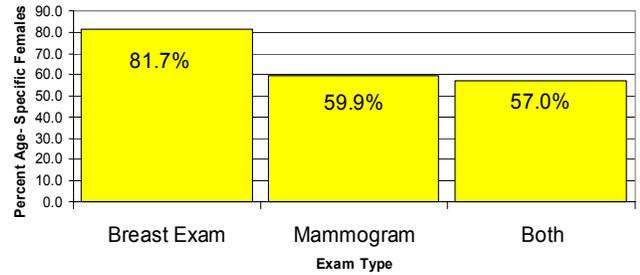
Among those aged 50 years and older, the proportion who:

^a reported "Never" to the question, "A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. How long has it been since you had your last blood stool test using a home kit?"

^b reported "Never" to the question, "Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. How long has it been since you had your last sigmoidoscopy or colonoscopy?"

The fecal occult blood test (FOBT), is a test that checks for blood in the stool and is available in a home kit. It is recommended to perform the FOBT each year. In Berrien County 41.8% of adults 50 and older have never had a blood stool test. A sigmoidoscopy test allows the doctor to look for polyps using a narrow, flexible lighted tube. The double contrast barium enema test allows the doctor to view on X-ray any polyps or abnormalities following the barium solution enema. The barium coats the intestines so that polyps are visible on X-ray. Both tests are recommended every 5 years. The final screening test is the colonoscopy, this is recommended every 10 years and is very similar to a sigmoidoscopy however the test looks at the entire colon compared to the lower colon and rectum. In Berrien County, 49% of adults 50 to 59 years have never received a sigmoid/colonoscopy.

Percent of Females with appropriately timed Breast Exam & Mammogram Compared to Having Both Exams in Past Year Berrien County 2005



Breast Cancer Screening

Percentage of Berrien County screened for breast cancer by mammogram and clinical breast exam among women, 40 years and older.

% Population	Berrien 2002	Berrien 2005	Michigan 2005	Nation 2005
Ever had a mammogram	67.0%	68.1%	64.2%	62.2%

	Ever Had a Mammogram ^a		Had a Mammogram in Past Year ^b		Had a Clinical Breast Exam & a Mammogram in Past Year ^c	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	68.1	(60.4 - 74.9)	59.9	(50.9 - 68.3)	57.0	(48.1 - 65.6)
Age						
40-49 years	82.0	(67.2 - 91.1)	42.2	(32.5 - 62.5)	30.4	(17.7 - 46.9)
50-59 years	88.8	(67.9 - 96.7)	47.7	(31.0 - 64.4)	60.4	(43.2 - 75.3)
60-69 years	91.3	(72.1 - 97.7)	69.8	(52.3 - 83.0)	67.9	(50.3 - 81.6)
70+ years	98.1	(87.9 - 99.7)	57.5	(37.4 - 75.5)	55.5	(35.6 - 73.9)
Race/Ethnicity						
White	67.4	(58.2 - 41.6)	60.6	(50.4 - 69.9)	58.3	(48.3 - 67.7)
Black	70.0	(55.0 - 81.7)	49.7	(30.7 - 68.8)	*	*
Hispanic		*		*		*
Education						
Less than HS	75.2	(51.0 - 89.9)				*
HS Graduate	62.0	(49.3 - 73.3)	52.9	(40.7 - 64.7)	57.8	(44.3 - 70.3)
Some College	70.4	(57.5 - 80.7)			63.6	(47.7 - 77.0)
College Graduate	68.5	(51.7 - 81.6)	68.9	(56.2 - 79.3)		*
Income						
LT 20K	61.6	(44.8 - 76.1)	40.0	(26.4 - 55.3)	58.5	(43.2 - 72.3)
20-34,999K	65.4	(49.8 - 78.3)	52.9	(38.0 - 67.4)	47.3	(33.2 - 61.8)
35-49,999K	59.0	(40.0 - 75.7)				
50-79,999K	48.0	(24.4 - 72.5)				
75K+	78.9	(58.8 - 90.7)	86.3	(70.4 - 94.4)	*	*

Among women aged 40 years and older, the proportion who:

^a reported ever having a mammogram.

^b reported having a mammogram in the past year.

^c had both a clinical breast exam and mammogram in the previous year.

