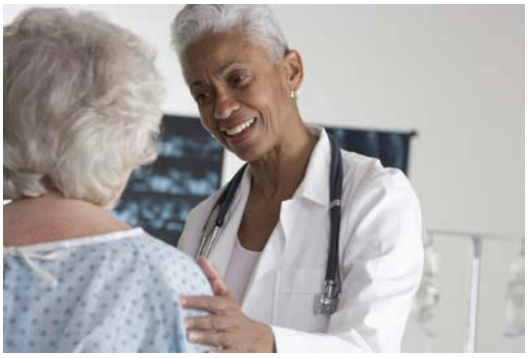
West Virginia Behavioral Risk Factor Surveillance System Report

2011

WEST VIRGINIA Department of Health & Human Resources

Bureau for Public Health
Health Statistics Center
350 Capitol Street, Room 165
Charleston, WV 25301

Earl Ray Tomblin, Governor
Karen L. Bowling, Cabinet Secretary

WEST VIRGINIA

BEHAVIORAL RISK FACTOR

SURVEILLANCE SYSTEM REPORT

2011

Earl Ray Tomblin
Governor

Karen L. Bowling
Cabinet Secretary
Department of Health and Human Resources

Joyce Spiroff
Acting Commissioner
Bureau for Public Health

Michael Mills, MD
Acting State Health Officer
Bureau for Public Health

Teresa Frazier, MD
Deputy State Health Officer
Bureau for Public Health

Anne Williams, RN, BSN, MS-HCA
Deputy Commissioner
Bureau for Public Health

Daniel M. Christy, MPA
Director
Health Statistics Center

Report Prepared By

Birgit A. Shanholtzer, MA
Senior Epidemiologist

Division of Behavioral Surveillance Staff

Fred King, Division Director
John McLaury, Programmer/Analyst

2011 BRFSS Interviewers

Sandra Johnson, Gale Ardman, Vickie Hairston, Norman Jackson,
Sarah Elliott, Deborah Pack, Mima Chapman, Annemarie Barnes,
Linda Maxwell, Newman Jackson, Laura Elswick,
Michael Hunter, Betty Wilson, Kimberly Shrader,
Jasmine Handley, Carolyn J. Hunter, Claudia Hudson-Sims

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EXECUTIVE SUMMARY

INTRODUCTION

Each year since 1984, the West Virginia Behavioral Risk Factor Surveillance System has measured a range of risk factors that can affect our health. This report presents state survey results for the year 2011 as well as county data combined for the latest available five years (typically 2007 through 2011).

The survey is conducted by telephone and represents a collaborative effort between the West Virginia Health Statistics Center (WVHSC) and the Centers for Disease Control and Prevention (CDC) in Atlanta. Standardized survey methods are provided by CDC. All 50 states, the District of Columbia, and several U.S. territories now participate in the system, known as the Behavioral Risk Factor Surveillance System (BRFSS).

The information in this document serves as a resource for governments, business leaders, schools, and community groups, all of which are helping to shape the health of West Virginia.

HIGHLIGHTS OF FINDINGS

Health Status

- West Virginia ranked 2nd highest nationally in reporting the general health of adults as either "fair" or "poor."
- Over one-fourth of West Virginia adults (25.1%) consider their health to be either "fair" or "poor."
- "Fair" or "poor" health is most common among groups of adults who are the oldest, have the lowest educational attainment, and have the lowest household income.
- Approximately 17.6% reported poor physical health for at least 14 days in the past 30 days and 15.3% reported poor mental health at least 14 days in the past 30 days.

Health Care Access

- About one-fourth of West Virginia adults age 18 to 64 have no health care coverage (25.0%).
- Among adults of all ages, slightly less than one-fifth needed medical care within the past 12 months and could not afford it (19.8%).
- More than one-fifth of all adults also do not have a specific personal doctor or health care provider (23.9%).
- One-fourth of West Virginia adults did not have a routine checkup in the past year (25.1%).

Physical Inactivity

- Over one-third of West Virginia adults (35.1%) participate in no leisure-time physical activity or exercise.
- The prevalence of physical inactivity was significantly higher among women than men.
- Approximately 57.0% did not meet aerobic exercise recommendations and 79.8% did not meet muscle strengthening recommendations.

Nutrition

- Nine out of every 10 adults (91.7%) consume fewer than the recommended five servings of fruits and vegetables each day which ranked West Virginia highest in the nation.
- The highest prevalence was found among those with less education and lower income.

Obesity and Overweight

- The obese proportion of the adult population was 32.4%, 3rd highest nationally.
- Approximately two-thirds (68.9%) of West Virginia adults were either obese or overweight.
- Only 22.4% had been advised by a health care professional to lose weight.

Tobacco Use

- More than one-fourth of adults (28.6%) smoke every day or some days which ranked West Virginia the 2nd highest nationally.
- Approximately 53.0% of smokers had tried to quit smoking in the past year.
- West Virginia ranked the 4th highest in smokeless tobacco use in the nation (7.5%).

Hypertension

- West Virginia ranked the 6th highest nationally in the prevalence of hypertension (high blood pressure).
- More than a third of the state's adults (37.0%) have been diagnosed with high blood pressure.
- The prevalence of high blood pressure increased steeply and significantly with increasing age, as would be expected, with 60.8% of West Virginia seniors having hypertension.
- Approximately 84.3% of adults with hypertension currently take medication, the highest in the nation.

Cholesterol

- Approximately 83.3% of West Virginia adults have had their cholesterol level checked.
- About 40.5% of adults had high cholesterol.
- Similar to hypertension, high cholesterol is more prevalent among older adults and those with low levels of educational attainment and low annual household income.

Alcohol Consumption

- The prevalence of binge drinking was 10.1%, the 2nd lowest in the nation.
- The heavy drinking prevalence was 3.9%, the 2nd lowest in the nation.
- In West Virginia, 68.2% of adults did not drink at all in the past month, compared with 44.9% nationally.

Seat Belt Use

- Approximately 82.5% of West Virginia adults always wear a seat belt when they drive or ride in a car.
- Women have a significantly higher prevalence of seat belt use than men.

Immunization

- About half of all adults (55.3%) and 31.5% of seniors had not had a flu immunization in the past 12 months.
- About 68.7% of all adults and 35.6% of seniors never had a pneumonia shot.

Cardiovascular Disease

- West Virginia ranked the 2nd highest in the nation in the prevalence of heart attack among adults at 6.2%.
- West Virginia also ranked highest in the prevalence of angina or coronary heart disease among adults (6.7%).
- For the prevalence of stroke among adults, West Virginia ranked 5th highest nationally (3.8%).
- The overall cardiovascular disease prevalence was highest in the nation at 12.3%.

Diabetes

- Approximately 7.6% of West Virginia adults had borderline or pre-diabetes.
- More than 1 in 10 West Virginia adults had diabetes (12.0%) and ranked West Virginia 4th highest nationally.
- The prevalence of diabetes was highest among those aged 65 and older, those with less than a high school education, and those with the lowest income.
- Among those with diabetes, 81.0% had 2 or more doctor visits in the past year, 67.5% check their glucose daily, and 43.6% have taken a diabetes education class.
- Among those with diabetes, 20.0% have retinopathy or diabetes associated eye problems.

Cancer

- Approximately 6.3% of West Virginia adults had skin cancer and 7.8% had some other type of cancer.
- About 1 in 10 West Virginia adults are cancer survivors (12.7%).
- Cancer prevalence is significantly higher among females than males.
- About one-fifth of WV seniors had cancer during their lives (27.7%).

Asthma

- Approximately 12.0% of West Virginia adults had ever been diagnosed with asthma.
- About 9.2% of West Virginia adults currently had asthma.
- Women had significantly higher prevalence of both lifetime and current asthma than men.
- The prevalence of current asthma was highest among those without a high school diploma and those with an annual household income of less than $15,000.

Chronic Obstructive Pulmonary Disease

- The prevalence of chronic obstructive pulmonary disease or COPD in West Virginia was 8.8%, the 4th highest in the nation.
- Approximately 20.8% of those with COPD were admitted to the hospital or visited the ER because of their COPD.
- About 44.2% of those with COPD saw a doctor in the past year due to a flare up of their COPD symptoms.
- Among those with COPD, 75.6% say the COPD affects quality of life.

Arthritis

- More than 1 in 3 WV adults have arthritis (35.9%) which ranked West Virginia highest in the nation.
- Approximately 56.5% of those with arthritis reported that they were limited due to arthritis.
- Among those with arthritis, 46.1% reported that arthritis affected their work and 27.7% reported it affected their social activities.

Disability

- West Virginia had the highest disability prevalence nationwide.
- Nearly one-third of adults were disabled because of a physical, mental, or emotional problem (31.4%).
- About 11.2% of West Virginia adults use special equipment such as a cane, a wheelchair, a special bed, or a special telephone, which ranks West Virginia the 2nd highest in the nation.

