



Montana

Behavioral Risk Factor Surveillance System (BRFSS)

2009 Data Report



Public Health and Safety Division
Montana Department of Public Health and Human Services
DIVISION MISSION: To Improve & Protect the Health & Safety of Montanans

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To the citizens of the state of Montana, we thank you for your continued cooperation and willingness to participate in this very important health survey. The information you have provided regarding health risk behaviors is invaluable for assessing state trends for public health planning purposes and allowing us the ability to compare Montana's progress to the rest of the states and the nation.

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EXECUTIVE SUMMARY

Prevalence rates for most health risk behaviors were similar to the national medians. However, a few differences were noted as indicated below.

Access to Health Care

Montanans fared worse than more than one-half the states in the United States with more than one in five adults (21%) ages 18 to 64 reporting no health insurance coverage at the time they were interviewed.

Health Status

The self-reported health status of Montanans was essentially the same as the nation's median, meaning about one-half the states either fared better or worse than Montanans who said their general health was "fair" or "poor". The proportion of Montanans who reported being overweight was similar to the national median, but for reports of being obese the proportion of Montanans was almost four percentage points lower than the national median. For most other measures of health status or outcomes (prevalence of chronic conditions such as cardiovascular disease (heart attack, stroke, angina and asthma), Montana estimates were also similar to the nation's median. Montanans reported substantially less clinically diagnosed diabetes than the majority of the states in the US.

Risk Factors

Montana adults were less likely to report no leisure time physical activity and to report having slightly better consumption of fruits and vegetables than other US adults. The differences in heavy and binge drinking, as well as cigarette smoking were generally small compared to the US median.

Preventive Measures

Montana adults were less likely than the majority of Americans to have their blood cholesterol levels checked within the five years prior to being surveyed. Influenza vaccination estimates for adults ages 65 and older were similar to the nation's median but this age group was more likely to ever have had a pneumococcal immunization than adults nationwide.

Population Subgroups

Certain population subgroups in Montana are at greater risk for premature death and disability than the population as a whole. Young adults (18-24), adults with less education (particularly those who have not completed high school) adults with low household incomes (<\$25,000) and American Indian/Alaska Natives are often at greater risk due to certain health-risk behaviors and conditions.

Estimated Number of People at Risk

Approximately 483,000 Montana adults reported 2 or more of the following serious risk factors: current smoking, binge drinking, heavy drinking, BMI \geq 25, insufficient sleep, and no leisure time physical activity. Further, about 146,000 Montana adults have 2 or more of the following chronic conditions: current asthma, ever had a heart attack, ever had a stroke, coronary heart disease, diabetes, hypertension, and high cholesterol. Those with multiple chronic conditions tended to have lower educational attainment and lower household income than other Montana adults.

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INTRODUCTION

From 1981 to 1983, the Centers for Disease Control and Prevention (CDC) funded a select number of states to conduct point-in-time prevalence surveys of behaviors that were associated with an increased risk of developing avoidable illness and/or premature death (i.e., behavioral risk factors). In 1984, the CDC established the Behavioral Risk Factor Surveillance System (BRFSS), an annual set of telephone surveys assessing the health status and behavioral risk factors of the adult population (18 years and older) within 15 participating states. The BRFSS began with four primary goals:

1. To document health trends at the state level;
2. To identify emerging health issues;
3. To compare health behaviors across states;
4. To measure progress toward health goals.

Through cooperative agreements between CDC and state departments of public health, the BRFSS expanded to include all 50 states, the District of Columbia, and three U.S. territories. BRFSS is now the largest continuously conducted telephone health survey in the world.

Montana has the distinction of having been one of the 15 states to participate in conducting point-in-time health surveys with CDC in the early 1980s and was one of the original states to secure funding from CDC when the BRFSS initiative began in 1984. The Montana BRFSS sample size has increased from 855 in 1984 to 7,618 in 2009. The number of questions included in the annual survey has increased from 45 questions in 1984 to 159 questions in 2009. Approximately 630 interviews were completed each month during the 2009 survey year. Subject areas include self-reported health status, access to health care, health awareness, use of preventive services, as well as knowledge and attitudes of health care and health-care practices.

The BRFSS survey provides valuable information on health trends, chronic disease risk and data for monitoring the effectiveness of policies, programs, and interventions. Additionally, BRFSS data are used to identify important health issues for future attention, formulate policies and legislation, and develop public awareness strategies. Each year modifiable behaviors such as smoking, excessive alcohol consumption, overweight, and physical inactivity contribute to a substantial portion of the mortality and morbidity associated with chronic disease and unintentional injury (McKenna et al., 1998; Mokdad et al, 2004). Underutilization of preventive health services (e.g., blood pressure, cholesterol, and cervical cancer screening) may also contribute to morbidity and premature death from many diseases (CDC, 2003a, 2003b). Measuring the prevalence of high risk behaviors and preventive health service utilization provides information for developing and monitoring interventions designed to reduce premature death and disease (CDC 2004). In 2009, seventy-four percent of Montana deaths were associated with chronic disease and unintentional injury (Table A).

Table A. Leading Causes of Death in Montana, 2009*

Rank	Cause of death	# of Deaths	% of total deaths ¹	Crude Rate per 100,000 ²	Risk Characteristics to Target Prevention
1	Cancer	1,909	21.9	195.8	Smoking, high-fat diet, chronic alcohol abuse
2	Heart disease	1,825	21.0	187.2	Smoking, physical inactivity, high blood pressure, high-fat diet, high blood cholesterol, overweight
3	Unintentional injury (Accidents)	612	7.0	62.8	Binge and chronic drinking, non-use of safety belts
4	Chronic lower respiratory diseases	595	6.8	61.0	Smoking, exposure to certain chemicals
5	Cerebrovascular disease (including stroke)	461	5.3	47.3	High blood pressure, smoking, high blood cholesterol
6	Alzheimer's disease	255	2.9	26.2	Head injuries
7	Diabetes	228	2.6	23.4	Overweight, physical inactivity, poor nutrition
8	Intentional Self-Harm (Suicide)	217	2.5	22.3	Depression, alcohol or substance abuse, major stressor events
9	Pneumonia and Influenza	177	2.0	18.2	Vaccine preventable infection with pneumococcal bacteria or influenza virus, compromised immune system
10	Chronic Liver Disease and Cirrhosis	138	1.6	14.2	Chronic alcohol abuse, Hepatitis B or Hepatitis C infection
Total deaths from leading causes		6,417	73.7		

* Mortality data are from e-mail correspondence with Bruce Schwartz, Montana Vital Statistics Bureau, Montana Department of Public Health and Human Services, December 16, 2010.

¹ Total deaths from all causes in 2009, excluding fetal deaths, were 8,704.

² Cause-specific crude death rates are per 100,000 estimated population.

The Healthy People 2010 (Public Health Service 2004) is an on-going national initiative driven by 467 objectives designed to serve as a road map for improving the health of all people in the United States during the first decade of the 21st century. Healthy People 2010 builds on similar initiatives pursued over the past two decades and national health objectives for Healthy People 2020 will be forthcoming in the near future. Two overarching goals—increase quality and years of healthy life and eliminate health disparities—serve as a guide for developing objectives that will actually measure progress. Data from the annual BRFSS survey are one of the primary means of monitoring progress towards achieving specific national year 2010 health objectives. Ten Leading Health Indicators (LHI) were chosen from all of these objectives based on their ability to motivate action for health promotion and disease prevention, the availability of data to measure their progress, and their relevance as broad public health issues. Table B summarizes Montana’s progress toward Healthy People 2010 goals that were measured on the 2009 survey.

This report summarizes selected results from the 2009 BRFSS survey. Results were tabulated for the overall Montana population, as well as for subpopulations (sex, age class, education level, income class, race/ethnicity, disability status, and health planning region/MMSA). The numbers reported in the data tables were the actual numbers of respondents, while the prevalence estimates (expressed as percentages) were calculated using weighted data and are representative of the Montana adult population. As a measure of data precision, 95 percent confidence intervals (CI) were presented with the percentage prevalence estimates (see Methods section as follows for a more complete discussion). For the full question and response categories from which the data were derived see the “Questionnaires” link on www.brfss.mt.gov,

Table B. Healthy People 2010 Objectives¹ for the Nation and Montana: Summary of Montana BRFSS Data for 2009

Healthy People 2010 ² Objective ³	Yr 2010 Target	MT 2009
Health Insurance (Objective #1.1)	100.0	82.5
Usual Primary Care Provider (Objective #1.5)	96.0	74.7
Limitation in Activities Due to Arthritis (Objective #2.2)	≤ 21.0	46.2 §
Diabetes, Clinically Diagnosed (Objective #5.3)	≤ 2.5	6.8
Cholesterol Screening, within Past Five Years (Objective #12.15)	≥ 80.0	72.0
Influenza Immunization, Within Past Year (Objective #14.29a) ⁴	≥ 90.0	68.7
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) ⁴	≥ 90.0	71.8
Obese, BMI ≥ 30 (Objective #19.2) ⁵	≤ 15.0	23.7
Reduce Proportion of adults with High Blood Pressure	≤ 16.0	27.7
No Leisure Time Physical Activity (Objective # 22.1)	≤ 20.0	22.0
Regular, Moderate Physical Activity, 3 or more Days a Week for 20 or more Minutes a Day (Objective #22.2)	≥ 30.0	47.6 √
Regular, Vigorous Physical Activity, 3 or more Days a Week for 20 or more Minutes a Day (Objective #22.3)	≥ 30.0	36.3 √
Binge Drinking, During the Past Month (Objective #26.11c)	≤ 6.0	17.3
Cigarette Smoking (Objective #27.1a)	≤ 12.0	16.8

¹ Objectives are for adults age 18 or older except as noted.

² Public Health Service. Healthy People 2010: National Health Promotion and Disease Prevention Objectives—full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 2000.

³ In some cases, BRFSS definitions of objectives differ slightly from those in Healthy People 2010. See Healthy People 2010 for the exact definition of the objective.

⁴ Among Adults Ages 65 years or older.

⁵ Healthy People Obesity Objective is for Adults Ages 20 years or older.

§ The 2009 estimate cannot be compared to previous year estimates due to a change in the questionnaire.

√ Met Healthy People 2010 Objectives.

METHODS

Sampling Design

Since 2000, Montana's BRFSS sample has been stratified based on county population size and proportion of American Indians, Montana's largest minority population. Stratum I consists of seven counties containing a high proportion of American Indians, Stratum II consists of 41 counties with relatively low population size and low proportion of American Indians, and Stratum III consists of eight counties with relatively high population size and low proportion of American Indians. These three strata allow the potential for oversampling households of American Indians and are used strictly for sampling, rather than analytical purposes.

In 2002, CDC began the Selected Metropolitan/Micropolitan Area Risk Trends (SMART) BRFSS in order to analyze the data from selected metropolitan and micropolitan statistical areas (MMSAs) with 500 or more respondents. The Montana BRFSS, therefore, added a fourth stratum in 2004 that includes Yellowstone and Carbon Counties – Billings, Montana's largest MMSA¹. Starting in 2006 Montana BRFSS added two additional strata to the sampling frame to be rotated between Montana's other MMSAs so that each MMSA will have 2 consecutive years of data every 4 to 5 years. In 2009, the MMSAs that achieved a sample size of at least 500 included: Billings, Butte, Bozeman and Kalispell.

Beginning in 2003, Montana's dataset has been weighted for regional analyses based on the state's five health planning regions (HP1 – HP5) for regional health information and public health planning purposes (see Appendix A for map of health planning regions). Appendix B contains a summary of selected 2009 health indicators for the nation, state, MMSAs, and health planning regions in Montana.

According to national BRFSS protocol, Montana used a disproportionate stratified sampling design (DSS)² for the BRFSS survey. In the DSS design, the universe of all Montana telephone numbers was disproportionately stratified by telephone blocks. A block consists of 100 phone numbers with consecutive four-digit telephone suffixes (e.g., 406-443-1100 to 406-443-1199). Beginning in 2003, the CDC protocol for selecting household telephone numbers discontinued the inclusion of "0" blocks in the sampling frame; "0" blocks are computer generated listings of 100 consecutive phone numbers that contain *no* published household telephone numbers. Now, only "1+" blocks are sampled; these are also computer generated listings of 100 consecutive phone numbers, but they contain *at least one* published household telephone number. These "1+" blocks are then assigned to two strata: 1) high density or listed numbers and 2) low density or unlisted numbers. To be representative, the sampling ratio for these two strata is 1.5:1, in which the high density stratum (listed) is sampled at the rate of 1.5 times that of the low density stratum (unlisted). This approach has served to lower cost and improve interviewer efficiency.

Once a residence was successfully contacted, individual respondents were randomly selected from all adults aged 18 and older living in the household. The selected adult was then interviewed in accordance with the BRFSS protocol (CDC 2006). In 2009, although our sample size goal indicated completing 500 interviews per month, approximately 630 interviews were completed each month, for a yearly total of 7618 interviews.

Interviews were conducted by University of Nebraska Medical Center with headquarters in Omaha, Nebraska. Interviews were conducted during daytime and evening hours on Monday through Friday and on weekends to ensure that selected individuals had ample opportunity to participate in the survey. Fifteen efforts were made to reach a phone number at different times of the day and evening and on different days before being classified as an unreachable number. The Council of American Survey Research Organizations (CASRO) response rate, which includes a portion of the dispositions with unknown eligibility in the denominator of the rate, for Montana in 2009 was 62%. Of all contacted selected respondents, 79% resulted in completed interviews (cooperation rate). At least 10 percent of all interviews were monitored and validated by the quality assurance section of the call center, using the system's monitoring function to observe and score interviews in progress for quality improvement purposes.