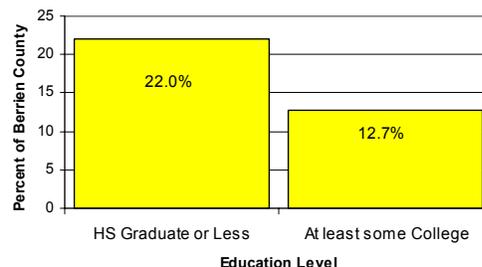
Breast cancer screening includes both mammography and clinical breast examinations. Mammography is currently the best available procedure for detecting breast cancer in its earliest, most treatable stage—an average of 1-3 years before the woman can feel the lump.¹⁹ Additionally, clinical breast exams are able to detect some of the few breast cancers that a mammography may miss.²⁰

Women 40 years and older are recommended to have a screening mammogram every 1 to 2 years. Among women 40-49 years only 30.4% have received a clinical breast exam and a mammogram in the past year. The number of African American women in Berrien County having a mammogram in the past year was 49.7% compared to their white counterpart of 60.6%. Although most women 40 years and older have an appropriately timed breast exam (81.7%), too few are receiving both exams (57%).

Intimate Partner Violence

Percentage of Berrien County reporting ever being threatened or experiencing an intimate partner hitting, slapping, pushing, kicking or physically hurting them.

Experienced Intimate Partner Violence by Education Level Berrien County, 2005



	Intimate Partner Ever Threatened Violence ^a		Intimate Partner Ever Do Violence ^b	
	2005 %	95% C.I.	2005 %	95% C.I.
Total	13.2	(10.0 - 17.3)	17.3	(13.2 - 22.3)
Age				
18-44 years	16.5	(11.5 - 23.6)	19.3	(12.8 - 28.0)
35-54 years	17.9	(12.1 - 25.8)	23.8	(17.0 - 32.4)
45-64 years	14.2	(8.8 - 22.0)	20.8	(14.2 - 29.5)
65+ years	*		*	
Gender				
Male	*		*	
Female	20.2	(15.2 - 26.3)	23.0	(17.2 - 30.0)
Race/Ethnicity				
White	11.9	(8.6 - 16.3)	17.5	(12.9 - 23.3)
Black	*		*	
Hispanic	*		*	
Education				
HS Graduate or Less	15.3	(10.3 - 22.1)	22.0	(15.3 - 30.6)
At least some College	11.3	(7.6 - 16.3)	12.7	(8.7 - 18.2)
Income				
LT 34,999K	17.9	(12.4 - 25.0)	21.9	(15.0 - 31.0)

^a Among all respondents, the proportion who reported having intimate partner ever threatened them with physical violence. This includes threatening to hit, slap, push, kick, or physically hurt them in any way.

^b Among all respondents, the proportion that has experienced an intimate partner ever hitting, slapping, pushing, kicking, or physically hurting them

^c Among all respondents, the proportion ever experiencing any unwanted sex by a current or former intimate partner.

* Too few respondents in subpopulation.

In Berrien County, 13.2% of the population have ever been threatened with physical violence. This includes threatening to hit, slap, push, kick or physically hurt in anyway. Approximately 17.3% of residents have experienced an intimate partner hitting, slapping, pushing, kicking or physically hurting them in any way. Unwanted sex by an intimate partner was reported in 5.4% of Berrien County. Women predominately reported both being threatened by violence 20.2%, and experiencing violence 23%.

	Experienced Unwanted Sex by Intimate Partner ^c	
	2005 %	95% C.I.
Ever	5.4	(3.4 - 8.4)
Past year	*	

The respondents were made aware that this information would be anonymous and unique identifiers would be removed, recognizing that these past experiences would bring up traumatic events, a telephone hot line with a trained counselor was provided to individuals reporting intimate partner violence.

It is estimated that available data greatly underestimate the true magnitude of intimate partner violence (IPV).

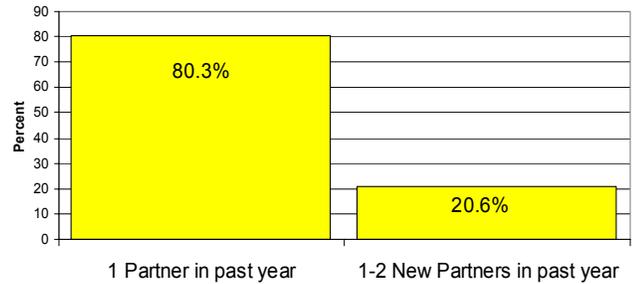
The statistics on partner abuse vary because of differences in how data sources define IPV. Furthermore, most IPV incidents are not reported to the police. According to a recent study only about 20% of IPV rapes or sexual assaults, 25% of physical assaults, and 50% of stalkings directed toward women are reported.²¹

A combination of individual, relational, community and societal factors contribute to the risk of being a victim or perpetrator of IPV. Public health aims to moderate and mediate those contributing factors that are preventable.