Kidney Disease

- The prevalence of kidney disease in West Virginia was 2.8%.
- Kidney disease prevalence was highest among seniors, those with low educational attainment, and those with low annual household income.

Vision Impairment

- Approximately 19.0% of West Virginia adults had vision impairment which is defined as vision problems in one or both eyes even when wearing glasses.
- The prevalence of vision impairment was highest among adults 65 and older, those with low educational attainment, and those with low annual household income.

Depression

- About 20.1% of West Virginia adults had depression which was significantly higher than the U.S. prevalence of 16.8%.
- The prevalence of depression was significantly higher among women than men.

Cognitive Impairment

- The prevalence of cognitive impairment, defined as confusion or memory loss that is happening more often or is getting worse, was 7.2% in West Virginia.
- Among those with cognitive impairment, 39.4% discussed it with their doctor.
- Among those with cognitive impairment, 48.5% are getting treatment in the form of therapy or medication.
- Among those with cognitive impairment, 21.9% gave up household activities and 27.4% reported it interfered with work or social activities in the past year.
- Among those with cognitive impairment, 11.7% had been diagnosed with Alzheimer's Disease and 16.8% had been diagnosed with dementia.

HIV Testing

- More than one-fourth of adults in West Virginia have been tested for HIV (27.6%).
- The prevalence of HIV testing was highest among those aged 25-34.
- Approximately 2.3% of West Virginia adults are at high risk of contracting HIV based on their behavior.

End of Life Care

- Almost two-thirds of West Virginia adults (65.6%) do not have a living will or a medical power of attorney.
- While 83.5% reported that it was important to talk to family and their doctor about end of life care, 64.6% have discussed the topic with their family and only 15.7% have discussed it with their doctor.

Comorbidities

- About 1 in 4 West Virginia adults (20.4%) were both disabled and had arthritis.
- Approximately 16.9% of adults were obese and had hypertension.
- About 1 in 8 West Virginia adults (12.9%) were obese and did not exercise.
- Approximately 9.7% of adults were current smokers and had no health care coverage.
- Seven percent of West Virginia adults were obese and had diabetes.
- Only 3.8% of West Virginia adults had both cardiovascular disease and diabetes.

ESTIMATED NUMBER OF PERSONS AT RISK

Table I below shows selected risk factor rates and the corresponding numbers of West Virginians who are estimated to be at risk. Data are shown for the latest available year.

Table ES.1 Percentage and number of persons estimated at risk due to selected risk factors (among adults aged 18 and older or appropriate subset): WVBRFSS 2011

Risk Factor	Year	Percentage Estimated at Risk[a]	Number Estimated at Risk[a]
Self-rated general health is fair or poor	2011	25.1	365,501
No health care coverage, ages 18-64	2011	25.0	287,057
Unable to afford needed medical care	2011	19.8	289,257
No personal doctor or health care provider	2011	23.9	349,070
No routine medical checkup in past year	2011	25.1	364,125
No leisure-time exercise	2011	35.1	508,801
Fewer than 5 servings of fruit/vegetables per day	2011	91.7	1,240,143
Obesity (BMI 30.0+)	2011	32.4	446,036
Overweight (BMI 25.0-29.9)	2011	36.5	502,639
Current cigarette smoking	2011	28.6	417,107
Smokeless tobacco use	2011	7.5	109,819
High blood pressure	2011	37.0	540,201
High cholesterol (among those ever checked)	2011	40.5	472,181
Binge drinking	2011	10.1	144,489
Heavy drinking	2011	3.9	56,196
No flu vaccination in past year	2011	55.3	796,845
Never had a pneumonia vaccination (ages 65 and older)	2011	35.6	105,527
Have had a heart attack	2011	6.2	90,196
Have angina or coronary heart disease	2011	6.7	96,716
Have had a stroke	2011	3.8	56,202
Have any form of cardiovascular disease	2011	12.3	178,335
Diabetes	2011	12.0	175,416
Cancer	2011	12.7	185,224
Lifetime asthma	2011	12.0	174,266
Current asthma	2011	9.2	133,552
Chronic obstructive pulmonary disease (COPD)	2011	8.8	128,952
Arthritis	2011	35.9	522,533
Disability	2011	31.4	453,892
Kidney disease	2011	2.8	41,513
Vision impairment	2011	19.0	277,760
Depression	2011	20.1	293,382
Cognitive impairment	2011	7.2	102,286
At high risk for developing HIV	2011	2.3	33,070
Do not have a living will nor a medical power of attorney	2011	65.6	926,989

a. The percentages and numbers of persons estimated to be at risk are subject to sampling error. Please refer to the confidence intervals presented in the chapters of this report for a more complete perspective. In addition, the risk estimates were derived from population estimates available at the end of the data collection period. Later estimates of the same population may result in different estimated numbers of persons at risk.

DEFINITIONS OF COMMON TERMS

Risk Factor

A risk factor is a health-related behavior or practice that has been shown to increase the probability of developing a condition or disease. This report presents West Virginia prevalence estimates for selected risk factors.

Prevalence

Prevalence is the percentage of the population having a particular condition or characteristic or practicing a certain health-related behavior. This report presents the results of the Behavioral Risk Factor Surveillance Survey (BRFSS) in West Virginia as a series of prevalence estimates for selected risk factors. Prevalence can also be calculated as a rate or frequency.

Confidence Intervals

Confidence intervals (CIs) reflect sampling error. They are presented as upper and lower boundary values surrounding the prevalence estimate; the true value of the estimate can be expected to fall within this range with a confidence of 95%.

Significant

Significant is the term used to describe prevalence estimates that have been tested and found to be statistically different. In this report, a difference is said to be significant when the 95% confidence intervals (CIs) associated with each of the prevalence estimates do not overlap. In other words, it can be stated with 95% certainty that the difference found between the two prevalence estimates is not a random occurrence. Identifying differences as significant can detect changes in prevalence over time and direct attention to characteristics associated with a particular health condition or risk behavior. In this report, adjectives such as slight, minor, and little may be used to describe less reliable differences, those for which the confidence intervals do overlap. See Methodology on page 5 for additional discussion.

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INTRODUCTION

Personal health practices have been shown to be important determinants of overall health. Unhealthy behaviors such as smoking, overeating, or lack of exercise can lead to the chronic diseases that cause more than 50% of all deaths in the United States. Other practices, such as getting vaccinated or wearing seatbelts, have a positive effect by preventing disease and unintentional injury. It is clear that the adoption of healthier lifestyles can reduce the suffering, disability, and economic burden imposed by illness and extend life expectancy in West Virginia and the nation.

The Behavioral Risk Factor Surveillance System (BRFSS) was established by the U.S. Centers for Disease Control and Prevention (CDC) based in Atlanta in order to permit states to determine the prevalence of certain health risk factors and health conditions among their adult populations. West Virginia, through the West Virginia Bureau for Public Health (WVBPH) of the West Virginia Department of Health and Human Resources, became 1 of the 15 initial participants in 1984. Since then, the system has expanded to include all 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

The technique of interviewing a random sample of state residents by telephone offers quality control advantages and is a faster, more cost-effective way of obtaining this information than in-person interviews. Over time, trends that occur in risk factors can be monitored. Participation in the BRFSS has the additional benefit of permitting states to compare their data to each other and to the nation with estimates derived using the same methodologies. The data can be used by public health professionals and researchers to identify high-risk groups, establish health policy and priorities, and monitor the impact of health promotion efforts.

Twenty-one reports have been published by the WVBPH presenting survey results of the state's participation in the BRFSS since 1984. This report focuses on the 2011 risk factor prevalence estimates and compares them to the years 1984 through 2011. Table I.1 on the following page shows topics that have been included in the last 10 years of surveillance, many of which are examined in the present report.

Table I.1 Topics administered in the survey: WVBRFSS, 2002-2011

Topic	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Seatbelt use	x						x		x	x
Hypertension	x	x		x		x		x		x
Cholesterol	x	x		x		x		x		x
Leisure-time physical activity	x	x	x	x	x	x	x	x	x	x
Obesity	x	x	x	x	x	x	x	x	x	x
Cigarette use	x	x	x	x	x	x	x	x	x	x
Smokeless tobacco use	x	x	x				x		x	x
Alcohol consumption	x	x	x	x	x	x	x	x	x	x
Weight control		x						x		x
Fruits & vegetables	x	x		x		x		x		x
Diabetes	x	x	x	x	x	x	x	x	x	x
Routine checkup				x	x	x	x	x	x	x
Breast cancer screening	x		x		x		x		x	
Cervical cancer screening	x		x		x		x		x	
Prostate cancer screening	x		x		x		x		x	
Excess sun exposure	x	x	x							
AIDS/HIV	x	x	x	x	x	x	x	x	x	x
Cancer survivors								x	x	x
Immunization	x	x	x	x	x	x	x	x	x	x
Health insurance	x	x	x	x	x	x	x	x	x	x
Health status	x	x	x	x	x	x	x	x	x	x
Colorectal cancer screening	x		x		x		x		x	
Oral health	x		x		x		x		x	
Emotional support/Life satisfaction				x	x	x	x	x	x	
Firearm ownership	x		x							
Asthma	x	x	x	x	x	x	x	x	x	x
Sleep								x	x	
Disability		x	x	x	x	x	x	x	x	x
Cardiovascular disease	x	x	x	x	x	x	x	x	x	x
Veteran status			x	x	x	x	x	x	x	x
Osteoporosis			x				x			
Arthritis		x	x	x		x		x	x	x
Intimate partner violence					x	x				
Visual impairment and access to eye care						x				
Sexual violence							x			
Falls							x		x	
Drinking and driving							x		x	
HPV vaccine							x		x	

METHODOLOGY

The survey is conducted by the method known as Computer Assisted Telephone Interviewing (CATI) and represents a collaborative effort between the WVHSC and CDC. The WVHSC provides telephones, office space, interviewers, and supervision of the data collection. Financial assistance, a standardized set of core questions and survey protocols, computer-assisted telephone interviewing software, data processing services, and analytic consultation are provided by CDC.

