

Macomb County Behavioral Risk Factor Survey

2009

Prepared for
Macomb County Health Department
Mount Clemens, Michigan
and
Southeastern Michigan Health Association
Detroit, Michigan

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Executive Summary

INTRODUCTION

In 2009, the Southeastern Michigan Health Association (SEMHA) and the Macomb County Health Department (MCHD) contracted for a survey of the adult population in Macomb County on various behaviors, medical conditions, and preventive health care practices. Findings from the survey are useful to SEMHA, the MCHD, and community partners in identifying priority health issues and the populations at greatest risk for health problems. The data contribute to planning efforts and effective targeting of resources to support intervention programs, and can be used by all community members to gain a better understanding of the health concerns affecting our community.

A total of 1,086 adults in Macomb County responded to the telephone survey, resulting in an overall margin of error of ± 3.0 percent. The findings presented in this report have been weighted and can be interpreted as estimates of the prevalence rates of various health risks among the general adult population of Macomb County. For a complete description of the methodology used in this survey and report, refer to the Methodology section.

GENERAL HEALTH STATUS

Perceived General Health

People responding to the Macomb County Behavioral Risk Factor Survey were asked to rate their general health status as excellent, very good, good, fair, or poor. In 2009, an estimated 12.2 percent of adults in Macomb County perceived their general health to be either fair or poor. This proportion increased with age from 7.3 percent of people aged 18–24 years to 24.7 percent of people aged 75 years and older. The proportion who reported fair or poor health decreased with income levels.

Healthy Days

In 2009, about 9.8 percent of adults in the Macomb County reported that they had experienced physical health that was not good on at least 15 days during the past month. About 13.1 percent of adults in Macomb County reported that their mental health was not good on at least 15 days of the past month.

HEALTH CARE ACCESS

In 2009, an estimated 12.7 percent of adults aged 18–64 in Macomb County had no health care coverage. Health care coverage includes health insurance, prepaid plans, or government plans such as Medicare, Medicaid, or county health plans. Males are more likely than females to lack health care coverage. Younger adults and those with lower incomes are more likely to report lacking health care coverage.

CHRONIC DISEASE PREVALENCE

Diabetes

In Macomb County in 2009, an estimated 8.5 percent of adults have ever been told by a doctor, nurse, or other health professional that they have diabetes. Males are more likely than females to have ever been told they have diabetes. Adults aged 55 and older are more likely than adults aged 18–54 to have ever been told they have diabetes.

Hypertension

In Macomb County, an estimated 30.8 percent of adults report ever having been told they have high blood pressure. The prevalence of hypertension increases with age.

Cholesterol

In Macomb County in 2009, an estimated 33.7 percent of adults report ever having been told by a doctor, nurse, or other health professional that their blood cholesterol is high. The proportion of adults who report ever having been told their blood cholesterol is high increases with age and is significantly greater for older adults.

Asthma

In Macomb County, an estimated 14.9 percent of adults report ever having been told they have asthma by a doctor, nurse, or other health professional. Younger adults are more likely than older adults to report ever having been told they have asthma. And adults with less than a high school education are more likely than college graduates to report ever having been told they have asthma.

Arthritis

In 2009, an estimated 29.1 percent of Macomb County adults had ever been told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. This proportion increased with age and declined with higher education and income levels. Females were more likely than males to report ever having been told by a health care professional they have some form of arthritis.

Overweight and Obesity

An estimated 25.7 percent of adults in Macomb County were obese in 2009, and about 37.7 percent of adults in the county were overweight. Males are more likely than females to be overweight, and 18 to 24-year-olds are less likely to be overweight than adults in any other age category. Adults in households with annual income greater than \$50,000 are more likely to be *overweight* than adults in households with annual income less than \$35,000. But they are *less likely to be obese* than adults in households with lower incomes.

IMMUNIZATIONS

Influenza Vaccination

Adults over the age of 65 are in one of the highest risk groups for contracting influenza and are at increased risk of hospitalization and/or mortality due to the virus. Therefore,

public health agencies encourage seniors to receive an influenza vaccination each year to protect them from complications to health as a result of contracting the virus. Among Macomb County adults aged 65 and older, approximately 72.7 percent had received a flu vaccine in the last 12 months.

HEALTH RISK BEHAVIORS

Cigarette Use

In 2009, about one-fifth (20.6 percent) of Macomb County adults are current smokers. The percentage of female adults in the county who are current smokers has decreased since 2005. Adults aged 75 and older are significantly less likely to smoke cigarettes than adults in other age categories. College graduates are also less likely to smoke than adults with lower levels of education.

Alcohol Consumption

In Macomb County in 2009, about 18.2 percent of adults report binge drinking, that is, males who report having five or more drinks of alcohol on a single occasion on one or more of the past 30 days, and females who report having four or more drinks of alcohol on a single occasion on one or more of the past 30 days. Men are more likely to report binge drinking than women, and younger adults are more likely to report binge drinking than older adults.

An estimated 5.8 percent of adults in Macomb County report heavy drinking, that is, on average consuming more than two alcoholic beverages per day for men and more than one alcoholic beverage per day for women.

Vegetable Consumption

Respondents to the 2009 Macomb County Behavioral Risk Factor Survey were asked how many separate servings of fruits and vegetables they eat per day. More than four-fifths (85.4 percent) report eating fewer than five fruits and vegetables each day.

Physical Activity

In 2009, about a quarter of Macomb County adults report not participating in any leisure-time physical activity (i.e., physical activities or exercises such as jogging, swimming, bicycling, or walking for exercise) in the past month.

An estimated 27.8 percent of adults in Macomb County meet the U.S. Centers for Disease Control and Prevention recommendations for participation in moderate physical activity. An estimated 32.1 percent of Macomb County adults meet recommendations for participation in vigorous physical activity.

HIV/AIDS

An estimated 3.9 percent of Macomb County residents engaged in at-risk behaviors for acquiring HIV in 2009. While the differences are not statistically significant, the percentage of individuals reporting this behavior decreases as age increases.

WOMEN'S HEALTH

Clinical Breast Exams

Among Macomb County females, 74.9 percent have had an appropriately timed clinical breast exam. While not a statistically significant difference, women aged 30–39 were the most likely to have had a breast exam within the recommended time frame for their age group. Women in households with annual incomes of \$50,000 and greater were more likely to have received an appropriately timed clinical breast exam than women in households with annual incomes of less than \$35,000.

Mammograms

Among Macomb County females in 2009, 56.8 percent had received a mammogram within the past two years, and 46.8 percent had received one within the past year. Overall, females aged 35 and older were more likely to have had a mammogram in the past two years than women aged 18–34.

Pap Tests

In 2009, an estimated 89.3 of Macomb County adult females had received a Pap test within the past three years. Females aged 75 and older were less likely to have received a Pap test in the past three years than females aged 54 and younger.

DISASTER PREPAREDNESS

About a quarter (25.5 percent) of Macomb County adults believe their household is well-prepared to handle a large-scale disaster or emergency. A greater proportion of males than females believe their household is well-prepared to handle a large-scale disaster or emergency. Adults aged 35–54 are less likely than adults in other age groups to report their household is well-prepared for a large-scale disaster or emergency.

Introduction

In 2009, the Southeastern Michigan Health Association (SEMHA) and the Macomb County Health Department (MCHD) contracted for a survey of the adult population in Macomb County on various behaviors, medical conditions, and preventive health care practices. Findings from the survey are useful to SEMHA, the MCHD, and community partners in identifying priority health issues and the populations at greatest risk for health problems. The data contribute to planning efforts and effective targeting of resources to support intervention programs, and can be used by all community members to gain a better understanding of the health concerns affecting our community.

A total of 1,086 adults in Macomb County responded to the telephone survey, resulting in an overall margin of error of ± 3.0 percent. The findings presented in this report have been weighted and can be interpreted as estimates of the prevalence rates of various health risks among the general adult population of Macomb County. For a complete description of the methodology used in this survey and report, refer to the Methodology section.

SURVEY INSTRUMENT

Public Sector Consultants (PSC) used a collaborative approach to develop the survey instrument with MCHD staff. Whenever possible, identical question wording was used from the Michigan Behavioral Risk Factor Survey (BRFS) to allow for comparisons to state figures. In past Macomb County behavioral risk factor surveys, unique questions were included to permit analysis of issues of interest to the local community. PSC worked with Macomb County staff to ensure that wording identical to those unique questions was used in this survey to allow for comparisons to past Macomb County behavioral risk factor surveys. A copy of the questionnaire is included in the Appendix.

SAMPLING AND DATA COLLECTION

Data were collected using a Random Digit Dial (RDD) telephone survey of adult residents (18 and older) in Macomb County. As a partner on this project, PSC worked with Western Wats Market Research, an 850-station market research firm with 11 facilities spread across three western states and one Canadian province. Through Western Wats, PSC acquired an appropriate RDD sample and conducted the survey by telephone. It is against the law to use an automatic dialing device to contact a cell phone number. Despite a growing number of cell-only households in America, RDD continues to be the gold standard for survey research. The Macomb County health survey includes only landline telephone numbers, and does not account for multiple telephone lines that may exist in a single household. Western Wats Market Research made a minimum of six call attempts to each eligible number in the sample in an attempt to interview an eligible respondent. The attempts were distributed by day, evening, and weekend periods.

Respondents were selected using the standard BRFS random selection methodology. This methodology asks potential respondents to identify the number of adults in the household, including their gender, in order to randomly select an adult for inclusion in the sample. The probability of inclusion in the sample, based upon the varying number of adults in each household, is accounted for using the BRFS expansion weight described below in “Case Weighting.” The script for selection of respondents is included in the survey instrument.

The sample was stratified by gender and age. The final sample was achieved through an initial sample of 800 respondents, including 400 males and 400 females. An oversample was then applied until the sample included enough respondents to provide reliable results for both males and females aged 65 and older. The final sample includes:

- 547 males, for a margin of error of ± 4.2 percent at a 95 percent confidence interval
- 539 females, for a margin of error of ± 4.2 percent at a 95 percent confidence interval
- 230 males aged 65 and older, for a margin of error of ± 6.4 percent at a 95 percent confidence interval
- 230 females aged 65 and older, for a margin of error of ± 6.5 percent at a 95 percent confidence interval

The final sample included 1,086 respondents for an overall margin of error of ± 3.0 percent at a 95 percent confidence interval.

DATA ANALYSIS

Case Weighting

The data for Macomb adults were weighted to account for the sample design and to reduce the effect of unit non-response. RDD sample design yields a complex probability sample. The probability of reaching a given adult varies by the number of phone lines that serve that adult's household and by the number of adults that live in the household. Expansion weights were calculated to reduce the non-random element of study design associated with the number of adults living in the household, but not the element associated with the number of phone lines to the household because this information was unavailable. To reduce the effect of unit non-response (refusals and non-contacts), Public Sector Consultants calculated poststratification weights from age and gender distributions of the population of Macomb County as determined by the U.S. Census Bureau for the year 2000 (Table 1). These were rescaled to reflect the age and gender distributions of the portion of the population aged 18 and older. The final weights applied for analysis were calculated by multiplying the expansion weights by the poststratification weights and rescaling the result to reflect the actual sample size of 1,086.

Table 1
Percentage Distribution of Macomb County Population and 2009 Macomb County BRFs Weighted and Unweighted Sample

Demographic Characteristic	Macomb County Census 2000	Macomb County Weighted BRFs	Macomb County Unweighted BRFs
Gender			
Male	48.2%	52.2%	50.4%
Female	51.8	47.8	49.6
Age			
18–24	10.5	14.5	7.1
25–34	19.3	20.3	13.7
35–44	22.1	20.6	9.8
45–54	18.1	19.4	11.9
55–64	12.0	10.8	13.8
65–74	9.4	8.1	22.8
75 +	8.6	6.3	21.1
Education			
Less than high school	17.0	5.3	6.8
High school graduate	32.8	33.9	37.7
Some college	24.8	29.4	27.8
College graduate	25.4	31.4	27.8
Income			
< \$15,000	9.9	3.5	6.0
\$15,000–24,999	10.2	13.6	20.8
\$25,000–34,999	11.3	9.5	13.5
\$35,000–49,999	15.7	14.9	16.6
\$50,000+	52.7	58.4	43.1

Analysis

Public Sector Consultants used SPSS and Excel software to analyze the data. The initial phase of the analyses involved frequency tables and descriptive statistics (e.g., mean, median, standard deviation) to examine and characterize the distribution of responses for each variable. Several variables were recoded to reflect desired demographic categories for comparison and all variables were recoded to exclude “not sure” and “refused” responses from prevalence calculations. The second phase of the analyses examined the patterns of relations between key demographic variables and all other survey variables to identify meaningful similarities and differences. For analyzing subgroup comparisons and interpreting the 95 percent confidence interval, the following method was used: if two intervals do not overlap then they are probably statistically different from one another; if they overlap, then the observed difference in the estimates cannot be interpreted as statistically different. Some breakouts produced small sample sizes ($n < 50$) limiting interpretation of prevalence estimates due to relatively large confidence intervals.