Some of factors that public health continue to work on are:

- Heavy alcohol & drug use
- High-risk sexual behavior
- Policies addressing employee witnessing violence toward children
- Poverty and associated factors

Percent of Berrien County By Number Sex Partners, 2005



Sexual Behaviors

Percent of Berrien County reporting number of sex partners and condom use in the past year.

% Population	Berrien 2002	Berrien 2005	Kalamazoo Co 2004
Used condom at last intercourse	N/A	27.4%	25.6%

	Number of sex partners in past year ^a	
	%	95% C.I.
1 partner	80.3	(71.4 - 86.9)
2+ partners		*

^aAmong all respondents the proportion who have had 1 sex partner in the past year.

	Number of NEW sex partners in past year ^b	
	%	95% C.I.
1-2 partners	20.6	(13.9 - 29.4)
3+ partners		*

^bAmong all respondents the proportion who have had 1-2 partners in the past year.

	Condom used the last time had sex ^c	
	%	95% C.I.
Total	27.4	(19.6 - 36.8)
Age		
18 - 34	41.9	(28.1 - 56.9)
35 - 44		*
Gender		
Male		*
Female	34.9	(23.9 - 47.6)
Race/Ethnicity		
White	23.4	(15.0 - 34.5)
Black		*
Hispanic		*

^cAmong sexually active respondents the proportion who used a condom the last time they had sexual intercourse.

* Too few respondents in subpopulation.

High risk sexual behavior continues to be a problem in Berrien County. As of 2004, Berrien County had the 10th highest number of Chlamydia cases in the state. Our youth (15-19 years) and young adults (20-24 years) are the most impacted by Chlamydia and Gonorrhea, both sexually transmitted infections. Berrien County ranks 4th among 83 counties in Michigan for rates of Chlamydia in these two age groups. For every one reported male Chlamydia infection, 3 females have been reported. Infections of Gonorrhea are also prevalent, compared to other counties, Berrien ranks 8th in the number of Gonorrhea infections reported. Untreated Gonorrhea or Chlamydia can cause serious and permanent health problems in both men and women. Also, individuals infected with Chlamydia or Gonorrhea can more easily contract HIV.

In Berrien County 27.4% of sexually active persons used a condom the last time they had intercourse. Kalamazoo County, a county within our region has a 25.6% prevalence rate for condom use. Responsible sexual behavior is one of the 10 leading health indicators of the national health objectives for Healthy People 2010. One goal set forth is to have 50% of females 18-44 using condoms. Currently, 34.9% of Berrien County females are using condoms.

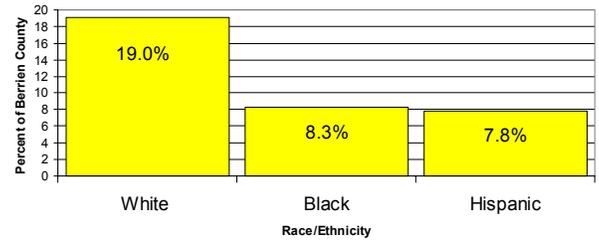
Besides condom use or abstinence, it is widely recognized that limiting the number of sex partners decreases your risk of becoming infected with a sexually transmitted disease. In the past year, 20.6% of Berrien County reported 1-2 new sex partners.

Individuals who reported multiple sexual partners, relative to only one partner were nearly 3 times as likely to test positive for a sexually transmitted infection. Individuals who reported unprotected vaginal sex relative to those reporting protective vaginal sex also had greater odds of testing positive for a sexually transmitted disease.²²

Treatment When Seeking Health Care

Percent of Berrien County who feel their experiences were worse than, the same as, or better than for people of other races.

When Seeking Health Care Your Experiences Were Better Than Other Races
Berrien County 2005



	Worse than other races ^a		Same as other races ^b		Better than other races ^c	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	2.3	(1.2 - 4.3)	72.4	(66.1 - 78.0)	17.9	(13.8 - 22.9)
Race/Ethnicity						
White	1.5	(0.5 - 4.0)	72.9	(65.7 - 79.0)	19.0	(14.3 - 24.8)
Black	7.5	(3.3 - 16.1)	69.8	(53.8 - 82.1)	8.3	(4.2 - 15.6)
Hispanic	0.6	(0.2 - 2.2)	89.9	(72.7 - 96.8)	7.8	(2.0 - 26.3)

^a Worse than other races.

^b Same as other races

^c Better than other races.

^d Worse than some races, better than others.

^e Only encountered people of the same race.

* All categories with the exception of "Same as other race" and "Better than other races" had less than 50 respondents.