A prepared introductory statement and the core questions were developed and tested in the field by CDC. The interviews take approximately 15-20 minutes. In addition to behavioral risk factors and certain health conditions, they cover standard demographic characteristics and selected preventive health practices. A very limited number of questions of topical interest may be added by individual states to the survey.

Phone calls and interviews are conducted by the WVHSC for approximately a two- to three-week period each month. The monthly interview schedule reduces the possibility of bias because of seasonal variations in certain lifestyles. To assure maximum response rates, calls are made weekdays from noon to 9:00 p.m., Saturdays from 10:00 a.m. to 7:00 p.m., and Sundays from 2:00 p.m. to 6:00 p.m.

SAMPLE SELECTION

The sample was selected by random digit dialing (RDD). Telephone directories are not relied upon since they do not include unlisted or new numbers. From 1984 through 1998, sampling was conducted in a multistage cluster design based on the Mitofsky-Waksberg Sampling Method for Random Digit Dialing. Since 1999, the sampling method known as Disproportionate Stratified Sampling (DSS) has been used. Both methods eliminate many unassigned and business phone numbers from the selection process.

According to 2011 state-level estimates from the National Health Interview Survey, 97.5% of West Virginia households have telephones, with 59.6% of households having landline telephones. In addition, a growing number of adults (25.7%) live in wireless-only households. In order to better represent these latter residents, the 2011 West Virginia dataset includes, for the first time, data from interviews conducted by cell phone. The addition of cell phone only households improves coverage of certain population groups including the young and those with lower socioeconomic status. CDC provides banks of telephone numbers (landline and cell phone) that are presumed to contain household numbers. Calls were made until each number resulted in a completed interview or a refusal or was disqualified. A number was disqualified if it was nonresidential or nonworking, if there was no eligible respondent available during the survey, if the selected respondent was unable to communicate, or if the number had been called at least 15 times without success (encompassing a minimum of three attempts each during afternoons, evenings, and weekends). Within each household, the actual respondent was chosen randomly to avoid possible biases related to the time of day and household telephone answering preferences. Since the number of adult residents and the number of telephone lines may differ from household to household, resulting in different probabilities of being selected, data were weighted to compensate for this bias.

DEMOGRAPHIC CHARACTERISTICS OF THE WV BRFSS SAMPLE

The demographic characteristics of the samples in 2011, both unweighted and weighted to the WV population, are presented in Table M.1. Data were weighted according to the process described later in this chapter in order to more accurately estimate the actual prevalence of behavioral risk factors in the adult population of West Virginia.

Table M.1 Demographic summary: WVBRFSS, 2011

Demographic Characteristic	Number of Interviews	Percent of Unweighted Sample	Percent of Weighted Sample
Total	**5,282**	**100.0**	**100.0**
Sex			
Male	2,072	39.2	48.5
Female	3,210	60.8	51.5
Race/Ethnicity			
White, Non-Hispanic	4,952	94.0	94.0
Black, Non-Hispanic	135	2.6	3.4
Other	182	3.4	2.6
Age			
18-24	256	4.9	11.9
25-34	545	10.4	15.5
35-44	675	12.9	16.0
45-54	969	18.5	18.3
55-64	1,204	23.0	17.2
65+	1,597	30.4	20.9
Education			
< High School	754	14.3	17.9
HS or GED	2,132	40.4	40.5
Some College	1,292	24.5	25.4
College Degree	1,094	20.8	16.1
Household Income			
<$15,000	682	15.4	14.6
$15,000-$24,999	1,012	22.9	22.5
$25,000-$34,999	785	17.7	17.0
$35,000-$49,999	701	15.9	16.0
$50,000-$74,999	566	12.8	13.7
$75,000+	678	15.3	16.2
Marital Status			
Married	2,808	53.3	53.4
Divorced	877	16.6	12.5
Widowed	779	14.8	8.7
Separated	100	1.9	1.7
Never Married	610	11.6	20.2
Unmarried Couple	97	1.8	3.6
Employment Status			
Employed for wages	2,108	40.0	45.8
Self-Employed	229	4.3	4.5
Unemployed (>1 year)	117	2.2	2.8
Unemployed (<1 year)	119	2.3	3.1
Homemaker	467	8.9	8.6
Student	83	1.6	3.3
Retired	1,444	27.4	19.3
Unable to Work	707	13.4	12.5

LIMITATIONS

The target population consists of civilian, non-institutionalized persons 18 years of age and older who reside in households with telephones, including those with landlines and/or cell phones. Some questions in the questionnaire also pertain to children who live in such households. State residents who do not fit the target population are not represented in prevalence estimates.

Self-reported behavior obtained by telephone must be interpreted with caution. The validity of survey results depends on the accuracy of the responses given by the persons interviewed. This may be affected by the ability to recall past behavior. For example, individuals may not accurately recall fruit and vegetable intake or exercise levels. In addition, respondents may have a tendency to understate behaviors known to be unhealthy, socially unacceptable, or illegal. For example, a person may not accurately report their weight. These biases may vary depending on the specific risk factor.

Other sources of bias may result from greater difficulty in contacting some persons, from higher refusal rates, or from lower telephone coverage (including either landlines or cell phones). Given the possibility that persons not interviewed for these reasons may behave differently from the general population, estimates for the population based on the survey sample may be biased. Weighting of the data is conducted in order to correct for over- or underrepresentation of these groups.

Finally, breaking down the data into smaller categories decreases the sample size of the individual strata, thereby decreasing the power to determine statistically significant differences. Prevalence rates based on denominators of fewer than 50 responses are considered statistically unreliable.

ESTIMATES, CONFIDENCE INTERVALS, SIGNIFICANCE, AND RELIABILITY

The prevalence rates presented in this report are derived from surveying a sample of adults rather than all adults in the population; therefore, the rates are estimates of the true values. For this reason, estimates are presented together with their associated confidence intervals. A confidence interval is a range of values around an estimate, which reflects sampling error and represents the uncertainty of the estimate. This report presents 95% confidence intervals (95% CI)[1]. Therefore, we can be 95% confident that the confidence interval contains the true value that we are estimating.

Significant is the term used in this report to describe when prevalence estimates have been tested and found to be significantly different from each other. Statistically significant differences between estimates are traditionally determined using statistical tests such as a t-test or chi-square test. However, this report uses the following more conservative method for determining significance. Two prevalence estimates are said to be "significantly" different when the 95% confidence intervals (CIs) associated with each of the estimates do not overlap.

Reliability refers to the precision of an estimate. If an estimate is termed reliable, there is confidence that the same, or a very similar, estimate would be obtained if the survey were to be repeated within the same time period. Estimates that are determined to be unreliable may not reflect the true prevalence and should be reported and interpreted with caution. Throughout this report, unreliable estimates are noted with this message: "Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5."

[1] Confidence intervals were derived from the surveyfreq procedure in SAS, a commonly used statistical software package. This procedure estimates sample variances (which are used to calculate confidence intervals) for complex sample designs.

Based on CDC recommendations, estimates in this report were termed unreliable if any of the three following conditions were met:

1) The estimate is based on responses from fewer than 50 respondents in the subsample or denominator of the prevalence estimate calculation.
2) The 95% confidence interval of the estimate has a width or range greater than 20 (e.g., 95% CI = 10.0-30.5).
3) The estimate has a relative standard error (RSE) of 30.0% or higher. The RSE is obtained by dividing the standard error of the estimate by the estimate itself. It is calculated by the SAS software.

WEIGHTING OF 2011 DATA RESULTS

Beginning in 2011, CDC changed the weighting procedures for the BRFSS. Prior to 2011, weights for the BRFSS data were calculated based on the sex and age distribution of the WV population, using a method known as post-stratification. For 2011 and future years, BRFSS weights will be calculated using a method known as iterative proportional fitting or raking. This weighting method takes into account additional demographic factors allowing for a better fit to West Virginia's socio-demographic profile. The additional factors used in the raking method include age group by sex, detailed race/ethnicity, education, marital status, tenure (rent or own home), gender by race/ethnicity, age group by race/ethnicity, and telephone sample source (landline or cell phone). Due to the addition of cell phone data and the new weighting methodology, 2011 results are not comparable to previous years. Although time trend graphs for state prevalence estimates are included in this report, they should be interpreted with caution as no direct comparison can be made to 2011 data. Any changes between 2011 and previous years' data cannot be directly interpreted due to unknown comparability ratios.

