
The Livingston County Behavioral Risk Factor Survey, 2009: Summary Report

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While IPPSR accepts responsibility for the quality of the data, the interpretation and conclusions presented are solely those of the author."

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The Livingston County Behavioral Risk Factor Survey, 2009: Summary Report

OVERVIEW

Using a telephone survey surveillance methodology, this project collected prevalence data on risk factors and conditions associated with many of the leading causes of morbidity and mortality. The data for this project were collected by the Office for Survey Research (OSR), a division of the Institute for Public Policy and Social Research (IPPSR) at Michigan State University in East Lansing, Michigan.

OSR conducted the survey under contracts with the Livingston County Health Department and with the Michigan Department of Community Health (MDCH).

The Survey

The 2009 Livingston County Behavioral Risk Factor Survey (LBRFS) followed the research protocol of the Michigan Behavioral Risk Factor Survey (MiBRFS). MiBRFS is a participating member of the Behavioral Risk Factor Surveillance System (BRFSS) designed and coordinated by the U.S. Centers for Disease Control and Prevention (CDC). CDC has developed a standardized core interview to be administered each year to which each state may add questions of particular interest to the state. CDC specifies a rigorous set of standards regarding the sample design, respondent selection, informed consent, call scheduling, monitoring, and verification procedures that must be followed.

The Livingston County BRFS was conducted from July 22, 2009 to December 3, 2009. The MiBRFS was conducted throughout the calendar year.

The Sample

The survey sample was designed to be a stratified random sample of 600 English-speaking, non-institutionalized adults in Livingston County. At the request of the county health department, the county was stratified into two geographic areas based on census tracts, the set of rural tracts in the county and the set of suburban tracts. The rural stratum was somewhat over-sampled to improve the precision of point estimates within the stratum. These individuals were found using list-assisted, random digit dial sampling procedures to ensure that all residents with landline telephones have a chance to be included in the study. OSR completed 646 interviews and, by agreement with the MiBRFS coordinators at MDCH, combined them with an additional 127 interviews with Livingston County residents in the MiBRFS for a total of 773.

The samples of telephone numbers randomly selected according to OSR specification were supplied by Survey Sampling, Inc., and Genesys (for MiBRFS). OSR requested that the generated samples be cross-checked against telephone directory listings so that the names and addresses of the households associated with the selected phone numbers (where there were matches) could be provided to OSR. OSR mailed advance notice letters to the address listed roughly one week prior to releasing the replicate for calling. OSR asked that Genesys and Survey Sampling not provide

information as to which subscriber and address corresponded to which phone number however so that anonymity was maintained.

Within selected households, OSR randomly selected one respondent to be interviewed from among the eligible adults living in the household (using the Trol Dahl-Carter procedure).

The Interview Instrument

The interview instrument consisted of three major components, the core set of questions specified by CDC, a portion of a second set of questions added to the MiBRFS by MDCH for the statewide survey, and a third set of questions added specifically at the request of Livingston County. The county specified questions were included in the Livingston County BRFSS but were not included in the MiBRFS.

The final interview instrument can be described briefly as being divided into thirty-five sections as follows:

Section 1: Health Status	Section 21: Emotional Support and Life Satisfaction
Section 2: Healthy Days	Section 27: Mental Illness and Stigma
Section 3: Health Care Access	Section 28: Asthma Selection
Section 4: Sleep	Section 29: Childhood Asthma
Section 5: Exercise	Section 41: Skin Cancer
Section 6: Diabetes	* Livingston County-added questions**
Section 7: Hypertension	Section M4: Oral Health
Section 8: Cholesterol	Section M5: Social Context
Section 9: Cardiovascular Disease	Section M7: Personal Independence (Assistance with Daily Activities)
Section 10: Asthma	Section M8: Respite Care
Section 11: Tobacco Use	Section M9: Prescription Drug Coverage
Section 12: Demographics, including height and weight	Section 45: Transportation Barriers
Section 13: Caregiving Responsibilities	Section 46: Children's Screen Time
Section 14: Disability	Section 48: Reading to Children
Section 15: Alcohol Consumption	Section 49: Parenting Information
Section 16: Immunization	Section 50: Awareness of 211 Services
Section 17: Arthritis	Section 51: Parental Attitudes Toward Underage Drinking
Section 18: Servings of Fruits and Vegetables	
Section 19: Moderate and Vigorous Physical Activity	

OSR conducted the telephone interviews using its computer assisted telephone interviewing (CATI) facilities in East Lansing, Michigan. The particular CATI system OSR used was CASES 5.4 developed by the University of California at Berkeley. A copy of the interview script for the substantive part of the interview is included in the appendix to this report.

Outcomes

OSR interviewers completed a total of 646 interviews for the Livingston County Behavioral Risk Factor Survey, which then were supplemented by 127 interviews completed with county residents in the 2009 MiBRFS. The typical completed interview lasted approximately 18.7 minutes. Completed interviews required an average of 5.1 call attempts in order to produce the completed interview, but ranged from as few as a single call attempt to as many as 21 call attempts.

Using the BRFSS-provided specifications the Livingston BRFSS completion rate was 50.8%. The refusal rate was 8.1%.

OSR has weighted the final data set to correct for unequal probabilities of selection (i.e., different sampling rates across the two geographic strata, listed numbers vs. not-listed numbers, the number of phone lines to the household, and the number of adults living in the household) and to maximize the representativeness of the sample findings (post-stratification adjustments to match the gender, age, and education profile of the Livingston County population for 2006-2008 based the U.S. Census Bureau's American Community Survey. The final working sample size was 773. In general, the overall margin of sampling error for a sample of 773 is $\pm 3.5\%$ or less. There were 273 interviews completed among respondents in rural geographic area of the county and 373 interviews completed among respondents in the suburban geographic area of the county (the MiBRFS cases could not be definitively coded to either the rural or suburban strata so are not included in comparisons between rural and suburban residents). The margin of sampling error for a sample of 273 is $\pm 5.9\%$ and the margin of sampling error for a sample of 373 is $\pm 5.1\%$. The margin of sampling error will be larger with smaller segments of the sample.

Throughout the report, we have not bothered to represent the breakdowns of results by race since there are so few non-white residents in the county that a random sample of this size of all residents produces too few non-white respondents to generate stable, reliable statistics for non-white portions of the population. Consequently, all racial groups are included together.

Table 1 provides a demographic profile of the weighted sample for the county. The profile of respondents in the weighted data file very closely matches the population's profile.

Table 1. Demographic Profile of the Weighted Sample, by Geographic Area Within the County				
Characteristic		Livingston County	Within the County	
			Rural	Suburban
Sex	Male	49.8%	54.7%	48.7%
	Female	50.2%	45.3%	51.3%
Age	18-24	11.1%	12.7%	11.8%
	25-34	16.7%	11.6%	14.3%
	35-44	17.0%	21.5%	16.3%
	45-54	22.5%	19.3%	24.6%
	55-64	16.5%	13.8%	18.5%
	65+	16.1%	21.0%	14.5%
Race	White	98.2%	97.2%	99.3%
	Other	1.7%	2.8%	0.7%
Education	< High School	6.9%	8.2%	6.4%
	High School Grad.	30.9%	42.3%	28.9%
	Some College	34.0%	28.0%	35.5%
	College Grad. +	28.2%	21.4%	29.2%
Marital Status	Single (never married)	13.5%	18.6%	11.3%
	Married	69.1%	63.9%	69.4%
	Divorced	7.1%	7.1%	8.2%
	Widowed	6.4%	4.9%	6.7%
	Separated	2.3%	0.5%	3.5%
	Unmarried couple	1.7%	4.9%	0.9%
Employment Status	Employed for wages	41.0%	31.9%	42.4%
	Self-Employed	12.4%	11.5%	12.3%
	Out of work (> 1 year)	2.2%	1.6%	2.2%
	Out of work (< 1 year)	5.7%	3.8%	7.0%
	Homemaker	7.4%	8.2%	7.0%
	Student	8.8%	11.5%	8.4%
	Retired	17.5%	23.1%	16.3%
	Unable to Work	4.9%	8.2%	4.4%
Children <18 in Home check	Yes	44.4%	42.9%	44.4%
	No	55.6%	57.1%	55.6%
Household Income	< \$20,000	10.6%	17.7%	7.9%
	\$20,000 - 34,999	17.3%	13.5%	21.7%
	\$35,000 - 49,999	8.3%	7.1%	7.6%
	\$50,000 - 74,999	19.3%	12.8%	17.0%
	\$75,000 +	44.5%	48.9%	45.7%

RESULTS

Health Status

When asked to describe their current health, 61.3% of Livingston County adults said their health was either excellent (28.1%) or very good (33.2%). This is somewhat greater than the 57.0% of Livingston County adults who said their health was either excellent (23.3%) or very good (33.7%) in 2004..

Table 2 shows the percentage distribution of responses for the county as a whole and for the two geographic areas (excludes the MiBRFS cases). The percent claiming their health was only fair or poor was 15.3% for the county as a whole, and 24.2.0% and 13.8% for the two geographic areas respectively. The percentage reporting their health as only fair or poor is also greater than was reported in 2004 (i.e., 11.8%).

Perceived Health Status	Overall	Within the County	
		Rural	Suburban
Excellent	28.1%	18.7%	33.6%
Very Good	33.2%	30.8%	30.7%
Good	23.4%	26.4%	21.9%
Fair	10.9%	13.2%	11.2%
Poor	4.4%	11.0%	2.6%
N =	773	182	456

Table 3 shows the percentage of respondents who rated their health as fair or poor broken down by gender, age, education, income and marital status. The table indicates that

- Males were more likely than females to report their health as only fair or poor.
- Those 65 or older were more likely than their younger counterparts to judge their health as only fair or poor.
- Generally, respondents with more education and those with greater income were less likely to describe their health as only fair or poor.
- Respondents who were currently divorced or separated were much more likely to rate their health as only fair or poor than were other respondents.

Table 3. Percentage of Respondents Rating Their Health as Fair or Poor, by Demographic Background: 2009		
Demographic Characteristic		% Reporting Health Fair or Poor
Area of County*	Rural	24.2%
	Suburban	13.8%
Sex*	Male	19.0%
	Female	11.6%
Age*	18-34	14.6%
	35-54	11.3%
	55-64	8.7%
	65+	34.1%
Education*	< High School	52.8%
	High School	19.2%
	Some College	14.8%
	College +	2.8%
Income*	< \$20,000	41.3%
	\$20,000 - 34,999	38.5%
	\$35,000 - 49,999	18.0%
	\$50,000 - 74,999	3.4%
	\$75,000 +	1.9%
Marital* Status	Single, Never Married	9.6%
	Married	15.1%
	Widowed	22.9%
	Divorced, Separated	23.6%
	Member Unmarried Couple	0.0%

* Statistically significant, p < .05

Days Health Was Not Good

The interview contained several other questions through which to assess the general health status of the respondents. Three questions asked respondents to indicate the numbers of days in the past month that their health (physical and mental) was not good and the number of days in the past month that they were unable to do their usual activities because of poor mental or physical health.

In the county as a whole, the average number of days in the previous month respondents reported their physical health not being good (whether from illness or injury) was 4.1 – up from the 3.1 reported in 2004 – and the average number of days they reported that their mental health was not good in this same time period was 3.8 – virtually the same as the 3.7 reported in 2004. In the rural area of the county, the average number of days respondents reported their physical health was not good was 7.3 – much greater than the average 2.1 reported in 2004 – while the average

number of days they reported their mental health was not good was 5.6, also much greater than 2004 (i.e., 2.2). In the suburban area of the county, respondents reported the average number of days of bad physical health to be 2.8 – slightly lower than the 3.5 average reported in 2004 – and the average number of days of bad mental health to be 3.3 – also slightly lower than the 2004 average of 4.2. That is, on average, respondents in the rural area tended to report slightly greater number of days of both bad physical and mental health than those in the suburban areas and the disparities have widened.

The averages can be influenced by extremes. In fact, 68.0% of respondents in Livingston County reported that there were no days when their physical health was not good, while 8.1% reported their physical health was not good from 1 to 2 days. On the other hand, 7.2% of respondents reported their physical health was not good for all of the previous 30 days.

Similarly, 60.2% of respondents reported there were no days when their mental health was not good in the previous 30 days, while 10.5% reported it was not good between 1 and 2 days, and only 7.0% reported their mental health was not good 20 or more of the preceding 30 days.

Respondents were asked how many days of the previous month poor mental or physical health kept them from doing their usual activities such as self-care, work or recreation. Among those who had reported not feeling good *physically* at least one day in the previous month, the average number of days individuals reported not being able to do their usual activities because of poor health was 8.1 – somewhat greater than the 4.4 days found in 2004. Nevertheless, 42.3% of these county respondents said there were no days their bad physical health prevented them from doing their usual daily activities – similar to the 41.4% found in 2004.