Where possible, prevalence estimates and confidence intervals from the 2005 Macomb County BRFs are included to enable trend analysis. Data from the 2006 and 2007 Michigan Behavioral Risk Factor Surveys are also included where appropriate to enable comparison of 2009 Macomb County data with the state population. Any notable differences between estimates from the 2009 Macomb County BRFs and estimates from either the 2005 Macomb County BRFs or 2006 and 2007 Michigan BRFs are reported.

General Health Status

PERCEIVED HEALTH STATUS

General health status may be influenced by many factors, including behaviors, environmental factors, and social and economic conditions. Self-rated assessment can be a reliable indicator of an individual's perceived health. State and national data have shown the prevalence of self-rated fair or poor health status to be higher within older age groups, females, and minorities, and fair or poor health status also has been associated with lower socioeconomic status.

People responding to the Macomb County Behavioral Risk Factor Survey were asked to rate their general health status as excellent, very good, good, fair, or poor. In 2009, an estimated 12.2 percent of adults in Macomb County perceived their general health to be either fair or poor. This proportion increased with age from 7.3 percent of people aged 18–24 years to 24.7 percent of people aged 75 years and older. The proportion who reported fair or poor health decreased with income levels. Females responding to the 2009 Macomb BRFs were less likely to report their general health status as fair or poor (10.8 percent) than those responding to the 2007 Michigan BRFs (15.2 percent).

Table 2
General Health Status Fair or Poor^a

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2007 (95% CI)
Total	12.2% (10.2–14.2)	12.9% (10.7–15.0)	14.8% (13.8–15.8)
Gender			
Male	13.7 (10.9–16.5)	10.1 (7.0–13.1)	14.3 (12.7–16.1)
Female	10.8 (8.1–13.5)	15.5 (12.5–18.4)	15.2 (14.1–16.5)
Age			
18–24	7.3 (3.2–11.4)	9.4 (0.5–18.3)	8.3 (5.2–13.1)
25–34	8.0 (4.4–11.7)	4.0 (0.8–7.3)	8.5 (6.3–11.3)
35–44	12.5 (8.1–17.9)	6.1 (2.6–9.5)	11.2 (9.1–13.5)
45–54	8.3 (4.5–12.1)	11.1 (6.9–15.4)	13.6 (11.7–15.7)
55–64	17.6 (10.6–24.6)	15.7 (10.0–21.3)	19.5 (17.4–21.8)
65–74	21.5 (12.8–30.3)	31.1 ^b (25.4–36.9)	23.0 (20.2–26.0)
75 +	24.7 (14.2–35.2)	–	31.2 (28.1–34.4)
Education			
Less than high school	35.2 (22.4–47.9)	39.9 (24.8–55.0)	26.9 (22.4–31.8)
High school graduate	12.3 (9.0–15.7)	16.5 (12.5–20.4)	19.7 (17.7–22.0)
Some college	12.7 (9.0–16.3)	11.7 (8.1–15.3)	14.6 (12.9–16.5)
College graduate	8.3 (5.3–11.2)	5.5 (3.0–8.0)	6.9 (5.8–8.3)
Income			
< \$15,000	37.9 ^c (20.2–55.6)	39.9 (25.6–54.3)	–
\$15,000–24,999	25.8 (18.0–33.6)	22.5 (14.7–30.2)	–
\$25,000–34,999	18.8 (10.4–27.2)	17.7 (10.4–25.1)	–
\$35,000–49,999	13.5 (7.7–19.3)	14.6 (8.0–21.1)	–
\$50,000+	5.8 (3.8–7.8)	6.2 (3.8–8.6)	–

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

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFs.

^cDenotes sample size smaller than 50.

HEALTH-RELATED QUALITY OF LIFE

Perceived physical and mental health affects the ability of individuals to engage in daily activities as well as their overall quality of life. In 2009, about 9.8 percent of adults in Macomb County reported that they had experienced physical health that was not good on at least 15 days during the past month. Physical health includes physical illness and injury.

Table 3
Physical Health Status Poor on at Least 15 Days in the Past Month^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
	9.8%	(8.0–11.6)	7.9%	(6.3–9.5)
Total				
Gender				
Male	10.7	(8.1–13.3)	5.9	(3.6–8.2)
Female	8.8	(6.3–11.3)	9.7	(7.4–12.0)
Age				
18–24	5.3	(1.7–8.9)	2.4	(0.0–7.1)
25–34	7.2	(3.7–10.7)	5.0	(1.0–9.1)
35–44	10.6	(6.5–14.7)	3.8	(1.3–6.3)
45–54	14.4	(9.5–19.3)	9.6	(5.9–13.3)
55–64	10.1	(4.4–15.8)	11.3	(6.3–16.4)
65–74	11.0	(4.2–17.8)	16.5 ^b	(12.1–20.9)
75 +	14.8	(5.9–23.7)	–	–
Education				
Less than high school	25.0	(13.7–36.3)	17.0	(7.8–26.3)
High school graduate	10.1	(7.0–13.2)	9.8	(6.8–12.9)
Some college	11.3	(7.8–14.8)	8.0	(4.9–11.1)
College graduate	5.7	(3.2–8.2)	4.1	(2.0–6.3)
Income				
< \$15,000	28.1 ^c	(12.5–43.7)	19.3	(9.0–29.6)
\$15,000–24,999	19.3	(12.1–26.5)	16.2	(9.4–22.9)
\$25,000–34,999	20.0	(11.2–28.8)	11.3	(5.1–17.4)
\$35,000–49,999	9.9	(4.8–15.0)	8.0	(3.5–12.6)
\$50,000+	6.0	(3.9–8.1)	5.2	(2.9–7.4)

^aAmong all respondents, the proportion who reported 15 or more days during the past 30 days when their physical health was poor. Physical health includes physical illness and injury.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

Mental health includes stress, depression, and problems with emotions. About 13.1 percent of adults in Macomb County reported that their mental health was not good on at least 15 days of the past month. A greater proportion of Macomb County adults reported poor mental health status on at least 15 days in the past month in 2009 (13.1 percent) than in 2005 (7.4 percent). Males were more likely to report poor mental health on at least 15 days in the past month in 2009 (14.2 percent) than in 2005 (5.4 percent).

Table 4
Mental Health Status Poor on at Least 15 days in the Past Month^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
Total	13.1%	(11.1–15.1)	7.4%	(5.6–9.2)
Gender				
Male	14.2	(11.3–17.1)	5.4	(2.9–7.9)
Female	12.0	(9.2–14.8)	9.3	(6.7–11.9)
Age				
18–24	16.7	(10.7–22.7)	4.5	(0.0–10.3)
25–34	13.3	(8.7–17.9)	9.9	(4.5–15.4)
35–44	16.4	(11.4–21.4)	6.0	(2.6–9.4)
45–54	13.6	(8.8–18.4)	11.1	(6.6–15.7)
55–64	11.0	(5.1–16.9)	5.7	(2.0–9.5)
65–74	9.8	(3.4–16.2)	3.8 ^b	(1.7–6.0)
75 +	1.6	(0.0–4.7)	–	–
Education				
Less than high school	30.2	(17.8–42.6)	19.1	(4.5–33.8)
High school graduate	16.9	(13.0–20.8)	7.3	(4.4–10.2)
Some college	10.8	(7.3–14.3)	9.5	(5.8–13.2)
College graduate	9.0	(5.9–12.1)	3.6	(1.5–5.7)
Income				
< \$15,000	19.4 ^c	(5.5–33.3)	15.2	(5.9–24.4)
\$15,000–24,999	22.8	(15.1–30.5)	11.3	(4.9–17.8)
\$25,000–34,999	20.0	(11.2–28.8)	12.2	(4.6–19.8)
\$35,000–49,999	17.6	(11.1–24.1)	10.7	(4.0–17.3)
\$50,000+	10.3	(7.6–13.0)	4.2	(2.1–6.3)

^aAmong all respondents, the proportion who reported 15 or more days when their mental health was poor during the past 30 days. Mental health includes stress, depression, and problems with emotions.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

Health Care Access

People who do not have health care coverage are less likely to access health care services, including preventive care, and are more likely to delay getting needed medical attention. Behavioral Risk Factor Survey data for Michigan show that people who do not have health care coverage are more likely to have other health risk factors, such as current cigarette smoking and lack of physical activity.

In 2009, an estimated 12.7 percent of adults aged 18–64 in Macomb County had no health care coverage. Health care coverage includes health insurance, prepaid plans, or government plans such as Medicare, Medicaid, or county health plans. Males are more likely than females to lack health care coverage. Younger adults and those with lower incomes are more likely to report lacking health care coverage.

Table 5
No Health Care Coverage^a (aged 18–64)

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	12.7%	(10.4–14.8)	13.1%	(10.0–15.9)	14.4%	(13.1–15.8)
Gender						
Male	14.4	(11.3–17.5)	13.2	(8.7–17.6)	15.5	(13.5–17.8)
Female	10.7	(7.7–13.7)	13.0	(9.0–16.6)	13.3	(11.7–15.0)
Age						
18–24	20.4	(14.0–26.8)	21.7	(8.8–34.5)	24.7	(19.5–30.6)
25–34	14.1	(9.4–18.8)	18.0	(10.2–25.1)	19.1	(15.6–23.2)
35–44	11.1	(6.9–15.3)	7.7	(3.4–11.6)	12.8	(10.7–15.3)
45–54	8.3	(4.5–12.1)	12.4	(7.4–17.8)	10.6	(9.0–12.5)
55–64	10.5	(4.9–16.1)	9.2	(4.9–14.0)	7.4	(6.1–9.0)
Education						
Less than high school	7.0 ^b	(0.0–14.6)	31.3	(8.2–54.3)	30.4	(23.1–38.8)
High school graduate	16.5	(12.1–20.9)	16.7	(10.9–22.5)	20.5	(17.8–23.5)
Some college	13.8	(9.7–17.9)	9.8	(5.7–14.1)	14.2	(11.9–16.8)
College graduate	8.8	(5.6–12.0)	10.0	(5.2–14.6)	6.1	(4.8–7.8)
Income						
< \$15,000	34.8 ^b	(15.4–54.2)	35.6	(15.1–56.1)	–	–
\$15,000–24,999	34.8	(24.9–44.7)	28.0	(14.5–39.1)	–	–
\$25,000–34,999	23.0	(12.4–33.6)	31.3	(15.3–47.3)	–	–
\$35,000–49,999	11.5	(5.4–17.6)	10.1	(3.2–18.0)	–	–
\$50,000+	7.2	(4.8–9.6)	5.7	(2.8–8.4)	–	–

^aAmong all respondents aged 18–64, the proportion who reported that they did not have any kind of health care coverage. Health care coverage includes health insurance, prepaid plans such as HMOs, or government plans such as Medicare.

^bDenotes sample size smaller than 50.

An estimated 7.4 percent of adults in Macomb County report that there was a time in the past year when they needed to see a doctor, but could not either because they could not afford it or because they were uninsured. Adults aged 18–54 were more likely to report being unable to see a doctor due to cost or lack of insurance than adults aged 55 and

older. Adults with lower incomes were also more likely to report being unable to see a doctor due to cost or lack of insurance.

Table 6
Unable to See a Doctor When Needed^a

Demographic Characteristic	Macomb County 2009 (95% CI)	
Total	7.4%	(5.8–8.9)
Gender		
Male	8.3	(6.0–10.6)
Female	6.4	(4.3–8.5)
Age		
18–24	6.6	(2.7–10.5)
25–34	12.2	(7.8–16.6)
35–44	8.3	(4.6–12.0)
45–54	8.3	(4.5–12.1)
55–64	2.7	(0.0–5.7)
65–74	3.5	(0.0–7.4)
75 +	1.5	(0.0–4.4)
Education		
Less than high school	17.2	(7.5–26.9)
High school graduate	6.3	(3.8–8.8)
Some college	11.4	(7.9–14.9)
College graduate	3.0	(1.2–4.8)
Income		
< \$15,000	15.6 ^b	(3.0–28.2)
\$15,000–24,999	21.5	(14.2–28.8)
\$25,000–34,999	11.8	(4.9–18.7)
\$35,000–49,999	5.3	(1.5–9.1)
\$50,000+	4.8	(3.0–6.6)

^aAmong all respondents, the proportion who reported that there was a time in the past year that they were unable to see a doctor when they needed to due to cost or lack of insurance.

^bDenotes sample size smaller than 50.

Chronic Disease Prevalence

DIABETES

There are two major types of diabetes: type 1, occurring mainly in children and adolescents 18 years and younger, in which the body does not produce insulin and thus insulin administration is required to sustain life; and type 2, occurring usually in adults over 30 years of age, in which the body's tissues become unable to use its own limited amount of insulin effectively. Over the past decade, diabetes has remained the seventh leading cause of death in the United States, mainly from diabetes-associated cardiovascular disease. Diabetes is also the leading cause of non-traumatic amputations, blindness among working-aged adults, and end-stage renal disease. The occurrence of diabetes, especially type 2 diabetes as well as associated complications, is increasing in the United States. Several factors account for this chronic disease epidemic, including behavioral elements (improper nutrition, decreased physical activity, and obesity) and demographic changes (an aging population and increased growth of at-risk populations).