COUNTY-LEVEL DATA

County prevalence rates were calculated by using five (5) years of aggregated BRFSS data. The data were reweighted to be representative of the Census 2010 age and sex population distribution by county. In previous years, some counties were grouped due to small sample sizes. For the first time ever, all counties have an individual prevalence estimate. In this report, county estimates were compared to the total West Virginia estimate for the same time period. This method better identifies disparities between counties. It also clearly identifies counties in need of health promotion interventions. The county maps included in this report classify counties according to the degree of difference from the West Virginia prevalence. County estimates, rankings, and statistical comparison to overall West Virginia estimates can be found in Appendix B.

PRESENTATION OF RESULTS

In the sections that follow, the prevalence data are presented in a variety of ways, including by state rank, yearly state and national prevalence, and demographic variables. It should be stressed that the risk factor prevalence estimates for the demographic variables (age, sex, education, and income) show the percentages of persons **within the group** – not in the total survey sample – who report the behavior being examined. This method of presenting risk factor prevalence facilitates identification of at-risk populations for health promotion efforts. Each table shows the number of respondents (# Resp.) who answered the question, the weighted prevalence estimate (%), and the 95% confidence interval for the prevalence (95% CI).

Prevalence estimates were calculated by excluding unknown and/or refused responses from the denominators. Consequently, estimates may be slightly higher than would have been the case had the

unknown/refused responses been included. In editions of this report before 2003, many estimates representing the years 1984 through 1996 were calculated by including unknown responses. In the present report, all such rates have been re-calculated to exclude unknown responses. Therefore, discrepancies may exist between the time trends and appendices in this report and those in older editions.

The risk factor sections also include West Virginia's rank among the BRFSS participants. For example, if hypertension-related questions were administered by all 52 BRFSS participants, ranking 1st in hypertension would mean having the highest prevalence of hypertension while ranking 52nd would mean having the lowest prevalence. Some questions are not asked of all BRFSS participants. In these cases, the rankings are not presented. In addition, readers should note that differences between states often are less than one percentage point and that statistical significance was not tested when determining rankings. The prevalence estimates and rankings by state were calculated by Health Statistics Center staff. State and county prevalence estimates and rankings for many risk factors are presented in Appendices A and B.

CHAPTER 1: HEALTH STATUS

General Health

Definition

Responding "Fair" or "Poor" to the question "Would you say that in general your health is: Excellent, Very Good, Good, Fair, or Poor?"

Prevalence

WV: 25.1% (95% CI: 23.7-26.5)
U.S.: 18.2% (95% CI: 17.9-18.4)
West Virginia's prevalence was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among 52 BRFSS participants.

Gender

Men: 24.0% (95% CI: 21.9-26.1)
Women: 26.1% (95% CI: 24.3-27.9)
There was no gender difference in the prevalence of fair or poor general health status.

Age

Reports of fair or poor health increased significantly with age. The prevalence ranged from a low of 11.1% among the youngest adults to a high of 34.7% among the oldest.

Education

Adults with less than a high school education had the highest prevalence of fair or poor health, with a prevalence of nearly 45%. Those with more education had a much lower prevalence, with the prevalence for college graduates of 8.8%. Differences in prevalence were significant between every educational bracket.

Household Income

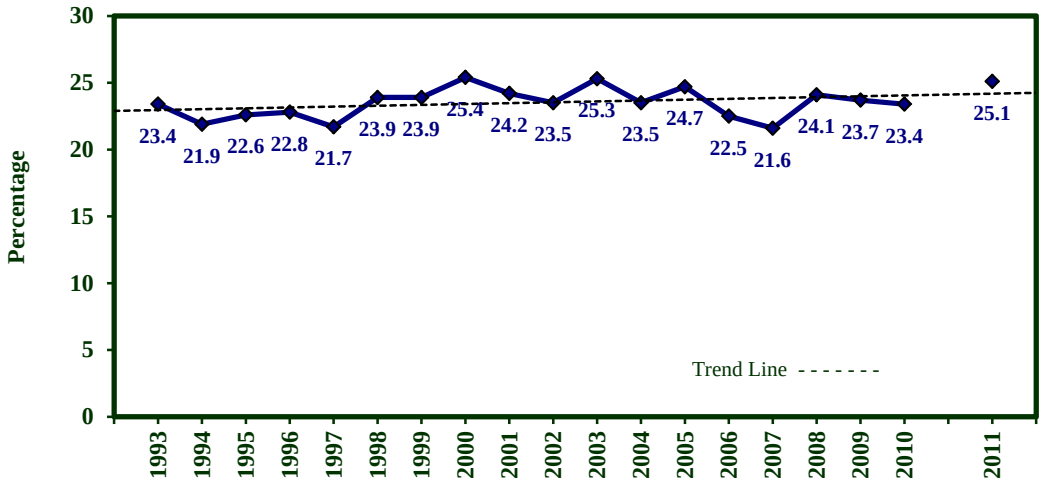
Fair or poor health was experienced by approximately 1 of every 2 adults in the lowest income group (less than $15,000 annually). The lowest prevalence was among those in the highest income bracket of $75,000 or more (7.7%). There were significant differences in prevalence between almost every income group.

Table 1.1 Fair or poor health by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,065	**24.0**	21.9-26.1	3,203	**26.1**	24.3-27.9	5,268	**25.1**	23.7-26.5
Age									
18-24	101	***7.7**	1.9-13.4	154	**14.8**	7.7-21.9	255	**11.1**	6.5-15.7
25-34	237	**11.0**	6.7-15.4	308	**15.3**	10.9-19.7	545	**13.1**	10.1-16.2
35-44	279	**19.4**	14.6-24.3	394	**22.5**	17.9-27.1	673	**21.0**	17.6-24.3
45-54	393	**30.7**	25.4-35.9	569	**26.4**	22.3-30.6	962	**28.5**	25.2-31.8
55-64	481	**35.8**	31.0-40.7	721	**32.8**	28.9-36.8	1,202	**34.3**	31.2-37.5
65+	566	**33.1**	28.7-37.5	1,029	**35.8**	32.5-39.1	1,595	**34.7**	32.0-37.3
Education									
Less than H.S.	282	**41.8**	35.1-48.6	467	**48.1**	42.3-53.9	749	**45.0**	40.5-49.5
H.S. or G.E.D.	831	**25.4**	22.1-28.8	1,296	**30.0**	27.1-32.8	2,127	**27.7**	25.5-29.9
Some Post-H.S.	473	**18.8**	15.1-22.5	815	**16.2**	13.5-18.9	1,288	**17.3**	15.1-19.5
College Graduate	474	**7.9**	5.4-10.4	620	**9.6**	6.7-12.4	1,094	**8.8**	6.8-10.7
Income									
Less than $15,000	229	**52.1**	44.1-60.0	448	**49.5**	43.6-55.4	677	**50.6**	45.8-55.4
$15,000- 24,999	352	**37.0**	31.2-42.8	658	**36.0**	31.6-40.5	1,010	**36.5**	32.9-40.1
$25,000- 34,999	297	**24.8**	19.4-30.3	487	**25.4**	20.9-29.8	784	**25.1**	21.6-28.6
$35,000- 49,999	310	**15.2**	10.2-20.2	391	**11.1**	7.8-14.4	701	**13.2**	10.2-16.2
$50,000- 74,999	271	**12.0**	7.7-16.4	293	**13.4**	8.6-18.1	564	**12.6**	9.4-15.8
$75,000+	328	**8.7**	5.3-12.1	350	**6.6**	3.8-9.3	678	**7.7**	5.5-9.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 1.1 Fair or poor health by year: WVBRFSS, 1993-2011