1 These geographic subdivisions are designated by the U. S. Office of Management and Budget and used by the U. S. Census Bureau as of June 2003. See <http://www.cdc.gov/brfss/smart/faqs.htm#2> for frequently asked questions and answers about SMART BRFSS and MMSAs.

2 For a detailed description of BRFSS methodology, see the BRFSS User's Guide, an online version at: <http://www.cdc.gov/brfss/training.htm>

Data Weighting and Analysis

Once BRFSS data are collected, statistical procedures are undertaken to ensure the data are representative of the population for the state or the local area. Data were weighted to account for the design of the survey and differences in the probability of selection due to the disproportionate sampling method and due to households with different number of adults and different numbers of telephones (e.g., households with more than one telephone number were more likely to be called). This adjustment is intended to reduce biases that may result from excluding Montanans without telephone service (non-coverage) or from the varying characteristics of those that choose not to participate in the survey (non-response). Post-stratification is a computational procedure that adjusts the responders sampling weights, so that the totals over various demographic categories match known population totals. Post-stratification weighting for the 2009 Montana survey was based on the gender and age distribution in each health planning region and was used to ensure that the results more closely reflected the adult population of Montana. Prevalence estimates presented throughout this report are based on this weighting methodology.

Beginning in 2007, CDC's Division of Behavioral Surveillance started development of an alternative weighting method for BRFSS data in order to more closely match a more complete demographic make-up within each state. This alternative post-stratification method of raking weights³ replaces the current post-stratification method to adjust the data so that groups which are under- or over- represented in the sample can be accurately represented in the final data set. Through an iterative process the weighted sample totals are made to agree with the corresponding totals for the population characteristic (or dimension) in each cell. In other words, the weights are proportionately adjusted to one set of control totals then those adjusted weights are proportionately adjusted to another set of control totals. For example, when weighting by age and gender, weights would first be adjusted for gender groups, then those estimates would be adjusted by age groups. The procedure would continue in an iterative process until all group proportions in the sample approach those of the population (or after 75 iterations or some preset tolerance level). Using the raking methodology will allow the distribution of the sample to properly represent state distributions with respect to: telephone source, age group by gender, detailed race and ethnicity, educational level, marital status, gender by race/ethnicity, age group by race/ethnicity, geographic region within the state, and renter/owner status.

CDC released the 2009 survey data with both the current post-stratification weights and the new raking weights in order to allow states to see how estimates may change based on the raking weights. There will be a forthcoming report titled, *New Weighting Methods in BRFSS*, with a more complete discussion of raking weights and a comparison of survey results with the current weighting methodology and with the alternative raking weight methodology. *Starting with the 2011 dataset release, raking will become the standard weighting method for all BRFSS data.*

The demographic characteristics of the 2009 survey respondents are presented in Table C. This table describes the 2009 survey population, including the un-weighted number of respondents, the population estimate, and the weighted percent of respondents by selected demographic characteristics. Respondents who indicated "don't know," "not sure," or "refused" were excluded from the calculation of prevalence estimates. Therefore, the sample sizes used to calculate the estimates in this report vary. The SPSS for Windows Complex Survey Samples™ statistical software package was used to compute prevalence estimates (expressed as percentages) and associated 95% confidence intervals using sample weights provided by CDC. Prevalence estimates based on denominators with fewer than 50 respondents or half-width confidence intervals greater than 10 percent were not reported due to their inherent low precision.

Data Reliability and 95% Confidence Intervals

As noted previously, the BRFSS data provides a disproportionate stratified statewide random sample of telephone-equipped households in Montana. The precision of a sample statistic (e.g., prevalence) can be estimated by calculating the confidence interval of the statistic; 95% confidence intervals (CI) are presented with the prevalence estimates in this report.

As an example, a prevalence estimate for cigarette smoking of 20 percent with a computed 95% confidence interval

³ Raking, credited to W.E. Deming and F. Stephan, was first used to estimate U.S. Census population totals in 1940. Raking is commonly used when only the marginal population totals of the adjusted weights are known and the joint population distributions of post-strata are unknown. Raking is preferable as a post-stratification method when the cell counts of the responders within each demographic combination are too small to produce stable estimates, and is the same as log-linear regression expected totals.

Table C. Demographic Characteristics of Montana Adults in the 2009 Behavioral Risk Factor Surveillance System (BRFSS) Survey.

2009 BRFSS Sample				
Demographic Group		Sample Size (N)	Population Estimate	Weighted Percent†
All Adults:		7,618	752,600	100.0
Sex:	Male	3,223	373,800	49.7
	Female	4,395	378,800	50.3
Age:	18 - 24	239	95,700	12.8
	25 - 34	565	119,100	15.9
	35 - 44	922	117,200	15.6
	45 - 54	1,585	15,100	20.1
	55 - 64	1,786	127,200	16.9
	65+	2,488	140,400	18.7
	Unknown§	33		
Education:	<High School	540	52,200	6.9
	High School	2,448	255,100	33.9
	Some College	2,144	208,900	27.8
	College Degree	2,477	235,800	31.4
	Unknown§	9		
Income:	<\$15,000	844	68,500	10.2
	\$15,000 - \$24,999	1,365	113,100	16.8
	\$25,000 - \$49,999	2,163	203,900	30.2
	\$50,000 - \$74,999	1,191	125,000	18.5
	\$75,000+	1,334	16,400	24.3
	Unknown§	721		
Race/Ethnicity:	White, non-Hispanic	6,703	671,600	89.7
	AI/AN*	496	33,500	4.5
	Other or Hispanic**	372	43,400	5.8
	Unknown§	47		
Disability:	Disability	2,083	163,800	22.1
	No Disability	5,439	579,000	77.9
	Unknown§	96		
Region:	1- Eastern MT	1,001	57,300	7.7
	2- N Central MT	1,271	106,500	14.2
	3- S Central MT	1,112	151,200	20.2
	4- Southwest MT	2,036	198,000	26.5
	5- Northwest MT	2,165	234,900	31.4
	MMSA-Billings	626	116,000	
	MMSA-Bozeman	589	73,100	
	MMSA-Butte	577	25,500	
	MMAS-Kalispell	553	68,700	
	Unknown§	33		

† Weighted percentages are based on CDC's 2009 pop. estimate of 752,600 adult Montanans.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

§ Cases with unknown values are excluded from relevant analyses.

of $\pm 2\%$, translates to a lower limit of 18 percent and an upper limit of 22 percent. We are 95% confident that the interval 18% to 22% includes the true percentage of smokers in the Montana population.

The width of a confidence interval (e.g., $\pm 2\%$) using weighted data is dependent upon sample size and the design effect of the survey. Generally, estimates based on large samples have narrower confidence intervals and are more precise than are estimates based on small samples. Confidence intervals must be considered when making comparisons among subgroups of the population (e.g., among age classes). Percentages for different subgroups of the population can be determined to be significantly different if their confidence intervals do not overlap. A statistical test is needed to determine if estimates are different when the confidence intervals overlap.

Analysis of subpopulations results in a concomitant lowering of sample size. The more subgroups into which the data are partitioned, the smaller the sample size per subgroup. The results include some instances where sample sizes for subgroups within select populations are too small (denominator <50), or the associated 95% confidence intervals width too broad (>20 percentage points wide), to yield meaningful comparisons. For Montana reports and website information, all data where the cell size numerator is less than 3 and denominator is less than 300 is also suppressed. In these instances the estimates are not reported and are labeled NSD (not sufficient data) within every table.

Questionnaire

The BRFSS questionnaire has three parts:

1. the core, consisting of the fixed core questions (asked every year), rotating core questions (asked in alternating years), and emerging core questions (asked for only one year);
2. optional modules provided by CDC, any number of which can be selected by individual states for inclusion;
3. and state-added questions (additional questions of specific interest to individual states).

All states must ask the core questions without modification in wording. As part of the core, respondents are asked to provide demographic information including sex, age, race, marital status, annual household income, employment status, and education level. Optional modules and state-added questions may be added by individual states to their respective questionnaires. Montana's BRFSS Working Group, consisting of state data analysts and users, helps to establish the state questionnaire content each year using the "Criteria for Adding Questions to the MT BRFSS," which can be found at the Montana BRFSS website: www.brfss.mt.gov.

The 2009 Montana BRFSS questionnaire consisted of 159 questions. Not all respondents were asked all questions, since some questions pertained to a specific age group or sex or persons with a particular health condition (e.g., diabetes). The average length of time to complete the survey was 24 minutes in 2009.

Survey Limitations

Surveys that require self-reporting of data have limitations and should be interpreted with caution. Respondents may have a tendency to under-report behaviors that are socially undesirable, unhealthy, or illegal (e.g., drinking and driving or smoking), while over-reporting desirable behaviors (e.g., amount of exercise or regular health screening). The accuracy of self-reported information also is affected by the ability of respondents to fully recall past behaviors or health screening results.

Telephone surveys exclude households without telephones, which may result in a biased survey population due to under-representation of certain segments of the population. In 2009, an estimated 97 percent of Montana households had some form of telephone service. The three percent of homes without telephones may have represented a population segment at high risk for preventable diseases associated with low socioeconomic status. The 2009 survey prevalence estimates include only respondents from households with land-line telephone service, though Montana has been surveying cell-phone only users as part of a cell-phone pilot study since 2007. In 2009, for the first time in this pilot study, we have weighted cell-phone data to be analyzed with the land-line data. The effect of included cell phone sample data will be further discussed in the forthcoming report, *New Weighting Methods in BRFSS. Also starting with the 2011 survey, cell phone only households will become part of the regular sampling strategy for all BRFSS surveys.*

LITERATURE CITED

Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System User's Guide*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2006. Available at: <http://www.cdc.gov/brfss>.

Centers for Disease Control and Prevention. *The Burden of Chronic Disease and the Future of Public Health*. Atlanta: U.S. Department of Health and Human Services; January 2003. Available at: <http://www.cdc.gov/publications/Burden>.

Centers for Disease Control and Prevention. *The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives 2004*. Atlanta: U.S. Department of Health and Human Services; 2004. Available at: <http://www.cdc.gov/nccdphp/burdenbook2004>.

Centers for Disease Control and Prevention. *The Power of Prevention. Chronic Disease, The Public Health Challenge of the 21st Century*. Atlanta: U.S. Department of Health and Human Services; 2009. Available at: <http://www.cdc.gov/chronicdisease/resources/publications/index.htm>.

Deming WE, Stephens F. *Annals of Mathematical Statistics*, 1940; 11: 427-444.

Frazier EL, Okoro CA, Smith C, and McQueen DV. State- and sex-specific prevalence of selected characteristics: Behavioral Risk Factor Surveillance System, 1992 and 1993. *MMWR*. 1996, 45(SS-6):1-34.

Izrael D, Hoaglin D, Battaglia M, SAS Macro for Balancing a Weighted Sample. <http://www2.sas.com/proceedings/sugi25/25/st/25p258.pdf5>.

Korn EL, Graubard BI, *Analysis of Health Surveys*, New York, NY: Wiley Series 3, 1999.

Lohr S. *Sampling: Design and Analysis*, Pacific Grove, CA: Duxbury Press. 1999.

McGinnis JM, and Foege WH. Actual causes of death in the United States. *JAMA* 1993; 270:2207-12.

McKenna MT, Taylor WR, Marks JS, and Koplan JP. Current issues and challenges in chronic disease control. In Brownson RC, Remington PL, Davis JR, eds. *Chronic Disease Epidemiology and Control*. 2nd Ed. Washington, DC: American Public Health Association, 1998:1-26.

Mokdad AH, Marks JS, Stroup DF, and Gerberding JL. Actual causes of death in the United States, 2000. *JAMA* 2004; 291; 1238-1245.

Montana Department of Health and Human Services: *2009 Montana Vital Statistics Total Fertility Rates by Mother's County of Residence*. Helena, MT: Office of Vital Statistics, Operations and Technology Division, January 2011.

National Heart, Lung, and Blood Institute. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. Bethesda, MD: National Institutes of Health, NHLBI Information Center, 1998.

SPSS for Windows Complex Survey Samples 17.0. Chicago, IL: SPSS, Inc. 2008. See <http://www.spss.com>.

U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd Ed, 2 vols. Washington, DC: U.S. Government Printing Office, January 2007. Available at <http://www.healthypeople.gov>.

INTERPRETING THE TABLES

This is an explanation about how to interpret the tables that are presented in this report. Each table presents a set of prevalence estimates weighted to represent the proportion of the non-institutionalized adult population age 18 years and older in Montana, unless a different demographic group is specified. Weighting adjusts for different probability of selection by the random dialing procedure and the varied demographic characteristics of the respondents (see Methods, page 05). As a result, for the table below, it is appropriate to state that “among Montana adults, 18 through 64 years of age, 21.3% did not have health care coverage in 2009.” For this table, all adults includes only those less than 65 years of age, because those age 65 years and older are assumed to have Medicare coverage.

The survey questions that the tables are based on appear in the footnote of the table. For the full question and response categories from which the data were derived see the “Questionnaires” link on www.brfss.mt.gov,

Weighted data are used in all calculations of prevalence. The weighted population estimate in the footnote provides the estimated number of adults in Montana who are characterized by a particular risk factor or behavior. The unweighted sample size (UnWt. N.) is the number of respondents who gave a particular response, but this is given only as an indicator of sample size. It is not appropriate to use unweighted numbers to compute prevalence estimates of risk factors and health conditions. Unless stated differently within the table, estimates do not include respondents who refused to answer the question, said “Don’t know/Not Sure” or the response is missing.

These tables also contain 95% confidence intervals (CI) for each estimate. The 95% CI is the range of values within which the true value falls with 95% certainty. The column headings of LL represent the lower limit and UL represent the upper limit of the 95% confidence interval. *The confidence interval associated with the prevalence estimate for adults ages 18 to 64 with no health care coverage ranges from 19.5 to 23.3.* The small width of this confidence interval indicates that the estimate is fairly precise.