In Macomb County in 2009, an estimated 8.5 percent of adults have ever been told by a doctor, nurse, or other health professional that they have diabetes. Males are more likely than females to have ever been told they have diabetes. Adults aged 55 and older are more likely than adults aged 18–54 to have ever been told they have diabetes.

Adult males responding to the 2009 Macomb County BRFSS were more likely to report having ever been told they have diabetes (10.1 percent) than males responding to the 2005 Macomb County BRFSS (4.0 percent).

Table 7
Diabetes^a

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2007 (95% CI)
Total	8.5% (6.8–10.2)	5.9% (4.6–7.2)	9.0% (8.3–9.7)
Gender			
Male	10.1 (7.6–12.6)	4.0 (2.4–5.7)	9.5 (8.4–10.8)
Female	6.7 (4.6–8.9)	7.6 (5.6–9.5)	8.5 (7.6–9.4)
Age			
18–24	0.7 (0.0–2.0)	0.0 (0.0–0.0)	0.9 (0.3–2.6)
25–34	3.8 (1.2–6.4)	3.0 (0.1–5.9)	1.8 (0.9–3.4)
35–44	4.2 (1.5–6.9)	2.1 (0.2–4.0)	5.0 (3.6–6.9)
45–54	7.9 (4.2–11.6)	4.2 (1.8–6.6)	7.8 (6.4–9.5)
55–64	20.2 (12.8–27.6)	11.6 (7.0–16.1)	16.9 (14.8–19.3)
65–74	21.2 (12.5–29.9)	15.2 ^b (11.1–19.3)	22.0 (19.2–25.0)
75 +	20.0 (10.3–29.7)	–	20.3 (17.6–23.2)
Education			
Less than high school	12.1 (3.7–20.5)	14.9 (5.9–23.8)	12.6 (9.9–15.9)
High school graduate	9.9 (6.8–13.0)	6.1 (4.1–8.2)	11.2 (9.8–12.7)
Some college	7.6 (4.7–10.5)	6.1 (3.8–8.5)	9.0 (7.8–10.4)
College graduate	6.2 (3.6–8.8)	3.7 (1.5–5.9)	5.8 (4.8–7.0)

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Income						
< \$15,000	6.5 ^c	(0.0–15.2)	17.1	(7.8–26.3)	–	–
\$15,000–24,999	11.6	(5.8–17.4)	6.3	(2.8–9.8)	–	–
\$25,000–34,999	13.1	(5.9–20.3)	5.7	(1.6–9.8)	–	–
\$35,000–49,999	12.8	(7.1–18.5)	7.0	(3.2–10.8)	–	–
\$50,000+	5.8	(3.8–7.8)	4.3	(2.5–6.2)	–	–

^aAmong all respondents, the proportion who reported that they were ever told by a doctor, nurse, or other health professional that they have diabetes. Adults who were told they had pre-diabetes or borderline diabetes were considered not to have been diagnosed with diabetes.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

HYPERTENSION

High blood pressure, or hypertension, is known as the “silent killer” and is a major risk factor for coronary heart disease, stroke, and heart failure. Lifestyle interventions can help prevent high blood pressure. These interventions include increasing the level of aerobic physical activity, maintaining a healthy weight, limiting the consumption of alcohol to moderate levels for those who drink, reducing salt and sodium intake, and eating a reduced-fat diet high in fruits, vegetables, and low-fat dairy food.

While public awareness of the dangers of high blood pressure has increased, there are still many people with high blood pressure who are unaware that they have this disorder. In Macomb County, an estimated 30.8 percent of adults report ever having been told they have high blood pressure. The prevalence of hypertension increases with age.

Table 8
Hypertension Awareness^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	30.8%	(28.1–33.6)	25.8%	(22.9–28.7)	29.0%	(27.8–30.3)
Gender						
Male	33.6	(29.7–37.5)	27.9	(23.2–32.7)	30.8	(28.7–32.9)
Female	27.8	(23.9–31.7)	23.8	(20.3–27.2)	27.4	(26.0–28.9)
Age						
18–24	8.6	(4.1–13.1)	2.6	(0.0–6.7)	6.3	(3.8–10.3)
25–34	20.3	(14.9–25.7)	8.5	(0.0–6.7)	12.5	(9.7–16.1)
35–44	24.1	(18.4–29.8)	18.8	(12.5–25.1)	17.9	(15.3–20.8)
45–54	36.8	(30.1–43.5)	27.2	(20.4–34.0)	29.3	(26.8–32.0)
55–64	45.6	(36.5–54.8)	42.8	(35.1–50.5)	47.0	(44.2–49.8)
65–74	52.9	(42.3–63.6)	53.7 ^b	(47.6–59.8)	60.2	(56.8–63.5)
75 +	67.7	(56.3–79.1)	–	–	58.1	(54.7–61.4)
Education						
Less than high school	40.4	(27.7–53.1)	36.9	(23.5–50.2)	33.6	(28.8–38.8)
High school graduate	35.3	(30.4–40.2)	27.9	(22.9–32.8)	33.3	(31.0–35.8)
Some college	27.3	(22.4–32.2)	26.6	(21.0–32.1)	29.8	(27.4–32.3)
College graduate	27.0	(22.3–31.7)	20.4	(15.6–25.2)	22.8	(20.9–24.9)

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2007 (95% CI)
Income			
< \$15,000	31.3 ^c (15.2–47.4)	44.4 (29.4–59.3)	– –
\$15,000–24,999	41.5 (32.6–50.4)	31.2 (23.0–39.5)	– –
\$25,000–34,999	35.7 (25.5–46.0)	24.5 (15.8–33.2)	– –
\$35,000–49,999	38.6 (30.3–46.9)	28.6 (20.4–36.8)	– –
\$50,000+	24.3 (20.6–28.0)	19.7 (15.5–23.9)	– –

^aAmong 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 (HBP). Women who had HBP only during pregnancy and adults who were borderline or pre-hypertensive were considered not to have been diagnosed.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

CHOLESTEROL

High blood cholesterol is a major risk factor for coronary heart disease. Experts recommend that all adults aged 20 years and older have their cholesterol levels checked at least once every five years to help them take action to prevent or lower their risk of coronary heart disease. Lifestyle changes that prevent or lower high blood cholesterol include eating a diet low in saturated fat and cholesterol, increasing physical activity, and reducing excess weight.

In Macomb County in 2009, an estimated 33.7 percent of adults report ever having been told by a doctor, nurse, or other health professional that their blood cholesterol is high. This is lower than the proportion of adults in Michigan who have ever been told their blood cholesterol is high (39.9 percent). Males in Macomb County are less likely to have ever been told their blood cholesterol is high (35.1 percent) than males who responded to the 2007 Michigan BRFSS (42.8 percent). The proportion of adults who report ever having been told their blood cholesterol is high increases with age and is significantly greater for older adults.

Table 9
Cholesterol Awareness^a

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2007 (95% CI)
Total	33.7% (30.9–36.6)	31.3% (28.2–34.4)	39.9% (38.4–41.4)
Gender			
Male	35.1 (31.1–39.0)	30.5 (25.7–35.4)	42.8 (40.3–45.3)
Female	32.3 (28.2–36.3)	32.0 (28.1–36.0)	37.4 (35.7–39.2)
Age			
18–24	12.4 (7.0–17.8)	2.4 (0.0–7.1)	9.2 (4.6–17.3)
25–34	19.7 (14.4–25.1)	14.6 (8.4–20.8)	24.3 (19.9–29.4)
35–44	34.4 (28.0–40.8)	26.1 (19.2–32.9)	30.9 (27.5–34.6)
45–54	36.3 (29.7–43.0)	36.2 (28.8–43.7)	39.6 (36.7–42.5)
55–64	48.7 (39.5–57.9)	50.0 (42.2–57.7)	55.2 (52.3–58.1)
65–74	54.1 (43.5–64.7)	56.1 ^b (50.0–62.1)	58.7 (55.2–62.1)
75 +	55.4 (43.3–67.5)	– –	53.2 (49.7–56.6)

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Education						
Less than high school	34.5	(22.0–47.1)	50.6	(35.4–65.9)	41.8	(35.9–48.0)
High school graduate	39.8	(34.7–44.9)	29.6	(24.6–34.5)	44.6	(41.9–47.3)
Some college	30.3	(25.2–35.3)	30.8	(25.0–36.5)	40.3	(37.5–43.1)
College graduate	30.0	(25.1–34.9)	30.7	(24.8–36.6)	35.5	(33.0–38.0)
Income						
< \$15,000	22.6 ^c	(7.9–37.3)	49.7	(33.7–65.6)	–	–
\$15,000–24,999	39.8	(30.9–48.7)	38.4	(29.4–47.5)	–	–
\$25,000–34,999	38.1	(27.7–48.5)	41.9	(30.6–53.3)	–	–
\$35,000–49,999	41.4	(33.0–49.8)	27.2	(19.8–34.6)	–	–
\$50,000+	32.3	(28.2–36.4)	26.9	(22.2–31.6)	–	–

^aAmong all respondents, the proportion who reported that they were ever told by a doctor, nurse, or other health professional that their blood cholesterol is high.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

ASTHMA

Asthma is a chronic inflammatory disorder of the lungs that can result in restricted activity, hospitalization, and even death. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few potential risk factors that are associated with the development of asthma. Asthma attacks can be triggered by a variety of factors, such as exposure to allergens, air pollutants, and respiratory viral infections.

Most of the problems caused by asthma could be averted if persons with asthma and their health care providers managed the disease according to established guidelines. Effective management of asthma—controlling exposure to factors that trigger asthma episodes, adequately managing asthma with medicine, monitoring the disease by using objective measures of lung function, and educating asthma patients to become partners in their own care—is necessary to interrupt the progression of the disease and improve the quality of life for individuals with asthma.

In Macomb County, an estimated 14.9 percent of adults report ever having been told they have asthma by a doctor, nurse, or other health professional. Younger adults are more likely than older adults to report ever having been told they have asthma. And adults with less than a high school education are more likely than college graduates to report ever having been told they have asthma.

Table 10
Asthma^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	14.9%	(12.8–17.0)	11.5%	(9.2–13.8)	14.7%	(8.6–10.5)
Gender						
Male	14.2	(11.3–17.1)	9.1	(5.7–12.4)	13.4	(11.7–15.2)
Female	15.7	(12.6–18.8)	13.7	(10.5–17.0)	15.9	(14.5–17.4)
Age						
18–24	24.0	(17.2–30.8)	14.4	(3.7–25.1)	20.4	(15.8–25.9)
25–34	19.7	(14.4–25.0)	14.0	(7.4–20.5)	18.3	(15.0–22.3)
35–44	14.4	(9.7–19.1)	13.9	(8.6–19.2)	15.4	(13.0–18.1)
45–54	11.8	(7.4–16.2)	7.7	(4.0–11.4)	12.4	(10.6–14.5)
55–64	11.5	(5.6–17.4)	8.9	(4.7–13.2)	13.5	(11.7–15.5)
65–74	8.3	(2.4–14.2)	9.8 ^b	(5.9–13.6)	10.6	(8.7–12.9)
75 +	7.6	(1.2–14.0)	–	–	8.8	(7.1–10.8)
Education						
Less than high school	31.0	(19.1–42.9)	22.0	(8.5–35.5)	18.3	(13.9–23.7)
High school graduate	15.6	(11.9–19.3)	7.5	(4.2–10.9)	13.4	(11.6–15.5)
Some college	15.7	(11.7–19.7)	13.7	(8.9–18.5)	17.2	(15.0–19.8)
College graduate	11.3	(7.9–14.7)	12.3	(8.1–16.5)	12.6	(11.0–14.4)
Income						
< \$15,000	23.3 ^c	(8.6–38.0)	14.6	(5.7–23.4)	–	–
\$15,000–24,999	15.3	(8.8–21.8)	17.9	(10.5–25.4)	–	–
\$25,000–34,999	20.0	(11.5–28.5)	11.1	(2.5–19.7)	–	–
\$35,000–49,999	13.5	(7.7–19.3)	8.6	(1.9–15.3)	–	–
\$50,000+	12.6	(9.7–15.5)	11.6	(8.1–15.1)	–	–

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

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

ARTHRITIS

Arthritis and rheumatism are the leading causes of disability in the United States. In 2003, the total costs attributed to arthritis and rheumatism in Michigan were approximately \$5.5 billion. With an aging Michigan population, it is estimated that the number of persons in Michigan with doctor-diagnosed arthritis will increase to over 2.5 million by 2030.

In 2009, an estimated 29.1 percent of Macomb County adults had ever been told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. This proportion increased with age from 11.9 percent of those aged 18–24 to 61.5 percent of those aged 75 years and older. The proportion declined with higher education and income levels. Females were more likely than males to report ever having been told by a health care professional they have some form of arthritis.