Among those who had reported their *mental health* was not good at least one day during the previous month, the average number of days they said they could not do their usual activities was 4.8 – also greater than the 2004 finding of 2.8 – with 61.1% reporting there were no such days.

In the cases both of feeling bad physically and feeling bad mentally, similar percentages of respondents as in 2004 were not limited in their daily activities as a result. However, among those who were, their reported period of limitation was more prolonged in 2009 than in 2004.

Individuals who assessed their health as being only “fair” or “poor” reported substantially larger numbers of days in the past month when their physical or mental health was not good. Those who described their health as only fair or poor reported an average of 13.8 days of bad physical health (compared to 12.9 in 2004), 9.6 days of bad mental health (compared to 6.8 days in 2004), and 10.5 days their health limited their daily activities in the previous month (compared to 5.9 days in 2004) compared to only 2.4 days of bad physical health, 2.8 days of bad mental health and 1.5 days of limited activities among those who described their health as good, very good, or excellent.

Table 4 shows the average number of days respondents of various demographic backgrounds reported their physical health and mental health were not good and the average number of days their daily activities were limited.

Table 4 indicates that:

- Suburban residents reported somewhat more days of poor physical and mental health than rural residents but they did not differ significantly regarding the number of days they could not do their usual daily activities as a result.

Table 4. Average Number Days Health (Physical, Mental) Was Not Good, Activities Limited, by Demographic Characteristics: 2009				
Demographic Characteristic		Phys. Health Not Good ¹ (Mean # Days)	Mental Health Not Good ² (Mean # Days)	Limited Activities ³ (Mean # Days)
Overall		4.1	3.8	2.9
Area of County	Rural	2.1*	2.2*	1.7
	Suburban	3.5	4.2	1.6
Gender	Male	4.3	3.2*	3.2
	Female	4.0	4.5	2.6
Age	18-34	2.7*	6.8*	1.9*
	35-44	4.3	4.3	2.2
	45-54	1.8	3.8	1.6
	55-64	3.3	2.4	2.6
	65-99	7.9	4.5	4.6
Education	< High School	11.5*	11.9*	7.8*
	H.S. Grad.	4.5	3.8	4.0
	Some College	3.7	3.5	2.2
	College Grad.	2.5	2.3	1.3
Income	< \$20,000	17.7*	6.1*	10.3*
	\$20,000-34,999	5.7	6.2	5.2
	\$35,000-49,999	3.1	2.7	1.5
	\$50,000-74,999	1.1	2.4	1.2
	\$75,000 +	2.0	2.9	1.3
¹ Mean number of days in past 30 physical health was not good. ² Mean number of days in past 30 mental health was not good ³ Mean number of days in past 30 when poor physical or mental health kept respondent from doing usual activities (all respondents) * Statistically significant, p < .05				

- Females tended to report a greater number of days their mental health was not good than did males.
- Generally, the number of days physical health was not good tended to increase with age while the number of days mental health was not good tended to decrease with age.
- In general, those with less education tended to report more days that their physical or mental health was not good.
- The number of days physical health was not good, mental health was not good, and daily activities were limited by either tended to decrease as household income and the individual's education level increased .

Access to Care and Utilization

Health Care Coverage. The Livingston BRFSS interview asked respondents to indicate whether or not they had any kind of health care coverage, including health insurance, prepaid plans such as HMO’s, or government plans such as Medicare. Among all respondents, 87.2% reported that they do. This is appreciably lower than the 93.0% of all adults found in the 2004 survey and probably reflects the impact of the recession that began in Michigan in 2007 but greatly intensified in Michigan and nationally in 2008-9.

Virtually all adults aged 65 or older are covered under Medicare. Therefore, it may be more meaningful to determine what percentage of those 18 to 64 are without insurance coverage. For the county as a whole, 14.5% of those under age 65 reported having no coverage (compared to 8.0% in 2004). The 2008 Michigan Behavioral Risk Factor Survey found that 13.7% of all adults 18 to 64 reported having no insurance coverage.

Table 5 shows the percentage of respondents who reported having no health care coverage across various demographic categories for each of the county. The table indicates that:

Table 5. Prevalence of Having No Health Care Coverage ¹ Among 18-64 Year Olds, by Demographic Characteristics: 2009		
Demographic Characteristic		% of Respondents
Overall		14.5%
Area of County	Rural	16.2%
	Suburban	12.8%
Gender	Male	16.5%
	Female	12.7%
Age	18-34	17.4%
	35-54	12.3%
	55-64	15.0%
Education*	< High School	50.0%
	H.S. Grad.	12.5%
	Some College	19.1%
	College Grad.	5.7%
Income*	< \$20,000	51.7%
	\$20,000-34,999	38.2%
	\$35,000-49,999	30.8%
	\$50,000-74,999	6.2%
	\$75,000 +	4.3%

¹ Among 18-64 year olds, the percentage who responded “no” to the question, “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?”
* Statistically significant, p < .05

- Those with less than a high school education were more likely to be uninsured than those with other levels of education, while college graduates were least likely to be uninsured.
- Those with less income – especially those with less than \$35,000 of income per year –

were much more likely to be uninsured than those with greater incomes.

One in eleven (9.1%) respondents had served in the U.S. Armed Forces, none of whom were currently on active duty. Among those 18 to 64 years of age who have ever served in the armed forces, 18.9% said they do not currently have health insurance (compared to 13.2% in 2004) while 14.2% of those who did not serve in the military reported not having insurance (also up from 7.6% in 2004).

Health Care Provider.

Interviewers asked all respondents whether they have one person that they think of as their personal doctor or health care provider. Overall, 85.9% of respondents in Livingston County said they have one or more individuals they think of as their personal doctor or healthcare provider. This is virtually identical to the 85.3% found in 2004, but the 14.1% without a regular provider is somewhat greater than the 11.6% found statewide in the 2008 MiBRFS.

Table 6 shows the percentage of respondents who said they do not have a personal physician or health care provider across areas of the county, categories of gender, age, level of education, and household income. The table indicates that:

- Respondents in the rural and suburban areas of the county were about equally likely to report having a personal health care provider.
- Males were almost twice as likely as females to not have a personal physician.
- Younger individuals, especially those 25 to 44, were more likely than their older and younger counterparts to not have a personal physician or provider.
- Generally, those with less than a high school education and those with incomes between

Demographic Characteristic		% No Health Care Provider
Overall		14.1%
Area of County	Rural	13.7%
	Suburban	14.5%
Gender*	Male	18.7%
	Female	9.7%
Age*	18-24	10.6%
	25-34	29.5%
	35-44	27.1%
	45-54	8.2%
	55-64	6.9%
	65-99	1.8%
Education*	< High School	35.8%
	H.S. Grad.	6.3%
	Some College	13.5%
	College Grad.	17.1%
Income*	< \$20,000	6.3%
	\$20,000-34,999	30.4%
	\$35,000-49,999	12.5%
	\$50,000-74,999	11.1%
	\$75,000 +	10.3%

¹ Among all respondents, the percentage who responded “no” to the question, “Do you have one person you think of as your personal doctor or health care provider?”
* Statistically significant, p < .05

\$20,000 and \$35,000 were more likely than their counterparts to not have a personal physician or health care provider.

Routine Checkup. More than a third of respondents (34.3%) reported their most recent routine medical checkup was more than a year earlier. This is very similar to the 32.2% reported statewide in the 2008 MiBRFS.. Table 7 indicates that:

- Rural residents, males, those under age 55, and those with incomes of \$20,000 to \$50,000 were much less likely than their counterparts to have had a recent routine checkup.
- Those who had no insurance were more than twice as likely as those with insurance to have not had a recent routine medical exam.

Needed Care Foregone. Roughly one in nine respondents (11.8%) reported that there had been a time in the past year when they did not go to get medical care they needed because of the cost. This is virtually unchanged since 2004. Table 7 shows that:

- Those under 35 were more likely and those 65 or older were less likely than others to have foregone care because of the cost.
- Those with less than a high school education were more likely than others to have foregone care.
- Those with incomes between \$20,000 and \$50,000 were more likely than others to have foregone needed care because of the cost.
- Those who said they have no health care insurance were more than six times more likely than their counterparts to report not getting care they needed because of costs.
- Nevertheless, the majority (51.6%) of those who reported foregoing needed care because of costs were individuals who said they have health insurance coverage.

Table 7. Prevalence of No Checkup in Past Year, Not Getting Needed Medical Care Because of Cost ¹ by Demographic Characteristics: 2009			
Demographic Characteristic		% No Routine Checkup in Past Year	% Not Getting Needed Care Because of Cost
Overall		34.3%	11.8%
Area of County	Rural	39.1%	7.7%
	Suburban	30.5%*	13.4%
Gender	Male	37.5%	13.5%
	Female	31.1%*	10.0%
Age	18-34	46.9%	18.3%
	35-54	40.8%	11.6%
	55-64	22.2%	11.8%
	65-99	11.6%*	1.6%*
Education	< High School	43.4%	32.1%
	H.S. Grad.	30.1%	7.1%
	Some College	35.4%	16.3%
	College Grad.	35.1%	6.5%*
Income	< \$20,000	21.0%	17.2%
	\$20,000-34,999	47.6%	42.3%
	\$35,000-49,999	31.3%	26.0%
	\$50,000-74,999	24.1%	6.0%
	\$75,000 +	26.6%*	0.7%*
Have Insurance	Yes	29.7%	7.0%
	No	64.6%*	44.4%*

¹ Among all respondents, the percentage who responded “yes” to the question, “Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?”

* Statistically significant, p < .05

Dental Care. In 2009, 70.8% of Livingston County respondents reported that they have dental care insurance coverage while 29.2% reported that they do not.

Table 8 shows which segments of the county population are more or less likely to have no dental coverage than others. The table indicates that:

Table 8. % of Adults Without Dental Coverage, Who Did Not Visit a Dentist, Have Checkup in Past Year: 2009
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Demographic Characteristic		No Dental Care Coverage ¹	No Dental Visit in Past Year ²	No Checkup in Past Year ³
		%	%	%
Overall		29.2%	21.6%	22.2%
Area of County	Rural	40.2%	32.0%	33.3%
	Suburban	24.9%*	17.7%*	17.9%*
Gender	Male	32.4%	28.2%	27.6%
	Female	26.0%	15.4%*	17.1%*
Age	18-34	26.6%	28.0%	28.5%
	35-54	16.2%	10.8%	11.7%
	55-64	38.4%	29.3%	30.6%
	65+	52.0%*	32.0%*	32.0%*
Education	< High school	74.4%	53.5%	60.5%
	High school grad	28.0%	25.3%	24.9%
	Some college	28.8%	22.1%	22.6%
	College grad	19.8%*	8.4%*	8.4%*
Household Income	< \$20,000	92.2%	54.9%	55.8%
	\$20,000 - \$34,999	41.1%	50.0%	52.7%
	\$35,000 - \$49,999	55.9%	32.4%	35.3%
	\$50,000 - \$74,999	22.6%	24.2%	24.6%
	>\$75,000	10.5%*	4.6%*	4.6%*

¹ The percentage who reported having no dental care coverage.

² The percentage who reported that they had not visited a dentist or dental clinic for any reason in the previous year.

³ The percentage who reported that they did not have a routine checkup by a dentist or dental clinic in the previous year.

- Rural residents were more likely than suburban residents to report having no dental coverage.
- Respondents aged 35 to 54 were more likely than others to have dental coverage.
- Generally, those with lower levels of education and lower household incomes were more likely to not have dental coverage than their counterparts and to have not visited a dentist recently.

Whether they had dental coverage or not, 78.4% of all respondents reported having visited a dentist or a dental clinic in the past year, while 21.6% reported not visiting the dentist in the past year for any reason. A total of 86.6% reported having visited one within the past two years. A little more than one in five (22.2%) reported not having a routine dental checkup in the past year which slightly lower than the 25.2% reported statewide in the 2008 MiBRFS.

Less than 1% (0.2%) reported never having visited a dentist for a routine checkup and another 9.4% reported not having visited one for five or more years.

Table 8 also shows the percentages of respondents who did not visit a dentist or dental clinic for any reason or for a routine checkup in the past year among various demographic groups.

The table indicates that:

- Rural residents were less likely than suburban to report having visited a dentist or dental clinic in the past year.
- Males were less likely than females to report having visited a dentist in the past year.
- Those in the 35-54 age group were more likely than others to report having visited the dentist recently.
- Those with more education and those with greater incomes (generally) were more likely to have visited a dentist in the past year than were their counterparts.