	Worse than some, better than others ^d		Only encountered people of the same race ^e		Did not seek medical care in past year	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	0.7	(0.1 - 3.7)	1.6	(0.4 - 6.3)	5.1	(2.3 - 11.0)
Race/Ethnicity						
White	0.0	-	1.0	(0.1 - 6.9)	5.7	(2.4 - 52.4)
Black	4.9	(0.9 - 22.7)	5.8	(0.8 - 31.2)	3.8	(1.0 - 13.1)
Hispanic	0.2	(0.0 - 1.9)	0.0	-	1.4	(0.4 - 4.6)

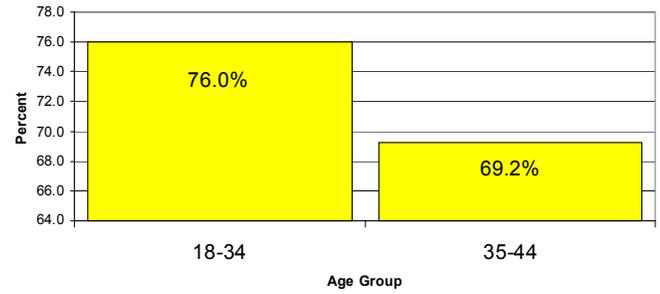
Residents were asked "Within the past 12 months, when seeking health care, do you feel your experiences were worse than, the same as, or better than people of other races?" Approximately 72.4% of Berrien County believe that their experiences were the same as other races, while 17.9% of the county believe their experiences were better than other races.

A compelling need for cultural competence is evident by the racial, ethnic, and culturally diverse population living in Berrien County. According to the 2000 US Census Bureau 5% of the county are foreign borne and 7.1% of residents speak a language at home other than English. Despite similarities, fundamental differences among people arise from nationality, ethnicity and culture, as well as from family background and individual experience. These differences affect the health beliefs and behaviors that both patients and providers have of each other. Despite progress in a variety of health indicators, there are continuing disparities in the incidence of illness and death among African Americans and other minorities in Berrien County. Rationale to incorporate cultural competency in health care is numerous. Curricula for educating health care professionals have been developed through a cooperation agreement with the Department of Health & Human Services and the National Center for Cultural Competence and can be found at www.ncccurrucula.info

Family Planning

Percentage of Berrien County females 18-44 reporting that they or their partner were doing something to prevent pregnancy.

Percent Females Using Birth Control To Prevent Unintended Pregnancy, Berrien County 2005



% Population	Berrien 2002	Berrien 2005	Kalamazoo Co 2004
Females using birth control ^a	N/A	73.3	81.8

Using Birth Control^a Females Aged 18-44 Years

	%	95% C.I.
Total	73.3	(60.3 - 83.3)
Age		
18-34 years	76.0	(55.7 - 88.9)
35-44 years	69.2	(53.0 - 81.7)
Race/Ethnicity		
White	75.1	(58.9 - 86.4)
Black		*
Hispanic		*
Education		
HS Graduate or Less	64.3	(44.9 - 79.9)
Some college or more	84.1	(69.4 - 92.5)
Income		
LT 35K	65.4	(45.4 - 81.2)
GE 35K	83.1	(66.7 - 92.4)

Family planning does more than enable women and men to limit family size. It safeguards individual health and rights, preserves our county's resources, and improves the quality of life for individual women, their partners, and their children.

Historically, family size declined between 1800 and 1900 from 7.0 to 3.5 children. In 1900, six to nine of every 1000 women died in childbirth, and one in five children died during the first 5 years of life. Distributing information and counseling patients about contraception and contraceptive devices was illegal under federal and state laws; the timing of ovulation, the length of the fertile period, and other reproductive facts were unknown.²³

Today unintended pregnancy remains a problem county wide. In 2004, 704 pregnancies ended in abortion in Berrien County. During 2000—2004 the teenage pregnancy rate for Berrien County was 71.9 per 1,000 female teenagers compared to the state rate of 56.4 during the same period. However, family planning is helping to decrease these health indicators.

Note: Family planning questions were not asked of women who were over the age of 44, who had a hysterectomy, or who was currently pregnant.

^a The proportion who reported that they or their partner were doing something to prevent

* Too few respondents in this subpopulation.

In Berrien County 73.3% of females 18-44 years are doing something to prevent unintended pregnancies. Overall 46.6% of the county has a partner that has undergone a medical procedure (sterilization or vasectomy) as a method to prevent pregnancy. Another 39.4% of Berrien County either use birth control pills or condoms. In Kalamazoo County, a county within our region, 81.8% of females 18-44 were using birth control during 2004. Condoms to prevent pregnancy was used among 21.4% of the county in Kalamazoo.

Methods of Birth Control		
	%	95% C.I.
Female Sterilization/Male Vasectomy	46.6	(35.7 - 57.9)
Pill/Condoms	39.4	(28.8 - 51.1)
Other		*

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