Table 11
Arthritis^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	29.1%	(26.4–31.8)	28.9%	(25.9–31.9)	31.7%	(30.4–33.0)
Gender						
Male	25.0	(21.5–28.6)	20.4	(16.3–24.4)	28.2	(26.3–30.3)
Female	33.6	(29.5–37.7)	36.9	(32.7–41.0)	34.9	(33.3–36.6)
Age						
18–24	11.9	(6.8–17.1)	4.9	(0.0–10.6)	4.7	(2.7–7.9)
25–34	16.6	(11.6–21.6)	9.1	(3.7–14.5)	12.2	(9.5–15.6)
35–44	14.7	(10.0–19.5)	19.6	(13.6–25.6)	18.6	(16.2–21.4)
45–54	40.2	(33.5–46.9)	31.2	(24.2–38.1)	34.7	(32.0–37.4)
55–64	38.1	(29.1–47.0)	53.2	(45.5–60.9)	53.3	(50.4–56.1)
65–74	58.3	(47.8–68.9)	57.5 ^b	(51.5–63.5)	64.0	(60.5–67.3)
75 +	61.5	(49.7–73.4)	–	–	63.6	(60.2–66.8)
Education						
Less than high school	31.6	(19.5–43.6)	38.8	(24.8–52.8)	36.8	(31.6–42.3)
High school graduate	36.9	(32.0–41.9)	30.9	(25.7–36.0)	33.9	(31.6–36.3)
Some college	30.0	(25.0–35.1)	31.1	(25.4–36.9)	34.6	(32.1–37.2)
College graduate	20.4	(16.1–24.7)	22.5	(17.7–27.4)	25.4	(23.4–27.5)
Income						
< \$15,000	41.9 ^c	(24.5–59.3)	53.3	(37.3–69.3)	–	–
\$15,000–24,999	43.3	(34.4–52.2)	40.9	(31.7–50.2)	–	–
\$25,000–34,999	40.5	(30.0–51.0)	30.1	(19.7–40.5)	–	–
\$35,000–49,999	33.3	(25.3–41.3)	33.6	(25.3–42.0)	–	–
\$50,000+	21.4	(17.9–24.9)	21.8	(17.6–26.0)	–	–

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

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

WEIGHT STATUS

People who are overweight or obese are at increased risk for high blood pressure, diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, and some types of cancer. The health outcomes related to these diseases, however, often can be improved through weight loss or, at a minimum, no further weight gain.

Overweight is defined as having a body mass index (BMI) between 25.0 and 29.9. An obese weight status is a BMI greater than or equal to 30.0. The body mass index is defined as weight in kilograms divided by height in meters squared. This is calculated from the self-reported height and weight measurements of adults responding to the Behavioral Risk Factor Survey.

An estimated 25.7 percent of adults in Macomb County were obese in 2009, and about 37.7 percent of adults in the county were overweight. Males are more likely than females to be overweight, and 18 to 24-year-olds are less likely to be overweight than adults in any other age category. Adults in households with annual income greater than \$50,000

are more likely to be *overweight* than adults in households with annual income less than \$35,000. But they are *less likely to be obese* than adults in households with lower incomes.

Table 12
Weight Status: Obese^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	25.7%	(23.1–28.4)	23.1%	(20.2–26.9)	28.4%	(27.1–29.9)
Gender						
Male	27.4	(23.6–31.1)	21.1	(16.6–25.6)	29.1	(26.8–31.4)
Female	23.7	(19.9–27.4)	25.0	(21.2–28.8)	27.8	(26.2–29.5)
Age						
18–24	17.8	(11.5–24.1)	11.0	(1.6–20.5)	15.6	(11.0–21.8)
25–34	26.2	(20.2–32.3)	17.5	(10.5–24.6)	30.4	(26.1–35.1)
35–44	22.7	(17.1–28.3)	21.0	(14.7–27.2)	27.7	(24.6–31.1)
45–54	31.1	(24.6–37.6)	26.1	(19.4–32.8)	30.4	(27.8–33.1)
55–64	29.2	(20.8–37.6)	35.2	(27.9–42.6)	38.4	(35.6–41.2)
65–74	32.9	(22.7–43.1)	25.4 ^b	(20.0–30.7)	34.2	(31.0–37.6)
75 +	19.1	(9.4–28.7)	–	–	19.5	(17.0–22.2)
Education						
Less than high school	35.1	(22.7–47.5)	33.3	(19.2–47.4)	23.9	(19.5–29.0)
High school graduate	24.1	(19.7–28.5)	22.0	(17.4–26.7)	31.9	(29.3–34.7)
Some college	29.0	(23.8–34.1)	21.2	(16.2–26.3)	32.1	(29.4–34.8)
College graduate	23.2	(18.5–27.7)	24.3	(18.4–30.1)	22.7	(20.6–25.0)
Income						
< \$15,000	23.3 ^c	(8.2–38.4)	25.7	(13.6–37.8)	–	–
\$15,000–24,999	36.1	(27.5–44.7)	28.5	(19.7–37.3)	–	–
\$25,000–34,999	36.3	(25.8–46.8)	21.2	(12.3–30.2)	–	–
\$35,000–49,999	30.0	(22.2–37.8)	18.5	(11.9–25.0)	–	–
\$50,000+	23.6	(19.9–27.3)	21.8	(17.5–26.1)	–	–

^aAmong all respondents, the proportion whose body mass index (BMI) was greater than or equal to 30.0. BMI 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.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

Table 13
Weight Status: Overweight^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	37.7%	(34.7–40.6)	40.0%	(36.3–43.6)	36.2%	(34.7–37.7)
Gender						
Male	46.4	(42.2–50.5)	49.2	(43.4–55.0)	41.5	(39.1–44.0)
Female	27.8	(23.8–31.8)	30.9	(26.7–35.0)	30.9	(29.1–32.7)
Age						
18–24	17.7	(11.4–24.0)	20.5	(7.6–33.3)	23.5	(18.5–29.3)
25–34	34.2	(27.6–40.7)	41.8	(32.0–51.5)	35.1	(30.5–40.1)
35–44	45.8	(39.2–52.5)	43.8	(35.7–51.9)	37.6	(34.2–41.1)
45–54	41.5	(34.5–48.4)	43.2	(35.4–51.1)	38.9	(36.1–41.8)
55–64	41.6	(32.5–50.7)	39.4	(31.6–47.3)	37.8	(35.0–40.7)
65–74	41.5	(30.8–52.1)	41.1 ^b	(35.0–47.2)	39.5	(36.1–43.0)
75 +	41.3	(29.1–53.4)	–	–	41.8	(38.4–45.2)
Education						
Less than high school	35.1	(22.7–47.5)	12.7	(3.2–22.1)	34.6	(29.1–40.7)
High school graduate	38.5	(33.4–43.5)	39.6	(33.3–45.9)	34.6	(32.0–37.3)
Some college	34.7	(29.3–40.1)	41.4	(34.8–48.1)	34.8	(32.1–37.7)
College graduate	40.2	(34.8–45.6)	43.7	(37.1–50.3)	39.2	(36.6–41.9)
Income						
< \$15,000	34.5 ^c	(17.2–51.8)	32.4	(18.4–46.4)	–	–
\$15,000–24,999	28.8	(20.6–37.0)	31.6	(22.4–40.7)	–	–
\$25,000–34,999	27.5	(17.7–37.3)	29.8	(19.2–40.4)	–	–
\$35,000–49,999	35.3	(27.2–43.5)	47.5	(37.8–57.1)	–	–
\$50,000+	45.0	(40.6–49.4)	42.4	(36.7–48.1)	–	–

^aAmong all respondents, the proportion whose body mass index (BMI) was between 25.0 and 29.9. BMI 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.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes samples size smaller than 50.

Immunizations

INFLUENZA VACCINATION

Influenza is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. The best way to prevent this illness is by getting a flu vaccination each fall. Some people, such as older people, young children, and people with certain health conditions, are at high risk for serious flu complications.

Adults over the age of 65 are in one of the highest risk groups for contracting influenza and are at increased risk of hospitalization and/or mortality due to the virus. Therefore, public health agencies encourage seniors to receive an influenza vaccination each year to protect them from complications to health as a result of contracting the virus. Among Macomb County adults aged 65 and older, approximately 72.7 percent had received a flu vaccine in the last 12 months. Of those who received a flu vaccine, none reported receiving the spray; all received a flu shot.

Table 14
Received a Flu Vaccine^a (aged 65 and older)

Demographic Characteristic	Macomb County 2009 ^a (95% CI)		Macomb County 2005 ^b (95% CI)		Michigan 2007 ^a (95% CI)	
Total	72.7%	(65.6–79.8)	61.6%	(55.6–67.6)	70.7%	(68.4–72.8)
Gender						
Male	72.5	(62.0–83.0)	63.4	(53.2–73.6)	74.1	(70.5–77.5)
Female	73.8	(64.2–83.4)	60.4	(53.1–67.7)	68.2	(65.3–70.8)
Age						
65–74	71.4	(61.7–81.1)	61.4	(53.4–69.4)	65.2	(61.9–68.4)
75 +	74.2	(63.6–84.8)	61.8	(52.7–70.8)	76.2	(73.2–78.9)
Education						
Less than high school	57.1 ^c	(31.2–83.0)	55.5	(37.4–73.5)	67.3	(60.8–73.1)
High school graduate	72.6	(62.4–82.8)	61.5	(52.8–70.3)	69.6	(66.0–73.0)
Some college	74.2 ^c	(58.8–89.6)	68.9	(57.6–80.2)	68.9	(64.3–73.2)
College graduate	80.6 ^c	(66.7–94.5)	55.8	(40.5–71.1)	76.5	(72.0–80.5)
Income						
< \$15,000	66.7 ^c	(29.0–100.0)	49.6	(32.0–67.2)	–	–
\$15,000–24,999	66.7 ^c	(40.0–93.3)	63.0	(50.5–75.5)	–	–
\$25,000–34,999	72.0 ^c	(54.4–89.6)	71.1	(57.5–84.7)	–	–
\$35,000–49,999	69.6 ^c	(50.8–88.4)	57.4	(41.2–73.5)	–	–
\$50,000+	76.6 ^c	(64.5–88.7)	59.4	(42.3–76.5)	–	–

^aAmong respondents, the proportion of adults aged 65 and older who reported receiving either a flu shot or spray (FluMist) in the past 12 months.

^bAmong respondents, the proportion of adults aged 65 and older who reported receiving a flu shot in the past 12 months.

^cDenotes sample size smaller than 50.

Health Risk Behaviors

CIGARETTE USE

The harmful effects of tobacco smoke have been well documented, yet tobacco use remains the leading preventable cause of disease and death in the United States. Smoking contributes to the development of many kinds of chronic conditions, including cancers, respiratory diseases, and cardiovascular diseases.

In 2009, about one-fifth (20.6 percent) of Macomb County adults are current smokers. The percentage of female adults in the county who are current smokers has decreased since 2005. Adults aged 75 and older are significantly less likely to smoke cigarettes than adults in other age categories. College graduates are also less likely to smoke than adults with lower levels of education.

Table 15
Cigarette Use^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	20.6%	(18.2–23.0)	24.4%	(21.2–27.5)	21.1%	(19.8–22.5)
Gender						
Male	22.7	(19.3–26.2)	21.8	(17.0–26.6)	23.5	(21.3–25.8)
Female	18.2	(14.9–21.5)	26.7	(22.6–30.9)	18.9	(17.4–20.5)
Age						
18–24	24.2	(17.4–31.0)	26.3	(12.7–39.8)	29.1	(23.5–35.5)
25–34	23.6	(17.9–29.3)	37.2	(27.8–46.7)	28.5	(24.4–33.0)
35–44	22.1	(16.6–27.6)	21.6	(15.7–27.5)	23.0	(20.2–26.1)
45–54	23.0	(17.2–28.8)	28.3	(21.4–35.2)	22.6	(20.3–25.2)
55–64	15.9	(9.2–22.6)	19.1	(13.0–25.3)	16.8	(14.8–19.1)
65–74	16.7	(8.7–24.7)	13.2 ^b	(8.3–16.3)	11.3	(9.2–13.8)
75 +	3.1	(0.0–7.3)	–	–	5.0	(3.7–6.6)
Education						
Less than high school	35.1	(22.7–47.5)	44.0	(28.4–59.6)	34.4	(28.6–40.8)
High school graduate	27.7	(23.1–32.3)	30.4	(24.7–36.1)	29.5	(26.8–32.3)
Some college	23.2	(18.5–27.9)	27.9	(21.7–34.0)	21.4	(19.1–23.9)
College graduate	8.3	(5.4–11.2)	10.5	(6.7–14.4)	9.2	(7.7–11.0)
Income						
< \$15,000	29.0 ^c	(13.0–45.0)	24.0	(11.8–36.2)	–	–
\$15,000–24,999	35.2	(26.7–43.7)	32.1	(22.7–41.6)	–	–
\$25,000–34,999	27.1	(17.7–36.5)	34.5	(23.1–45.8)	–	–
\$35,000–49,999	20.5	(13.6–27.4)	33.7	(24.4–43.1)	–	–
\$50,000+	15.4	(12.3–18.5)	20.7	(16.0–25.5)	–	–

^aAmong all respondents, the proportion who reported that they had ever smoked at least 100 cigarettes in their life and that they smoke cigarettes now, either every day or on some days.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

ALCOHOL CONSUMPTION

Alcohol abuse is linked with serious health conditions such as cirrhosis of the liver, high blood pressure, stroke, and some types of cancer, as well as injuries and deaths from traffic crashes, falls, fires, and drowning. It is also a factor in homicide, suicide, domestic violence, and child abuse.