Risk factors or health conditions may be more or less common among Montana adults of various demographic groups. In general, where confidence intervals for two subgroups being compared do not overlap, the subgroups can be said to be statistically different. Formal statistical tests, such as chi-square, are needed to evaluate statistically significant differences when confidence intervals overlap. For example from this table, “Females reported not being able to see a doctor due to costs in the prior year more often than males (16.9 % and 10.1%).” This is a statistically significant difference because the confidence intervals do not overlap.

Following CDC guidance, data that are considered unreliable have been suppressed. If the total number of respondents in the sample (found in the footnote for each question) is less than 50, then the data are not reported. Also, if the half-width of the confidence interval is greater than plus or minus 10 percentage points, the estimate has a large degree of statistical error and is considered unreliable. In tables where NSD is presented, it means that there was “not sufficient data” to report, i.e., either too few respondents in the population subgroup that answered the question or too wide a confidence interval to give a reliable estimate.

	No Health Care Coverage (18 to 64) †				Could Not See Dr. Due To Cost (past year) ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	21.3	19.5	23.3	969	13.5	12.3	14.8	933
Sex:								
Male	21.2	18.7	24.1	438	10.1	8.5	11.9	310
Female	21.4	18.8	24.2	531	16.9	15.2	18.7	623
Age:								
18 - 24	34.4	26.5	43.4	73	15.1	10.0	22.1	33
25 - 34	27.4	22.7	32.7	143	19.0	15.2	23.4	105
35 - 44	19.2	16.3	22.5	192	16.1	13.5	19.1	157
45 - 54	16.5	14.5	18.9	293	16.2	14.1	18.4	282
55 - 64	13.9	12.1	15.9	268	12.7	10.9	14.6	244
65+	Not Applicable				3.6	2.8	4.5	109
Education:								
<High School	41.8	33.1	50.9	93	28.0	21.4	35.8	101
High School	30.3	26.3	34.7	410	14.0	11.9	16.4	326
Some College	20.9	18.0	24.3	287	14.4	12.3	16.9	275
College Degree	8.7	7.1	10.7	179	8.9	7.5	10.5	229
Income:								
<\$15,000	46.9	39.9	54.0	206	23.0	19.0	27.6	191
\$15,000 - \$24,999	43.2	37.3	49.3	288	23.4	19.7	27.6	270
\$25,000 - \$49,999	21.5	18.5	24.8	271	15.3	13.1	17.8	256
\$50,000 - \$74,999	8.1	5.9	11.1	67	9.2	7.0	12.0	93
\$75,000 +	5.4	3.4	8.3	48	4.1	2.8	6.1	51
Race/Ethnicity:								
White, non-Hispanic	19.3	17.5	21.2	763	12.8	11.6	14.1	765
AI/AN*	43.0	35.6	50.6	138	17.1	13.0	22.1	91
Other or Hispanic**	NSD ^Δ			61	21.4	14.9	29.7	69
Disability:								
Disability	22.5	19.1	26.2	238	21.8	19.3	24.6	404
No Disability	20.8	18.6	23.1	714	11.1	9.8	12.5	514
Region:								
1- Eastern MT	16.1	12.9	19.8	106	9.7	7.5	12.4	93
2- N Central MT	18.8	15.6	22.5	186	12.3	10.2	14.9	167
3- S Central MT	23.0	18.9	27.7	146	11.5	9.3	14.1	121
4- Southwest MT	18.1	15.0	21.7	219	13.9	11.5	16.8	240
5- Northwest MT	23.8	20.4	27.6	301	16.0	13.6	18.7	304
MMSA-Billings	21.8	16.4	28.4	65	11.9	9.2	15.3	72
MMSA-Bozeman	19.4	13.9	26.5	63	13.4	9.3	19.0	62
MMSA-Butte	15.7	11.3	21.5	56	18.7	13.6	25.0	76
MMSA-Kalispell	27.0	21.1	33.9	78	15.6	11.9	20.2	77

† Do you have any kind of health care coverage (analysis limited to ages 18-64)?

Total Sample Size: 5,081, Weighted Prevalence Estimate: 127,600.

‡ Did you need to see a doctor in the past year, but could not because of the cost?

Total Sample Size: 7,603, Weighted Prevalence Estimate: 101,500.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 1a: Health Related Quality of Life Measures, Montana Adults 2009
(with 95% confidence intervals)

	Self-reported Fair or Poor Health †				Frequent Poor Physical Health ‡				Frequent Poor Mental Health §			
	95% CI				95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	14.5	13.3	15.8	1,365	10.4	9.5	11.4	972	10.2	9.1	11.3	734
Sex:												
Male	13.1	11.6	14.7	562	9.9	8.5	11.5	381	9.2	7.7	10.9	262
Female	15.9	14.1	17.9	803	11.0	9.8	12.2	591	11.1	9.8	12.6	472
Age:												
18 - 24	10.4	5.5	18.9	28	5.8	3.1	10.6	18	8.4	5.2	13.2	28
25 - 34	9.7	7.0	13.4	54	6.2	3.9	9.6	37	13.5	10.0	17.9	71
35 - 44	9.6	7.5	12.3	106	7.6	5.7	10.1	72	9.6	7.4	12.4	85
45 - 54	13.4	11.5	15.6	230	11.2	9.4	13.4	181	12.4	10.5	14.6	196
55 - 64	17.9	15.9	20.2	346	14.7	12.9	16.9	278	10.5	8.8	12.5	184
65+	23.5	21.6	25.6	595	14.8	13.2	16.6	383	6.3	5.2	7.5	168
Education:												
<High School	31.8	26.1	38.1	215	24.6	18.7	31.7	141	19.3	14.2	25.6	87
High School	19.3	16.7	22.2	561	11.3	9.7	13.0	370	11.3	9.4	13.4	268
Some College	13.3	11.4	15.3	356	11.3	9.6	13.3	279	12.0	10.0	14.4	226
College Degree	6.5	5.5	7.6	230	5.6	4.7	6.7	179	5.3	4.3	6.5	152
Income:												
<\$15,000	36.4	31.5	41.6	355	27.0	22.3	32.2	243	24.6	19.8	30.2	185
\$15,000 - \$24,999	22.9	20.0	26.1	370	16.9	14.3	19.9	263	12.8	10.4	15.7	177
\$25,000 - \$49,999	12.4	10.8	14.3	326	8.4	7.1	9.9	224	9.7	8.0	11.9	186
\$50,000 - \$74,999	6.9	5.3	8.8	101	7.9	5.6	11.0	86	7.3	5.5	9.6	72
\$75,000 +	5.1	3.4	7.6	69	4.6	3.4	6.1	66	5.4	3.7	7.7	60
Race/Ethnicity:												
White, non-Hispanic	13.3	12.2	14.5	1,123	9.9	9.0	11.0	822	9.2	8.2	10.3	577
AI/AN*	26.2	20.6	32.6	151	17.2	12.8	22.7	93	16.0	11.9	21.0	90
Other or Hispanic**	NSD ^Δ			80	13.3	9.1	19.0	53	20.4	14.3	28.4	62
Disability:												
Disability	41.7	38.8	44.7	942	33.7	30.8	36.8	706	23.6	20.8	26.6	413
No Disability	6.6	5.5	8.1	399	3.8	3.2	4.6	245	6.2	5.3	7.3	300
Region:												
1- Eastern MT	14.6	12.3	17.3	179	9.0	7.2	11.2	112	7.4	5.4	9.9	72
2- N Central MT	17.6	15.1	20.4	264	12.3	10.2	14.6	188	11.3	9.1	13.9	145
3- S Central MT	14.1	11.8	16.8	202	10.6	8.5	13.2	133	12.6	9.9	16.0	113
4- Southwest MT	12.8	10.7	15.1	323	8.9	7.4	10.6	237	8.8	7.2	10.7	182
5- Northwest MT	13.8	11.9	15.9	390	11.3	9.5	13.5	297	10.0	8.2	12.2	220
MMSA-Billings	14.2	11.3	17.6	113	11.2	8.2	15.0	75	14.8	10.7	20.0	68
MMSA-Bozeman	9.6	5.8	15.5	59	7.8	4.9	12.1	52	10.8	7.2	15.8	52
MMSA-Butte	19.0	15.1	23.5	127	11.1	8.6	14.2	85	13.2	9.6	17.9	63
MMSA-Kalispell	16.8	13.2	21.2	100	11.3	8.5	14.7	74	9.2	6.4	12.9	50

† How would you say your general health is? Total Sample Size: 7,603, Weighted Prevalence Estimate: 108,900.

‡ How many days during the past month was your physical health "not good"? Frequent is defined as 14 or more days in the past 30. Total Sample Size: 7,503, Weighted Prevalence Estimate: 77,600.

§ How many days during the past month was your mental health "not good"? Frequent is defined as 14 or more days in the past 30. Total Sample Size: 7,506 Weighted Prevalence Estimate: 75,700.

* American Indian or Alaska Native only.

** All other non-White (included multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 1b: Health Related Quality of Life Measures (continued), Montana Adults, 2009 (with 95% confidence intervals)

	Frequent Activity Limitation †				Mean Number of Unhealthy Days ‡		
	Wt.%	95% CI		UnWt. N	Mean	95% CI	
		LL	UL			LL	UL
All Adults	12.8	11.5	14.2	640	6.0	5.7	6.3
Sex:							
Male	14.1	11.9	16.7	264	5.3	4.8	5.8
Female	11.7	10.2	13.3	376	6.6	6.2	7.1
Age:							
18 - 24	5.4	2.7	10.6	11	5.9	4.7	7.1
25 - 34	5.6	3.3	9.6	24	5.4	4.4	6.4
35 - 44	11.6	8.4	15.7	55	5.5	4.7	6.2
45 - 54	15.3	12.5	18.7	129	6.3	5.7	7.0
55 - 64	18.1	15.4	21.3	183	6.6	6.0	7.2
65+	19.3	16.6	22.3	236	5.9	5.5	6.4
Education:							
<High School	20.8	14.9	28.3	88	10.5	8.9	12.1
High School	13.8	11.6	16.4	239	6.5	5.9	7.1
Some College	12.9	10.6	15.8	183	6.5	5.9	7.2
College Degree	8.8	7.1	10.9	129	3.9	3.5	4.3
Income:							
<\$15,000	25.9	21.1	31.4	184	12.3	10.9	13.8
\$15,000 - \$24,999	22.0	18.0	26.7	180	8.2	7.3	9.1
\$25,000 - \$49,999	10.3	8.1	12.9	137	5.5	4.9	6.0
\$50,000 - \$74,999	6.1	4.1	8.8	44	4.9	4.2	5.5
\$75,000 +	5.0	3.3	7.3	38	3.5	3.0	4.0
Race/Ethnicity:							
White, non-Hispanic	12.0	10.6	13.5	523	5.7	5.4	6.0
AI/AN*	16.0	11.5	21.7	67	9.2	7.8	10.5
Other or Hispanic**	21.9	15.0	30.8	48	8.1	6.2	10.0
Disability:							
Disability	31.2	28.0	34.6	503	13.7	12.9	14.5
No Disability	3.8	3.0	4.8	118	3.8	3.5	4.1
Region:							
1- Eastern MT	11.8	8.9	15.5	70	4.9	4.2	5.6
2- N Central MT	16.4	13.2	20.1	131	6.5	5.8	7.2
3- S Central MT	11.4	8.6	14.9	80	6.3	5.5	7.1
4- Southwest MT	11.5	9.3	14.3	167	5.8	5.2	6.3
5- Northwest MT	13.4	10.9	16.3	190	6.0	5.4	6.6
MMSA-Billings	10.5	7.3	14.7	42	6.6	5.5	7.8
MMSA-Bozeman	11.6	6.7	19.4	38	5.6	4.4	6.7
MMSA-Butte	14.7	10.5	20.2	57	6.8	5.7	8.0
MMSA-Kalispell	13.5	9.6	18.7	48	6.0	5.0	7.1

† Being limited in your usual activities due to poor physical or mental health for 14 or more days during the past 30. Total Sample Size: 3,914 Weighted Prevalence Estimate: 50,800.