Those with dental care coverage were more likely to have visited a dentist in the past year than were those without insurance. While 89.7% of those with dental care insurance reported visiting a dentist or dental clinic in the past year, only 49.2% of those without dental insurance reported making such a visit.

Health Conditions

The interview included a number of questions regarding whether or not the respondent had various health conditions or problems. These included asthma, diabetes, hypertension, high cholesterol, cardiovascular disease and being overweight. The results for these will be summarized in this section of the report.

Asthma. Among all those interviewed, 14.2% reported ever being told by a doctor, nurse or other health professional that they have asthma. This is a slight increase from the 11.1% found in 2004, but is similar to the 15.4% reported for the state as a whole in the 2008 MiBRFS. Of the 14.2%, two-thirds (66.8%) claimed they still have asthma. That is, 9.5% of the respondents reported having ever been told they have asthma and have it now compared to 6.8% found for the county in 2004.

Table 9 shows the percentage of respondents who reported having ever been told they have asthma and the percentage of all respondents who indicated they have asthma currently. The table indicates that:

- Rural residents and suburban residents were both about equally likely to have ever been told they have asthma and to have it currently.
- Younger respondents were more likely than their older counterparts to report that they have been told they have asthma and that they have it currently.
- High school graduates and those with some college education were more likely than others to have been told they have asthma and have it currently.

Among all respondents, 44.4% said there was at least one child under the age of 18 living in the household. In households where there were two or more children, one of the children was selected at random. In households where there was only one child or where one of the children was randomly selected, interviewers asked if that child had ever been diagnosed with asthma and whether or not the child still has asthma. Nine out of ten respondents with children in the household (90.1%) said none of the children has asthma while 9.9% said the child or the randomly selected child had been diagnosed with asthma. Of these, about half (52.3%) said the child still has asthma.

Diabetes. Among all respondents, 7.0% said they have been told by a doctor that they have diabetes. This excludes those women who were only told they have pregnancy-induced diabetes. This is very similar to the 7.6% found in 2004 and slightly lower than the 9.1% reported statewide by the 2008 MiBRFS.

Table 9 indicates that there were no differences in the prevalence rates between rural and suburban areas of the county. However,

- Males were somewhat more likely than females to report having been told they have diabetes.
- Those 55 or older were more likely than their younger counterparts to have ever been told

they have diabetes.

- Those with less education and those with lower incomes were more likely to report having been told they have diabetes than those with more education or greater incomes.

Demographic Characteristic		Asthma		Diabetes	Hypertension	Cholesterol
		% Ever ¹ Told Have	% Have ² Now	% Ever ³ Told Have	% Ever ⁴ Told Have	% Ever ⁵ Told High
Overall		14.2%	9.5%	7.0%	24.2%	39.1%
Area of County	Rural	13.2%	11.0%	9.9%	35.9%*	41.9%
	Suburban	15.1%	8.6%	6.4%	19.1%	39.3%
Gender	Male	16.6%	9.9%	9.4%*	28.6%*	49.8%*
	Female	11.7%	9.1%	4.7%	19.8%	30.7%
Age	18-34	20.5%*	13.3%*	0.0%*	2.3%*	14.5%*
	35-54	13.2%	10.6%	3.0%	16.2%	36.2%
	55-64	14.2%	4.7%	13.4%	38.6%	53.9%
	65 or older	6.5%	4.9%	22.8%	66.9%	53.5%
Education	< High School	1.9%*	1.9%*	18.9%*	60.4%*	73.7%*
	H.S. Grad.	14.3%	11.3%	7.5%	28.5%	42.9%
	Some College	17.5%	11.5%	7.6%	19.8%	38.2%
	College Grad.	13.0%	6.5%	2.8%	16.1%	33.5%
Income	< \$20,000	11.1%*	3.1%*	20.6%*	63.5%*	53.1%*
	\$20,000-34,999	25.0%	15.4%	10.6%	30.8%	60.3%
	\$35,000-49,999	10.0%	8.0%	8.0%	48.0%	44.4%
	\$50,000-74,999	21.2%	17.7%	8.0%	18.8%	33.7%
	\$75,000 +	10.4%	6.3%	3.7%	14.9%	39.2%

¹ The percentage who responded “yes” to the question, “Have you ever been told by a doctor, nurse or other health professional that you had asthma?”

² The percentage who responded “yes” to the question, “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” and “yes” to the question “Do you still have asthma?”

³ The percentage who responded “yes” to the question, “Have you ever been told by a doctor that you have diabetes?” (excluding those women who said it was only when pregnant.)

⁴ The percentage who responded “yes” to the question, “Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?” (excluding those who only had this during pregnancy)

⁵ The percentage of all respondents who said “yes” to the question, “Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?”

* Statistically significant, $p < .05$

Of those few (54) who said they had diabetes, 8.8% said they had been diagnosed before age 40, 59.5% before age 60, and 23.2% after age 70. The average age at first being diagnosed was 54.6 years of age.

About a third of these respondents (35.5%) current took insulin. While almost a quarter (23.2%) said they never check their blood sugar, nearly two-thirds (64.0%) said they check their blood sugar at least once a day, while another 10.0% said they check at least once a week.

Nearly a quarter (22.9%) said they never check their feet for sores or irritation, but 56.2% said they or another non-professional check their feet at least once a day, while another 9.7% said they check their feet at least once a week.

Nearly three out of ten respondents with diabetes (28.2%) said they had not seen a health care professional in the past year for their diabetes, while 19.4% said they had seen a health care professional once, 15.2% twice, 10.0% three times, 19.2% four times, and 8.0% five or more times. About three quarters of the respondents who had seen a health care professional for their diabetes in the past year said that the health care professional checked their hemoglobin A1C each visit (77.0%), more than half (58.1%) said the health care professional checked their feet each visit.

About half of these respondents (51.2%) reported having their eyes checked (including dilation of the pupils) within the previous month while another 31.1% reported having their eyes checked within the previous year but more a month earlier. One in five of the respondents with diabetes (19.8%) said they have been told they have retinopathy as result of their diabetes.

More than half the respondents with diabetes (56.5%) said they have taken a course or a class on how they can manage their diabetes themselves, while 43.5% said they had not.

Hypertension. High blood pressure, or hypertension, is an important risk factor for cardiovascular health problems. It is a significant factor in morbidity and mortality due to stroke, kidney failure, and heart and blood vessel disease.

For the county as a whole, 24.2% of respondents reported being told they have high blood pressure. This is slightly lower but similar to the 25.8% found in the 2004 survey and is lower than the 29.0% reported statewide by the 2007 MiBRFS.

Table 9 indicates that:

- Rural residents were much more likely than suburban residents to report having been told they have high blood pressure.
- Males were somewhat more likely than females to report having been told they have high blood pressure.
- Respondents over age 55 – especially those 65 or older – were much more likely than their younger counterparts to report having been told they have high blood pressure.
- Those with higher levels of education or income were less likely than their counterparts to report having been told they have high blood pressure.

Of those told they have high blood pressure, 80.7% indicated that they were currently taking medication for their blood pressure.

High Cholesterol. High blood cholesterol has been determined to be a risk factor for heart disease. The risk increases directly as blood cholesterol levels increase. Furthermore, the risks are appreciably greater when elevated levels of blood cholesterol are combined with smoking and high blood pressure.

Among all respondents, 81.4% reported having ever been tested for high cholesterol. Of these, three-quarters (74.5%) reported having been tested in the past year and another 12.8% in the past two years. Of those ever tested, 39.1% indicated they have ever been told their cholesterol is high. This is virtually identical to the 39.2% prevalence rate for high cholesterol found in the 2004 survey. This is also virtually the same as the 39.9% reported for the state as a whole in 2007.

Table 9 indicates that:

- There was no significant difference in the prevalence among rural and suburban residents.
- Males, older residents, those with less education, and those with lower incomes were more likely than their counterparts have been told they have high cholesterol.

Heart Attack and Stroke. Interviewers also asked respondents if a doctor, nurse, or other health care provider had ever told them that they have had a heart attack (myocardial infarction), angina or coronary heart disease, or a stroke. Table 10 below shows the percentages of respondents 35 years of age or older in Livingston County who reported having been told they have had these cardiovascular problems.

Statewide, the 2008 MiBRFS found that 6.3% had been told they have had a heart attack,

6.7% had been told they have angina or coronary heart disease, and 4.0% had been told they have had a stroke. Among those 35 or older in Livingston County, 4.7% had been told they have had a heart attack, 6.5% had been told they have angina or coronary heart disease, and 6.0% had been told they have had a stroke.

Altogether, one in ten respondents (10.4%) 35 or older reported having been told they had at least one of the three types of cardiovascular diseases.

Table 10 indicates that:

Demographic Characteristic		Ever Told Heart Attack ¹	Ever Told Angina or Coronary Heart Disease ²	Ever Told Stroke ³
		%	%	%
Overall		4.7%	6.5%	6.0%
Area of County	Rural	11.6%	20.0%	18.1%
	Suburban	1.8%*	1.5%*	1.2%*
Gender	Male	7.7%	11.8%	9.2%
	Female	1.8%*	1.4%*	2.9%*
Age	35-44	0.0%	0.0%	0.0%
	45-54	0.0%	5.2%	1.7%
	55-64	7.1%	4.1%	5.6%
	65-74	5.2%	18.5%	10.3%
	75+	20.3%*	17.2%*	26.2%*
Education	< High school	29.4%	29.4%	41.2%
	High school grad	4.7%	11.0%	8.2%
	Some college	2.2%	2.7%	1.1%
	College grad	2.4%*	1.2%*	1.8%*
Household Income	< \$20,000	28.6%	22.2%	36.7%
	\$20,000 - \$34,999	2.8%	11.3%	8.3%
	\$35,000 - \$49,999	9.8%	9.8%	2.4%
	\$50,000 - \$74,999	1.3%	1.3%	1.3%
	>\$75,000	1.0%*	1.0%*	2.4%*

1 The percentage who reported having been told by a doctor that they had a heart attack.
 2 The percentage who reported having been told by a doctor that they had angina or CHD
 3 The percentage who reported having been told by a doctor that they had a stroke.

- Rural residents were much more likely to report having been told they had a heart attack, angina, or a stroke than were suburban residents.
- Males were much more likely than females to report having had each of the types of cardiovascular disease.
- The percentage of individuals who have ever had each of the three types of cardiovascular problems increased with age, especially after age 64.
- The percentage of individuals who have ever had each was greater among those with lower

levels of education and greater among those with lower incomes.

Weight Status. Obesity has been shown to be a risk factor for a variety of health problems, including cardiovascular disease, a variety of cancers, osteoarthritis, and gallbladder disease. Some studies have also indicated that body shape in terms of where fat deposition occurs is also associated with different levels of risk for certain kinds of cardiovascular problems. As a result, there is considerable concern about reducing obesity, particularly through dietary improvements such as reducing total caloric intake and especially the percentage of calories consumed from fats, and through increased physical activity.

The 2009 Livingston BRFSS included a question about the respondent's weight and another question about the respondent's height. These can be used to calculate the individual's Body Mass Index score (BMI), defined as the individual's weight (measured in kilograms) divided by the square of the individual's height (measured in meters).

Individuals are classified as "obese" if their BMI score is 30.0 or greater, as "overweight" if their BMI score is greater than or equal to 25.0 but still less than 30.0, and as "acceptable" if their BMI score is less than 25.0. Compared to those not overweight, health risks are greater for those who are overweight, but especially for those who are obese.

The 2009 Livingston BRFSS found that – excluding pregnant women -- 34.2% of the respondents (somewhat lower than the 37.9% found in the 2004 survey) had BMI scores in the acceptable range, while 44.7% were overweight (compared to 38.3% in 2004), and 20.3% were obese (compared to 23.7% in 2004).

The 2008 Michigan BRFSS found that the percentage who were obese was 30.1% among all adults statewide, while 35.2% were overweight. Thus, the prevalence of obesity in Livingston County is somewhat lower both than it was five years ago and compared to the state as a whole.

Table 11 indicates that:

- Rural residents were somewhat more likely than their suburban counterparts to be obese.
- Males were more likely than females to be obese.
- Generally, older respondents were more likely to be in either the overweight or obese category rather than the acceptable weight category than were younger respondents. The prevalence of obesity was greater among respondents between ages 35 and 64 than among those either younger or older than this. In part, this undoubtedly reflects the greater mortality among obese individuals.
- Those with a high school level of education and those with lower incomes were somewhat more likely than others to be obese.

Those classified as obese were four times more likely (20.4% vs. 5.4%) than those overweight to have diabetes and ten times more likely than those in the acceptable weight range (1.5%).