Binge drinking results in high blood alcohol levels, which can cause blackouts and even death. Binge drinking also increases the likelihood of other risky behaviors, such as unsafe sex, driving under the influence, and use of illicit drugs.

In Macomb County in 2009, about 18.2 percent of adults report binge drinking, that is, males who report having five or more drinks of alcohol on a single occasion on one or more of the past 30 days, and females who report having four or more drinks of alcohol on a single occasion on one or more of the past 30 days. Men are more likely to report binge drinking than women, and younger adults are more likely to report binge drinking than older adults.

Table 16
Alcohol Consumption: Binge Drinking^a

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2007 (95% CI)
Total	18.2% (15.9–20.5)	21.9% (18.6–25.3)	18.4% (17.1–19.8)
Gender			
Male	25.4 (21.8–29.0)	29.7 (24.1–35.3)	24.9 (22.6–27.2)
Female	10.4 (7.8–13.0)	15.0 (11.1–18.8)	12.5 (11.1–14.0)
Age			
18–24	28.3 (21.1–35.5)	46.9 (30.8–63.1)	31.5 (25.5–38.1)
25–34	20.7 (15.3–26.1)	25.7 (17.1–34.2)	24.0 (20.1–28.4)
35–44	25.0 (19.2–30.8)	29.1 (21.9–36.4)	24.2 (21.4–27.3)
45–54	13.2 (8.6–17.8)	21.0 (14.3–27.6)	16.7 (14.7–19.0)
55–64	14.9 (8.4–21.4)	9.8 (5.6–14.0)	11.0 (9.2–13.0)
65–74	7.1 (1.6–12.6)	3.6 ^b (1.3–6.0)	8.9 (7.0–11.3)
75 +	4.5 (0.0–9.5)	–	2.0 (1.2–3.1)
Education			
Less than high school	17.5 (7.6–27.4)	23.9 (8.6–39.3)	14.8 (10.6–20.2)
High school graduate	18.9 (14.9–22.9)	26.5 (20.4–32.5)	18.9 (16.5–21.6)
Some college	16.8 (12.7–20.9)	16.7 (11.1–22.3)	20.5 (18.1–23.2)
College graduate	19.6 (15.4–23.8)	21.8 (15.7–27.9)	16.8 (14.8–19.1)
Income			
< \$15,000	18.8 ^c (5.3–32.3)	24.8 (6.9–42.7)	–
\$15,000–24,999	16.5 (9.9–23.1)	17.8 (9.4–26.2)	–
\$25,000–34,999	25.9 (16.6–35.2)	24.8 (13.5–36.2)	–
\$35,000–49,999	6.8 (2.5–11.1)	22.4 (13.1–31.8)	–
\$50,000+	23.3 (19.7–26.9)	24.3 (19.2–29.5)	–

^aAmong all respondents, the proportion of males who reported having five or more drinks of alcohol on a single occasion on one or more of the past 30 days, and females who reported having four or more drinks of alcohol on a single occasion on one or more of the past 30 days.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

Long-term heavy drinking increases risk for high blood pressure, heart rhythm irregularities, stroke, cirrhosis and other liver disorders, and certain forms of cancer. An estimated 5.8 percent of adults in Macomb County report heavy drinking, that is, on average consuming more than two alcoholic beverages per day for men and more than one alcoholic beverage per day for women.

Table 17
Alcohol Consumption: Heavy Drinking^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Michigan 2007 (95% CI)	
Total	5.8%	(4.4–7.2)	6.1%	(5.3–6.9)
Gender				
Male	6.9	(4.8–9.0)	7.5	(6.2–9.0)
Female	4.6	(2.8–6.4)	4.8	(3.9–5.7)
Age				
18–24	7.9	(3.6–12.2)	11.1	(7.6–15.9)
25–34	6.1	(2.9–9.3)	6.6	(4.5–9.6)
35–44	7.4	(3.9–10.9)	5.6	(4.2–7.3)
45–54	1.5	(0.0–3.2)	5.7	(4.6–7.1)
55–64	7.0	(2.3–11.7)	5.5	(4.3–7.0)
65–74	4.8	(0.2–9.4)	4.4	(3.3–6.0)
75 +	4.6	(0.0–9.7)	2.3	(1.4–3.5)
Education				
Less than high school	5.3	(0.0–11.1)	4.6	(2.6–8.2)
High school graduate	4.9	(2.7–7.1)	6.6	(5.2–8.3)
Some college	4.1	(1.9–6.3)	6.8	(5.4–8.6)
College graduate	8.3	(5.4–11.2)	5.2	(4.1–6.6)
Income				
< \$15,000	3.2 ^b	(0.0–9.4)	–	–
\$15,000–24,999	3.3	(0.1–6.5)	–	–
\$25,000–34,999	10.6	(4.1–17.1)	–	–
\$35,000–49,999	1.5	(0.0–3.6)	–	–
\$50,000+	8.1	(5.8–10.4)	–	–

^aAmong all respondents, the proportion who reported on average consuming more than two alcoholic beverages per day for men and more than one alcoholic beverage per day for women.

^bDenotes sample size smaller than 50.

VEGETABLE CONSUMPTION

A growing body of research shows that fruits and vegetables are critical to promoting good health. Healthy diets rich in fruits and vegetables may reduce the risk of cancer and other chronic diseases. To get the amount that is recommended, most people need to increase the amount of fruits and vegetables they currently eat every day. *Dietary Guidelines for Americans 2005*, issued jointly by the U.S. Department of Health and Human Services and the U.S. Department of Agriculture, recommends that all people over the age of two years eat 2 cups of fruit *and* 2½ cups of vegetables per day for a 2,000-calorie intake, with higher or lower amounts depending on the daily calorie level.

Respondents to the 2009 Macomb County Behavioral Risk Factor Survey were asked how many separate servings of fruits and vegetables they eat per day. More than four-fifths (85.4 percent) report eating fewer than five fruits and vegetables each day.

Table 18
Inadequate Fruit and Vegetable Consumption^a

Demographic Characteristic	Macomb County 2009 (95% CI)	
Total	85.4%	(83.3–87.5)
Gender		
Male	88.7	(86.1–91.3)
Female	81.7	(78.4–85.0)
Age		
18–24	93.4	(89.5–97.4)
25–34	82.2	(77.0–87.3)
35–44	81.0	(75.8–86.2)
45–54	87.7	(83.2–92.2)
55–64	88.5	(82.6–94.4)
65–74	81.2	(72.9–89.5)
75 +	86.2	(77.8–94.6)
Education		
Less than high school	91.2	(83.9–98.6)
High school graduate	88.7	(85.5–92.0)
Some college	90.8	(87.6–94.0)
College graduate	76.6	(72.0–81.1)
Income		
< \$15,000	96.8 ^b	(90.6–100.0)
\$15,000–24,999	90.9	(85.8–96.0)
\$25,000–34,999	90.6	(84.4–96.8)
\$35,000–49,999	80.3	(73.5–87.1)
\$50,000+	83.7	(80.5–86.8)

^aAmong all respondents, the proportion who reported eating less than five servings of fruits and vegetables per day.

^bDenotes sample size smaller than 50.

PHYSICAL ACTIVITY

Regular physical activity reduces the risk of dying of coronary heart disease, the nation's leading cause of death, and also decreases the risk for stroke, colon cancer, diabetes, and high blood pressure. Keeping physically active helps control weight; contributes to healthy bones, muscles, and joints; reduces symptoms of anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications.

In 2009, about a quarter (25.1 percent) of Macomb County adults report not participating in any leisure-time physical activity (i.e., physical activities or exercises such as jogging, swimming, bicycling, or walking for exercise) in the past month. The proportion of adults in the county who report not participating in any leisure-time physical activity has increased since 2005, and is higher than the proportion of adults in the state who report no physical activity (20.9 percent). Younger adults are more likely to participate in leisure-time physical activity than older adults. Adults with annual household income of at least \$50,000 are more likely to participate in leisure-time physical activity than adults with lower annual household incomes.

Table 19
No Leisure-Time Physical Activity^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2007 (95% CI)	
Total	25.1%	(22.6–27.7)	17.7%	(15.2–20.2)	20.9%	(19.6–22.1)
Gender						
Male	23.4	(19.9–26.9)	15.9	(12.3–19.7)	18.3	(16.4–20.3)
Female	27.0	(23.2–30.8)	19.4	(16.0–22.8)	23.3	(21.8–24.8)
Age						
18–24	12.4	(7.2–17.6)	5.9	(0.0–12.0)	14.2	(10.1–19.7)
25–34	21.2	(15.7–26.7)	13.7	(7.2–20.2)	18.0	(14.4–22.2)
35–44	28.1	(22.1–34.1)	14.7	(9.0–20.4)	18.6	(16.0–21.6)
45–54	25.4	(19.4–31.4)	15.7	(10.9–20.5)	18.2	(16.2–20.4)
55–64	29.2	(20.8–37.6)	23.6	(17.1–30.0)	23.3	(21.0–25.7)
65–74	31.0	(21.1–40.8)	31.8 ^b	(26.0–37.5)	28.0	(25.0–31.1)
75 +	42.4	(30.5–54.3)	–	–	35.3	(32.1–38.6)
Education						
Less than high school	50.9	(37.9–63.9)	38.0	(23.9–52.2)	35.5	(30.2–41.2)
High school graduate	32.7	(27.9–37.5)	20.8	(16.2–25.3)	27.0	(24.6–29.5)
Some college	22.2	(17.6–26.7)	14.6	(10.4–18.8)	19.5	(17.4–21.8)
College graduate	14.8	(11.0–18.6)	14.0	(9.7–18.2)	12.5	(10.8–14.4)
Income						
< \$15,000	48.4 ^c	(30.8–66.0)	21.1	(11.2–31.1)	–	–
\$15,000–24,999	33.3	(24.8–41.9)	34.9	(25.9–44.0)	–	–
\$25,000–34,999	47.1	(36.4–57.7)	22.0	(12.8–31.2)	–	–
\$35,000–49,999	30.3	(22.5–38.1)	18.7	(11.7–25.7)	–	–
\$50,000+	16.9	(13.7–20.1)	10.0	(7.0–12.9)	–	–

^aAmong all respondents, the proportion who reported that during the past month they did not participate in any leisure-time physical activity or exercises such as jogging, swimming, bicycling, or walking.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

The U.S. Centers for Disease Control and Prevention recommends that all adults engage in moderate-intensity physical activity, such as brisk walking, for at least 30 minutes on 5 or more days of the week, or vigorous-intensity physical activity on 3 or more days of the week for 20 or more minutes.

In 2009, an estimated 27.8 percent of adults in Macomb County participated in moderate physical activity for 30 minutes at a time on 5 or more days a week. An estimated 32.1 percent of Macomb County adults participated in vigorous physical activity for 20 minutes at a time on 3 or more days a week in 2009. This is higher than the percentage of adults who participated in vigorous activity in 2005 (24.7 percent). Males are more likely than females to participate in 20 minutes of vigorous physical activity on 3 or more days a week. Younger adults are more likely than older adults to participate in regular vigorous physical activity, and college graduates are more likely than adults with less than a high school education to participate in regular vigorous physical activity.

Table 20
Moderate Physical Activity^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
Total	27.8%	(25.1–30.5)	31.5%	(27.9–35.0)
Gender				
Male	28.7	(25.0–32.4)	33.7	(27.9–39.4)
Female	26.8	(23.0–30.6)	29.5	(25.3–33.7)
Age				
18–24	36.8	(29.1–44.5)	31.4	(16.5–46.4)
25–34	28.2	(22.2–34.2)	33.2	(23.8–42.6)
35–44	25.9	(20.1–31.7)	38.0	(29.9–46.0)
45–54	27.9	(21.7–34.1)	27.9	(20.7–35.1)
55–64	21.2	(13.7–28.7)	25.7	(18.8–32.7)
65–74	23.5	(14.5–32.5)	28.9 ^b	(23.2–34.6)
75 +	27.7	(16.8–38.6)	–	–
Education				
Less than high school	15.8	(6.3–25.3)	25.9	(11.5–40.3)
High school graduate	29.9	(25.2–34.6)	36.9	(30.4–43.3)
Some college	26.3	(21.4–31.2)	30.2	(24.0–36.5)
College graduate	28.8	(24.0–33.6)	26.8	(21.1–32.5)
Income				
< \$15,000	19.4 ^c	(5.5–33.3)	26.5	(10.3–42.8)
\$15,000–24,999	28.9	(20.8–37.0)	32.9	(23.1–42.6)
\$25,000–34,999	24.7	(15.5–33.9)	36.4	(24.6–48.3)
\$35,000–49,999	25.8	(18.3–33.3)	30.5	(21.7–39.2)
\$50,000+	28.1	(24.2–32.0)	31.7	(26.2–37.1)

^aAmong all respondents, the proportion who reported that they participate in moderate physical activity for 30 minutes at a time on 5 or more days a week.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

Table 21
Vigorous Physical Activity^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
	Total	32.1%	(29.4–34.9)	24.7%
Gender				
Male	37.6	(33.6–41.6)	27.1	(21.9–32.4)
Female	26.2	(22.4–30.0)	22.5	(18.3–26.6)
Age				
18–24	46.1	(38.2–54.0)	37.9	(22.4–53.4)
25–34	37.1	(30.6–43.6)	28.8	(19.9–37.7)
35–44	31.9	(25.7–38.1)	26.5	(19.7–33.4)
45–54	30.9	(24.6–37.2)	26.1	(19.2–32.9)
55–64	23.7	(15.9–31.5)	16.9	(11.0–22.7)
65–74	20.0	(11.5–28.5)	12.6 ^b	(8.5–16.8)
75 +	18.2	(8.9–27.5)	–	–
Education				
Less than high school	26.3	(14.9–37.7)	24.2	(8.7–39.8)
High school graduate	25.8	(21.3–30.3)	21.9	(16.5–27.4)
Some college	34.2	(29.0–39.4)	25.3	(19.0–31.5)
College graduate	37.1	(31.9–42.3)	27.2	(21.2–33.2)
Income				
< \$15,000	19.4 ^c	(5.5–33.3)	13.9	(2.9–24.9)
\$15,000–24,999	24.8	(17.1–32.5)	20.9	(11.9–29.9)
\$25,000–34,999	22.4	(13.5–31.3)	18.5	(8.3–28.7)
\$35,000–49,999	33.8	(25.8–41.8)	23.1	(15.1–31.1)
\$50,000+	37.7	(33.5–41.9)	26.0	(20.9–31.0)

^aAmong all respondents, the proportion who reported that they participate in vigorous physical activity for 20 minutes at a time on 3 or more days a week.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

HIV/AIDS

It is estimated that 18,000 people are living with HIV/AIDS in Michigan, 4,500 of whom do not know that they are infected. Engaging in certain behaviors can put people at increased risk for contracting HIV, the virus that causes AIDS. Respondents aged 18–64 were asked to indicate whether they had engaged in any of a list of behaviors that can increase the risk of contracting HIV.