‡ Mean number of the total unhealthy days (poor physical health days and poor mental health days combined) in the past 30 days. Total Sample Size: 7,414.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 2: Emotional Support and Life Satisfaction, Montana Adults, 2009
(with 95% confidence intervals)

	Insufficient Social & Emotional Support †				Dissatisfied or Very Dissatisfied with Life ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	19.5	18.1	21.1	1,550	6.0	5.2	7.0	420
Sex:								
Male	20.1	18.0	22.4	706	6.7	5.2	8.4	180
Female	18.9	16.9	21.0	844	5.4	4.6	6.4	240
Age:								
18 - 24	24.0	16.7	33.1	51	7.5	4.0	13.6	18
25 - 34	14.0	10.7	18.0	87	6.0	3.8	9.5	31
35 - 44	17.5	14.7	20.7	169	4.8	3.3	6.9	44
45 - 54	19.5	17.2	22.0	321	7.7	6.2	9.6	120
55 - 64	19.6	17.4	22.0	354	6.0	4.7	7.6	101
65+	22.9	21.0	25.1	565	4.3	3.4	5.4	106
Education:								
<High School	32.9	26.3	40.4	198	11.9	7.1	19.3	56
High School	21.5	18.5	24.7	557	7.0	5.3	9.0	154
Some College	20.8	18.2	23.7	432	6.3	4.9	8.0	118
College Degree	13.5	11.9	15.3	362	3.5	2.7	4.5	91
Income:								
<\$15,000	32.2	27.5	37.3	303	15.4	11.6	20.1	115
\$15,000 - \$24,999	26.7	22.9	30.8	368	8.9	6.3	12.5	104
\$25,000 - \$49,999	19.4	17.1	22.0	430	3.9	3.0	5.1	88
\$50,000 - \$74,999	14.7	11.9	18.1	172	3.9	2.7	5.6	40
\$75,000 +	9.9	8.0	12.1	133	2.6	1.6	4.3	28
Race/Ethnicity:								
White, non-Hispanic	17.9	16.5	19.4	1,270	5.6	4.8	6.6	350
AI/AN*	36.1	29.6	43.1	173	6.4	4.3	9.5	38
Other or Hispanic**	NSD ^Δ			95	11.8	6.3	21.0	28
Disability:								
Disability	29.1	26.5	32.0	631	14.7	12.4	17.2	261
No Disability	16.8	15.1	18.6	915	3.6	2.7	4.6	157
Region:								
1- Eastern MT	24.5	21.0	28.3	236	4.9	3.4	7.0	44
2- N Central MT	21.8	18.9	25.1	289	6.8	5.1	9.0	82
3- S Central MT	19.0	15.9	22.6	210	5.8	3.8	8.7	48
4- Southwest MT	17.1	14.6	19.8	386	6.1	4.5	8.1	124
5- Northwest MT	18.6	16.1	21.4	420	6.1	4.6	8.1	121
MMSA-Billings	20.4	16.3	25.2	123	7.3	4.3	12.2	31
MMSA-Bozeman	14.8	10.5	20.4	83	6.5	3.4	11.9	30
MMSA-Butte	22.6	18.3	27.7	133	6.9	4.5	10.4	39
MMSA-Kalispell	18.5	14.6	23.1	103	7.5	5.2	10.6	43

† Defined as reporting sometime, rarely, or never receiving the social and emotional support you need. Total Sample Size: 7,173, Weighted Prevalence Estimate: 138,600.

‡ In general, how satisfied are you with your life? Total Sample Size: 7,210, Weighted Prevalence Estimate: 42,900.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 3: Disability, Montana Adults, 2009

(with 95% confidence intervals)

	Require Use of Special Equipment †				Self-Reported Disability ‡			
	95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	7.0	6.3	7.7	745	22.1	20.8	23.4	2,083
Sex:								
Male	6.7	5.7	7.9	282	21.4	19.5	23.4	850
Female	7.3	6.5	8.2	463	22.7	21.1	24.5	1,233
Age:								
18 - 24	1.7	0.6	4.7	4	9.1	5.8	14.0	29
25 - 34	1.9	0.9	4.0	11	11.9	8.8	16.0	65
35 - 44	2.9	1.8	4.7	25	15.5	12.8	18.6	146
45 - 54	6.7	5.2	8.6	99	23.3	20.8	26.0	372
55 - 64	9.0	7.5	10.8	163	30.4	27.8	33.0	547
65+	17.0	15.3	18.9	442	36.2	33.9	38.6	920
Education:								
<High School	11.3	8.4	15.1	93	32.7	26.6	39.4	224
High School	7.8	6.6	9.2	267	23.4	21.1	25.8	734
Some College	7.4	6.1	8.9	211	23.8	21.3	26.4	597
College Degree	4.8	4.0	5.9	172	16.7	15.0	18.5	524
Income:								
<\$15,000	20.4	16.6	24.8	203	46.9	41.4	52.5	441
\$15,000 - \$24,999	10.8	8.9	13.1	198	30.4	26.8	34.2	500
\$25,000 - \$49,999	5.7	4.7	7.0	154	20.3	18.1	22.6	525
\$50,000 - \$74,999	4.9	3.5	6.7	58	17.2	14.6	20.1	224
\$75,000 +	2.0	1.3	3.1	37	11.7	9.8	13.9	178
Race/Ethnicity:								
White, non-Hispanic	6.9	6.2	7.7	636	21.8	20.5	23.2	1,787
AI/AN*	6.4	4.6	8.8	54	24.6	19.9	29.9	162
Other or Hispanic**	8.1	5.3	12.4	46	23.7	18.0	30.5	119
Region:								
1- Eastern MT	7.6	6.1	9.6	99	19.6	17.0	22.6	247
2- N Central MT	9.6	7.6	12.0	144	25.4	22.3	28.8	359
3- S Central MT	6.3	5.0	8.1	105	21.6	18.7	24.9	300
4- Southwest MT	6.6	5.4	8.1	185	21.1	18.8	23.6	542
5- Northwest MT	6.5	5.4	7.8	210	22.4	20.1	24.9	626
MMSA-Billings	6.5	4.8	8.7	58	23.1	19.1	27.7	169
MMSA-Bozeman	5.1	2.7	9.5	38	14.8	11.3	19.2	124
MMSA-Butte	8.4	5.9	12.0	63	30.1	25.1	35.6	186
MMSA-Kalispell	6.1	4.1	9.0	50	24.1	19.9	28.8	158

† Do you now have any health problems that require you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone? Total Sample Size: 7,543, Weighted Prevalence Estimate: 52,000.

‡ Disability is defined as a "Yes" response to one or both of the questions: 1. Are you limited in any way in any activities because of physical, mental, or emotional problems? 2. Do you now have any health problem that requires you to use special equipment? Total Sample Size: 7,522, Weighted Prevalence Estimate: 163,800.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 4: Access to Health Care, Montana Adults, 2009

(with 95% confidence intervals)

	No Health Care Coverage (18 to 64) †				Could Not See Dr. Due To Cost (past year) ‡			
	95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	21.3	19.5	23.3	969	13.5	12.3	14.8	933
Sex:								
Male	21.2	18.7	24.1	438	10.1	8.5	11.9	310
Female	21.4	18.8	24.2	531	16.9	15.2	18.7	623
Age:								
18 - 24	34.4	26.5	43.4	73	15.1	10.0	22.1	33
25 - 34	27.4	22.7	32.7	143	19.0	15.2	23.4	105
35 - 44	19.2	16.3	22.5	192	16.1	13.5	19.1	157
45 - 54	16.5	14.5	18.9	293	16.2	14.1	18.4	282
55 - 64	13.9	12.1	15.9	268	12.7	10.9	14.6	244
65+	Not Applicable				3.6	2.8	4.5	109
Education:								
<High School	41.8	33.1	50.9	93	28.0	21.4	35.8	101
High School	30.3	26.3	34.7	410	14.0	11.9	16.4	326
Some College	20.9	18.0	24.3	287	14.4	12.3	16.9	275
College Degree	8.7	7.1	10.7	179	8.9	7.5	10.5	229
Income:								
<\$15,000	46.9	39.9	54.0	206	23.0	19.0	27.6	191
\$15,000 - \$24,999	43.2	37.3	49.3	288	23.4	19.7	27.6	270
\$25,000 - \$49,999	21.5	18.5	24.8	271	15.3	13.1	17.8	256
\$50,000 - \$74,999	8.1	5.9	11.1	67	9.2	7.0	12.0	93
\$75,000 +	5.4	3.4	8.3	48	4.1	2.8	6.1	51
Race/Ethnicity:								
White, non-Hispanic	19.3	17.5	21.2	763	12.8	11.6	14.1	765
AI/AN*	43.0	35.6	50.6	138	17.1	13.0	22.1	91
Other or Hispanic**	NSD ^Δ			61	21.4	14.9	29.7	69
Disability:								
Disability	22.5	19.1	26.2	238	21.8	19.3	24.6	404
No Disability	20.8	18.6	23.1	714	11.1	9.8	12.5	514
Region:								
1- Eastern MT	16.1	12.9	19.8	106	9.7	7.5	12.4	93
2- N Central MT	18.8	15.6	22.5	186	12.3	10.2	14.9	167
3- S Central MT	23.0	18.9	27.7	146	11.5	9.3	14.1	121
4- Southwest MT	18.1	15.0	21.7	219	13.9	11.5	16.8	240
5- Northwest MT	23.8	20.4	27.6	301	16.0	13.6	18.7	304
MMSA-Billings	21.8	16.4	28.4	65	11.9	9.2	15.3	72
MMSA-Bozeman	19.4	13.9	26.5	63	13.4	9.3	19.0	62
MMSA-Butte	15.7	11.3	21.5	56	18.7	13.6	25.0	76
MMSA-Kalispell	27.0	21.1	33.9	78	15.6	11.9	20.2	77

† Do you have any kind of health care coverage (analysis limited to ages 18-64)?

Total Sample Size: 5,081, Weighted Prevalence Estimate: 127,600.

‡ Did you need to see a doctor in the past year, but could not because of the cost?

Total Sample Size: 7,603, Weighted Prevalence Estimate: 101,500.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 5: Health Care Utilization, Montana Adults, 2009

(with 95% confidence intervals)

	No Personal Health Care Provider †				No Routine Checkup Past 12 Months ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	25.3	23.6	27.1	1,411	42.3	40.5	44.1	2,826
Sex:								
Male	31.5	28.9	34.2	780	46.7	44.1	49.4	1,317
Female	19.2	17.1	21.6	631	37.9	35.5	40.3	1,509
Age:								
18 - 24	42.1	33.9	50.9	96	46.6	38.1	55.4	112
25 - 34	42.8	37.4	48.3	191	58.3	53.0	63.5	301
35 - 44	28.8	25.3	32.6	263	49.2	45.3	53.1	460
45 - 54	21.9	19.5	24.6	352	46.0	43.0	49.1	721
55 - 64	16.2	14.2	18.4	281	33.8	31.2	36.5	624
65+	8.1	7.0	9.4	224	23.6	21.6	25.7	599
Education:								
<High School	30.4	23.9	37.9	105	45.1	37.9	52.6	204
High School	29.3	25.9	32.9	511	43.7	40.3	47.1	946
Some College	24.9	21.9	28.1	393	42.9	39.7	46.2	814
College Degree	20.4	17.8	23.2	402	39.5	36.8	42.4	860
Income:								
<\$15,000	29.0	23.7	34.8	182	44.8	39.3	50.5	351
\$15,000 - \$24,999	30.1	25.6	34.9	277	46.9	42.4	51.5	536
\$25,000 - \$49,999	26.3	23.3	29.5	411	42.5	39.3	45.6	809
\$50,000 - \$74,999	19.8	16.6	23.6	190	38.4	34.5	42.5	438
\$75,000 +	21.6	18.1	25.6	208	40.9	37.0	44.9	466
Race/Ethnicity:								
White, non-Hispanic	24.0	22.3	25.9	1,165	42.0	40.2	43.9	2,463
AI/AN*	35.5	29.0	42.5	138	42.8	36.2	49.5	200
Other or Hispanic**	NSD ^Δ			96	45.9	36.2	55.9	144
Disability:								
Disability	16.1	13.6	19.0	255	35.9	32.9	39.0	671
No Disability	27.9	25.9	30.1	1,135	44.3	42.2	46.4	2,134
Region:								
1- Eastern MT	23.5	20.3	27.1	212	43.3	39.4	47.3	406
2- N Central MT	24.5	21.1	28.3	252	39.2	35.5	43.1	470
3- S Central MT	27.0	23.3	31.1	230	42.7	38.7	46.7	398
4- Southwest MT	25.9	22.6	29.5	364	41.7	38.3	45.3	726
5- Northwest MT	23.6	20.5	27.0	341	42.8	39.4	46.3	811
MMSA-Billings	28.0	23.0	33.6	124	44.7	39.5	50.0	223
MMSA-Bozeman	27.7	22.0	34.2	108	43.3	37.3	49.6	223
MMSA-Butte	22.6	17.4	28.9	97	38.6	32.8	44.7	186
MMSA-Kalispell	23.6	18.6	29.4	85	45.5	39.9	51.3	208

† Do you have one person you think of as your personal doctor or health care provider?

Total Sample Size: 7,597, Weighted Prevalence Estimate: 190,100.

‡ About how long has it been since you last visited a doctor for a routine checkup?

Total Sample Size: 7,556, Weighted Prevalence Estimate: 315,500.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 6: Immunization, Montana Adults Age 65 and Older, 2009
(with 95% confidence intervals)

	Received Influenza Vaccine (past year) †				Ever Received Pneumococcal Vaccine ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	68.7	66.5	70.9	1,648	71.8	69.6	73.9	1,670
Sex:								
Male	70.1	66.6	73.4	664	70.0	66.4	73.3	621
Female	67.6	64.6	70.4	984	73.2	70.4	75.8	1,049
Education:								
<High School	63.6	56.0	70.6	164	70.1	62.7	76.5	178
High School	66.8	63.0	70.5	606	74.5	70.9	77.8	648
Some College	66.9	62.4	71.1	414	68.9	64.4	73.1	428
College Degree	74.7	70.6	78.4	459	71.3	66.9	75.3	412
Income:								
<\$15,000	61.3	54.7	67.5	212	72.0	65.7	77.5	246
\$15,000 - \$24,999	67.4	62.8	71.8	410	70.6	66.0	74.8	418
\$25,000 - \$49,999	70.3	66.2	74.1	513	75.3	71.4	78.9	522
\$50,000 - \$74,999	73.0	65.7	79.3	162	67.5	59.8	74.3	145
\$75,000 +	74.0	66.1	80.5	132	67.0	58.5	74.5	113
Race/Ethnicity:								
White, non-Hispanic	69.8	67.4	72.0	1,513	72.3	70.0	74.5	1,523
AI/AN*	NSD ^Δ			71	NSD ^Δ			72
Other or Hispanic**	NSD ^Δ			56	NSD ^Δ			68
Disability:								
Disability	72.0	68.3	75.4	649	77.4	73.9	80.6	675
No Disability	66.9	64.0	69.6	993	68.6	65.7	71.3	987
Region:								
1- Eastern MT	66.4	60.1	72.2	212	66.8	60.4	72.6	212
2- N Central MT	68.1	62.2	73.5	266	70.9	65.0	76.2	268
3- S Central MT	71.9	66.5	76.7	247	74.6	69.2	79.3	256
4- Southwest MT	71.9	67.5	75.9	434	75.1	70.8	78.9	435
5- Northwest MT	65.2	60.8	69.3	484	68.9	64.6	72.9	492
MMSA-Billings	73.6	66.7	79.6	146	76.5	69.4	82.4	150
MMSA-Bozeman	66.4	57.7	74.2	98	70.6	61.9	78.1	99
MMSA-Butte	72.5	65.6	78.5	157	73.1	66.3	79.0	153
MMSA-Kalispell	62.3	53.6	70.2	118	66.2	57.5	74.0	123

† Have you had a flu shot in the past year (age 65 years and older)?