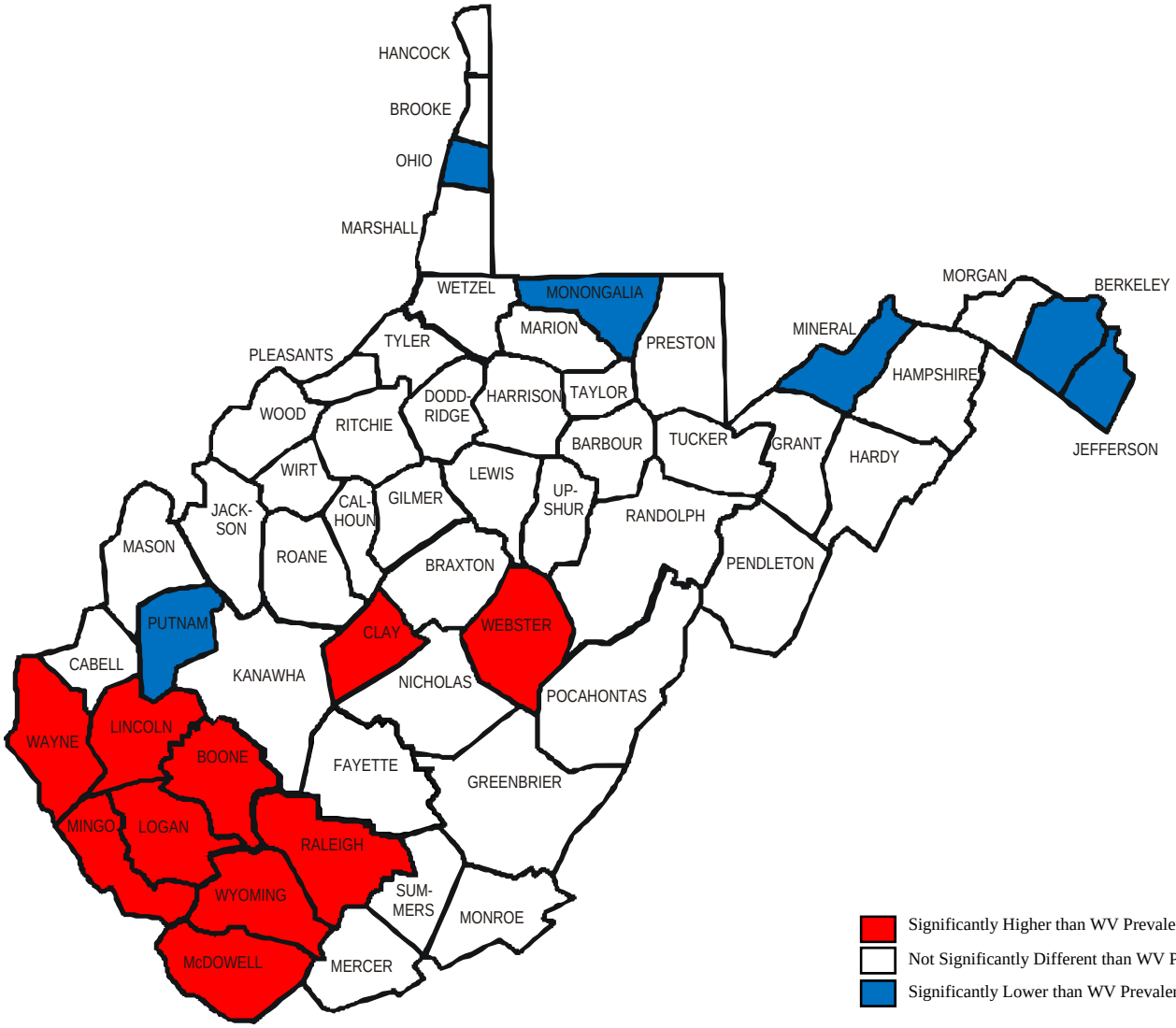


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 1.2 Fair or poor health by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 16.1%

WV Prevalence (2007-2011) – 23.6%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Physical Health

Definition

Responding at least "14 days" to the question "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"

Prevalence

WV: 17.6% (95% CI: 16.3-18.8)
U.S.: 12.2% (95% CI: 12.0-12.4)
West Virginia ranked the highest among 52 BRFSS participants. West Virginia's prevalence was significantly higher than the U.S. prevalence of poor physical health.

Gender

Men: 16.6% (95% CI: 14.8-18.5)
Women: 18.4% (95% CI: 16.8-20.0)
There was no gender difference in the prevalence of poor physical health.

Age

Reports of poor physical health increased significantly with age until age 65 where it declined. The prevalence ranged from a low of 8.7% among the youngest adults to a high of 23.8% among those aged 55-64.

Education

Adults with less than a high school education had the highest prevalence of poor physical health, with a prevalence of 28%. Those with more education had a lower prevalence, with the prevalence for college graduates of 7.7%. Differences were significant between every educational bracket except between those with a high school education and those with some college.

Household Income

Poor physical health was experienced by 33.7% of adults in the lowest income group (less than $15,000 annually) and 5.8% in the highest income bracket ($75,000 or more). This was a statistically significant difference in the prevalence of poor physical health.

Table 1.2 Poor physical health by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,037	**16.6**	14.8-18.5	3,146	**18.4**	16.8-20.0	5,183	**17.6**	16.3-18.8
Age									
18-24	102	***7.7**	0.9-14.5	153	**9.8**	4.6-15.0	255	**8.7**	4.4-13.1
25-34	235	**6.3**	3.1-9.5	306	**12.9**	8.6-17.1	541	**9.5**	6.9-12.2
35-44	279	**12.5**	8.5-16.5	390	**20.4**	16.1-24.8	669	**16.5**	13.5-19.4
45-54	387	**23.5**	18.7-28.2	570	**21.3**	17.4-25.2	957	**22.4**	19.3-25.4
55-64	474	**27.8**	23.2-32.4	708	**19.8**	16.4-23.2	1,182	**23.8**	20.9-26.7
65+	552	**18.5**	14.8-22.3	993	**22.0**	19.1-24.8	1,545	**20.5**	18.2-22.8
Education									
Less than H.S.	273	**29.6**	23.1-36.0	447	**26.4**	21.5-31.4	720	**28.0**	23.9-32.0
H.S. or G.E.D.	821	**14.7**	12.1-17.3	1,276	**21.5**	19.0-24.1	2,097	**18.1**	16.2-19.9
Some Post-H.S.	468	**16.9**	13.2-20.5	804	**15.1**	12.3-17.8	1,272	**15.9**	13.6-18.1
College Graduate	471	**7.2**	4.7-9.7	614	**8.1**	5.6-10.7	1,085	**7.7**	5.9-9.4
Income									
Less than $15,000	224	**34.8**	27.6-42.0	440	**32.7**	27.6-37.9	664	**33.7**	29.4-38.0
$15,000- 24,999	342	**22.8**	18.0-27.7	644	**24.1**	20.0-28.1	986	**23.5**	20.4-26.6
$25,000- 34,999	295	**18.9**	13.8-23.9	481	**16.7**	12.9-20.4	776	**17.7**	14.6-20.8
$35,000- 49,999	308	**12.8**	7.1-18.5	390	**12.0**	8.4-15.6	698	**12.4**	9.0-15.8
$50,000- 74,999	269	**9.8**	5.7-13.9	291	**13.7**	8.3-19.1	560	**11.6**	8.2-14.9
$75,000+	325	**6.1**	3.5-8.8	346	**5.5**	2.9-8.1	671	**5.8**	4.0-7.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Mental Health

Definition

Responding at least "14 days" to the question "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"

Prevalence

WV: 15.3% (95% CI: 14.1-16.5)
U.S.: 12.0% (95% CI: 11.8-12.2)
The WV prevalence of poor mental health was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 12.5% (95% CI: 10.7-14.2)
Women: 17.9% (95% CI: 16.3-19.6)
The prevalence of poor mental health was significantly higher among females than males.

Age

The prevalence of poor mental health varied with age. The prevalence of poor mental health was highest among those aged 45-54 (21%) and lowest among those aged 65 and older (10.2%).

Education

Adults with less than a high school education had the highest prevalence of poor mental health, with a prevalence of 23.3%. Those with more education had a lower prevalence, with the prevalence for college graduates of 8.9%. Differences were significant between every educational bracket except between those with a high school education and those with some college.

Household Income

Poor mental health was experienced by almost 1 of every 3 adults (30.9%) in the lowest income group (less than $15,000 annually). The lowest prevalence occurred for those in the highest income bracket of $75,000 or more (8.4%).

Table 1.3 Poor mental health by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,041	**12.5**	10.7-14.2	3,155	**17.9**	16.3-19.6	5,196	**15.3**	14.1-16.5
Age									
18-24	101	***11.4**	3.6-19.2	150	**18.4**	11.2-25.5	251	**14.8**	9.5-20.1
25-34	236	**12.0**	7.6-16.4	302	**21.6**	16.4-26.7	538	**16.7**	13.3-20.1
35-44	277	**9.0**	5.5-12.4	389	**19.2**	14.9-23.5	666	**14.1**	11.3-16.9
45-54	394	**20.4**	15.8-25.0	565	**21.6**	17.8-25.4	959	**21.0**	18.0-24.0
55-64	468	**13.7**	10.2-17.1	714	**17.3**	14.0-20.5	1,182	**15.5**	13.1-17.9
65+	557	**7.9**	5.3-10.4	1,008	**12.0**	9.7-14.3	1,565	**10.2**	8.5-11.9
Education									
Less than H.S.	278	**19.7**	14.6-24.8	452	**26.8**	21.5-32.1	730	**23.3**	19.6-27.0
H.S. or G.E.D.	817	**11.9**	9.0-14.8	1,274	**17.6**	15.2-20.0	2,091	**14.7**	12.8-16.6
Some Post-H.S.	468	**11.9**	8.5-15.3	808	**16.9**	13.9-19.8	1,276	**14.7**	12.5-16.9
College Graduate	473	**6.8**	4.1-9.5	616	**11.0**	7.6-14.3	1,089	**8.9**	6.7-11.1
Income									
Less than $15,000	226	**27.9**	21.1-34.7	440	**33.3**	27.5-39.2	666	**30.9**	26.4-35.4
$15,000- 24,999	344	**15.4**	11.2-19.6	649	**23.6**	19.6-27.6	993	**20.0**	17.0-22.9
$25,000- 34,999	297	**14.7**	9.7-19.6	483	**15.0**	11.5-18.5	780	**14.8**	11.9-17.8
$35,000- 49,999	307	**6.8**	3.9-9.7	388	**11.3**	7.5-15.2	695	**9.0**	6.6-11.5
$50,000- 74,999	268	**5.0**	2.5-7.5	291	**14.3**	9.2-19.5	559	**9.2**	6.4-11.9
$75,000+	327	***7.5**	1.9-13.1	345	**9.4**	5.8-13.1	672	**8.4**	4.9-11.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Poor Health Limitations

Definition

Responding to the question "During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?"