An estimated 3.9 percent of Macomb County residents engaged in at-risk behaviors for acquiring HIV in 2009. While the differences are not statistically significant, the percentage of individuals reporting this behavior appears to decrease as age increases. The proportion of adult males in Macomb County engaging in at-risk behaviors for acquiring HIV has increased since 2005.

Table 22
Engaged in At-Risk Behaviors for Acquiring HIV^a
(aged 18–64)

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
Total	3.9%	(2.6–5.1)	1.6%	(0.5–2.8)
Gender				
Male	4.5	(2.7–6.3)	0.9	(0.0–2.0)
Female	3.2	(1.5–4.9)	2.4	(0.4–4.4)
Age				
18–24	6.8	(2.7–10.9)	5.9	(0.0–12.7)
25–34	8.1	(4.4–11.8)	2.1	(0.0–4.5)
35–44	1.4	(0.0–3.0)	0.5	(0.0–1.6)
45–54	2.0	(0.1–3.9)	0.7	(0.0–1.5)
55–64	1.8	(0.0–4.2)	0.0	(0.0–0.0)
Education				
Less than high school	18.2 ^b	(6.8–29.6)	12.8	(0.0–31.2)
High school graduate	4.5	(2.1–6.9)	1.9	(0.0–3.8)
Some college	2.2	(0.5–3.9)	0.7	(0.0–2.0)
College graduate	3.3	(1.3–5.3)	1.1	(0.0–2.5)
Income				
< \$15,000	4.3 ^b	(0.0–12.6)	3.6	(0.0–9.1)
\$15,000–24,999	5.6	(0.8–10.4)	2.7	(0.0–6.7)
\$25,000–34,999	0.0	(0.0–0.0)	4.9	(0.0–11.6)
\$35,000–49,999	0.9	(0.0–3.3)	2.9	(0.0–8.3)
\$50,000+	2.6	(1.2–4.0)	0.5	(0.0–1.2)

^aAmong all respondents aged 18–64, the proportion who reported that they engaged in at-risk behaviors for acquiring HIV in the past year.

^bDenotes sample size smaller than 50.

Women's Health

CLINICAL BREAST EXAMS

Breast cancer is the most commonly diagnosed cancer among women in the United States, with the exception of skin cancer. It is second only to lung cancer as the most common cause of death among women. It takes an average of one to four years before a woman can feel a lump in her breast. Current recommendations from the National Center for Chronic Disease Prevention and Health Promotion, Division of Cancer Prevention and Control are that women should receive a clinical breast exam (CBE) every three years from the age of 20 until the age of 39. At age 40, women should receive a CBE annually.

Among Macomb County females, 74.9 percent have had an appropriately timed clinical breast exam. While not a statistically significant difference, women aged 30 to 39 were the most likely to have had a breast exam within the recommended time frame for their age group. Women in households with annual incomes of \$50,000 and greater were more likely to have received an appropriately timed clinical breast exam than women in households with annual incomes of less than \$35,000.

Table 23
Had an Appropriately Timed Clinical Breast Exam^a

Demographic Characteristic	Macomb County 2009 (95% CI)	Macomb County 2005 (95% CI)	Michigan 2006 (95% CI)
Total	74.9% (71.0–78.8)	76.6% (72.9–80.3)	75.4% (73.7–77.0)
Age			
20–29	68.5 (58.9–78.2)	83.7 (70.3–97.0)	81.8 (75.4–86.7)
30–39	92.1 (86.8–97.4)	92.1 (85.9–98.2)	89.8 (86.4–92.5)
40–49	73.6 (65.2–82.0)	72.9 (64.5–81.2)	69.7 (65.8–73.3)
50–59	73.4 (63.7–83.1)	75.4 (67.0–83.8)	73.3 (69.7–76.6)
60–69	71.1 (57.9–84.3)	69.3 (59.9–78.7)	74.3 (70.4–77.8)
70+	62.7 (50.4–75.0)	58.5 (50.0–67.1)	59.5 (55.4–63.5)
Education			
Less than high school	62.5 ^b (43.1–81.9)	47.6 (27.5–66.9)	61.5 (53.8–68.6)
High school graduate	75.9 (69.4–82.4)	71.6 (65.1–78.1)	70.0 (66.9–73.0)
Some college	76.6 (69.5–83.7)	79.7 (73.6–85.7)	76.6 (73.3–79.5)
College graduate	74.3 (67.4–81.3)	84.8 (77.7–91.9)	83.5 (80.9–85.8)
Income			
< \$15,000	58.8 ^b (35.4–82.2)	55.4 (41.0–69.7)	–
\$15,000–24,999	58.8 (47.1–70.5)	65.1 (54.3–75.9)	–
\$25,000–34,999	63.3 (46.1–80.6)	84.9 (74.1–95.6)	–
\$35,000–49,999	75.5 (63.9–87.1)	83.5 (75.8–91.1)	–
\$50,000+	86.3 (81.8–90.9)	79.3 (73.7–85.0)	–

^aAmong all female respondents, the proportion aged 20 and older who reported that they had a clinical breast exam within the past three years (women aged 20–39) or past year (women aged 40 and older).

^bDenotes sample size smaller than 50.

Clinical breast exams are effective screening tools for changes in breast tissue, but mammography is the best available method to detect breast cancer in its earliest, most treatable stage.

MAMMOGRAMS

Mammography is the best available method to detect breast cancer in its earliest, most treatable stage because, on average, it takes one to four years before a woman can feel a lump in her breast through self-examination. Current recommendations are that all women over the age of 40 should have a mammogram every one to two years.

Among Macomb County females in 2009, 56.8 percent had received a mammogram within the past two years, and 46.8 percent had received one within the past year. Overall, females aged 35 and older were more likely to have had a mammogram in either the past year or past two years than women aged 18 to 34.

Table 24
Had a Mammogram within the Past Year^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
Total	46.8%	(42.4–51.1)	45.9%	(41.5–50.3)
Age				
18–24	8.8	(2.1–15.6)	7.5	(0.0–18.8)
25–34	12.1	(5.4–18.8)	11.1	(3.7–18.5)
35–44	48.0	(38.1–57.9)	49.7	(40.6–58.9)
45–54	67.3	(58.1–76.6)	61.0	(51.6–70.3)
55–64	63.0	(50.1–75.8)	71.4	(62.7–80.2)
65–74	83.7 ^c	(72.7–94.8)	64.4 ^b	(57.4–71.4)
75 +	62.2 ^c	(46.5–77.8)	–	–
Education				
Less than high school	53.8 ^c	(34.7–73.0)	31.7	(16.3–47.1)
High school graduate	57.3	(50.0–64.6)	46.7	(39.6–53.8)
Some college	35.9	(28.1–43.7)	48.1	(40.1–56.1)
College graduate	44.3	(36.6–52.0)	44.3	(35.6–53.1)
Income				
< \$15,000	37.5 ^c	(13.8–61.2)	46.6	(32.3–60.8)
\$15,000–24,999	42.9	(31.3–54.5)	50.0	(38.3–61.7)
\$25,000–34,999	60.0 ^c	(42.5–77.5)	46.2	(31.3–61.2)
\$35,000–49,999	56.1 ^c	(43.3–69.0)	38.9	(27.7–50.1)
\$50,000+	44.9	(38.5–51.4)	43.3	(36.3–50.3)

^aAmong all female respondents, the proportion who reported that they had a mammogram within the past year.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFSS.

^cDenotes sample size smaller than 50.

Table 25
Had a Mammogram within the Past Two Years^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)	
Total	56.8%	(48.1–61.1)	57.4%	(52.7–62.0)
Age				
18–24	11.7	(4.1–19.4)	15.0	(0.0–32.3)
25–34	17.6	(9.8–25.4)	13.4	(5.5–21.4)
35–44	61.3	(51.6–70.9)	62.6	(53.8–71.5)
45–54	78.5	(70.4–86.6)	76.4	(68.2–84.6)
55–64	76.0 ^c	(64.6–87.4)	83.8	(76.4–91.9)
65–74	90.7 ^c	(82.0–99.4)	79.8 ^b	(74.0–85.7)
75 +	81.1 ^c	(68.5–93.7)	–	–
Education				
Less than high school	65.3 ^c	(47.0–83.6)	48.8	(30.2–67.4)
High school graduate	69.1	(62.3–75.9)	59.2	(51.8–66.6)
Some college	44.2	(36.2–52.2)	60.2	(51.9–68.5)
College graduate	53.8	(46.0–61.6)	52.7	(43.5–61.9)
Income				
< \$15,000	62.5 ^c	(38.8–86.2)	61.9	(47.6–76.1)
\$15,000–24,999	52.9	(41.2–64.6)	62.9	(50.3–74.7)
\$25,000–34,999	70.0 ^c	(53.6–86.4)	60.2	(44.2–76.2)
\$35,000–49,999	68.4	(56.4–80.5)	51.0	(38.8–63.2)
\$50,000+	55.5	(49.0–62.0)	53.8	(46.5–61.0)

^aAmong all female respondents, the proportion who reported that they had a mammogram within the past two years.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

PAP TESTS

Gynecologic cancers are diagnosed in female reproductive organs that include the uterus, ovaries, cervix, fallopian tubes, vulva, and vagina. Each year, thousands of women are diagnosed with some form of gynecologic cancer. Cervical cancer screening using the Pap test detects not only cancer but also precancerous lesions. Women should begin getting a Pap test within 3 years of the onset of sexual activity or at age 21, and repeat the test at least every three years.

In 2009, an estimated 89.3 of Macomb County adult females had received a Pap test within the past three years. This is higher than the percentage of women who had received a Pap test within the past three years in Michigan in 2006. Females aged 75 and older were less likely to have received a Pap test in the past three years than females aged 54 and younger.

Table 26
Had a Pap Test within the Past Three Years^a

Demographic Characteristic	Macomb County 2009 (95% CI)		Macomb County 2005 (95% CI)		Michigan 2006 (95% CI)	
Total	89.3%	(86.5–92.1)	86.0%	(82.6–89.5)	82.6%	(81.0–84.1)
Age						
18–24	95.2 ^c	(88.8–100.0)	60.8	(35.3–86.2)	–	–
25–34	92.6	(87.0–98.3)	92.8	(85.8–99.8)	–	–
35–44	92.2	(87.1–97.4)	96.3	(93.1–99.6)	–	–
45–54	95.8	(91.8–99.8)	90.8	(85.2–96.5)	–	–
55–64	84.3	(74.3–94.3)	87.5	(81.1–93.8)	–	–
65–74	87.8 ^c	(77.8–97.8)	71.3 ^b	(64.2–78.3)	–	–
75+	60.6 ^c	(43.9–77.3)	–	–	–	–
Education						
Less than high school	72.2 ^c	(51.5–92.9)	56.6	(37.5–75.6)	71.4	(64.0–77.9)
High school graduate	87.2	(82.2–92.2)	81.4	(75.0–87.7)	78.4	(75.3–81.1)
Some college	90.8	(85.9–95.8)	92.5	(88.6–96.4)	81.4	78.0–84.3)
College graduate	92.0	(87.7–96.3)	90.0	(82.5–97.5)	92.1	(90.1–93.8)
Income						
< \$15,000	92.9 ^c	(79.4–100.0)	76.4	(65.3–87.5)	–	–
\$15,000–24,999	78.5	(68.5–88.5)	81.4	(72.9–89.9)	–	–
\$25,000–34,999	80.7 ^c	(65.5–95.9)	79.1	(64.8–93.5)	–	–
\$35,000–49,999	90.1	(81.9–98.3)	91.6	(85.5–97.8)	–	–
\$50,000+	96.0	(93.4–98.6)	92.1	(87.9–96.3)	–	–

^aAmong all female respondents, the proportion who reported that they had a pap test within the past three years.