Total Sample Size: 2,439, Weighted Prevalence Estimate: 94,500.

‡ Have you ever had a pneumonia vaccination (age 65 years and older)?

Total Sample Size: 2,380, Weighted Prevalence Estimate: 96,200.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 7: HIV Testing and High Risk Behavior, Montana Adults Ages 18 to 64, 2009 (with 95% confidence intervals)

	Ever Tested for HIV †				Engaged in High Risk Behavior (past year) ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	34.4	32.4	36.4	1,556	3.0	2.2	4.1	95
Sex:								
Male	32.3	29.3	35.3	662	3.1	1.8	5.1	36
Female	36.5	33.8	39.3	894	2.9	2.0	4.2	59
Age:								
18 - 24	23.9	17.4	31.8	66	8.6	4.8	15.1	17
25 - 34	49.2	43.6	54.7	261	4.6	2.8	7.5	27
35 - 44	46.3	42.3	50.4	400	2.2	1.1	4.1	17
45 - 54	31.9	29.1	34.9	484	1.0	0.6	1.7	20
55 - 64	20.4	18.1	22.8	345	0.5	0.3	0.9	14
Education:								
High School or Less	31.2	27.7	34.8	487	4.6	2.9	7.2	43
Some College	37.1	33.3	41.0	461	3.2	2.0	5.2	31
College Degree	35.7	32.7	38.9	606	0.9	0.5	1.6	21
Income:								
<\$15,000	41.8	34.7	49.2	192	4.1	2.3	7.2	22
\$15,000 - \$24,999	43.7	37.6	50.1	253	5.9	2.8	12.2	18
\$25,000 - \$49,999	32.0	28.3	35.9	382	1.7	0.8	3.4	20
\$50,000 - \$74,999	33.4	29.4	37.7	282	2.0	0.9	4.3	9
\$75,000 +	34.6	30.9	38.5	374	1.6	0.7	3.6	12
Race/Ethnicity:								
White, non-Hispanic	33.5	31.4	35.7	1,302	2.5	1.8	3.6	69
AI/AN*	47.4	39.8	55.2	157	5.9	3.3	10.3	18
Other or Hispanic**	NSD ^Δ			92	NSD ^Δ			8
Disability:								
Disability	40.3	36.2	44.4	416	4.4	2.7	7.1	31
No Disability	33.0	30.7	35.3	1,133	2.7	1.8	4.0	64
Region:								
1- Eastern MT	26.5	22.4	31.0	167	1.2	0.6	2.5	10
2- N Central MT	34.8	30.5	39.2	275	1.8	1.0	3.2	15
3- S Central MT	35.3	31.0	39.9	239	3.9	2.0	7.4	14
4- Southwest MT	34.6	30.6	38.7	416	2.4	1.2	4.5	28
5- Northwest MT	35.8	32.0	39.9	455	3.9	2.3	6.7	28
MMSA-Billings	36.3	30.7	42.2	139	4.1	1.9	9.0	7
MMSA-Bozeman	40.9	33.9	48.2	147	2.3	0.9	5.4	10
MMSA-Butte	28.4	22.6	35.1	92	4.4	2.1	9.0	10
MMSA-Kalispell	32.8	26.8	39.5	118	2.5	1.0	6.2	6

† Have you ever been tested for HIV, except blood donation?

Total Sample Size: 4,778, Weighted Prevalence Estimate: 197,100.

‡ One or more of the behaviors: Used intravenous drugs, been treated for a sexually transmitted disease, given or received money or drugs in exchange for sex, or had anal sex without a condom. Total Sample Size: 4,868, Weighted Prevalence Estimate: 17,400.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 8: Physical Activity, Montana Adults, 2009
(with 95% confidence intervals)

	No Leisure Time Physical Activity, past 30 days †				Insufficient /No Moderate Physical Activity ‡				Insufficient /No Vigorous Physical Activity §			
	95% CI				95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	22.0	20.7	23.4	1,999	52.4	50.6	54.3	3,878	63.7	61.8	65.5	4,977
Sex:												
Male	21.5	19.5	23.6	822	52.3	49.6	55.1	1,606	58.0	55.1	60.8	1,955
Female	22.6	20.9	24.4	1,177	52.5	50.1	54.9	2,272	69.2	66.8	71.5	3,022
Age:												
18 - 24	11.0	7.1	16.7	41	47.7	38.9	56.6	104	46.3	37.6	55.2	111
25 - 34	22.1	17.8	27.2	120	45.7	40.1	51.3	235	58.1	52.4	63.5	314
35 - 44	19.2	16.3	22.5	186	52.3	48.3	56.3	442	56.2	52.2	60.2	515
45 - 54	21.9	19.5	24.6	367	54.3	51.1	57.4	832	66.4	63.4	69.2	1,001
55 - 64	21.7	19.6	24.0	447	52.4	49.4	55.3	897	68.3	65.4	71.0	1,187
65+	32.4	30.2	34.7	834	59.6	57.1	62.1	1,351	79.3	77.2	81.2	1,826
Education:												
<High School	34.9	29.0	41.2	234	55.2	47.4	62.8	300	72.1	63.3	79.5	398
High School	27.9	25.2	30.7	823	55.6	52.0	59.1	1,281	65.1	61.2	68.7	1,657
Some College	22.3	19.8	25.0	556	54.4	51.0	57.7	1,110	67.8	64.6	70.9	1,445
College Degree	12.5	11.0	14.2	380	46.9	44.1	49.7	1,182	56.7	53.9	59.5	1,470
Income:												
<\$15,000	34.9	30.0	40.1	344	55.6	49.7	61.3	468	73.6	67.4	79.0	622
\$15,000 - \$24,999	30.7	26.9	34.8	465	52.7	47.8	57.4	714	68.2	62.9	72.9	965
\$25,000 - \$49,999	22.8	20.5	25.3	557	53.6	50.3	56.8	1,097	67.7	64.4	70.8	1,456
\$50,000 - \$74,999	18.5	15.7	21.6	228	50.6	46.5	54.8	612	62.2	57.9	66.3	744
\$75,000 +	12.3	9.8	15.2	184	50.5	46.6	54.3	630	52.9	49.0	56.7	715
Race/Ethnicity:												
White, non-Hispanic	21.3	20.0	22.8	1,693	52.1	50.2	54.0	3,385	63.6	61.7	65.5	4,384
AI/AN*	26.3	21.7	31.6	177	53.1	46.0	60.0	271	66.1	59.0	72.5	322
Other or Hispanic**	29.4	22.2	37.9	113	NSD ^Δ			205	NSD ^Δ			242
Disability:												
Disability	34.0	31.3	36.8	827	60.8	57.7	63.9	1,253	77.3	74.3	80.1	1,622
No Disability	18.7	17.2	20.3	1,142	50.1	47.9	52.2	2,614	59.8	57.6	62.0	3,337
Region:												
1- Eastern MT	31.5	28.0	35.1	341	56.3	52.2	60.4	533	71.2	67.2	74.9	701
2- N Central MT	27.6	24.4	31.1	400	58.4	54.4	62.2	693	71.5	67.7	75.0	883
3- S Central MT	23.7	20.6	27.1	301	55.8	51.7	59.9	594	64.4	60.2	68.3	730
4- Southwest MT	20.3	17.6	23.2	464	51.1	47.5	54.7	1,019	62.2	58.5	65.7	1,293
5- Northwest MT	17.7	15.5	20.2	479	48.1	44.6	51.6	1,020	59.7	56.1	63.2	1,349
MMSA-Billings	23.5	19.4	28.2	162	58.0	52.6	63.2	352	65.2	59.6	70.4	420
MMSA-Bozeman	18.0	13.2	24.1	108	47.8	41.5	54.1	286	56.7	50.2	63.0	351
MMSA-Butte	24.3	20.1	29.2	161	56.3	50.4	62.1	321	69.7	64.1	74.8	395
MMSA-Kalispell	17.2	13.3	22.1	114	52.1	46.2	58.0	266	62.5	56.5	68.1	350

† During the past month, other than your regular job, did you do any physical activities or exercise?

Total Sample Size: 7,610, Weighted Prevalence Estimate: 165,700.

‡ Insufficient moderate physical activity is defined as not meeting the recommendation of at least 30 min a day on 5 or more days per week. Total Sample Size: 7,049, Weighted Prevalence Estimate: 368,000.

§ Insufficient vigorous physical activity is defined as not meeting the recommendation of at least 20 min a day on 3 or more days per week. Total Sample Size: 7,152, Weighted Prevalence Estimate: 451,900.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 9: Body Mass Index (BMI), Montana Adults, 2009

(with 95% confidence intervals)

	Overweight † (25.0 ≤ BMI <30.0)				Obese ‡ (BMI ≥30.0)			
	95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	38.4	36.7	40.1	2,894	23.7	22.4	25.2	1,869
Sex:								
Male	45.1	42.5	47.8	1,520	24.3	22.2	26.5	836
Female	31.4	29.3	33.5	1,374	23.2	21.4	25.0	1,033
Age:								
18 - 24	26.9	20.3	34.9	64	14.5	10.0	20.6	43
25 - 34	35.2	30.2	40.5	203	23.2	18.9	28.3	126
35 - 44	37.8	34.0	41.8	327	26.4	22.9	30.2	235
45 - 54	41.2	38.2	44.3	604	25.8	23.2	28.7	401
55 - 64	42.0	39.2	44.9	684	28.4	25.9	31.1	512
65+	42.8	40.4	45.2	1,006	21.8	19.8	23.8	551
Education:								
<High School	29.9	24.1	36.4	193	29.5	23.6	36.0	155
High School	38.2	35.2	41.4	918	25.9	23.3	28.6	662
Some College	38.6	35.5	41.8	819	25.1	22.5	28.0	551
College Degree	40.3	37.6	43.0	963	19.0	17.0	21.2	499
Income:								
<\$15,000	31.7	26.8	37.1	273	31.5	26.6	36.9	260
\$15,000 - \$24,999	39.8	35.4	44.2	517	23.3	20.2	26.7	348
\$25,000 - \$49,999	40.5	37.6	43.6	873	25.6	23.0	28.4	572
\$50,000 - \$74,999	37.2	33.4	41.1	468	23.4	20.2	26.9	280
\$75,000 +	41.1	37.4	45.0	531	18.5	15.9	21.4	261
Race/Ethnicity:								
White, non-Hispanic	39.1	37.3	40.9	2,583	22.4	21.0	23.9	1,552
AI/AN*	31.4	25.8	37.5	166	43.2	36.6	50.1	205
Other or Hispanic**	32.8	26.3	40.0	133	29.3	22.7	36.9	101
Disability:								
Disability	39.4	36.4	42.5	741	31.2	28.4	34.1	678
No Disability	38.3	36.3	40.3	2,115	21.5	19.9	23.2	1,167
Region:								
1- Eastern MT	40.3	36.4	44.2	386	27.1	23.9	30.6	294
2- N Central MT	38.2	34.4	42.2	449	25.5	22.4	28.9	346
3- S Central MT	38.0	34.3	41.9	423	28.5	24.9	32.4	295
4- Southwest MT	37.4	34.2	40.8	767	21.6	19.0	24.4	453
5- Northwest MT	38.9	35.7	42.2	855	20.9	18.5	23.6	476
MMSA-Billings	37.0	32.2	42.0	229	29.2	24.4	34.4	163
MMSA-Bozeman	43.4	37.2	49.8	238	15.2	11.5	19.8	97
MMSA-Butte	41.3	35.7	47.1	225	26.4	21.4	32.1	150
MMSA-Kalispell	36.1	31.1	41.4	218	24.8	20.2	30.1	117

† Self-reported height and weight yield a body mass index (BMI) greater than or equal to 25 and less than 30. Total Sample Size: 7,376, Weighted Prevalence Estimate: 279,800.

‡ Self-reported height and weight yield a body mass index (BMI) greater than or equal to 30. Total Sample Size: 7,376, Weighted Prevalence Estimate: 173,000.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

**Table 10: Fruit and Vegetable Consumption,
Montana Adults, 2009**

(with 95% confidence intervals)

	Inadequate Fruit and Vegetable Consumption †			
	Wt.%	95% CI		UnWt. N
	LL	UL		
All Adults	74.3	72.8	75.8	5,412
Sex:				
Male	81.0	78.9	83.0	2,504
Female	67.7	65.5	69.8	2,908
Age:				
18 - 24	72.4	64.3	79.2	165
25 - 34	77.9	73.5	81.8	406
35 - 44	74.7	71.1	78.0	661
45 - 54	76.3	73.6	78.8	1,166
55 - 64	74.3	71.7	76.7	1,307
65+	70.1	67.8	72.3	1,686
Education:				
<High School	75.7	68.2	81.9	408
High School	78.6	75.8	81.1	1,834
Some College	75.6	72.7	78.2	1,551
College Degree	68.3	65.8	70.7	1,613
Income:				
<\$15,000	77.4	72.7	81.5	606
\$15,000 - \$24,999	75.7	71.7	79.3	997
\$25,000 - \$49,999	76.9	74.4	79.3	1,588
\$50,000 - \$74.999	73.4	69.5	76.8	845
\$75,000 +	71.9	68.7	74.9	893
Race/Ethnicity:				
White, non-Hispanic	74.5	72.9	76.1	4,759
AI/AN*	68.7	61.1	75.3	358
Other or Hispanic**	76.9	69.5	82.9	266
Disability:				
Disability	72.5	69.6	75.2	1,493
No Disability	74.8	73.0	76.5	3,903
Region:				
1- Eastern MT	77.7	74.1	80.9	745
2- N Central MT	75.9	72.5	78.9	916
3- S Central MT	72.6	68.8	76.1	763
4- Southwest MT	74.9	71.9	77.7	1,460
5- Northwest MT	73.1	70.1	75.9	1,509
MMSA-Billings	72.9	68.2	77.2	423
MMSA-Bozeman	69.0	63.3	74.2	388
MMSA-Butte	80.2	75.5	84.3	439
MMSA-Kalispell	70.4	65.1	75.3	361

† Inadequate consumption is less than 5 servings per day.