They were nearly twice as likely as those overweight to have high blood pressure (44.7% vs. 24.5%) and three and half times more likely than those in the acceptable weight range (12.5%).

They were about 20% more likely than those who were overweight to have high cholesterol (53.4% vs. 45.8%) and more than twice as likely as those in the acceptable weight range (21.4%).

They were 50% more likely than those who were overweight to have had a heart attack (6.6% vs. 4.2%) and seven times more likely than those in the acceptable weight range (0.8%).

They were almost three times more likely than those who were overweight to have angina (11.9% vs. 4.2%) and ten times more likely than those in the acceptable weight range (1.2%).

Demographic Characteristic		% Overweight ¹	% Obese ²
Overall		44.7%	20.3%
Area of* County	Rural	44.7%	28.5%
	Suburban	45.8%	15.6%
Gender*	Male	46.2%	25.7%
	Female	43.1%	14.6%
Age*	18-34	39.5%	11.4%
	35-54	43.8%	20.2%
	55-64	37.3%	34.7%
	65-99	59.8%	23.0%
Education*	< High School	53.8%	13.5%
	H.S. Grad.	39.7%	31.6%
	Some College	45.8%	14.2%
	College Grad.	46.7%	16.2%
Income*	< \$20,000	54.0%	31.7%
	\$20,000-34,999	41.3%	23.1%
	\$35,000-49,999	34.7%	24.5%
	\$50,000-74,999	58.8%	21.9%
	\$75,000 +	50.4%	18.4%

¹ Among all respondents, the percentage who had BMI scores (from height and weight) 25.0 - 29.9, excluding pregnant women.
² Among all respondents, the percentage who had BMI scores (from height and weight) greater than or equal to 30.0, excluding pregnant women.
* Statistically significant, p < .05

Disability. Interviewers asked all respondents if they are limited in any way in any activities because of physical, mental, or emotional problems. Among all respondents, 19.6% said they were limited due to some disability. This was about the same as was found in 2004 (18.6%). Among all respondents, 7.2% said they have a health problem that requires them to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone. This was slightly greater than the 4.5% found in the 2004 survey.

Table 12 shows the percentage of respondents among the various demographic groupings who reported having some type of disability and the percentage of all respondents who reported having to use special equipment. The table indicates that:

- Rural residents were more than twice as likely than suburban residents to report having some type of health limitation and more than four times as likely to report having to use special equipment.

- There were no statistically significant differences between males and females on either issue.
- Those 55 and older were more than twice as likely as those younger than 55 to have some type of limitation, while those 65 or older were roughly five times more likely than their younger counterparts to have to use special equipment.
- Respondents with less than a high school education were more likely than their more educated counterparts to have some type of limitation and to have to use special equipment.
- Those with less than \$20,000 income were much more likely to have some type of disability and to have to use special equipment than those with higher incomes.

Combining those who use some type of assistive technology and those that report some limitation, the total percentage of Livingston County adults with some type of disability was 21.2% – slightly lower than the 24.5% reported statewide by the 2008 MiBRFS.

The 2008 MiBRFS also found that 22.7% of adults statewide reported having a disability and that 7.8% of adults statewide required the use of special equipment because of a health problem. That is, although a somewhat lower proportion of Livingston County residents report an activity limitation as is the case statewide, nearly the same proportion of individuals in Livingston County require special equipment, suggesting their disabilities may be similarly debilitating.

Only 28.0% of those who said they have a health limitation reported using assistive technology, while 15.1% of those who use assistive technology reported having no physical, mental or emotional problems that limit them.

Table 12. Percent of Livingston County Adults Who Have Mental, Physical, or Emotional Limitation, Use Special Equipment, by Demographic group: 2009			
Demographic Characteristic		% Have Limitation ¹	% Require Special Equipment ²
Overall		19.6%	7.2%
Area of County	Rural	33.5%*	17.7%*
	Suburban	14.7%	4.2%
Sex	Male	19.0%	7.8%
	Female	20.3%	6.5%
Age	18-34	13.9%*	0.0%*
	35-54	14.6%	5.3%
	55-64	26.2%	5.6%
	65 +	36.1%	26.0%
Education	< HS	34.0%*	26.4%*
	High School	20.1%	8.8%
	Some College	18.7%	5.3%
	College +	16.7%	2.8%
Income	< \$20,000	44.4%*	33.3%*
	\$20,000-34,999	22.1%	2.9%
	\$35,000-49,999	20.0%	8.0%
	\$50,000-74,999	24.1%	6.9%
	\$75,000 +	11.6%	1.5%

1 Among all respondents, the percentage who answered “yes” to the question, “Are you limited in any way in any activities because of physical, mental, or emotional problems?”

2 Among all respondents, the percentage who answered “yes” to the question, “Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?”

* p < .05

Among those who have health insurance, those with a physical, mental or emotional problem that limits their activities were fifteen times more likely (31.1% vs. 2.4%) to currently use assistive technology than those with no health-related limitations, but, regardless whether they had a health limitation or not, none of those who had no insurance were currently using assistive technologies.

Arthritis. Interviewers asked all respondents several questions about problems with joints. Interviewers asked respondents if they had ever been told by a healthcare professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. Among all respondents, 31.1% said that they had. This is virtually the same as the 31.7% reported for adults statewide based on the 2008 MiBRFS.

Table 13 indicates that:

Demographic Characteristic		% Ever Told Have Arthritis ¹	Of Those Told They Have Arthritis or Related Ailment			
			% Limited Activities Because of Pain ²	% Limited in Work Because of Pain ³	% Limited in Usual Social Activities in Past Month ⁴	
					A Lot	A Little
Overall		31.1%	47.5%	23.5%	17.2%	20.0%
Area of County	Rural	29.8%	64.2%*	31.5%	29.6%	24.1%*
	Suburban	34.1%	44.2%	22.6%	14.8%	19.4%
Gender	Male	27.2%*	56.3%*	27.2%	19.2%	18.3%
	Female	35.0%	40.9%	20.3%	15.7%	21.6%
Age	18-34	4.9%*	20.0%*	30.0%*	0.0%	30.0%*
	35-54	27.0%	40.0%	33.3%	13.6%	32.1%
	55-64	48.4%	47.5%	27.9%	8.1%	14.5%
	65+	69.9%	57.6%	10.6%	29.4%	10.6%
Education	< High school	47.2%*	48.3%*	19.2%	57.7%	3.8%*
	High school grad.	37.2%	44.8%	24.7%	13.6%	20.5%
	Some college	26.0%	32.7%	29.9%	17.4%	27.5%
	College grad.	26.3%	47.7%	16.5%	3.6%	18.2%
Household Income	< \$20,000	64.1%*	75.0%*	17.1%*	36.6%	7.3%*
	\$20,000 - \$34,999	39.4%	57.5%	40.0%	25.0%	15.0%
	\$35,000 - \$49,999	30.0%	40.0%	33.3%	13.3%	26.7%
	\$50,000 - \$74,999	23.9%	25.9%	14.8%	7.4%	14.8%
	\$75,000+	27.4%	32.9%	19.2%	2.7%	23.3%

1 The percentage who reported they were told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

2 The percentage of those ever told they have arthritis who reported they are now limited in some way in some of their usual activities.

3 The percentage of those ever told they have arthritis who reported arthritis or joint symptoms now affect whether they work, the type of work they do, or the amount of work they do?

4 The percentage of those ever told they have arthritis who reported arthritis or joint symptoms interfered with their normal social activities, such as going shopping, to the movies, or to religious or social gatherings a lot, a little or not at all in the past month.

* p < .05

- Females were more likely than males to report having been told they have some form of arthritis or one of the other related ailments.
- The percentage of respondents who reported having been told they have some form of arthritis or one of the other related ailments increased with age, but generally decreased with level of education and with income.
- There was no significant difference between rural and suburban respondents regarding the prevalence of arthritis.

Those who said they had some form of arthritis or a related ailment were asked were asked if they were now limited in any way in any of their usual activities because of arthritis or joint symptoms. Among these respondents, 47.5% indicated that they were in some way limited in their usual activities as a result – 14.7% of all respondents. Among the respondents with arthritis or related ailments, 23.5% indicated that arthritis or joint symptoms now affect whether they work, the type of work they do, or the amount of work they do, and 37.2% indicated that, in the previous month, their arthritis or joint symptoms interfered with their normal social activities, such as going shopping, to the movies, or to religious or social gatherings either a lot (17.2%) or a little (20.0%).

On a scale from 0 to 10 where 0 was no pain or aching and 10 was pain or aching as bad as it can be, the average pain score given by these respondents was 4.6, with a median of 5.0. Those who said they were limited in their usual activities gave their pain level a score of 6.2 compared to the average score of 3.2 given by those who said they were not limited in their usual activities. Those who said they were limited in their work gave their level of pain or aching an average score of 6.7 compared to the average pain score of 4.0 given by those who said pain does not limit them in their work. Those who said their pain in the previous month had interfered with their usual social activities a lot reported an average pain score of 7.2, compared to 5.8 among those who said pain interfered with their social activities a little, and compared to an average pain score of 3.5 among those who said the pain did not interfere with their usual social activities.

Table 13 indicates that:

- Rural residents were more likely than suburban residents to report being limited in some of their usual activities because of pain or aching, particularly in their social activities.
- Females were more likely than males to report being limited in some of their usual activities but there were no significant differences between males and females with respect to work limitations or interference with social activities in the previous month.
- Younger respondents with arthritis or a related ailment were less likely than their older counterparts to report being limited in some of their usual activities. They were less likely to report that pain and aching interfered a lot with their social activities over the previous month, but somewhat more likely to reported being limited with respect to their work.
- Those with lower incomes were much more likely than their counterparts to indicate they were limited in their usual activities because of their pain or aching, more likely (generally) to report pain and aching limited them with respect to their work, and more

likely to report pain and aching interfered with their social activities a lot in the previous month.

Mental Health. Interviewers asked respondents if they were currently taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problems. Among all Livingston County respondents, 8.9% said they were currently being treated.

Table 14 indicates that:

- Females were more likely than males to be treated for a mental or emotional problem.
- Respondents between 55 and 64 were more likely than others to be undergoing treatment for a mental or emotional problem.
- Generally, those with lower incomes were somewhat more likely than others to report being treated for a mental or emotional problem.

The differences among segments of the population might either reflect differences in the prevalence of mental health problems or differences in individuals' opinions about stigma of having a mental health problem or the efficacy or expense of treatment. Interviewers asked all respondents two opinion questions.

The first asked respondents to indicate how strongly they agreed or disagreed that treatment can help people with mental illness lead normal lives. The second asked respondents to indicate how strongly they agreed or disagreed that people are generally caring and sympathetic to people with mental illness.

More than two-thirds of respondents (68.3%) strongly agreed that treatment can help and another 27.0% somewhat agreed. There were no significant differences in the responses of those who were currently receiving treatment and those not. This suggests that the perceptions of treatment efficacy were very similar between those receiving treatment and others in the county.

Regarding the view that people are generally caring and sympathetic toward individuals with mental illness, 15.7% of respondents strongly agreed, 47.9% somewhat agreed, 10.5%

Table 14: Mental Health: 2009		
		% Being Treated for Mental Health Condition ¹
Demographic Characteristic		
Overall		9.8%
Area of County	Rural	10.1%
	Suburban	8.9%
Gender	Male	6.4%*
	Female	13.3%
Age	18-34	8.8%
	35-54	7.0%
	55-64	22.6%*
	65+	6.5%
Education	< High school	6.1%
	High school grad	9.2%
	Some college	12.2%
	College grad	9.1%
Household Income	< \$20,000	20.0%*
	\$20,000 - \$34,999	8.5%
	\$35,000 - \$49,999	11.6%
	\$50,000 - \$74,999	17.4%
	\$75,000+	8.5%

¹ The percentage of respondents who reported that they were currently taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem.
* p < .05

strongly disagreed, 23.9% somewhat disagreed and 2.1% neither agreed nor disagreed. In this case, however, those receiving treatment differed in their responses from those not receiving treatment. Half of those (50.0%) who were currently receiving treatment disagreed with the statement that people are generally caring and sympathetic toward individuals with mental illness, while only 32.6% of those who were not receiving treatment disagreed with the statement. This suggests those receiving treatment perceived that their illness and treatment carries a stigma which influences how others then treat them. However, this likely reflects how these individuals believe others had reacted to them since they initiated treatment. So it seems unlikely that a negative attitude toward mental illness accounts for the differing rates of treatment across demographic groups. Instead, the differing rates seem likely to reflect differences in the actual prevalence of emotional or mental health problems across groups.