^bThis proportion represents adults aged 65 and older, which was the highest age range reported in the 2005 Macomb BRFS.

^cDenotes sample size smaller than 50.

Disaster Preparedness

PERCEIVED DISASTER PREPAREDNESS

People responding to the 2009 Macomb County BRFSS were asked how prepared they are for a large-scale disaster or emergency. Large-scale disasters or emergencies include any events that leave people either isolated in their home or displaced from their home for at least three days. This might include natural disasters such as hurricanes, tornados, floods, and ice storms, or man-made disasters such as explosions, terrorist events, or blackouts.

About a quarter (25.5 percent) of Macomb County adults believe their household is well-prepared to handle a large-scale disaster or emergency. A greater proportion of males than females believe their household is well-prepared to handle a large-scale disaster or emergency. Adults aged 35–54 are less likely than adults in other age groups to report their household is well-prepared for a large-scale disaster or emergency.

Table 27
Household Is Well-Prepared to Handle a Large-Scale Disaster or Emergency^a

Demographic Characteristic	Macomb County 2009 (95% CI)	
Total	25.5%	(22.8–28.1)
Gender		
Male	30.5	(26.7–34.3)
Female	20.0	(16.5–23.5)
Age		
18–24	36.8	(29.1–44.5)
25–34	26.8	(20.8–32.8)
35–44	18.3	(13.0–23.6)
45–54	16.3	(11.1–21.5)
55–64	26.4	(18.2–34.6)
65–74	31.7	(21.6–41.8)
75 +	34.9	(23.1–46.7)
Education		
Less than high school	28.1	(16.4–39.8)
High school graduate	22.6	(18.2–27.0)
Some college	23.4	(18.7–28.1)
College graduate	30.7	(25.7–35.7)
Income		
< \$15,000	31.0 ^b	(14.2–47.9)
\$15,000–24,999	23.7	(15.9–31.5)
\$25,000–34,999	22.6	(13.7–31.5)
\$35,000–49,999	23.1	(15.9–30.3)
\$50,000+	24.5	(20.7–28.2)

^aAmong all respondents, the proportion who feel that their household is well-prepared to handle a large-scale disaster or emergency.

^bDenotes sample size smaller than 50.

Appendix: Survey Instrument

Macomb BRFs Survey 2009

INTRODUCTION

Hello, I am calling on behalf of the Macomb County Health Department. We are gathering information about the health and well-being of residents to help guide public health policies. You have been randomly selected to participate in this interview, and I would like to ask some questions about health and day-to-day living habits that may affect health.

You don't have to answer any question you don't want to, and you can end the interview at any time. Taking part in the survey is up to you. For most people, the interview takes about 20 minutes. Any information you give me will be anonymous. You will not be asked for your name, address, or other personal information that can identify you.

If you have any questions about this survey, you may call the survey researcher Craig Wiles of Public Sector Consultants Inc. at (517)484-4954 or Steve Kuntz of the Macomb County Health Department at (586)469-5699.

For quality control purposes, this interview may be monitored by one of my supervisors.

RANDOM SELECTION

I need to randomly select one adult who lives in your household to be interviewed. How many members of your household, including yourself, are 18 years of age or older?

__ Number of adults

If "1,"

Are you the adult?

If "yes,"

Then you are the person I need to speak with. Enter 1 man or 1 woman below (Ask gender if necessary) and then go to "health status" section.

If "no,"

Is the adult a man or a woman? Enter 1 man or 1 woman below. May I speak with [fill in (him/her) from previous question]? Repeat introduction (Ask gender if necessary) and then go to "health status" section.

How many of these adults are men and how many are women?

__ Number of men

__ Number of women

The person in your household that I need to speak with is _____ .

If "you," ask gender if necessary and then continue with "health status" section.

1. **Record gender; ask only if in doubt**

- a) Male
- b) Female

HEALTH STATUS

2. The first question asks about your overall health. Would you say that in general your health is excellent, very good, good, fair, or poor?

- a) Excellent
- b) Very good
- c) Good
- d) Fair
- e) Poor

Do not read:

- f) Don't know/Not sure
- g) Refused

HEALTHY DAYS – HEALTH RELATED QUALITY OF LIFE

3. Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

- a) Number of days [RECORD WHOLE NUMBER]:_____

Do not read:

- b) Don't know/Not sure
- c) Refused

If both Q3 equals zero, go to Q5.

4. During the past 30 days, how many days did poor physical health keep you from doing your usual activities, such as self care, work, or recreation?

- a) Number of days [RECORD WHOLE NUMBER]:_____

Do not read:

- b) Don't know/Not sure
- c) Refused

5. Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

- a) Number of days [RECORD WHOLE NUMBER]:_____

Do not read:

- b) Don't know/Not sure
- c) Refused

If both Q5 equals zero, go to Q7.

6. During the past 30 days, how many days did poor mental health keep you from doing your usual activities, such as self care, work, or recreation?

a) Number of days [RECORD WHOLE NUMBER]: _____

Do not read:

b) Don't know/Not sure

c) Refused

HEALTH CARE AND ACCESS

Next, I would like to ask you questions about health care and health insurance.

7. Do you have any kind of health care coverage, including health insurance, prepaid plans, such as HMOs, or government plans such as Medicare?

a) Yes **Go to Q9**

b) No **Go to Q8**

Do not read:

c) Don't know/Not sure **Go to Q9**

d) Refused **Go to Q9**

8. About how long has it been since you had health care coverage? [ASK ONLY IF "NO" TO Q7, OTHERWISE SKIP TO Q9]

a) Within the past 6 months (anytime less than 6 months)

b) Within the past year (6 months but less than 12 months ago)

c) Within the past 2 years (1 year but less than 2 years ago)

d) Within the past 5 years (2 years but less than 5 years ago)

e) 5 or more years ago

f) Never

Do not read:

g) Don't know/Not sure

h) Refused

9. What type of health care coverage do you use to pay for most of your medical care?

Is it coverage through:

Read only if necessary.

a) Your employer **Go to Q10**

b) Someone else's employer **Go to Q10**

c) A plan that you or someone else buys on your own **Go to Q10**

d) Medicare **Go to Q11**

e) Medicaid or Medical Assistance **Go to Q11**

f) The Military, CHAMPUS, or the VA **Go to Q11**

- g) Indian Health Service **Go to Q11**
- h) Some other source **Go to Q11**

Do not read

- i) Don't know/Not sure **Go to Q11**
- j) Refused **Go to Q11**

10. What health coverage plan do you have? [ASK ONLY IF A, B, OR C TO PREVIOUS QUESTION]

- a) Blue Cross / Blue Shield of Michigan
- b) HAP/Health Alliance Plan
- c) Blue Care Network
- d) Care Choices
- e) Select Care
- f) Other

Do not read

- g) Don't know/Not sure
- h) Refused

11. How many people less than 19 years of age live in your household?

- a) Number [RECORD WHOLE NUMBER]: _____ [If zero or none, Go to Q13]

Do not read:

- b) Don't know/Not sure **Go to Q13**
- c) Refused **Go to Q13**

12. Do the people less than 19 years of age living in your household have any kind of health care coverage?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

13. Was there a time in the past year when you needed to see a doctor **but could not** for any reason?

- a) Yes **Go to Q14**
- b) No **Go to Q15**

Do not read:

- c) Don't know/Not sure **Go to Q15**
- d) Refused **Go to Q15**

14. What was the main reason you were not able to see a doctor? [ASK ONLY IF “YES” TO Q13, OTHERWISE SKIP TO Q15]

Note: Read only if necessary

- a) Cost, money, could not afford it
- b) No insurance
- c) Transportation
- d) Unable to get an appointment
- e) Other

Do not read:

- f) Don't know/Not sure
- g) Refused

15. About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.

- a) Within past year (anytime less than 12 months ago) **Go to Q17**
- b) Within past 2 years (1 year but less than 2 years ago) **Go to Q16**
- c) Within past 5 years (2 years but less than 5 years ago) **Go to Q16**
- d) 5 or more years ago **Go to Q16**

Do not read:

- e) Don't know / Not sure **Go to Q17**
- f) Refused **Go to Q17**

16. What was the main reason you have not visited the doctor in the last year?

Note: Read only if necessary

- a) No reason to go, not sick
- b) No insurance
- c) Doctor would not accept my insurance
- d) Cost
- e) Transportation problems
- f) Do not have a doctor
- g) Unable to get an appointment

Do not read:

- h) Don't know/Not sure
- i) Refused

17. Do you have any UNTREATED problems or conditions that you think could be helped by a medical, dental, or mental health professional or counselor?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

PHYSICAL ACTIVITY

18. During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

19. Last week, other than your job, on how many days did you do moderate physical activities for at least 30 minutes at a time? A moderate physical activity is one that causes a small increase in breathing or heart rate, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate.

- a) Number [RECORD WHOLE NUMBER 1-7]: _____

20. Last week, other than your job, on how many days did you do vigorous physical activities for at least 20 minutes at a time? Vigorous physical activities cause large increases in breathing or heart rate and include things like running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate.

- a) Number [RECORD WHOLE NUMBER 1-7]: _____

DIABETES

I'd like to ask you about diabetes, sometimes called sugar diabetes.

21. Have you ever been told by a doctor, nurse, or other health professional that you have diabetes? [NOTE: IF RESPONDENT INDICATES THAT THEY ARE BORDER LINE OR PRE-DIABETIC, MARK OPTION D BELOW.]

If female and response is "Yes," ask: Was this only when you were pregnant?

- a) Yes
- b) Yes, but female told only during pregnancy
- c) No
- d) No, pre-diabetes or borderline diabetes

Do not read:

- e) Don't know/Not sure
- f) Refused

22. Are you currently being treated or taking prescribed medication for diabetes? [NOTE: PRESCRIBED MEDICATION INCLUDES ORAL OR INJECTED MEDICATIONS]

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

DENTAL CARE

23. How long has it been since you last visited a dentist or other dental health professional for a routine checkup?

Read only if necessary:

- a) Within the past year (anytime less than 12 months ago)
- b) Within the past 2 years (1 year but less than 2 years ago)
- c) Within the past 5 years (2 years but less than 5 years ago)
- d) 5 or more years ago
- e) Never

Do not read:

- f) Don't know/Not sure
- g) Refused

HYPERTENSION AWARENESS

24. Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure?

If female and response is "Yes," ask: Was this only when you were pregnant?

- a) Yes
- b) Yes, but female told only during pregnancy, **Go to Q26**
- c) No, **Go to Q26**
- d) Told borderline high or pre-hypertensive, **Go to Q26**

Do not read:

- e) Don't know/Not sure, **Go to Q26**
- f) Refused, **Go to Q26**

25. Are you supposed to be taking any medicine for your high blood pressure?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

CHOLESTEROL

Blood cholesterol is a fatty substance found in the blood.

26. About how long has it been since you last had your blood cholesterol checked?

Read only if necessary:

- a) Within the past year (anytime less than 12 months ago)
- b) Within the past 2 years (1 year but less than 2 years ago)
- c) Within the past 5 years (2 years but less than 5 years ago)
- d) 5 or more years ago

Do not read:

- e) Don't know/Not sure
- f) Refused

27. Have you EVER been told by a doctor, nurse, or other health professional that your blood cholesterol is high?

- a) Yes
- b) No **Go to Q29**

Do not read:

- c) Don't know/Not sure **Go to Q29**
- d) Refused **Go to Q29**

28. Are you supposed to be taking any medicine for your high cholesterol?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

CARDIOVASCULAR DISEASE

Now I would like to ask you some questions about cardiovascular disease.

Has a doctor, nurse, or other health professional EVER told you that you had any of the following? For each, tell me “Yes”, “No”, or you’re “Not sure.”

29. (Ever told) you had a heart attack, also called a myocardial infarction?

- a) Yes
- b) No
- c) Don’t know/Not sure

Do not read:

- d) Refused

30. (Ever told) you had angina or coronary heart disease?

- a) Yes
- b) No
- c) Don’t know/Not sure

Do not read:

- d) Refused

31. (Ever told) you had a stroke?

- a) Yes
- b) No
- c) Don’t know/Not sure

Do not read:

- d) Refused

ASTHMA

32. Have you ever been told by a doctor, nurse, or other health care professional that you had asthma?

- a) Yes
- b) No **Go to Q35**

Do not read:

- c) Don’t know/Not sure **Go to Q35**
- d) Refused **Go to Q35**

33. During the past 12 months have you had an episode of asthma or an asthma attack?

- a) Yes
- b) No

Do not read:

- c) Don’t know/Not sure
- d) Refused

34. Are you currently being treated by a doctor or other health professional for your asthma?
- a) Yes
 - b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

IMMUNIZATIONS

35. A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a flu shot?
- a) Yes **Go to Q37**
 - b) No

Do not read:

- c) Don't know/Not sure **Go to Q36**
- d) Refused **Go to Q36**

36. During the past 12 months, have you had a flu vaccine that was sprayed in your nose?
The flu vaccine sprayed in the nose is also called FluMist.
- a) Yes
 - b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

TOBACCO USE

Now I'd like to ask you a few questions about cigarette smoking.