Total Sample Size: 7,371, Weighted Prevalence

Estimate: 539,800.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 11: Tobacco Use, Montana Adults, 2009

(with 95% confidence intervals)

	Current Smokers †				Current Smokeless Tobacco Users ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	16.8	15.5	18.2	1,268	7.4	6.4	8.5	446
Sex:								
Male	16.4	14.4	18.5	524	13.4	11.6	15.5	385
Female	17.3	15.6	19.1	744	1.5	1.1	2.2	61
Age:								
18 - 24	21.9	15.9	29.3	65	10.2	6.2	16.5	28
25 - 34	23.4	19.2	28.2	143	10.4	7.2	14.7	53
35 - 44	16.0	13.4	18.9	179	9.1	7.1	11.6	96
45 - 54	19.6	17.3	22.1	333	9.0	7.3	11.1	119
55 - 64	14.6	12.8	16.6	302	3.9	2.9	5.2	78
65+	7.8	6.7	9.0	243	3.0	2.3	4.0	70
Education:								
<High School	44.6	37.4	52.1	177	10.1	5.8	17.2	38
High School	21.1	18.5	24.0	505	8.8	7.0	11.0	174
Some College	15.8	13.8	18.1	371	7.5	5.7	9.7	123
College Degree	7.0	5.9	8.4	215	5.3	4.1	6.9	110
Income:								
<\$15,000	33.3	28.3	38.8	283	6.4	4.5	9.0	52
\$15,000 - \$24,999	28.8	24.7	33.3	340	10.5	7.1	15.4	77
\$25,000 - \$49,999	15.9	13.7	18.4	304	6.9	5.5	8.7	126
\$50,000 - \$74,999	11.6	9.4	14.3	131	8.0	6.0	10.7	83
\$75,000 +	8.8	6.5	11.8	108	6.2	4.6	8.2	72
Race/Ethnicity:								
White, non-Hispanic	15.0	13.7	16.5	967	7.3	6.3	8.4	371
AI/AN*	42.7	36.4	49.3	206	11.7	8.3	16.2	51
Other or Hispanic**	24.8	17.8	33.5	86	6.8	2.8	15.8	22
Disability:								
Disability	22.8	20.1	25.7	438	6.6	5.0	8.6	102
No Disability	15.2	13.8	16.8	818	7.7	6.6	9.1	340
Region:								
1- Eastern MT	15.4	12.9	18.3	172	10.8	8.4	13.8	76
2- N Central MT	20.4	17.6	23.5	272	7.9	6.0	10.2	88
3- S Central MT	18.6	15.6	22.0	192	7.5	5.6	9.9	73
4- Southwest MT	15.8	13.2	18.9	300	7.0	5.3	9.2	106
5- Northwest MT	15.4	13.1	18.1	324	6.8	4.9	9.5	102
MMSA-Billings	18.9	15.0	23.6	109	5.0	3.0	8.3	24
MMSA-Bozeman	10.9	7.1	16.5	55	7.3	4.2	12.5	30
MMSA-Butte	22.7	17.8	28.5	113	4.0	2.6	6.2	26
MMSA-Kalispell	12.6	9.4	16.7	70	4.5	2.1	9.3	16

† A current smoker is defined as someone who has ever smoked 100 cigarettes and who now smokes everyday or some days.

Total Sample Size: 7,596, Weighted Prevalence Estimate: 126,300.

‡ A current user is defined as using chewing tobacco, snuff or snus everyday or some days.

Total Sample Size: 7,615, Weighted Prevalence Estimate: 56,000.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 12: Alcohol Consumption, Montana Adults, 2009
(with 95% confidence intervals)

	Binge Drinking Past 30 Days †				Heavy Drinking Past 30 Days ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	17.3	15.9	18.8	1,037	5.4	4.8	6.2	429
Sex:								
Male	23.5	21.1	26.0	638	6.3	5.3	7.6	221
Female	11.3	9.9	12.9	399	4.5	3.8	5.5	208
Age:								
18 - 24	27.9	20.8	36.2	70	5.1	2.9	8.6	21
25 - 34	25.0	20.7	29.9	146	5.6	3.5	8.8	30
35 - 44	22.0	18.9	25.5	208	5.4	3.9	7.3	60
45 - 54	17.7	15.6	20.1	283	6.2	5.0	7.7	110
55 - 64	11.9	10.2	13.9	217	6.1	4.9	7.5	110
65+	4.2	3.4	5.3	113	4.1	3.2	5.3	97
Education:								
<High School	17.9	12.1	25.8	58	3.0	1.8	5.0	22
High School	17.9	15.3	20.9	345	6.4	5.0	8.1	153
Some College	18.1	15.6	20.9	298	6.0	4.8	7.6	124
College Degree	15.9	13.8	18.3	336	4.4	3.6	5.4	130
Income:								
<\$15,000	12.2	9.1	16.2	94	5.1	3.2	8.1	37
\$15,000 - \$24,999	19.9	15.7	25.0	163	6.3	4.6	8.4	79
\$25,000 - \$49,999	16.5	14.1	19.2	291	5.8	4.5	7.4	128
\$50,000 - \$74,999	20.2	16.9	24.0	204	4.8	3.6	6.4	71
\$75,000 +	18.4	15.6	21.6	228	5.9	4.4	8.0	88
Race/Ethnicity:								
White, non-Hispanic	16.5	15.0	18.0	879	5.2	4.6	6.0	381
AI/AN*	27.7	21.2	35.4	89	8.8	5.2	14.3	27
Other or Hispanic**	21.8	14.4	31.6	58	5.3	2.1	12.3	16
Disability:								
Disability	10.4	8.5	12.5	190	5.4	4.3	6.8	119
No Disability	19.3	17.6	21.2	845	5.4	4.7	6.4	310
Region:								
1- Eastern MT	17.4	14.5	20.9	142	5.5	4.0	7.4	56
2- N Central MT	19.2	16.3	22.4	207	5.2	3.8	7.2	61
3- S Central MT	16.3	13.2	20.0	134	4.8	3.2	7.2	54
4- Southwest MT	17.4	14.7	20.4	288	6.3	5.0	8.0	128
5- Northwest MT	17.2	14.4	20.5	263	5.1	4.1	6.5	128
MMSA-Billings	13.1	9.3	18.0	58	4.2	2.2	8.0	25
MMSA-Bozeman	20.0	15.1	26.1	89	9.2	6.4	13.2	56
MMSA-Butte	23.2	18.0	29.4	93	6.1	3.8	9.7	28
MMSA-Kalispell	12.3	8.8	16.7	52	5.0	3.3	7.5	35

† Binge drinking is defined as having five or more alcoholic drinks on one occasion for men, and four or more alcoholic drinks on one occasion for women.

Total Sample Size: 7,412, Weighted Prevalence Estimate: 126,700.

‡ Heavy drinking is defined as the consumption of more than two alcoholic drinks per day for men or more than one alcoholic drink per day for women.

Total Sample Size: 7,388, Weighted Prevalence Estimate: 39,400.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 13: Lifetime and Current Asthma, Montana Adults, 2009

(with 95% confidence intervals)

	Ever Diagnosed w/ Asthma †				Current Asthma ‡			
	95% CI				95% CI			
	Wt.%	LL	UL	UnWt. N	Wt.%	LL	UL	UnWt. N
All Adults	12.1	11.1	13.3	945	8.1	7.3	9.1	667
Sex:								
Male	10.4	8.9	12.1	337	6.2	5.1	7.5	216
Female	13.9	12.4	15.5	608	10.1	8.8	11.5	451
Age:								
18 - 24	16.4	11.4	22.9	45	9.7	6.1	15.1	28
25 - 34	10.3	7.6	13.9	59	6.5	4.3	9.6	33
35 - 44	10.7	8.6	13.2	110	7.7	6.0	10.0	79
45 - 54	11.5	9.8	13.5	199	7.4	6.1	9.0	135
55 - 64	13.5	11.7	15.5	238	9.8	8.2	11.6	172
65+	11.3	9.9	13.0	287	8.0	6.8	9.4	214
Education:								
<High School	16.4	11.8	22.2	80	13.3	9.1	18.9	64
High School	14.0	11.8	16.5	317	9.4	7.7	11.5	231
Some College	11.2	9.5	13.2	253	7.4	6.1	8.9	183
College Degree	10.0	8.7	11.5	293	6.3	5.2	7.5	187
Income:								
<\$15,000	18.4	14.7	22.8	157	14.1	10.8	18.2	122
\$15,000 - \$24,999	15.2	12.3	18.6	188	10.9	8.6	13.8	142
\$25,000 - \$49,999	11.5	9.7	13.6	250	6.9	5.6	8.4	164
\$50,000 - \$74,999	10.1	7.8	13.0	130	7.4	5.4	10.2	90
\$75,000 +	10.3	8.3	12.7	141	6.2	4.6	8.2	86
Race/Ethnicity:								
White, non-Hispanic	11.7	10.6	12.9	798	7.6	6.8	8.6	554
AI/AN*	14.9	10.8	20.2	77	10.3	7.1	14.8	60
Other or Hispanic**	17.9	12.4	25.0	66	14.3	9.4	21.3	50
Disability:								
Disability	18.9	16.6	21.4	389	14.9	12.8	17.2	309
No Disability	10.2	9.0	11.5	539	6.2	5.3	7.3	346
Region:								
1- Eastern MT	10.3	8.0	13.0	107	6.3	4.5	8.8	65
2- N Central MT	15.3	12.7	18.3	194	11.0	8.7	13.7	146
3- S Central MT	13.3	10.8	16.2	143	8.0	6.2	10.3	99
4- Southwest MT	12.9	10.6	15.6	245	8.7	7.0	10.9	173
5- Northwest MT	10.1	8.4	12.0	255	7.0	5.6	8.8	183
MMSA-Billings	13.7	10.7	17.5	87	8.6	6.2	11.7	58
MMSA-Bozeman	7.9	5.7	10.7	64	4.9	3.4	7.1	42
MMSA-Butte	15.4	11.2	20.7	66	10.4	6.8	15.4	47
MMSA-Kalispell	8.1	5.8	11.3	53	6.3	4.3	9.1	45

† Did a doctor ever tell you that you had asthma?

Total Sample Size: 7,601, Weighted Prevalence Estimate: 91,200.

‡ Do you currently have asthma?

Total Sample Size: 7,582, Weighted Prevalence Estimate: 61,100.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Table 14: Arthritis, Montana Adults, 2009
(with 95% confidence intervals)

	Doctor Diagnosed Arthritis †				Activities Limited Due to Arthritis ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	27.5	26.2	28.8	2,792	46.2	43.7	48.6	1,295
Sex:								
Male	24.8	22.9	26.8	1,055	46.6	42.6	50.6	501
Female	30.1	28.3	31.9	1,737	45.8	42.7	48.9	794
Age:								
18 - 24	2.8	1.1	6.7	6	NSD ^Δ			2
25 - 34	7.6	5.2	10.9	46	NSD ^Δ			22
35 - 44	15.1	12.4	18.3	146	NSD ^Δ			56
45 - 54	29.4	26.7	32.3	480	50.1	44.4	55.8	232
55 - 64	43.6	40.8	46.5	780	48.3	44.0	52.6	395
65+	54.2	51.8	56.6	1,323	44.1	40.8	47.4	585
Education:								
<High School	31.1	25.6	37.2	246	61.4	52.7	69.5	142
High School	29.0	26.5	31.6	964	47.7	43.4	52.0	467
Some College	28.3	25.8	31.0	781	45.9	41.2	50.5	364
College Degree	24.3	22.4	26.4	795	40.2	36.0	44.6	320
Income:								
<\$15,000	39.4	34.3	44.8	421	62.9	55.1	70.0	268
\$15,000 - \$24,999	32.6	29.0	36.4	582	56.3	50.8	61.7	302
\$25,000 - \$49,999	30.1	27.6	32.7	812	43.7	39.3	48.1	358
\$50,000 - \$74,999	23.8	21.0	26.9	368	39.7	33.7	46.0	149
\$75,000 +	20.3	17.8	23.0	350	30.9	25.1	37.4	103
Race/Ethnicity:								
White, non-Hispanic	27.7	26.3	29.1	2,473	45.1	42.5	47.7	1,117
AI/AN*	27.8	22.8	33.4	179	62.2	52.3	71.3	109
Other or Hispanic**	24.5	18.7	31.5	126	NSD ^Δ			60
Disability:								
Disability	57.9	54.7	60.9	1,306	75.1	71.5	78.4	973
No Disability	18.8	17.6	20.1	1,474	21.0	18.5	23.7	317
Region:								
1- Eastern MT	29.4	26.2	32.9	351	36.3	30.6	42.5	150
2- N Central MT	29.7	26.5	33.1	461	47.1	41.0	53.4	211
3- S Central MT	27.2	24.1	30.5	394	48.5	42.2	54.8	189
4- Southwest MT	27.8	25.3	30.6	757	43.4	38.7	48.2	334
5- Northwest MT	26.1	23.7	28.5	814	49.2	44.7	53.7	404
MMSA-Billings	25.4	21.4	29.8	201	47.9	39.0	57.0	95
MMSA-Bozeman	21.7	18.0	25.9	179	38.3	30.0	47.4	68
MMSA-Butte	36.0	31.1	41.2	251	44.3	36.7	52.1	114
MMSA-Kalispell	24.4	20.5	28.8	191	51.9	43.1	60.5	89

† Ever been told by a health care professional that you have arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

Total Sample Size: 7,410, Weighted Prevalence Estimate: 200,600.