Interviewers asked respondents another series of questions regarding how much of the time in the previous month they felt each nervous, hopeless, restless or fidgety, depressed, worthless or that everything was an effort. The answers for each were all the time, most, some, a little or none of the time. We have combined each respondent's answers across the set of six items, scoring them on a scale from 0-5 with a score of 0 meaning the respondent answered none of the time to all six items and a score of 5 meaning the respondent answered all of the time to all six items. Scores between 0 and 5 represent combinations of the various answers across the six items, but scores closer to 0 mean the respondent felt anxious, depressed, and troubled little of the time while scores closer to 5 mean the respondent felt anxious, depressed and troubled much of the time.

Across all respondents, the average score to the six items was 0.67 while the maximum score any respondent received was 3.0. More than half the respondents (52.9%) had scores of less than 1, meaning they answered none of the time to all or almost all of the six items.

Those who said they were being treated for a mental or emotional problem had an average score of 1.12 compared to an average score of 0.62 among those who were not being treated.

Interviewers asked all respondents how many days out of the previous month a mental or emotional health problem prevented them from doing their work or other usual activities. More than nine out of ten respondents (91.3%) said there were no days when they were unable to do their usual activities. Among those who said they were prevented from doing their usual activities for at least one day, the average number of days reported was 7.7 and the median was 5 days. Of these respondents, 38.0% were currently being treated for mental or emotional problems while 62.0% were not.

Skin Cancer Risk. Interviewers asked all respondents how often when they are going to be outside during the day for more than one hour, they protect yourself from the sun by using sun screen with an SPF of 15 or higher, avoiding the sun between 10 am and 4 pm, or wearing sun protective clothing. Overall, 14.1% said they always protect themselves in this way, 26.5% said they usually do, 20.8% said they sometimes do, 13.1% said they rarely do, and 25.6% said they never do. That is, 59.5% only sometimes, rarely or never protect themselves from exposure to the sun that may lead to skin cancer.

Female respondents were much more likely than males to protect themselves usually or all of the time (51.7% vs. 28.7%). Respondents with a high school education or less were less likely to protect themselves from sun exposure than were those with at least some college education. Those 18-34 and those 55-64 were more likely to protect themselves from the sun (47.7% and 53.8% respectively) than those 35-54 or 65 or older (39.4% and 21.5% respectively).

Interviewers asked respondents how often they had used a sun lamp or tanning bed in the previous year. More than nine out of ten respondents (93.0%) said they had never done this.

Among all respondents, 4.4% had used a sun lamp or tanning bed in the previous year and protected themselves from exposure to the sun only sometimes, rarely or never, while 38.0% always or usually protected themselves from the sun and never used a sun lamp or tanning bed. The remainder of respondents either never used a tanning bed or sun lamp but did not routinely protect themselves from the sun (55.1%) or at least usually protected themselves from the sun but at least occasionally used a sun lamp or tanning bed (2.5%).

Preventive Care and Health Screenings

Influenza and Pneumonia Vaccinations. An important type of preventive care is getting vaccinated against common diseases that can be debilitating or deadly. The elderly are highly vulnerable to influenza and pneumonia against which effective vaccines have more recently been developed. A part of the Livingston BRFS interview was designed to determine what proportion of this at-risk adult population had been successfully persuaded to be vaccinated against these.

Interviewers asked all respondents if they had a flu shot in the past twelve months and if they had had a flu vaccine nasal spray. Overall, 30.1% of respondents said they had one or the other. Table 15 indicates that:

- Those in the rural parts and suburban parts of the county were similarly likely to report having received a flu vaccination in the past year.
- Females were more likely to have received a flu vaccination than were males.
- There were substantial differences across age categories. Whereas only 10.5% of those under age 34 were vaccinated against influenza, 36.5% of those 55 to 64, and 54.5% of those 65 or older reported being vaccinated against influenza.

Among those 65 or older, the 2009 finding that 54.5% had received the flu vaccine was lower than the 64.2% found in the 2004 survey and it was lower than the 70.2% found statewide by the 2008 MiBRFS.

Among those 65 or older, rural residents were somewhat more likely than suburban residents (64.1% vs. 42.2%) to have received a flu vaccination and those with more education were more likely to have received a vaccination.

Interviewers also asked all respondents if they had ever had a pneumonia shot. This shot

Demographic Characteristic		% Had Flu Vaccine ¹	% Had Pneumonia Shot ²
Overall		30.1%	23.6%
Area of County	Rural	33.3%	28.6%*
	Suburban	27.5%	21.2%
Gender	Male	24.7%*	14.7%*
	Female	35.7%	32.1%
Age	18-34	10.5%*	13.9%*
	35-54	31.5%	13.6%
	55-64	36.5%	19.5%
	65-99	54.5%	65.3%
Education	< High School	32.1%	29.6%
	H.S. Grad.	27.4%	28.4%
	Some College	27.5%	20.7%
	College Grad.	36.0%	19.8%
Income	< \$20,000	31.7%*	31.7%
	\$20,000-34,999	18.4%	20.4%
	\$35,000-49,999	34.0%	31.8%
	\$50,000-74,999	33.3%	24.7%
	\$75,000 +	40.0%	20.3%

¹ Among all respondents, the percentage who responded “yes” to the question, “During the past 12 months, have you had a flu shot?”

² Among all respondents, the percentage who responded “yes” to the question, “During the past 12 months, have you had a flu vaccine sprayed in your nose?” And “Have you ever had a pneumonia shot?”

* Statistically significant, $p < .05$

is usually given only once or twice in a person's lifetime.

Table 15 also shows the percentage who reported having ever had a pneumonia shot. For Livingston County as a whole, 23.6% of respondents reported having had at least one pneumonia shot in their lifetime – up slightly from the 20.3% found in 2004. Among those 65 or older, 65.6% reported having had a pneumococcal vaccine. This is very similar to the statewide rate of 66.4% reported by MiBRFS for 2008.

Table 15 indicates that:

- Those in the rural parts of the county were somewhat more likely to have received a pneumonia shot than those in the suburban areas.
- Females were much more likely than males to have received a pneumonia shot.
- Those 65 or older were much more likely than others to have had a pneumonia shot.
- There were no significant differences in the likelihood of having received a pneumonia shot across levels of education and levels of income, but both of these are correlated with age.

However, among those 65 or older, rural residents were less likely than suburban (45.7% vs. 75.0%), males were less likely than females (41.5% vs. 84.8%), younger seniors – 65-74 year olds – were less likely than older seniors – 75 or older (53.7% vs. 76.2%) – to have had a pneumonia shot.

Health Risk Behaviors

Another portion of the overall 2009 Livingston BRFSS concerned respondents' activities that have fairly direct links to their risk of developing major cardio-vascular diseases, cancers, other diseases, or of sustaining significant injuries. These are collectively referred to as health risk behaviors and include tobacco use, alcohol consumption, level of physical activity, and dietary habits. The findings of the 2009 survey on these topics will be summarized and discussed in this section of the report.

Cigarette Smoking. The links between cigarette smoking and cancer (especially lung cancer), heart disease, and various respiratory problems have been well established for many years now. But just as continued smoking increases individuals' risks of experiencing one or more of these health problems, quitting smoking reduces the risks.

Interviewers asked all respondents whether or not they had smoked at least 100 cigarettes (roughly five packs of cigarettes) in their entire life. If they said they had, then interviewers asked respondents whether they now smoke cigarettes every day, some days, or not at all. Those who currently smoke at least some days are counted as current smokers. Those who have smoked 100 cigarettes in their lifetime but claim not to smoke at all now are counted as former smokers. And, those who said they have not smoked at least 100 cigarettes in their lifetime are counted as having never smoked.

Overall, 15.1% of Livingston County adults are current smokers. This was a decrease from the 19.0% found in 2004. The 15.1% current smoking rate is appreciably lower than the 20.5% prevalence reported statewide by the Michigan BRFSS for 2008.

Among Livingston residents, 31.7%% are former smokers, and 53.2% have never smoked. The 53.2% who have never smoked is an increase from the 47.1% who never smoked found in the 2004 survey.

Calculating the percentage who have quit smoking of those who have ever smoked produced the Quit Ratio for the county of 68.6%, which is also somewhat greater than the Quit Ratio of 64.1% found in 2004. That indicates that the county has been successful at both persuading more people to not start smoking and persuading those who have been smoking to quit.

Table 16 shows the percentages of the Livingston County population that were current smokers, former smokers, never smokers, and the percentage of those who have ever smoked who have quit among categories of various demographic groups.

Table 16. Smoking Status of Livingston County Respondents by Demographic Characteristics: 2009.					
Demographic Characteristic		Smoking Status (%)			Quit Ratio ²
		Current Smoker ¹	Former Smoker	Never Smoked	
Overall		15.1%	31.7%	53.2%	68.6%
Area of County	Rural	10.4%	32.4%	57.1%	75.6%*
	Suburban	15.6%	34.8%	49.6%	70.5%
Gender*	Male	20.3%	34.3%	45.5%	62.9%*
	Female	10.1%	29.2%	60.7%	76.9%
Age*	18-34	17.0%	15.6%	67.5%	47.8%*
	35-54	14.9%	28.1%	57.1%	68.0%
	55-64	23.0%	31.7%	45.2%	58.0%
	65-99	4.9%	65.0%	30.1%	93.0%
Education*	< High School	32.1%	34.0%	34.0%	51.4%*
	H.S. Grad.	20.2%	40.3%	39.5%	69.1%
	Some College	15.6%	30.0%	54.4%	65.8%
	College Grad.	5.0%	23.9%	71.1%	82.5%
Income*	< \$20,000	9.4%	56.3%	34.4%	85.7%*
	\$20,000-34,999	24.0%	43.3%	32.7%	65.2%
	\$35,000-49,999	34.0%	30.0%	36.0%	46.9%
	\$50,000-74,999	22.4%	34.5%	43.1%	60.6%
	\$75,000 +	8.6%	25.5%	65.9%	74.7%

1 Among all respondents, the percentage who responded “yes” to the question, “Have you smoked at least 100 cigarettes in your lifetime?” and responded that they currently smoked cigarettes every day or some days.
2 The percentage of all respondents who said they have said they smoked at least 100 cigarettes in their life who said they do not smoke now.
* Statistically significant, p < .05

The table indicates that:

- There were no significant differences in current smoking status between rural and suburban residents, but rural residents were somewhat more likely to have quit smoking if they had ever smoked than were suburban residents.

- Males were more likely than females to be current smokers, females were more likely to have never smoked, and females had a high quit ratio than males if they have ever started smoking.
- In general, younger respondents were more likely to have never smoked than were older respondents, while those in the 55-64 year old age group had the higher current smoking rate. Those 65 or older who had ever smoked had the highest quit ratio.
- Those with more education were much less likely to be current smokers and more likely to have never smoked than other residents of the county.
- Those with incomes between \$35,000 and \$50,000 were more likely than others to be current smokers while those with incomes of \$75,000 or more were least likely to have ever smoked compared to others in the county.

Interviewers asked those who were current smokers if they had stopped smoking for one day or longer during the last year because they were trying to quit smoking. Among the current smokers, 53.6% said they had – a slight increase from the 51.8% found in 2004. Younger residents who currently smoked were somewhat more likely than others to report having tried to quit.

Those who said they no longer smoke were asked how long it had been since they last smoked regularly. For 93.7% of these former smokers, it had been more than a year.

Smokeless Tobacco. Interviewers asked respondents if they currently use chewing tobacco, snuff or SNUS. Overall, 99.1% of Livingston residents said they do not. There were no significant differences among the demographic groups as to whether they use smokeless tobacco products or not.

Alcohol Consumption. The 2009 Livingston BRFSS included several questions regarding alcohol consumption, frequency, and quantities. The Centers for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS) classifies individuals' drinking statuses based on a combination of quantity and frequency of drinking. To measure this, two questions were asked. The first asked respondents how many days in the past month they had consumed any beer, wine, wine coolers, cocktails, or liquor. Those who indicated that they had not had any drinks in the past month were categorized as "abstainers" and were not asked the follow-up questions. Those who said they had were asked how many drinks they drank on average on the days when they did drink alcoholic beverages.

These answers were then converted into the average number of drinks per day they had over the past 30 days. BRFSS currently focuses primarily on those it classifies as heavy drinkers, i.e., males who drink an average of more than 2 alcohol drinks per day all month and females who drink an average of more than one alcohol drink per day all month.

Based on this classification scheme, 5.9% of Livingston County adults were heavy drinkers. This is somewhat lower than the 8.2% found in the 2004 survey, and very similar to the 5.5% prevalence rate reported for all adults statewide in the 2008 MiBRFS.