Prevalence

At least 14 days

WV: 21.6% (95% CI: 19.8-23.5)
U.S.: 15.3% (95% CI: 15.1-15.6)
West Virginia ranked the 2nd highest among 52 BRFSS participants and was significantly higher than the U.S. prevalence.

Every day

WV: 10.4% (95% CI: 9.2-11.7)
U.S.: 7.5% (95% CI: 7.3-7.7)
West Virginia ranked the 4th highest among 52 BRFSS participants and was significantly higher than the U.S. prevalence.

Gender

At least 14 days

Men: 24.0% (95% CI: 20.7-27.2)
Women: 19.8% (95% CI: 17.7-21.9)
There was no gender difference in the prevalence of poor health limitations for at least 14 days in past 30 days.

Every day

Men: 12.1% (95% CI: 9.9-14.3)
Women: 9.2% (95% CI: 7.8-10.6)
There was no gender difference in the prevalence of poor health limitations every day in past 30 days.

Age

The prevalence of poor health limitations increased significantly with age for the every day indicator but peaked among the 45-54 age group for the 14 day indicator.

Education

In general, the prevalence of poor health limitations was highest among those with the least amount of education and lowest among those with the most education for both the 14 day and every day indicators.

Household Income

The prevalence of poor health limitations varied somewhat for income level but generally declined with increasing annual household income for both the 14 day and every day indicators.

Table 1.4 Poor health limitations at least 14 days in past 30 days by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	961	**24.0**	20.7-27.2	1,826	**19.8**	17.7-21.9	2,787	**21.6**	19.8-23.5
Age									
18-24	49	***10.2**	0.0-22.7	92	***9.1**	2.3-15.9	141	***9.6**	2.7-16.6
25-34	104	***7.6**	2.6-12.7	196	**12.1**	7.3-16.9	300	**10.3**	6.8-13.8
35-44	138	**23.2**	15.8-30.6	247	**22.7**	17.0-28.5	385	**22.9**	18.4-27.5
45-54	207	**37.8**	30.3-45.2	359	**21.7**	16.9-26.6	566	**28.9**	24.5-33.2
55-64	240	**31.9**	25.3-38.4	411	**23.0**	18.5-27.5	651	**27.2**	23.2-31.1
65+	221	**25.3**	18.9-31.7	512	**25.8**	21.6-30.0	733	**25.6**	22.0-29.2
Education									
Less than H.S.	157	**38.9**	29.9-48.0	291	**32.3**	25.7-38.9	448	**35.3**	29.9-40.7
H.S. or G.E.D.	397	**22.3**	17.1-27.5	758	**22.0**	18.7-25.3	1,155	**22.1**	19.2-25.1
Some Post-H.S.	215	**22.6**	16.7-28.5	482	**14.3**	11.2-17.5	697	**17.3**	14.4-20.3
College Graduate	189	**9.4**	5.3-13.4	293	**7.0**	3.8-10.1	482	**8.1**	5.6-10.6
Income									
Less than $15,000	153	**44.4**	35.1-53.8	313	**37.9**	31.3-44.6	466	**40.7**	35.2-46.3
$15,000- 24,999	198	**29.1**	22.4-35.9	416	**23.1**	18.2-28.0	614	**25.6**	21.6-29.5
$25,000- 34,999	149	**21.4**	13.8-29.0	282	**15.2**	10.8-19.6	431	**17.9**	13.7-22.0
$35,000- 49,999	125	**19.7**	11.8-27.6	201	**12.3**	7.5-17.0	326	**15.5**	11.1-19.8
$50,000- 74,999	110	***5.6**	1.8-9.4	136	**14.6**	7.6-21.6	246	**9.7**	5.8-13.7
$75,000+	116	***17.6**	4.4-30.8	169	***3.9**	0.9-7.0	285	***10.2**	3.5-16.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Table 1.5 Poor health limitations every day in past 30 days by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	961	**12.1**	9.9-14.3	1,826	**9.2**	7.8-10.6	2,787	**10.4**	9.2-11.7
Age									
18-24	49	***2.7**	0.0-7.8	92	***1.8**	0.0-4.2	141	***2.2**	0.0-4.9
25-34	104	***5.1**	0.7-9.6	196	***3.0**	0.8-5.1	300	**3.9**	1.6-6.1
35-44	138	**8.4**	3.6-13.1	247	**10.9**	6.6-15.2	385	**9.9**	6.7-13.1
45-54	207	**14.8**	9.7-19.9	359	**9.8**	6.4-13.2	566	**12.0**	9.1-15.0
55-64	240	**19.5**	13.7-25.3	411	**11.3**	8.0-14.7	651	**15.2**	11.9-18.4
65+	221	**18.3**	12.6-24.0	512	**14.9**	11.6-18.3	733	**16.2**	13.2-19.2
Education									
Less than H.S.	157	**22.6**	15.3-30.0	291	**14.6**	10.3-18.9	448	**18.2**	14.1-22.3
H.S. or G.E.D.	397	**9.7**	6.9-12.5	758	**10.3**	7.9-12.6	1,155	**10.0**	8.2-11.8
Some Post-H.S.	215	**10.9**	6.6-15.2	482	**7.1**	5.0-9.3	697	**8.5**	6.4-10.6
College Graduate	189	**5.3**	2.4-8.2	293	***2.5**	0.6-4.5	482	**3.8**	2.1-5.5
Income									
Less than $15,000	153	**24.4**	16.7-32.1	313	**18.3**	13.6-23.1	466	**21.0**	16.7-25.3
$15,000- 24,999	198	**12.4**	8.0-16.8	416	**9.8**	6.6-13.0	614	**10.8**	8.3-13.4
$25,000- 34,999	149	**8.6**	4.3-12.9	282	**7.3**	4.3-10.3	431	**7.9**	5.4-10.4
$35,000- 49,999	125	**13.6**	6.7-20.6	201	***5.2**	2.0-8.3	326	**8.8**	5.3-12.3
$50,000- 74,999	110	***2.6**	0.0-5.2	136	***6.5**	1.6-11.3	246	***4.4**	1.7-7.0
$75,000+	116	***7.3**	1.9-12.6	169	***0.9**	0.0-2.1	285	***3.8**	1.3-6.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 2: HEALTH CARE ACCESS

No Health Care Coverage (among adults 18 to 64)

Definition

Responding "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, or Indian Health Service?" The results reported for this section have been limited to adults aged 18-64.

Prevalence

WV: 25.0% (95% CI: 23.2-26.9)
U.S.: 21.8% (95% CI: 21.5-22.1)
The prevalence of no health care coverage among those aged 18-64 was significantly higher in West Virginia than in the U.S. West Virginia ranked the 12th highest among 52 BRFSS participants.

Gender

Men: 26.9% (95% CI: 24.0-29.9)
Women: 23.1% (95% CI: 20.8-25.4)
There was no gender difference in the prevalence of no health care coverage for those aged 18-64.

Age

The prevalence of no health care coverage was significantly higher among those aged 18-44 compared with those aged 55-64.

Education

There was a significant difference in the prevalence of no health coverage between each level of education. Those with less than a high school education had the highest prevalence of no health coverage (42.9%) while those with a college degree had the lowest prevalence of no health coverage (10.1%).