‡ Among adults with doctor diagnosed arthritis: Are you limited in doing your usual activities because of arthritis? Total Sample Size: 2,775, Weighted Prevalence Estimate: 91,900.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 15: Hypertension and High Cholesterol (Chol.), Montana Adults, 2009
(with 95% confidence intervals)

	Ever Told High Blood Pressure †				Chol. Checked within the Past 5 Yrs ‡				Ever Told High Chol. (adults ever tested) §			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL			LL	UL	
All Adults	27.7	26.4	29.1	2,761	72.0	70.1	73.8	5,999	36.5	34.9	38.2	2,681
Sex:												
Male	29.8	27.7	32.0	1,243	70.4	67.6	73.1	2,477	38.2	35.7	40.8	1,150
Female	25.7	24.1	27.4	1,518	73.5	70.9	76.0	3,522	35.0	33.0	37.0	1,531
Age:												
18 - 24	3.2	1.4	7.1	9	29.1	21.8	37.8	68	9.8	3.7	23.4	7
25 - 34	13.6	10.2	18.0	66	49.1	43.6	54.7	264	17.5	12.4	24.2	47
35 - 44	16.2	13.4	19.5	148	70.2	66.4	73.7	620	24.7	20.8	29.0	160
45 - 54	26.2	23.6	28.9	423	82.0	79.7	84.1	1,261	36.3	33.2	39.6	498
55 - 64	39.7	37.0	42.5	709	89.1	87.3	90.8	1,550	46.3	43.4	49.3	790
65+	56.8	54.4	59.1	1,392	92.6	91.3	93.8	2,209	50.9	48.4	53.4	1,166
Education:												
<High School	32.1	26.5	38.3	230	56.1	48.6	63.2	366	38.9	31.7	46.6	184
High School	29.2	26.7	31.9	980	64.9	61.2	68.6	1,820	39.2	36.2	42.3	885
Some College	26.2	23.9	28.7	754	72.2	68.6	75.5	1,695	35.4	32.4	38.5	717
College Degree	26.5	24.3	28.8	793	82.6	80.0	84.9	2,111	34.9	32.4	37.5	890
Income:												
<\$15,000	35.5	30.7	40.6	373	61.0	54.9	66.7	596	46.5	40.4	52.6	283
\$15,000 - \$24,999	32.3	28.8	35.9	586	64.9	60.0	69.4	1,008	39.4	35.1	43.7	504
\$25,000 - \$49,999	31.0	28.5	33.7	829	75.1	71.8	78.1	1,754	40.3	37.2	43.4	831
\$50,000 - \$74,999	26.5	23.4	29.8	377	76.5	72.3	80.2	986	32.4	29.0	36.1	404
\$75,000 +	19.5	17.1	22.3	326	79.7	75.4	83.4	1,143	30.3	27.2	33.7	411
Race/Ethnicity:												
White, non-Hispanic	27.7	26.3	29.2	2,408	73.4	71.4	75.3	5,343	36.6	34.9	38.3	2,398
AI/AN*	31.2	26.0	37.0	201	61.7	54.4	68.4	348	33.7	27.4	40.7	136
Other or Hispanic**	24.1	18.6	30.6	132	NSD ^Δ			269	35.4	27.9	43.6	123
Disability:												
Disability	45.8	42.8	48.8	1,063	79.1	76.0	82.0	1,711	47.0	43.9	50.2	901
No Disability	22.8	21.4	24.3	1,667	70.2	67.9	72.4	4,218	33.1	31.3	35.0	1,746
Region:												
1- Eastern MT	29.7	26.5	33.2	355	76.5	72.6	80.1	791	37.2	33.3	41.2	340
2- N Central MT	33.2	29.9	36.7	502	71.2	67.2	74.9	962	39.8	35.9	43.9	446
3- S Central MT	28.3	25.1	31.7	400	75.3	71.2	79.0	882	36.4	32.6	40.3	375
4- Southwest MT	25.1	22.7	27.6	701	72.0	68.0	75.7	1,626	35.2	32.3	38.2	724
5- Northwest MT	26.9	24.4	29.5	791	70.0	66.4	73.4	1,718	36.2	33.2	39.4	787
MMSA-Billings	28.8	24.5	33.4	231	76.4	71.0	81.1	506	35.9	30.9	41.2	211
MMSA-Bozeman	19.6	16.0	23.7	167	71.4	64.5	77.5	470	31.6	26.4	37.5	189
MMSA-Butte	32.5	27.8	37.7	235	71.7	65.1	77.5	456	42.1	36.6	47.7	226
MMSA-Kalispell	25.9	21.7	30.6	190	69.0	62.9	74.6	429	34.4	29.3	40.0	193

† Were you ever told by a health care professional that your blood pressure was high?

Total Sample Size: 7,607, Weighted Prevalence Estimate: 208,100.

‡ Had blood cholesterol checked in the past 5 years? Total Sample Size: 7,404, Weighted Prevalence Estimate: 522,000.

§ Were you ever told by a health care professional that your blood cholesterol was high? .

Total Sample Size: 6,380, Weighted Prevalence Estimate: 204,900

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 16: Cardiovascular Disease, Montana Adults, 2009

(with 95% confidence intervals)

	Ever Diagnosed w/ a Heart Attack †				Ever Diagnosed w/ Angina or CHD ‡				Ever Diagnosed w/ a Stroke §			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
All Adults	4.1	3.6	4.7	453	3.6	3.1	4.0	370	2.4	2.1	2.8	283
Sex:												
Male	5.5	4.6	6.6	265	4.8	4.1	5.7	219	2.4	1.9	3.0	112
Female	2.8	2.3	3.4	188	2.3	1.9	2.8	151	2.4	2.0	2.9	171
Age:												
18 - 24	NSD ^Δ			1	NSD ^Δ			0	NSD ^Δ			2
25 - 34	NSD ^Δ			0	NSD ^Δ			0	NSD ^Δ			2
35 - 44	1.8	0.9	3.5	12	1.2	0.5	2.7	7	0.3	0.1	1.0	4
45 - 54	2.6	1.8	3.7	44	2.8	1.9	4.0	40	2.1	1.3	3.2	31
55 - 64	4.9	3.8	6.4	87	4.6	3.5	6.1	77	2.6	1.8	3.6	52
65+	12.6	11.1	14.3	306	10.9	9.4	12.5	244	7.7	6.5	9.0	192
Education:												
<High School	8.2	5.7	11.6	62	6.7	4.4	10.1	47	3.4	2.1	5.5	33
High School	5.4	4.2	6.8	182	3.8	3.0	4.7	131	3.1	2.4	3.9	106
Some College	3.4	2.7	4.2	115	3.2	2.5	4.1	96	2.1	1.6	2.7	80
College Degree	2.6	2.0	3.3	93	3.0	2.3	3.8	96	1.7	1.2	2.3	62
Income:												
<\$15,000	8.3	6.3	10.9	93	7.1	5.1	9.8	74	6.4	4.7	8.5	71
\$15,000 - \$24,999	6.7	5.3	8.4	117	4.9	3.7	6.3	83	4.6	3.5	6.1	89
\$25,000 - \$49,999	4.4	3.5	5.5	120	4.1	3.3	5.1	116	2.4	1.8	3.2	70
\$50,000 - \$74,999	1.9	1.3	2.8	38	2.4	1.6	3.5	37	1.0	0.5	1.7	17
\$75,000 +	1.4	0.9	2.2	29	2.0	1.3	3.1	35	0.6	0.3	1.2	10
Race/Ethnicity:												
White, non-Hispanic	4.1	3.5	4.7	383	3.5	3.1	4.0	321	2.3	2.0	2.7	236
AI/AN*	4.5	3.1	6.4	43	3.0	1.9	4.7	29	2.6	1.5	4.3	26
Other or Hispanic**	5.0	2.8	8.6	23	4.0	2.0	8.0	16	3.5	1.9	6.2	18
Disability:												
Disability	9.8	8.4	11.4	251	8.2	6.8	9.8	188	5.9	4.8	7.2	162
No Disability	2.6	2.1	3.2	193	2.3	1.9	2.7	174	1.4	1.1	1.7	113
Region:												
1- Eastern MT	5.1	3.8	6.9	60	3.5	2.5	5.0	41	1.7	1.1	2.6	26
2- N Central MT	4.9	3.8	6.4	83	3.3	2.3	4.7	49	4.1	3.0	5.5	67
3- S Central MT	4.0	2.9	5.3	64	3.8	2.9	5.1	67	3.0	2.2	4.1	52
4- Southwest MT	4.3	3.1	6.0	114	3.2	2.5	4.1	87	1.8	1.3	2.4	59
5- Northwest MT	3.6	2.9	4.5	132	3.8	3.0	4.9	125	2.0	1.5	2.7	79
MMSA-Billings	3.8	2.5	5.6	34	3.3	2.2	5.0	31	3.1	2.1	4.5	32
MMSA-Bozeman	2.0	1.0	3.9	16	1.5	0.9	2.5	16	1.4	0.8	2.3	16
MMSA-Butte	5.7	4.1	7.9	45	2.9	1.9	4.5	25	1.9	1.1	3.1	19
MMSA-Kalispell	4.0	2.6	6.3	34	5.9	4.0	8.7	42	1.6	0.9	2.9	19

† Has a doctor ever told you that you had a heart attack? Total Sample Size: 7,577, Weighted Prevalence Estimate: 31,100.

‡ Has a doctor ever told you that you have angina or coronary heart disease (CHD)?

Total Sample Size: 7,537, Weighted Prevalence Estimate: 26,500.

§ Has a doctor ever told you that you had a stroke? Total Sample Size 7,597, Weighted Prevalence Estimate: 18,000.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Table 17: Diabetes and Pre-Diabetes, Montana Adults, 2009
(with 95% confidence intervals)

	Ever Diagnosed w/ Diabetes †				Ever Diagnosed w/ Pre-diabetes ‡			
	Wt.%	95% CI		UnWt. N	Wt.%	95% CI		UnWt. N
		LL	UL			LL	UL	
All Adults	6.8	6.2	7.4	746	5.8	5.1	6.6	496
Sex:								
Male	6.6	5.7	7.5	327	4.2	3.4	5.1	169
Female	7.0	6.1	7.9	419	7.5	6.4	8.7	327
Age:								
18 - 24	NSD ^Δ			1	3.2	1.4	7.1	10
25 - 34	1.7	0.9	3.3	14	3.9	2.4	6.3	30
35 - 44	3.4	2.3	5.0	37	5.0	3.7	6.9	56
45 - 54	5.7	4.5	7.3	101	5.9	4.6	7.5	95
55 - 64	10.7	9.1	12.5	197	8.7	7.1	10.5	138
65+	15.9	14.2	17.7	392	7.9	6.6	9.4	167
Education:								
<High School	9.3	6.9	12.4	86	7.4	4.3	12.6	40
High School	7.7	6.6	9.0	268	5.6	4.5	7.0	159
Some College	6.6	5.5	7.9	214	6.1	5.0	7.5	146
College Degree	5.4	4.5	6.5	177	5.4	4.4	6.8	151
Income:								
<\$15,000	12.2	9.7	15.2	144	8.0	5.9	10.7	72
\$15,000 - \$24,999	9.4	7.7	11.3	184	7.0	5.1	9.6	94
\$25,000 - \$49,999	8.2	6.9	9.7	218	5.0	4.0	6.3	131
\$50,000 - \$74,999	5.0	3.9	6.5	78	5.7	4.1	7.8	78
\$75,000 +	2.6	1.8	3.7	50	5.6	4.2	7.4	78
Race/Ethnicity:								
White, non-Hispanic	6.4	5.8	7.1	596	5.7	4.9	6.5	414
AI/AN*	15.4	11.7	20.1	101	9.1	6.3	12.9	47
Other or Hispanic**	5.9	4.0	8.8	45	6.5	4.2	10.0	34
Disability:								
Disability	14.1	12.4	16.1	350	10.4	8.6	12.5	201
No Disability	4.7	4.1	5.3	383	4.7	4.0	5.5	288
Region:								
1- Eastern MT	8.5	6.8	10.5	103	6.0	4.4	8.0	65
2- N Central MT	8.0	6.5	9.9	141	6.3	4.8	8.1	92
3- S Central MT	8.3	6.7	10.2	126	4.6	3.4	6.1	58
4- Southwest MT	5.8	4.8	6.9	180	6.6	5.2	8.4	134
5- Northwest MT	5.8	4.8	7.0	194	5.8	4.5	7.4	145
MMSA-Billings	7.9	6.0	10.3	69	3.9	2.6	5.7	30
MMSA-Bozeman	2.8	1.7	4.4	29	5.7	3.7	8.7	37
MMSA-Butte	7.9	5.8	10.7	64	7.1	4.9	10.3	41
MMSA-Kalispell	6.3	4.4	9.1	47	6.6	4.4	9.8	44

† Have you ever been told by a doctor you have diabetes?

Total Sample Size: 7,613, Weighted Prevalence Estimate: 51,000.

‡ Have you ever been told by a doctor you have pre-diabetes or borderline diabetes?

Includes women who were diagnosed with pre-diabetes only during pregnancy.