37. Have you smoked at least 100 cigarettes in your entire life?
Note: 100 cigarettes = 5 packs

- a) Yes
- b) No **Go to Q42**

Do not read:

- c) Don't know/Not sure **Go to Q42**
- d) Refused **Go to Q42**

If yes:

38. Do you now smoke cigarettes every day, some days, or not at all?

- a) Every day
- b) Some days
- c) Not at all **Go to Q42**

Do not read:

- d) Don't know/Not sure **Go to Q42**
- e) Refused **Go to Q42**

39. On average, how many cigarettes a day do you now smoke?

- a) 1 to 19
- b) 20 to 39
- c) 40 or more

Do not read:

- d) Don't know/Not sure **Go to Q44**
- e) Refused **Go to Q44**

40. During the past 12 months, have you thought about quitting smoking?

- a) Yes **Go to Q41**
- b) No **Go to Q44**

Do not read:

- c) Don't know/Not sure
- d) Refused

41. During the past 12 months, have you quit smoking for 1 day or longer because you were trying to quit smoking?

- a) Yes **Go to Q44**
- b) No **Go to Q44**

Do not read:

- c) Don't know/Not sure **Go to Q44**
- d) Refused **Go to Q44**

42. During an average day, how many minutes or hours are you exposed to second hand smoke?

- a) Number of minutes [RECORD WHOLE NUMBER]: _____ **Go to Q43**
- b) Number of hours [RECORD WHOLE NUMBER]: _____ **Go to Q43**
- c) None **Go to Q44**

Do not read:

- d) Don't know/Not sure **Go to Q43**
- e) Refused **Go to Q44**

43. Where does this second hand smoke exposure occur?

- a) Work only
- b) Home only

- c) Work and home
- d) Other:

Do not read:

- e) Don't know/Not sure
- f) Refused

DEMOGRAPHICS

The next few questions will be about you and the people in your household. This is for statistical purposes and to ensure that our sample for this survey accurately reflects the population as a whole.

44. What is your age?

- a) _____ [RECORD YEAR YY]

Do not read:

- b) Don't know/Not sure
- c) Refused

45. Are you Hispanic or Latino?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

46. Which one or more of the following would you say is your race? Would you say White, Black or African American, Asian, Native Hawaiian or Pacific Islander, American Indian or Alaska Native, or some other race?

Note: Record one or more races to indicate what this person considers himself/herself to be.

- a) White
- b) Black or African American
- c) Asian
- d) Native Hawaiian or Pacific Islander
- e) American Indian or Alaska Native
- f) Other

Do not read:

- g) Don't know/Not sure
- h) Refused

47. What is the highest grade or year of school you completed?

Read only if necessary:

- a) Never attended school or only attended kindergarten
- b) Grades 1 through 8 (Elementary)
- c) Grades 9 through 11 (some high school)
- d) Grades 12 or GED (high school graduate)
- e) College 1 through 3 years (some college or technical school)
- f) College 4 years or college graduate
- g) College 5 or more years (Masters, professional school or doctorate degree)

Do not read

- h) Don't know/Not sure
- i) Refused

48. Are you currently...?

Please read:

- a) Employed for wages
- b) Self-employed
- c) Out of work for more than 1 year
- d) Out of work for less than 1 year
- e) A homemaker
- f) A student
- g) Retired
- h) Unable to work

Do not read:

- i) Don't know/Not sure
- j) Refused

49. Is your annual household income from all sources—[IF RESPONDENT REFUSES ANY INCOME LEVEL, CODE 99 (REFUSED)]

Read only if necessary:

- | | | |
|-----|--|---|
| 0 4 | Less than \$25,000
(\$20,000 to less than \$25,000) | If "no," ask 05; if "yes," ask 03 |
| 0 3 | Less than \$20,000
(\$15,000 to less than \$20,000) | If "no," code 04; if "yes," ask 02 |
| 0 2 | Less than \$15,000
(\$10,000 to less than \$15,000) | If "no," code 03; if "yes," ask 01 |
| 0 1 | Less than \$10,000 | If "no," code 02 |
| 0 5 | Less than \$35,000
(\$25,000 to less than \$35,000) | If "no," ask 06 |
| 0 6 | Less than \$50,000 | If "no," ask 07 |

(\$35,000 to less than \$50,000)

0 7 Less than \$75,000 **If “no,” ask 08**
(\$50,000 to less than \$75,000)

0 8 Less than \$100,000 **If “no”, code 09**
(\$75,000 to less than \$100,000)

0 9 \$100,000 or more

Do not read:

77 Don't know / Not sure

99 Refused

50. How much do you weigh, in pounds, without shoes?

Note: Round fractions **up**

a) Pounds _____

Do not read:

b) Don't know/Not sure

c) Refused

51. How tall are you without shoes?

Note: Round fractions **down**

a) Feet ____

b) Inches ____

Do not read:

c) Don't know/Not sure

d) Refused

52. What is your ZIP Code where you live?

a) [ENTER ZIP XXXXX]:_____

Note: Ask next question only if respondent is female and younger than 45 years of age.

53. To your knowledge, are you now pregnant?

a) Yes

b) No

Do not read:

c) Don't know/Not sure

d) Refused

ALCOHOL CONSUMPTION

These next few questions are about the use of beer, wine, or liquor, such as vodka, gin, whiskey, or rum.

54. During the past 30 days, have you had at least one drink of any alcoholic beverage, such as beer, wine, a malt beverage, or liquor?

- a) Yes
- b) No, **Go to Q59**

Do not read:

- c) Don't know/Not sure, **Go to Q59**
- d) Refused **Go to Q59**

If yes:

55. During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage?

- a) Days per week [RECORD WHOLE NUMBER]: _____
- b) Days in past 30 days (month) [RECORD WHOLE NUMBER]: _____
- c) No drinks in past 30 days, **Go to Q59**

Do not read:

- d) Don't know/Not sure
- e) Refused

56. One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

Note: A 40-ounce beer counts as 3 drinks and a cocktail drink with 2 shots would count as 2 drinks.

- a) Number of drinks [RECORD WHOLE NUMBER]: _____

Do not read:

- b) Don't know/Not sure
- c) Refused

57. Considering all types of alcoholic beverages, how many times during the past 30 days did you have:

If MALE: five or more drinks on an occasion?

If FEMALE: four or more drinks on an occasion?

- a) Number of times [RECORD WHOLE NUMBER]: _____

Do not read:

- b) None
- c) Don't know/Not sure
- d) Refused

58. During the past 30 days, how many times have you driven when you've had perhaps too much to drink?

- a) Number of times [RECORD WHOLE NUMBER]: _____
- b) None

Do not read:

- c) Don't know/Not sure
- d) Refused

ARTHRITIS

The next questions refer to the joints in your body. Please do NOT include the back or neck.

59. Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

- a) Yes
- b) No **Go to Q61**

Do not read:

- c) Don't know/Not sure **Go to Q61**
- d) Refused **Go to Q61**

Interviewer note (do not read): Arthritis diagnoses include:

- **rheumatism, polymyalgia rheumatica**
- **osteoarthritis (not osteoporosis)**
- **tendonitis, bursitis, bunion, tennis elbow**
- **carpal tunnel syndrome, tarsal tunnel syndrome**
- **joint infection, Reiter's syndrome**
- **ankylosing spondylitis; spondylosis**
- **rotator cuff syndrome**
- **connective tissue disease, scleroderma, polymyositis, Raynaud's syndrome**
- **vasculitis (giant cell arteritis, Hensch-Schonlein purpura, Wegener's granulomatosis, polyarteritis nodosa)**

60. Are you currently being treated by a doctor or other health professional for arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

NUTRITION

61. On a typical day, about how many separate servings of fruit and vegetables do you eat?
- a) Number [RECORD WHOLE NUMBER]: _____
 - b) None

Do not read:

- c) Don't know/Not sure
- d) Refused

GENERAL PREPAREDNESS

The next series of questions asks about how prepared you are for a large-scale disaster or emergency. By large-scale disaster or emergency we mean any event that leaves you isolated in your home or displaces you from your home for at least 3 days. This might include natural disasters such as hurricanes, tornados, floods, and ice storms, or man-made disasters such as explosions, terrorist events, or blackouts.

62. How well prepared do you feel your household is to handle a large-scale disaster or emergency? Would you say...

Please read:

- a) Well prepared
- b) Somewhat prepared
- c) Not prepared at all

Do not read:

- d) Don't know / Not sure
- e) Refused

63. Does your household have a 3-day supply of water for everyone who lives there? A 3-day supply of water is 1 gallon of water per person per day.
- a) Yes
 - b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

64. Does your household have a 3-day supply of nonperishable food for everyone who lives there? By nonperishable we mean food that does not require refrigeration or cooking.

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

65. Does your household have a 3-day supply of prescription medication for each person who takes prescribed medicines?

- a) Yes
- b) No
- c) No one in household requires prescribed medicine

Do not read:

- d) Don't know/Not sure
- e) Refused

66. Does your household have a working battery operated radio and working batteries for your use if the electricity is out?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

67. Does your household have a working flashlight and working batteries for your use if the electricity is out?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

68. What would be your main method or way of getting information from authorities in a large-scale disaster or emergency?

Read only if necessary:

- a) Television
- b) Radio
- c) Internet
- d) Print media
- e) Neighbors
- f) Other

Do not read:

- g) Don't know / Not sure
- h) Refused

69. If public authorities announced a mandatory evacuation from your community due to a large-scale disaster or emergency, would you evacuate?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

WOMEN'S HEALTH

Note: if respondent is male, go to next section.

The next set of questions area about breast and cervical cancer.

70. A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?

- a) Yes
- b) No **Go to Q72**

Do not read:

- c) Don't know/Not sure **Go to Q72**
- d) Refused **Go to Q72**

71. How long has it been since you had your last mammogram?

Read only if necessary:

- a) Within the past year (anytime less than 12 months ago)
- b) Within the past 2 years (1 year but less than 2 years ago)
- c) Within the past 3 years (2 years but less than 3 years ago)
- d) Within the past 5 years (3 years but less than 5 years ago)
- e) 5 or more years ago

Do not read:

- f) Don't know / Not sure
- g) Refused

72. A clinical breast exam is when a doctor, nurse, or other health professional feels the breasts for lumps. Have you ever had a clinical breast exam?

- a) Yes
- b) No **Go to Q74**

Do not read:

- c) Don't know/Not sure **Go to Q74**
- d) Refused **Go to Q74**

73. How long has it been since your last clinical breast exam?

Read only if necessary:

- a) Within the past year (anytime less than 12 months ago)
- b) Within the past 2 years (1 year but less than 2 years ago)
- c) Within the past 3 years (2 years but less than 3 years ago)
- d) Within the past 5 years (3 years but less than 5 years ago)
- e) 5 or more years ago

Do not read:

- f) Don't know / Not sure
- g) Refused

74. A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

- a) Yes
- b) No **Go to Q76**

Do not read:

- c) Don't know/Not sure **Go to Q77**
- d) Refused **Go to Q77**

75. How long has it been since you had your last Pap test?

Read only if necessary:

- a) Within the past year (anytime less than 12 months ago) **Go to Q77**
- b) Within the past 2 years (1 year but less than 2 years ago)
- c) Within the past 3 years (2 years but less than 3 years ago)
- d) Within the past 5 years (3 years but less than 5 years ago)
- e) 5 or more years ago

Do not read:

- f) Don't know / Not sure
- g) Refused

76. What is the main reason you have never had a Pap test or not had one in the last year?

Do not read:

- a) Cost
- b) Not having health insurance
- c) No related health problems
- d) Had more important things to do
- e) Prior hysterectomy
- f) Other (specify): _____

HIV/AIDS/STD

Note: If respondent is 65 years old or older, go to next section.

The next few questions are about HIV, the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer every question if you do not want to. We will not ask you about the results of any test you may have had.

77. What are your chances of getting infected with HIV, the virus that causes AIDS?
Would you say high, medium, low or no chance?

- a) High
- b) Medium
- c) Low
- d) No chance

Do not read:

- e) Already have it
- f) Don't know/not sure
- g) Refused

78. I'm going to read you a list. When I'm done, please tell me if any of the situations apply to you. You do not need to tell me which one, just yes or no.

You have used intravenous drugs in the past year.

You have been treated for a sexually transmitted or venereal disease in the past year.

You have given or received money or drugs in exchange for sex in the past year.

You had anal sex without a condom in the past year.

Do any of these situations apply to you?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

79. Did you use a condom the last time you had intercourse?

- a) Yes
- b) No

Do not read:

- c) Don't know/Not sure
- d) Refused

CLOSING STATEMENT

That is my last question. Everyone's answers will be combined to give us information about the health practices of people in this county. Thank you very much for your time and cooperation.