Table 17 displays three categories regarding respondents' drinking status: abstainers (0 drinks in a month), light/moderate drinkers (greater than none but 2 or fewer per day for males or

1 or fewer per day for females), and heavy drinkers. The table indicates that 34.8% of Livingston adults were abstainers. This is appreciably greater than the 26.8% who were abstainers in the 2004 survey. The table also indicates that:

Demographic Characteristic		Drinking Status (%)			Binge Drank ²
		Abstainer	Light/Moderate	Heavy	
Overall		34.8%	59.4%	5.9%	18.1%
Area of County	Rural	44.7%	50.8%	4.5%*	17.9%
	Suburban	29.5%	65.1%	5.5%	18.0%
Gender	Male	30.0%	62.4%	7.6%*	25.4%*
	Female	39.5%	56.3%	4.1%	10.7%
Age	18-34	25.6%	69.7%	4.7%*	26.4%*
	35-54	29.8%	64.9%	5.3%	17.6%
	55-64	37.9%	51.6%	10.5%	22.4%
	65-99	62.3%	33.6%	4.1%	1.6%
Education	< High School	60.4%	35.8%	3.8%*	3.8%*
	H.S. Grad.	45.0%	47.9%	7.1%	17.7%
	Some College	28.7%	63.2%	8.1%	24.0%
	College Grad.	24.9%	72.8%	2.3%	14.7%
Income	< \$20,000	59.7%	37.1%	3.2%*	4.7%*
	\$20,000-34,999	33.7%	62.5%	3.8%	17.5%
	\$35,000-49,999	36.7%	42.9%	20.4%	32.7%
	\$50,000-74,999	25.0%	66.4%	8.6%	31.3%
	\$75,000 +	30.6%	65.3%	4.1%	16.8%

¹ The percentage of respondents who reported not drinking alcohol at all in the past month (abstainers), an average of 2 or fewer drinks per day for males or 1 or fewer drinks per day for females (light/moderate), or an average of more than 2 per day for males or more than 1 per day for females (heavy).

² The percentage of all respondents who said they had 5 or more drinks in a single occasion one or more times in the past month.

* Statistically significant, $p < .05$

- Rural residents were somewhat more likely than suburban residents to be abstainers whereas suburban residents were more likely than rural to be light or moderate drinkers, but they were about similarly likely to be heavy drinkers (4.5% vs. 5.5%).
- Females were somewhat more likely than males to be abstainers while males were somewhat more likely than females to be light/moderate or heavy drinkers.
- Older respondents were more likely than younger respondents to be abstainers, while those 55 to 64 were more likely to be heavy drinkers than respondents in other age groups.
- Those who had less education were more likely than those who had more education to be abstainers.

- Those with greater incomes were less likely than their lower income counterparts to be abstainers and those in the \$35,000-\$50,000 income range were the most likely to be heavy drinkers.

Interviewers also asked those respondents who drank at least some alcohol in the past month how many times in that month they had five or more drinks on a single occasion. This is what BRFSS refers to as “**binge drinking**.” BRFSS usually reports the percentage of respondents who engaged in binge drinking *at least once* in the past month.

The 2009 Livingston BRFSS found that 18.1% of all respondents claimed to have had five or more alcohol drinks on a single occasion one or more times in the past month. This is lower than the 22.7% binge drinking rate found in the 2004 survey and is roughly the same as the 17.6% binge drinking rate reported statewide by the 2008 MiBRFS.

Among those who reported having done so at least once in the previous month, the average number of times they reported binge drinking in the month was 4.5 (nearly double the 2.9 times found in the 2004 survey), with the median being 2.

Table 17 also shows the percentage of respondents who reported having engaged in binge drinking at least once in the previous month. The table indicates that:

- Males were about two and a half times more likely (25.4% vs. 10.7%) to report having engaged in binge drinking at least once in the past month.
- Younger respondents were somewhat more likely to have engaged in binge drinking than were older respondents.
- Those with incomes between \$35,000 and \$75,000 were more likely to report binge drinking at least once in the previous month than were respondents who had greater or lesser incomes.

Also, 73.7% of those classified as heavy drinkers reported binge drinking at least once in the previous month, compared to 23.9% of those classified as light or moderate drinkers.

Physical Activity. Numerous studies have shown the health benefits of even moderate physical activity, particularly in reducing the risk of cardiovascular health problems. Some studies have indicated that the risks of such problems are appreciably greater for those who engage in no physical activity even compared to those with sedentary lifestyles.

Interviewers asked all respondents if, other than their regular job, they had participated in any physical activities or exercises in the past month, such as running, calisthenics, golf, gardening, or walking for exercise. Those who said they had not have been categorized as inactive.

Among all respondents, 21.4% were inactive. This is similar to but slightly greater than the 19.3% found in the 2004 survey. However, it is still somewhat lower than the 25.1% reported for all adults in the state in 2008 MiBRFS. Table 18 indicates that:

- There were no significant differences in the percentages who were inactive between residents of the rural and the suburban parts of the county.

Demographic Characteristic		% Inactive (No Physical Activity) ¹	% Inadequate Moderate Activity ²	% Inadequate Vigorous Activity ³	% Inadequate Physical Activity ⁴
Overall		21.4%	57.4%	68.2%	49.7%
Area of County	Rural	20.9%	53.3%	69.3%	48.9%
	Suburban	21.5%	57.0%	67.2%	48.6%
Gender	Male	17.9%*	58.9%	63.8%*	49.3%
	Female	25.0%	56.0%	72.4%	50.1%
Age	18-34	22.6%*	62.7%*	56.3%*	54.1%*
	35-54	8.3%	50.9%	61.2%	38.6%
	55-64	30.2%	51.3%	81.1%	49.6%
	65-99	43.1%	74.5%	91.7%	72.5%
Education	< High School	49.1%*	79.1%*	94.3%*	83.0%*
	H.S. Grad.	25.9%	54.0%	66.8%	49.8%
	Some College	22.8%	56.3%	68.3%	48.0%
	College Grad.	8.3%	58.5%	63.1%	43.1%
Income	< \$20,000	45.3%*	60.0%*	92.1%*	64.9%*
	\$20,000-34,999	19.2%	66.0%	76.7%	58.7%
	\$35,000-49,999	16.0%	44.0%	65.3%	34.7%
	\$50,000-74,999	28.2%	67.0%	75.4%	60.3%
	\$75,000 +	11.6%	52.3%	56.7%	38.6%

1 The percentage of respondents who said they participated in no physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise.
2 The percentage of respondents who reported engaging in moderate exercise for at least 30 minutes fewer than 5 days per week.
3 The percentage of respondents who reported engaging in vigorous activities for 20 minutes or more less than 3 times/week.
4 Percent who did not engage in either 30 minutes or more of moderate physical activity five or more days per week, or at least 20 minutes of vigorous activity three or more days per week.
* Statistically significant, p < .05

- Females were somewhat more likely than males to be inactive.
- Older residents were more likely to be inactive than were their younger counterparts.
- Those with less education were more likely to be inactive than were those with more education.
- Generally, those with more income were less likely to be inactive than were those with less income.

Interviewers asked all respondents whether or not in a usual week they do any **moderate** physical activities (i.e., the kind that would cause a small increase in breathing or heart rate, such as brisk walking, bicycling, vacuuming, or gardening) for at least ten minutes at a time. More than eight out of ten respondents (86.4%) reported some type of moderate exercise for 10 minutes at a time at least once per week.

Three quarters of all respondents (74.3%) said they participate in moderate physical activities for ten or more minutes at a time three or more days a week and more than half (52.0%) said they do so five or more days per week.

Adequate moderate physical activity is considered to be 30 minutes of moderate activity five or more days a week. Using this standard, Table 18 shows the percentages of the population that participates in an inadequate amount of moderate activity per week. Table 18 indicates that 57.4% of Livingston County residents engage in an inadequate amount of moderate activity. There were no statistically significant differences on this between rural and suburban residents or between males and females. Those 55 or older were more likely than their younger counterparts to participate in an inadequate amount of moderate activity.

Interviewers asked respondents whether or not they engage in any **vigorous** physical activities outside of work (i.e., activity that causes large increases in breathing or heart rate such as running, aerobics, or heavy yard work) for at least 10 minutes at a time in a usual week. More than half the respondents (54.1%) said that they do. This is also slightly lower than the 58.8% found in 2004. Among those who said they do participate in vigorous activity, nearly two-thirds (65.3%) said they engage in vigorous physical activity for at least ten minutes at a time three or more days per week, while 31.1% reported participating at this level of activity five or more days a week.

Vigorous exercise for 20 minutes at a time at least three days a week is considered an adequate amount of exercise to maintain health. Table 16 indicates that 68.2% of Livingston County residents did not meet this standard. The table indicates that, again, there were no significant differences between the rural and suburban respondents. Females were more likely than males not to participate in an adequate amount of vigorous activity each week. In general, younger respondents and those with more education tended to be more likely to engage in adequate amounts of vigorous physical activity than their counterparts.

BRFSS defines adequate exercise or physical activity as engaging in 30 minutes or more of moderate physical activity five or more days per week, or at least 20 minutes of vigorous activity three or more days per week. Inadequate physical activity is any amount less than this.

Using this criterion, 50.3% of the respondents in Livingston County engaged in adequate levels of physical activity, while 49.7% did not. The percent engaged in inadequate levels of physical activity was greater than the 43.7% found in the 2004 survey. This 49.7% engaging in inadequate levels of physical activity is virtually identical with the 49.4% reported among adults statewide in the 2008 MiBRFS

Table 18 shows the prevalence of inadequate levels of physical activity among the various demographic groups in the Livingston BRFSS sample. The table indicates that:

- There was no difference between rural and suburban residents of the county regarding the percentage of residents, or males and females regarding the percentage engaging in inadequate levels of physical activity.
- Those under 35 or 65 or older were more likely than others to participate in inadequate levels of physical activity.
- Those with less than a high school education were more likely to engage in inadequate levels of physical activity than their counterparts.

Nutrition and Diet. The 2009 Livingston BRFSS included several questions designed to assess (partially) the nutrition and dietary intake of adults. Interviewers asked respondents how many servings of various fruits and vegetables they typically consume daily.

Table 19 shows the average and median number of servings of all fruits and vegetables typically consumed daily as reported by the respondents. It also shows the percentage of respondents whose responses indicated that they consume five or more fruits and vegetables per day as recommended.

The table indicates that the mean number of servings per day respondents in Livingston County reported is 3.6 – up slightly from the 3.1 found in the 2004 survey -- while only 19.9% reported consuming five or more -- also up slightly from the 17.9% found in 2004. The 17.9% figure is somewhat lower than the 21.7% reported for the statewide population in the 2008 Michigan BRFSS.

The table indicates that:

- Compared to 2004, the mean number of servings was up slightly for every demographic group except those with less than a high school education.

Demographic Characteristic		Number Servings Fruits-Veg./Day ¹		% Consume 5 or More Daily ²
		Mean	Median	
Overall		3.6	3.3	19.9%
Area of County	Rural	3.6	3.6	15.2%
	Suburban	3.6	3.1	21.5%
Gender	Male	3.2*	2.9	13.1%*
	Female	4.1	3.7	27.2%
Age	18-34	3.4	2.6	13.2%*
	35-54	3.6	3.2	22.6%
	55-64	3.6	3.3	17.2%
	65-99	4.1	3.6	27.5%
Education	< High School	2.6*	1.5	5.8%*
	H.S. Grad.	3.7	2.1	21.4%
	Some College	3.7	2.7	23.6%
	College Grad.	3.7	2.6	17.8%
Income	< \$20,000	3.5	3.6	6.5%*
	\$20,000-34,999	3.5	2.6	21.6%
	\$35,000-49,999	3.5	3.4	16.3%
	\$50,000-74,999	3.2	3.2	10.3%
	\$75,000 +	4.0	3.6	23.6%

¹ Mean/median number of servings of fruits and vegetables reported based on two questions: one about fruit and one about vegetables.
² Percent who reported consuming fruits and vegetables five or more times per day.
* Statistically significant, p < .05

- Female respondents were somewhat more likely to report eating five or more fruits and vegetables than were males, older respondents were somewhat more likely than younger, those who completed high school were more likely than those who had not, and those with incomes below \$20,000 were less likely than others.