Household Income

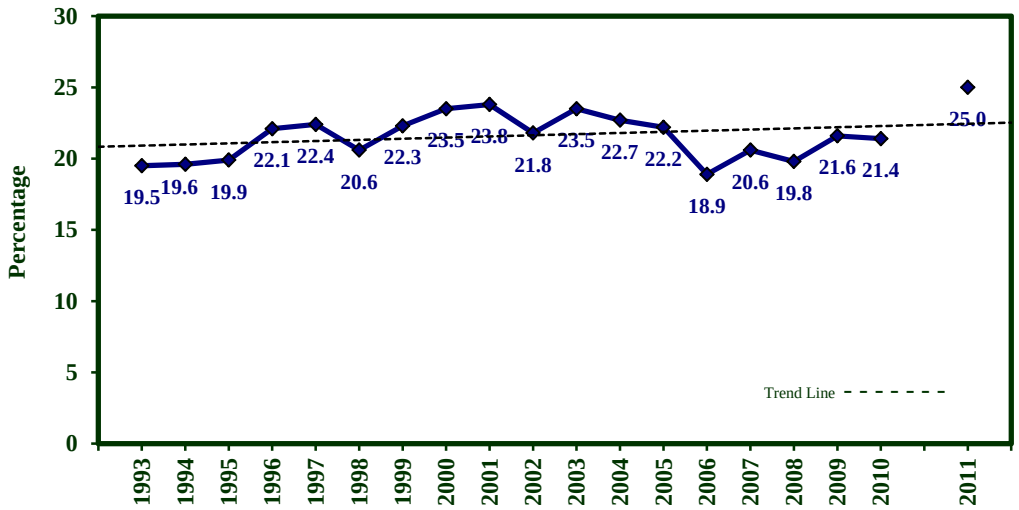
The prevalence of lack of health care coverage was significantly higher among low income groups than among those with high income. Nearly 1 in 2, or 45.4%, of those with incomes less than $15,000 per year had no health care coverage. In contrast, only 6.6% of those making more than $75,000 per year had no health care coverage.

Table 2.1 No health care coverage among adults aged 18-64 by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,494	**26.9**	24.0-29.9	2,149	**23.1**	20.8-25.4	3,643	**25.0**	23.2-26.9
Age									
18-24	100	***39.8**	28.6-50.9	154	**27.6**	18.8-36.5	254	**33.8**	26.6-41.0
25-34	236	**37.0**	29.9-44.1	308	**35.0**	29.1-40.8	544	**36.0**	31.4-40.6
35-44	280	**22.8**	16.9-28.7	395	**18.3**	14.2-22.5	675	**20.6**	16.9-24.2
45-54	397	**22.2**	17.5-26.9	571	**22.5**	18.6-26.4	968	**22.4**	19.3-25.4
55-64	481	**17.5**	13.5-21.4	721	**14.6**	11.8-17.4	1,202	**16.0**	13.6-18.5
Education									
Less than H.S.	173	**50.7**	41.8-59.6	237	**34.3**	26.2-42.4	410	**42.9**	36.8-49.0
H.S. or G.E.D.	617	**28.8**	24.1-33.5	787	**25.4**	21.9-28.9	1,404	**27.2**	24.2-30.3
Some Post-H.S.	360	**18.0**	13.5-22.4	625	**22.8**	18.9-26.8	985	**20.7**	17.8-23.7
College Graduate	342	**11.1**	7.2-15.0	497	**9.2**	6.2-12.1	839	**10.1**	7.7-12.5
Income									
Less than $15,000	172	**50.9**	41.9-59.8	293	**40.4**	33.2-47.6	465	**45.4**	39.7-51.1
$15,000- 24,999	239	**46.3**	38.8-53.7	387	**42.9**	37.1-48.8	626	**44.5**	39.8-49.2
$25,000- 34,999	190	**21.0**	14.3-27.8	320	**24.7**	19.2-30.3	510	**23.0**	18.6-27.3
$35,000- 49,999	215	**22.8**	14.3-31.4	293	**12.8**	8.0-17.6	508	**17.9**	12.8-22.9
$50,000- 74,999	215	**11.2**	4.7-17.7	243	***6.2**	2.1-10.3	459	**8.9**	4.9-13.0
$75,000+	279	***8.3**	2.0-14.5	320	***4.8**	1.0-8.7	599	**6.6**	2.8-10.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 2.1 No health care coverage among adults aged 18-64 by year: WVBRFSS, 1993-2011

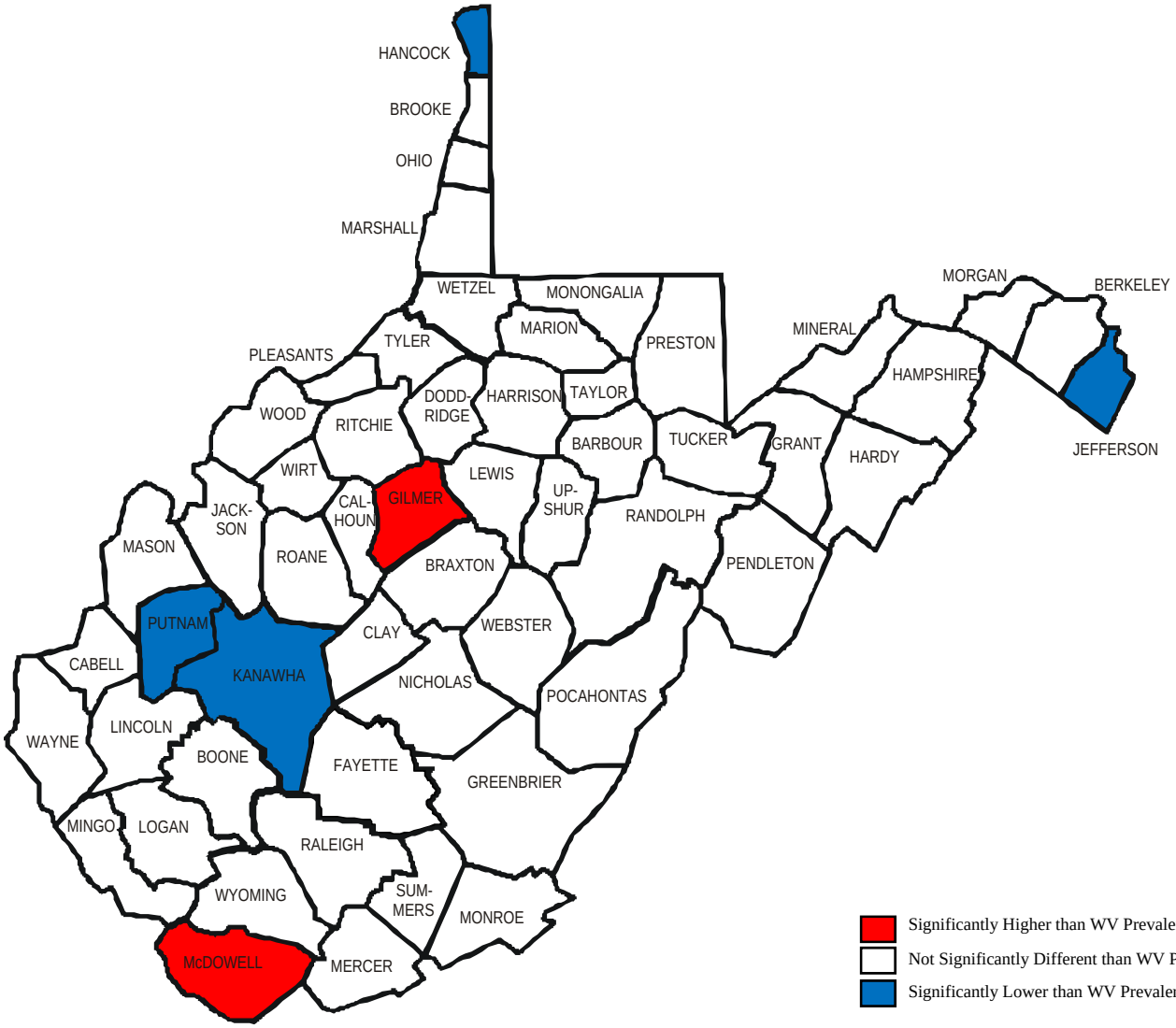


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 2.2 No health care coverage among adults aged 18-64 by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 18.2%

WV Prevalence (2007-2011) – 21.7%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

PEIA Coverage

Definition

Responding "Yes" to the question "Earlier you said that you have health care coverage. Is the coverage through PEIA?" Note: PEIA refers to Public Employees Insurance Agency.

Prevalence

WV: 16.1% (95% CI: 14.8-17.3)
Because this was a state added question, there are no national data for comparison.

Gender

Men: 14.8% (95% CI: 13.0-16.7)
Women: 17.1% (95% CI: 15.4-18.9)
There is no gender difference in the prevalence of PEIA coverage.

Age

The prevalence of PEIA coverage was highest among those aged 55-64 and was significantly higher than the prevalence of PEIA coverage among those aged 25-44 and 65 and older.

Education

Adults with a college degree had the highest prevalence of PEIA coverage and was significantly higher than all other education groups.

Household Income

The lowest prevalence of PEIA coverage (8.0%) was among those with incomes less than $15,000 per year. This prevalence of was significantly lower than all income groups earning $25,000 per year or more.