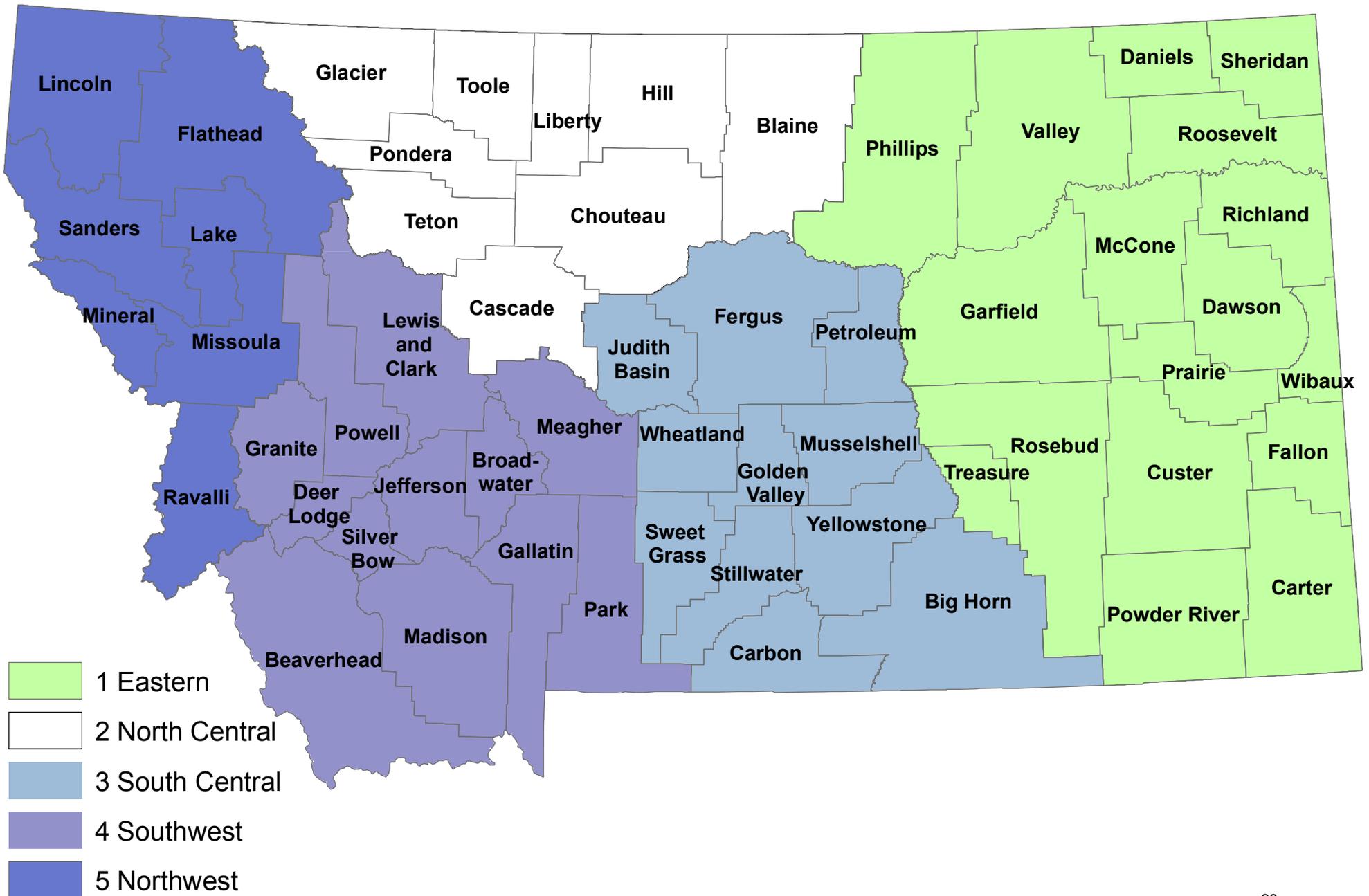
Total Sample Size: 6,862, Weighted Prevalence Estimate: 40,800.

* American Indian or Alaska Native only.

** All other non-White (including multiracial) or Hispanic.

Δ Not Sufficient Data to report a reliable estimate.

Appendix A: Montana Health Planning Regions



Appendix B. 2009 BRFSS Data Comparison Chart

2009 Health Indicator	U.S. 2009 Median (Range)	95% CI 2009 Wt% 95% CI	MMSA[1] Billings Wt% 95% CI	MMSA[2] Bozeman Wt% 95% CI	MMSA[3] Butte Wt% 95% CI	MMSA[4] Kalispell Wt% 95% CI	HP 1 Eastern Wt% 95% CI	HP 2 N. Cent. Wt% 95% CI	HP 3 S. Cent. Wt% 95% CI	HP 4 SW Wt% 95% CI	HP 5 NW Wt% 95% CI
<i>Access to Health Care:</i>											
No Health-care Coverage (18-64)	17.0 6.2 31.6	21.3 19.5 23.3	21.8 16.4 28.4	19.4 13.9 26.5	15.7 11.3 21.5	27.0 21.1 33.9	16.1 12.9 19.8	18.8 15.6 22.5	23.0 18.9 27.7	18.1 15.0 21.7	23.8 20.4 27.6
No Personal Health Care Provider	N/A	25.3 23.6 27.1	28.0 23.0 33.6	27.7 22.0 34.2	22.6 17.4 28.9	23.6 18.6 29.4	23.5 20.3 27.1	24.5 21.1 28.3	27.0 23.3 31.1	25.9 22.6 29.5	23.6 20.5 27.0
No Routine Checkup within past year[5]	N/A	42.3 40.5 44.1	44.7 39.5 50.0	43.8 37.3 49.6	38.6 32.8 44.7	45.5 39.9 51.3	43.3 39.4 47.3	39.2 35.5 43.1	42.7 38.7 46.7	41.7 38.3 45.3	42.8 39.4 46.3
<i>Health Status or Outcomes:</i>											
Fair or Poor General Health Status	14.6 10.1 30.9	14.5 13.3 15.8	14.2 11.3 17.6	9.6 5.8 15.5	19.0 15.1 23.5	16.8 13.2 21.2	14.6 12.3 17.3	17.6 15.1 20.4	14.1 11.8 16.8	12.8 10.7 15.1	13.8 11.9 15.9
Overweight[6]	36.2 38.7 51.6	38.4 36.7 40.1	37.0 32.2 42.0	43.4 37.2 49.8	41.3 35.1 47.1	36.1 31.1 41.4	40.3 36.4 44.2	38.2 34.4 42.2	38.0 34.3 41.9	37.4 34.2 40.8	38.9 35.7 42.2
Obese[7]	27.2 19.0 35.4	23.7 22.4 25.2	29.2 24.4 34.4	15.2 11.5 19.8	26.4 21.4 32.1	24.8 20.2 30.1	27.1 23.9 30.6	25.5 22.4 28.9	28.5 24.9 32.4	21.6 19.0 24.4	20.9 18.5 23.6
Ever had Heart Attack	4.0 1.5 6.5	4.1 3.6 4.7	3.8 2.5 5.6	2.0 1.0 3.9	5.7 4.1 7.9	4.0 2.6 6.3	5.1 3.8 6.9	4.9 3.8 6.4	4.0 2.9 5.3	4.3 3.1 6.0	3.6 2.9 4.5
Ever diagnosed w/ Angina or CHD	3.8 1.5 7.0	3.6 3.1 4.0	3.3 2.2 5.0	1.5 0.9 2.5	2.9 1.9 4.5	5.9 4.0 8.7	3.5 2.5 5.0	3.3 2.3 4.7	3.8 2.9 5.1	3.2 2.5 4.1	3.8 3.0 4.9
Ever had a stroke	2.4 1.4 3.9	2.4 2.1 2.8	3.1 2.1 4.5	1.4 0.8 2.3	1.9 1.1 3.1	1.6 0.9 2.9	1.7 1.1 2.6	4.1 3.0 5.5	3.0 2.2 4.1	1.8 1.3 2.4	2.0 1.5 2.7
Diabetes, Clinically Diagnosed	8.4 5.8 12.9	6.8 6.2 7.4	7.9 6.0 10.3	2.8 1.7 4.4	7.9 5.8 10.7	6.3 4.4 9.1	8.5 6.8 10.5	8.0 6.5 9.9	8.3 6.7 10.2	5.8 4.8 6.9	5.8 4.8 7.0
Currently have Asthma	8.8 4.4 11.1	8.1 7.3 9.1	8.6 6.2 11.7	4.9 3.4 7.1	10.4 6.8 15.4	6.3 4.3 9.1	6.3 4.5 8.8	11.0 8.7 13.7	8.0 6.2 10.3	8.7 7.0 10.9	7.0 5.6 8.8

[1] Metropolitan/Micropolitan Statistical Area (MMSA) for Billings, MT. Total Sample size N=503 adults in this MMSA

[2] Metropolitan/Micropolitan Statistical Area (MMSA) for Bozeman, MT. Total Sample size N=556 adults in this MMSA

[3] Metropolitan/Micropolitan Statistical Area (MMSA) for Butte, MT. Total Sample size N=556 adults in this MMSA

[4] Metropolitan/Micropolitan Statistical Area (MMSA) for Kalispell, MT. Total Sample size N=556 adults in this MMSA

[5] Visited a doctor for a routine checkup or general physical exam, not an exam for a specific injury, illness or condition

[6] Body Mass Index between 25.0 and 29.9 kg/m²

[7] Body Mass Index > 30 kg/m²

2009 Health Indicator	U.S. 2009 Median (Range)	MT 2009 Wt% 95% CI	MMSA Billings Wt% 95% CI	MMSA Bozeman Wt% 95% CI	MMSA Butte Wt% 95% CI	MMSA Kalispell Wt% 95% CI	HP 1 Eastern Wt% 95% CI	HP 2 N. Cent. Wt% 95% CI	HP 3 S. Cent. Wt% 95% CI	HP 4 SW Wt% 95% CI	HP 5 NW Wt% 95% CI
Health-Related Behaviors:											
No Leisure Time Physical Activity	24.2 15.8 45.6	22.0 20.7 23.4	23.5 19.4 28.2	18.0 13.2 24.1	24.3 20.1 29.2	17.2 13.3 22.1	31.5 28.0 35.1	27.6 24.4 31.1	23.7 20.6 27.1	20.3 17.6 23.2	17.7 15.5 20.2
Current Smoker[1]	17.9 6.4 25.6	16.8 15.5 18.2	18.9 15.0 23.6	10.9 7.1 16.5	22.7 17.8 28.5	12.6 9.4 16.7	15.4 12.9 18.3	20.4 17.6 23.5	18.6 15.6 22.0	15.8 13.2 18.9	15.4 13.1 18.1
Inadequate Fruit and Vegetable Consumption	76.5 68.5 85.4	74.3 72.8 75.8	72.9 68.2 77.2	69.0 63.3 74.2	80.2 75.5 84.3	70.4 65.1 75.3	77.7 74.1 80.9	75.9 72.5 78.9	72.6 68.8 76.1	74.9 71.9 77.7	73.1 70.1 75.9
Binge Drinking[2]	15.5 6.8 23.9	17.3 15.9 18.8	13.1 9.3 18.0	20.0 15.1 26.1	23.2 18.0 29.4	12.3 8.8 16.7	17.4 14.5 20.9	19.2 16.3 22.4	16.3 13.2 20.0	17.4 14.7 20.4	17.2 14.4 20.5
Heavy Drinking[3]	5.1 1.9 8.1	5.4 4.8 6.2	4.2 2.2 8.0	9.2 6.4 13.2	6.1 3.8 9.7	5.0 3.3 7.5	5.5 4.0 7.4	5.2 3.8 7.2	4.8 3.2 7.2	6.3 5.0 8.0	5.1 4.1 6.5
Screening and Immunizations:											
Blood Cholesterol Checked past 5 yrs	76.9 67.5 85.3	72.0 70.1 73.8	76.4 71.0 81.1	71.4 64.5 77.5	71.7 65.1 77.5	69.0 62.9 74.6	76.5 72.6 80.1	71.2 67.2 74.9	75.3 71.2 79.0	72.0 68.0 75.7	70.0 66.4 73.4
Influenza Immunization, within Past Year[4]	69.8 26.8 76.8	68.7 66.5 70.9	73.6 66.7 79.6	66.4 57.7 74.2	72.5 65.6 78.5	62.3 53.6 70.2	66.4 60.1 72.2	68.1 62.2 73.5	71.9 66.5 76.7	71.9 67.5 75.9	65.2 60.8 69.3
Ever Had Pneumococcal Immunization[4]	68.1 19.1 73.9	71.8 69.6 73.9	76.5 69.4 82.4	70.6 61.9 78.1	73.1 66.3 79.0	66.2 57.5 74.0	66.8 60.4 72.6	70.9 65.0 76.2	74.6 69.2 79.3	75.1 70.8 78.9	68.9 64.6 72.9

[1] Adults who reported ever smoking at least 100 cigarettes and who currently smoke every day or some days during the time of the survey.

[2] Adults who reported having five or more drinks on at least one occasion within the past 30 days of the survey.

[3] Males who consume more than 2 alcoholic drinks per day; females who consume more than 1 alcoholic drink

[4] All adults aged 65 and older

Appendix C: Data Use Permission and Contact Information

BRFSS data provided in this report and on the website are in the public domain and may be used without further permission. However, if you use or publish any of this data, please give credit to the Montana BRFSS.

The suggested citation is:

Data Source: Montana Department of Health and Human Services, Public Health and Safety Division, Behavioral Risk Factor Surveillance System (BRFSS, [year(s) of the study]).

If you publish Montana BRFSS data in any brochure, newsletter or other publication, we would appreciate receiving a copy of the publication. Send copies to:

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Please contact the BRFSS office for assistance if you have any questions about the data, its meaning or interpretation.