Additionally, those whose BMI scores for height and weight put them in the acceptable weight range were no more likely (24.7%) than those who were overweight (18.3%) and those who were obese (16.6%) to report consuming five or more vegetables per day, but the percentages consuming five or more for all three groups were somewhat greater in 2009 than in 2004 (18.1%,

16.7%, and 14.7%, respectively)

Interviewers also asked respondents how many servings of soda, pop, juice or fruit flavored drinks they drink each day. Overall, the average number of such drinks reported was 1.2 – down slightly from the 1.6 found in the 2004 survey. Nearly four out of ten (37.3%) reported drinking no such drinks on a daily basis – up compared to the 30.0% found in 2004 -- and 38.5% reported drinking only one – also up from the 27.4% found in 2004. Rural residents, males, those younger than 35 and those 65 or older, those with less than a high school education and those with incomes less the \$20,000 tended to drink more such sugar drinks each day than their counterparts. Similarly, those who were in the acceptable weight for height range drank few such sugar drinks each day (.85) than either those who were overweight (1.4) or obese (1.4), although the averages were down slightly for all three groups compared to 2004.

Sleep. Interviewers asked all respondents how many days out of the previous 30 they thought they did not get enough sleep. Overall, 28.6% said there were no days that they thought they did not get enough sleep, while 16.4% said there were no days when they thought they did get enough sleep. Among those who said there was at least one day when they did not, the average number of days they reported not getting enough sleep was 13.7 days, i.e, two weeks of inadequate sleep out the month.

Overall, respondents between 35 and 54 reported more days of inadequate sleep than other respondents. Similarly, respondents with less than a high school education and those with some college reported more days of inadequate sleep than did those who had completed high school or had college degrees.

Other Health Concerns

The 2009 Livingston BRFSS included questions on several additional health related topics as well. These other topics included questions regarding difficulties meeting basic needs, access to prescription drugs, assistance with daily living, caregiving responsibilities, transportation difficulties, children's time in physical activities, reading and in front of video screens, sources of parenting information, awareness of 211 services, and attitudes toward underage drinking and drug use. The results of these will be summarized in this section of the report.

Difficulties Meeting Basic Needs. Interviewers asked respondents how hard it is for them to pay for the very basics like food, housing, medical care, and heating. Among all respondents, one in eight (13.2%) said it is very hard, 28.7% said it is somewhat hard, and 58.1% said it is not very hard at all. The percentage who said it is very hard (13.2%) was double the percentage found in 2004 (6.5%) – undoubtedly reflecting the impact of the severe recession and high unemployment in the nation and Michigan in particular during all of 2009.

Respondents were then asked if they have been concerned about having enough food for themselves or their family in the past 30 days. Among all respondents, 6.7% said they had – also up slightly from the 4.1% found in 2004.

Then interviewers asked respondents if they believe their current housing situation poses a health or safety risk to themselves or other residents. Interviewers indicated that examples of such risks are a failing well or septic system, a leaky roof, poor electrical wiring, heating problems, broken stairs, or other risks. Among all respondents, only 1.2% said they thought their current

housing posed a health or safety risk – down slightly from the 3.2% found in 2004.

Table 20 shows the percentages of respondents who indicated they had each of these problems meeting basic needs. The table indicates that:

- Rural and suburban respondents were about equally likely to report having difficulties paying for basic needs but rural respondents were somewhat more likely to believe their current housing posed a health risk.

Demographic Characteristic		% Difficulty Paying for Basics ¹		% Concerned in ² Past Month About Having Enough Food	% Believe ³ Current Housing is Health Risk
		Very Hard	Somewhat Hard		
Overall		13.2%	28.7%	6.7%	1.2%
Area of County	Rural	16.6%	29.0%	8.4%	3.0%*
	Suburban	11.9%	28.4%	6.0%	0.5%
Gender	Male	15.7%	38.2%*	7.9%	2.0%*
	Female	10.9%	19.9%	5.5%	0.3%
Age	18-34	9.6%	37.6%*	4.5%*	0.0%*
	35-54	12.4%	20.7%	9.5%	0.4%
	55-64	12.2%	32.7%	1.0%	5.1%
	65-99	23.0%	32.0%	9.0%	0.0%
Education	< High School	16.3%	48.8%*	7.0%*	0.0%
	H.S. Grad.	20.4%	34.9%	10.2%	2.7%
	Some College	12.6%	26.1%	8.3%	0.0%
	College Grad.	4.8%	19.8%	1.2%	1.2%
Income	< \$20,000	37.3%	33.3%*	7.8%*	7.8%*
	\$20,000-34,999	34.1%	38.5%	34.4%	1.1%
	\$35,000-49,999	8.8%	52.9%	3.0%	0.0%
	\$50,000-74,999	3.2%	16.1%	1.6%	0.0%
	\$75,000 +	0.5%	23.4%	0.9%	0.5%
Marital Status	Single, Never Married	19.5%	43.9%*	3.8%	0.0%
	Married	8.4%	26.3%	6.5%	1.7%
	Widowed	43.2%	18.9%	13.5%	0.0%
	Divorce, Separated	18.2%	37.9%	9.2%	0.0%
	Member Unmarried Couple	23.1%	0.0%	0.0%	0.0%
Have Children	Yes	9.9%	32.7%	5.7%	1.5%
	No	15.6%	25.7%	7.4%	0.9%

¹ Percent responding to the question, “How hard is it for you to pay for the very basics like food, housing, medical care, heating?”

² Percent responding “yes” to the question, “In the past 30 days, have you been concerned about having enough food for you or your family?”

³ Percent responding “yes” to the question, “Do you believe your current housing situation poses a health or safety risk to you or other residents? Examples of such risks are a failing well or septic system, leaky roof, poor electrical wiring, heating problems, broken stairs, or other risks.”

* Statistically significant, $p < .05$

- Male respondents were somewhat more likely than females to indicate they had difficulties paying for basic needs and believed their current housing posed a health risk.
- Those 65 or older were more likely than others indicate they had a very hard time paying for basic needs, and, along with those 35 to 54, were more likely to report having been concerned about having enough food in the past month.
- Generally, those with less education were more likely than their counterparts to report difficulty paying for basic needs and having been concerned about having enough food in the past month.
- Those with incomes below \$35,000 were much more likely than their higher income counterparts to report they had a very hard time paying for basic needs and having been concerned about having enough food in the past month.
- Married respondents were least likely to report they had difficulties paying for basic needs while widowed respondents were the most likely.

Access to Prescription Drugs. The affordability of prescription drugs has been widely discussed over the past several years. As in the 2004 survey, the 2009 Livingston BRFSS included several questions regarding prescription drugs. Interviewers asked respondents whether paying for prescription medications in the past year had been a major problem, a minor problem, or had not been a problem at all. Among all respondents, 7.8% said this had been a major problem (up slightly from the 5.4% found in 2004), while another 13.4% said it had been a minor problem.

Interviewers asked respondents approximately how much they had to spend out of their own pocket per month for medications over the past year. A little more than a third (35.6% – up appreciably from the 27.6% found in 2004) said they paid less than \$10 per month, 32.0% said they paid between \$10 and \$50 per month, 12.7% said they paid between \$50 and \$100 per month, and 19.6% said they paid \$100 or more per month for prescription medications in the past year.

Those without insurance were no more likely to report having problems affording medications than those with insurance and reported similar amounts of money out of pocket per month for medications as those with insurance.

Interviewers asked respondents how concerned they were about their ability to pay for needed prescriptions in the next two years. Among all respondents, 22.1% (vs. 17.7% in 2004) said they were very concerned, 32.0% (vs. 30.8% in 2004) said somewhat concerned, 19.7% said they were not very concerned, and 26.3% said they were not concerned at all.

Another way to assess the extent to which the cost of medications is a problem for individuals or the depth of their concern about being able to afford medications is to examine the

lengths they have gone to reduce the costs of their medications or to be able to afford them. Interviewers asked all respondents if, in the past year, they had taken each of six different actions because of the costs of medications. One in nine respondents (11.7%) said they had delayed getting a prescription filled because they did not have enough money at the time, 9.4% said they took less of a medication than was prescribed in order to make it last longer, 8.5% said they cut back on other items such as food, fuel, or electricity to pay for prescription drugs, 20.3% said they ordered prescription drugs by mail or through the internet to reduce costs, 12.9% said they did not fill a prescription at all because of the cost, and 0.6% said they traveled to Canada to get a prescription filled at a lower cost. The percentages of respondents doing each of these were somewhat greater than in 2004 except for ordering prescriptions by mail or the internet and traveling to Canada to buy medications. Altogether, 34.9% of respondents – an increase from the 30.1% found in the 2004 survey – took at least one of these steps.

Table 21 shows the percentages of respondents giving various responses to these questions among the different demographic groupings of respondents. The table indicates that:

- Being able to afford prescription drugs was more of a problem for rural than suburban respondents, for males more than for females, for older respondents compared to younger respondents, for those with less education, for those with lower incomes, and for those who have no children in the household compared to their counterparts.
- The monthly out-of-pocket expenses for prescription drugs were greater for respondents 55 years of age or older, for those with less than a high school education, for those with incomes under \$35,000, and for those with no children.
- Concerns about being able to afford medications in the next two years were greater among older respondents, among those with less education, among those with lower incomes, among those with no health insurance, and among those with no children.
- Older respondents, those with less education, those with lower incomes, those who had no health insurance, and those with no children were more likely than their counterparts to have taken one or more of the six steps to try to reduce the cost of medications or to afford them.

The respondents who indicated that they were having a hard time paying for basic needs were much more likely than other respondents to report that being able to afford prescription drugs was a major problem, to be concerned about being able to afford medications in the next two years, and having taken steps to deal with high drug costs. Nearly four out of ten (38.0% – up from 32.5% in 2004) of those who said being able to pay for basic needs was very hard described paying for prescription drugs as a major problem, compared to 9.2% of those who said paying for basic needs was somewhat hard, and 0.3% of those who said it was not very hard at all.

More than half the respondents (53.8% – down from the 61.5% found in 2004) who said paying for basic needs was very hard said they were very concerned about their ability to pay for prescriptions over the next two years compared to 30.6% of those who said paying for basics was somewhat hard and 10.6% who said paying for basic needs was not very hard at all.

Three-quarters (75.0% – up from 71.8% in 2004) of those who said paying for basic needs was very hard reported taking at least one of the six actions listed because of the cost of drugs compared to only 39.9% (down from 45.7% in 2004) of those who said paying for basic needs was somewhat hard and 24.1% (also down slightly from 26.4% in 2004) of those who said it was

not very hard at all.

Table 21. Percent of Respondents Who Have Problems Affording Prescriptions, Pay Various Amounts per Month, Are Concerned About Costs, Have Taken Steps to Make Drugs Affordable, by Demographic Characteristics: 2009

Demographic Characteristic		How Much a Problem Affording Medications ¹		% Monthly Cost of Drugs ²			% Concerned ³ About Affording Drugs Next 2 Years		% Took ⁴ 1 or More Steps to Afford Medications in Past Year
		% Major Problem	% Minor Problem	<\$10	\$10- <\$50	\$50+	Very	Some-what	
Overall		7.8%	13.4%	35.6%	32.0%	32.3%	22.1%	32.0%	34.9%
Area of County	Rural	12.6%	18.6%*	36.9%	25.6%	37.5%	22.8%	31.1%	30.5%
	Suburban	6.0%	11.2%	35.1%	34.4%	30.4%	21.8%	32.4%	36.6%
Gender	Male	10.6%	14.3%*	38.1%	27.0%	34.9%*	22.9%	33.8%	35.2%
	Female	5.1%	12.5%	33.4%	36.7%	29.8%	21.3%	30.0%	34.4%
Age	18-34	2.5%	5.7%*	60.3%	26.3%	13.5%*	20.4%	29.9%*	17.8%*
	35-54	6.2%	12.4%	35.7%	36.6%	27.7%	19.2%	33.8%	28.9%
	55-64	7.2%	23.7%	27.4%	36.8%	35.8%	23.7%	28.9%	45.9%
	65-99	20.0%	19.0%	4.3%	20.7%	75.0%	32.3%	31.3%	62.0%
Education	< High School	29.5%	18.2%*	11.6%	16.3%	72.1%*	65.1%	4.7%*	58.1%*
	H.S. Grad.	8.6%	10.8%	46.1%	22.5%	31.5%	21.0%	35.5%	34.9%
	Some College	7.7%	16.8%	34.3%	41.8%	23.9%	19.4%	31.6%	34.5%
	College Grad.	1.2%	11.3%	31.7%	34.8%	33.5%	16.2%	35.3%	29.9%
Income	< \$20,000	33.3%	25.5%*	13.7%	23.5%	62.7%*	45.1%	27.5%*	67.3%*
	\$20,000-34,999	27.8%	12.2%	27.8%	25.6%	46.7%	44.9%	34.8%	67.1%
	\$35,000-49,999	6.1%	24.2%	29.0%	41.9%	29.0%	17.6%	29.4%	32.4%
	\$50,000-74,999	1.6%	21.0%	11.3%	53.2%	35.5%	25.8%	41.9%	27.9%
	\$75,000 +	0.0%	8.7%	34.6%	37.9%	27.5%	14.2%	26.6%	25.6%
Have Insurance	Yes	7.9%	12.2%	35.5%	33.3%	31.4%*	19.2%	32.2%*	32.1%*
	No	7.0%	21.1%	38.0%	22.5%	39.4%	42.5%	30.1%	54.8%
Have Children	Yes	3.4%	8.3%*	41.4%	29.3%	29.3%*	20.8%	27.7%*	26.2%*
	No	11.1%	17.3%	31.2%	34.2%	34.5%	23.0%	35.4%	41.7%

¹ Percent responding to the question, "In the past 12 months, has paying for prescription medications been a major problem, a minor problem, or not a problem for you?"

² Percent responding to the question, "In the past 12 months, approximately how much have you spent each month, out of your own pocket for prescription drugs?"

³ Percent responding to the question, "How concerned are you about being able to afford the cost of needed prescription drugs over the next two years?"

⁴ Percent responding "yes" to at least one of six questions regarding delaying filling a prescription, not filling a prescription, taken less medicine than prescribed, cut back on other basic needs, ordered medication by mail/internet, decided not to fill a prescription, or traveled to Canada to buy medications.

* Statistically significant, p < .05

Table 22 shows the percentages of respondents who reported taking each of the six actions because of drug costs among the three groups of respondents based on their difficulty paying for basic needs. The table indicates that:

- Those who said paying for basic needs was very hard were much more likely than their counterparts to not get a prescription filled at all, to have delayed filling a prescription because they could not afford it at the time, to take less of the medicine than prescribed so it would last longer, and to cut back on other basic expenses such as food, fuel and electricity to afford the medicine.
- They were somewhat less likely than others (but not significantly) to purchase medications through the mail or the internet.

Action	Difficulty Paying for Basic Needs		
	Very Hard	Somewhat Hard	Not Hard At All
1. Delayed filling prescription*	43.8%	15.0%	2.6%
2. Taken less medicine than prescribed*	31.9%	15.6%	1.7%
3. Cut back on other basics to afford medicine*	31.9%	13.9%	1.1%
4. Ordered medications by mail/internet	15.3%	20.8%	21.1%
5. Did not fill a needed prescription*	44.4%	19.7%	3.4%
6. Went to Canada to get medicine cheaper*	0.0%	1.7%	0.0%
	(n=80)	(n=173)	(n=351)

* p < .05

Assistance with Daily Living. The 2009 Livingston BRFSS included several questions about receiving assistance with daily living activities. Interviewers asked respondents if, due to an impairment, they needed assistance from another person with their personal care needs, such as eating, bathing, dressing, or getting around the house. Among all respondents, only 0.6% said that they did. Nearly all of these respondents indicated that another family member usually provides the care they need.

Interviewers also asked respondents if, due to an impairment, they need some assistance from another person with their routine needs, such as everyday household chores, shopping, or getting around for other purposes. Among all respondents, 8.5% (compared to 3.8% in 2004) indicated that they need such assistance. Nearly nine of ten of these respondents (89.2%) indicated that another family member provided this assistance, while a paid helper was indicated for 8.4% of these respondents.

Rural residents were more likely than suburban residents to need some assistance (20.2% vs. 4.3%). Those 65 or older were much more likely to need assistance than younger respondents. Those with less education and those with incomes below \$20,000 were more likely

to need assistance from someone else. Those who were widowed were more likely to need such assistance than others, while those who were married and those who were members of unmarried couples were least likely to report needing assistance from another person because of an impairment.

Caregiving Responsibilities. Interviewers also asked respondents if they provide care for a family member with a disease or disability. Nearly one in five respondents, 19.3%, said that they do. This was nearly double the 11.6% who reported providing care for a family member in 2004.

Table 23 shows the percentages of respondents in the various demographic categories who are involved in providing caregiving to family members. The table indicates that:

- Females were more likely than males to report they were providing care for another family member.
- Those with less than a high school education and those with some college were more likely to be involved in caregiving responsibilities than those with a high school education or those who completed college.
- Those with incomes below \$20,000 and those with incomes between \$50,000 and \$75,000 were more likely to be involved in caregiving than others.

Those who were married were much more likely to be providing care for another family member (22.1%) than were those who were single (3.7%), divorced or separated (13.8%), or widowed (2.8%).

Interviewers asked those who do provide care for another family member if there are times when they need to take a break from their caregiving activities. More than six out of ten of these respondents(62.7%) said that there are such times – up somewhat from the 54.3% found in 2004.

Those who said they sometimes need a break from caregiving were asked whom them

Demographic Characteristic		% Providing Care ¹
Overall		19.3%
Area of County	Rural	18.3%
	Suburban	19.7%
Gender	Male	14.6%*
	Female	23.8%
Age	18-34	14.6%
	35-54	21.6%
	55-64	13.3%
	65-99	21.2%
Education	< High School	32.6%*
	H.S. Grad.	8.1%
	Some College	31.7%
	College Grad.	13.2%
Income	< \$20,000	32.7%*
	\$20,000-34,999	16.7%
	\$35,000-49,999	11.8%
	\$50,000-74,999	27.4%
	\$75,000 +	16.0%

¹ Percent responding “yes” to the question, “Do you provide care for a family member with a disease or disability?”
* Statistically significant, p < .05

would call if they needed to take a break. Nearly nine out of ten of these respondents (87.4%) said they would call other family members, 1.7% said they would call a friend, the remainder mentioned a variety of other possible sources of assistance. The 87.4% who said they would call another family member was a substantial increase that would do this rather than something else compared to the 57.2% who said they would call another family member in the 2004 survey.

Transportation. Among all respondents, 97.3% said they own or lease a car. Interviewers asked all respondents if they or their children have missed a scheduled appointment for health care due to lack of transportation. Of all respondents, 1.5% said they had. All of those who said they had missed an appointment because of a lack of transportation also said they own or lease a car.

The 6.7% of respondents who said they did not own or lease a car were asked what method of transportation they use to get to scheduled appointments. More than eight out of ten of these respondents said they call a family member or neighbor to give them a ride to the appointment, while the remainder said they use public transportation to keep appointments, but none said they call a taxi.

Children's Time In Front of Video Screens. Respondents with children under age 18 were asked how many hours of screen time (e.g., TV, videogames, computer) their children have every day. Across all these respondents, the amount of time reported ranged from 0 to 12 hours. Nearly six out of ten of these respondents (57.2%) reported their children spend one or more hours of screen time each day – 40.2% spend two or more hours, 13.9% spend three or more hours. The overall reported average amount of screen time their children spend was 1.2 hours.

The average screen times reported by rural and suburban respondents were very similar. Respondents between 18 and 34 reported an average screen time for children in their households that was appreciably less (0.8 hours vs. 1.5 hours) than respondents between 35 and 54 years of age. Respondents whose household income was between \$35,000 and \$50,000 reported an average screen time for children in their households (3.6 hours) that was about double that of other respondents.

Activities With Children. Interviewers asked respondents several questions about activities with children. Interviewers asked respondents with a child in the household if the child participates with their family in physical activities such as biking, walking or swimming. Of all those respondents in households with children, 85.6% said the child does participate in physical activity with the family.

Among respondents who were inactive themselves, 35.1% of the respondents said the child participates in activities with the family compared to 94.2% of the respondents who reported getting some exercise themselves on a regular basis, 92.6% of the respondents who reported getting adequate amounts of moderate exercise themselves, 95.4% of the respondents who reported getting adequate amounts of vigorous exercise themselves, and 93.4% of the respondents who reported getting adequate amounts of either moderate or vigorous physical activity each week.

Interviewers also asked respondents with children five or younger how often someone reads to the child and who that person is who reads to the child most often. More than nine out of ten of these respondents (94.1%) said one of the parents read to the child most often and 94.0% of the respondents said the child is read to daily.

Sources of Parenting Information. Interviewers asked respondents with children where they turn to for helpful information on parenting. Table 24 shows the percentages of parents who said they use each of eight different possible resources. The table lists the resources in descending order based on the percentage that said they use each.

Where turn to	% Yes
Other family members	66.3%
Friends	64.9%
Books	61.1%
Pediatricians	51.1%
Internet	43.8%
Parenting magazines	36.0%
Co-workers	31.1%
Childcare provider	22.5%

The table indicates that the resource turned to by the greatest percentage of respondents was other family members (66.3%) followed by friends (64.9%). Respondents were least likely to report turning to childcare providers (22.5%) and co-workers (31.1%).

Most of these parents used multiple resources. The average number of the listed resources they said they used was 3.5, while the modal number used was 5. One in eight parents (12.3%) reported using seven or more of the eight resources listed, while 10.6% reported using none of the resources.

Female respondents and those with more education reported using a larger number of resources than their counterparts.

Among the few parents who said they turned to only one resource for helpful parenting information, respondents reported turning to friends over other family members by a 4 to 1 margin (80% vs. 20%).

Attitudes Toward Underage Drinking, Substance Abuse. Interviewers asked all respondents in households with children four questions to gather their opinions or perceptions of the prevalence and seriousness of the use of alcohol and other drugs in the county by underage residents. Interviewers asked respondents how widely available alcohol is for youth 14-20 years of age in the county, how much of a problem underage drinking is, how much of a problem the use of illegal drugs is, and how much of a problem the use of prescription drugs is.

Overall, 45.8% of these respondents said they thought alcohol was widely available in the county to youth 14 to 20 years of age and the remaining 54.2% said they thought it was somewhat available. None of these respondents said they thought alcohol was unavailable to youth in the county.

Suburban respondents thought alcohol was more widely available than did rural respondents (50.5% vs. 28.3%). Younger respondents thought it more widely available than did older respondents.

Asked how much of a problem they perceived underage drinking to be, 10.7% said it was not a problem, 61.2% said it was somewhat of a problem, and 28.1% said it was a big problem. Female respondents were more likely than male respondents to see underage drinking as a big problem (38.0% vs. 19.3%). Those with less education were more likely to indicate that underage drinking was not a problem, but were also more likely to see it as a big problem. That is, those with more education were more likely to see underage drinking as somewhat of a problem.

Overall, 42.5% of these respondents said they thought the use of illegal drugs by youth in Livingston County was a big problem, while 48.2% said they thought it was somewhat of a problem, and 9.2% said it was not a problem. There were no significant differences between rural and suburban respondents or between males and females on this question. Respondents 18-34 years of age were more likely than those 35-54 to see illegal drug use in the county as a big problem (65.0% vs. 30.0%). Those with less education were somewhat more likely than their counterparts to see illegal drug use as a big problem.

Regarding the use of prescription drugs, 13.5% said they thought this was not a problem in Livingston County, while 66.3% thought it was somewhat of a problem and 20.2% said they thought it was a big problem. Younger respondents and those with less education were somewhat more likely to say they thought this was a big problem than their counterparts.

From the results, it appears that more respondents perceived illegal drug use by youth in the county (42.5%) to be a big problem than underage drinking (28.0%) or the use of prescription drugs (20.2%).

Awareness of 211 Services. The county has developed a 211 call center for residents to contact when they are looking for assistance finding various services, especially healthcare related. But such centers cannot be useful to very many residents if the residents are unaware of the 211 service. Interviewers asked all respondents if they were aware that Livingston County has a 211 call in center that can be used to locate human services.

Among all respondents, one in six respondents (17.3%) said they were aware of the 211 call center, while the remaining 82.7% said they were not. Rural and suburban respondents were about equally likely to be aware or unaware of the service. Females were somewhat more likely to be aware of the service than males (21.9% vs. 12.2%). Respondents under age 35 were much less likely than those 35 or older to report being aware of the service. Those with less education or less income were not significantly more or less likely to be aware of the service than their counterparts.

CONCLUSION

The 2009 Livingston County BRFSS was conducted to produce prevalence rates for a variety of health conditions and health risk behaviors. Most of these are associated with the leading causes of mortality and morbidity. In the report, where possible, we have tried to compare the results from 2009 with those from 2004 and to the most recently published statewide results. We have also tried to demonstrate among which groups of residents various conditions or risk behaviors are more common or less common. Such information can be used by public health officials and healthcare providers to target interventions intended to reduce risk behaviors or improve health conditions.

In a number of areas, the county seems to be doing better than it was in 2004 and better than the state as a whole. In some other areas, the county is doing somewhat worse than in 2004. In many of these cases, it is likely that the recession that began affecting Michigan in 2007 and which became much more severe in the fall of 2008 through the present has caused the decline. However, in some cases, the county has made improvement in overall health in spite of the impact of the recession.