Table 2.2 PEIA coverage by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,662	**14.8**	13.0-16.7	2,645	**17.1**	15.4-18.9	4,307	**16.1**	14.8-17.3
Age									
18-24	44	***8.1**	0.2-16.1	103	**20.3**	10.9-29.7	147	**15.3**	8.7-21.9
25-34	148	**10.1**	5.5-14.6	195	**14.0**	8.4-19.6	343	**12.1**	8.4-15.7
35-44	222	**13.7**	9.0-18.5	306	**13.5**	9.5-17.5	528	**13.6**	10.5-16.7
45-54	303	**13.8**	9.8-17.8	439	**21.6**	17.2-26.1	742	**17.8**	14.8-20.9
55-64	399	**22.9**	18.3-27.5	604	**20.0**	16.5-23.5	1,003	**21.4**	18.5-24.3
65+	540	**14.1**	11.0-17.2	977	**14.9**	12.4-17.4	1,517	**14.5**	12.6-16.5
Education									
Less than H.S.	202	**5.4**	2.1-8.7	362	**8.2**	4.9-11.6	564	**6.9**	4.6-9.3
H.S. or G.E.D.	642	**14.2**	11.3-17.1	1,054	**14.5**	11.9-17.2	1,696	**14.4**	12.4-16.3
Some Post-H.S.	394	**13.2**	9.5-16.9	664	**16.3**	12.8-19.8	1,058	**14.9**	12.4-17.5
College Graduate	421	**25.8**	21.1-30.5	562	**32.0**	27.2-36.8	983	**29.0**	25.6-32.3
Income									
Less than $15,000	142	***5.5**	1.7-9.3	326	**9.6**	5.0-14.3	468	**8.0**	4.7-11.2
$15,000- 24,999	235	**9.4**	5.4-13.4	480	**14.0**	10.4-17.5	715	**12.1**	9.4-14.8
$25,000- 34,999	253	**13.9**	9.1-18.8	389	**16.9**	12.3-21.4	642	**15.4**	12.1-18.8
$35,000- 49,999	264	**24.4**	18.5-30.3	354	**23.3**	18.6-28.0	618	**23.8**	20.1-27.5
$50,000- 74,999	247	**20.9**	15.5-26.3	276	**20.3**	14.6-26.0	523	**20.6**	16.7-24.6
$75,000+	305	**15.7**	11.5-19.9	332	**21.9**	16.3-27.5	637	**18.6**	15.1-22.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Could Not Afford Needed Medical Care

Definition

Responding "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 cost?"

Prevalence

WV: 19.8% (95% CI: 18.5-21.2)
U.S.: 17.0% (95% CI: 16.7-17.2)
The West Virginia prevalence of could not afford needed medical care was significantly higher than the national prevalence. West Virginia ranked the 9th highest among 52 BRFSS participants.

Gender

Men: 17.5% (95% CI: 15.5-19.6)
Women: 22.0% (95% CI: 20.2-23.8)
The prevalence of could not afford needed medical care was significantly higher among women than men.

Age

The 25-34 age group experienced the highest prevalence of could not afford needed medical care and those aged 65 and older had the lowest prevalence. The difference between these two age groups was statistically significant.

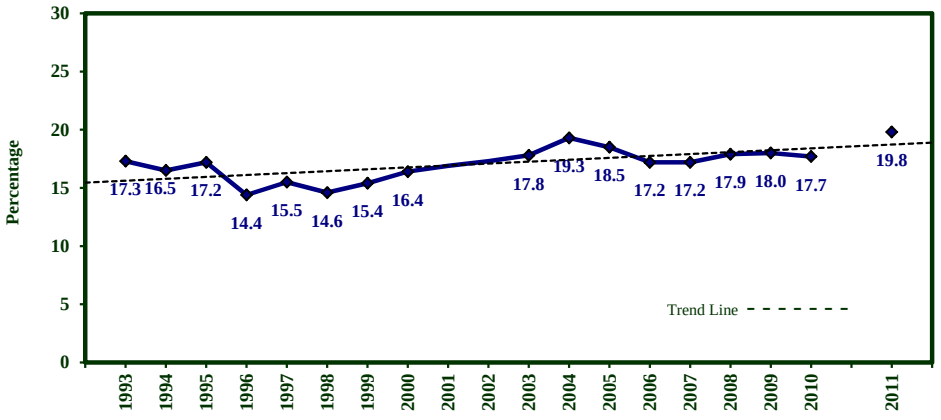
Education

Adults with less than a high school education had a significantly higher prevalence of could not afford needed medical care than all other adults. College graduates had a significantly lower prevalence of having problems affording needed health care than those with any lower level of education.

Household Income

The prevalence of could not afford needed medical care became steadily higher as household income declined. The prevalence of could not afford needed medical care was 3.5% for those earning $75,000 per year or more and 36.4% for those earning less than $15,000 per year.

Figure 2.3 Could not afford needed medical care by year: WVBRFSS, 1993-2011



NOTE: Data not available for the years 2001-2002.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Table 2.3 Could not afford needed medical care in past year by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,069	**17.5**	15.5-19.6	3,205	**22.0**	20.2-23.8	5,274	**19.8**	18.5-21.2
Age									
18-24	102	**21.7**	13.2-30.2	154	**26.1**	18.1-34.1	256	**23.8**	17.9-29.7
25-34	237	**22.9**	16.6-29.2	307	**32.7**	27.0-38.5	544	**27.7**	23.5-32.0
35-44	279	**23.3**	17.9-28.8	394	**28.5**	23.4-33.6	673	**26.0**	22.2-29.7
45-54	397	**20.3**	15.9-24.8	572	**26.1**	22.0-30.2	969	**23.3**	20.2-26.3
55-64	482	**14.8**	10.9-18.7	721	**20.1**	16.9-23.3	1,203	**17.5**	15.0-20.0
65+	564	**4.7**	2.9-6.5	1,029	**7.0**	5.1-8.9	1,593	**6.0**	4.7-7.3
Education									
Less than H.S.	282	**29.7**	23.2-36.2	468	**26.5**	21.1-32.0	750	**28.1**	23.9-32.3
H.S. or G.E.D.	834	**18.0**	14.7-21.2	1,295	**22.7**	19.9-25.5	2,129	**20.3**	18.1-22.5
Some Post-H.S.	474	**15.3**	11.6-19.0	818	**23.6**	20.2-27.0	1,292	**20.0**	17.5-22.5
College Graduate	474	**6.0**	3.5-8.6	619	**11.8**	8.5-15.0	1,093	**8.9**	6.8-11.0
Income									
Less than $15,000	230	**41.1**	33.4-48.8	450	**32.6**	26.9-38.3	680	**36.4**	31.7-41.1
$15,000- 24,999	353	**29.6**	23.8-35.4	657	**35.8**	31.2-40.4	1,010	**33.0**	29.4-36.7
$25,000- 34,999	298	**16.1**	10.9-21.2	487	**26.5**	21.6-31.5	785	**21.6**	18.0-25.2
$35,000- 49,999	309	**11.5**	6.6-16.4	391	**14.8**	10.6-19.1	700	**13.1**	9.9-16.4
$50,000- 74,999	272	**10.4**	4.9-16.0	294	**13.3**	8.5-18.1	566	**11.7**	8.0-15.4
$75,000+	328	***2.0**	0.4-3.7	350	**5.2**	2.7-7.8	678	**3.5**	2.0-5.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

No Personal Doctor or Health Care Provider

Definition

Responding "No" to the question "Do you have one person you think of as your personal doctor or health care provider?"

Prevalence

WV: 23.9% (95% CI: 22.3-25.5)
U.S.: 22.0% (95% CI: 21.8-22.3)
The prevalence of no personal doctor was similar for West Virginia and the U.S. West Virginia ranked the 21st highest among 52 BRFSS participants.

Gender

Men: 29.5% (95% CI: 26.9-32.1)
Women: 18.7% (95% CI: 16.9-20.5)
The prevalence of not having a personal doctor or health care provider was significantly higher for men than for women.

Age

In general, the prevalence of no personal doctor declined as age increased. The youngest age group, those aged 18-24, had the highest prevalence of no personal doctor (47.7%). The oldest age group (65 and older) had a relatively low prevalence of no personal doctor (7.7%).

Education

There was a significant difference in the prevalence of no doctor between those with less than a high school education (29.4%) and those with a college degree (18.6%).

Household Income

Those earning less than $15,000 per year had a higher prevalence of not having doctor (28.4%) than those earning $75,000 or more per year (18.9%).

Table 2.4 No personal doctor or health care provider by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,070	**29.5**	26.9-32.1	3,205	**18.7**	16.9-20.5	5,275	**23.9**	22.3-25.5
Age									
18-24	101	***57.9**	47.0-68.8	154	**37.0**	28.1-45.9	255	**47.7**	40.3-55.0
25-34	237	**53.1**	46.1-60.2	308	**34.7**	28.9-40.5	545	**44.0**	39.4-48.7
35-44	280	**31.3**	25.3-37.4	395	**19.8**	15.4-24.2	675	**25.5**	21.8-29.3
45-54	396	**23.0**	18.2-27.7	572	**17.8**	14.1-21.5	968	**20.3**	17.3-23.3
55-64	482	**13.4**	10.0-16.7	721	**9.8**	7.4-12.2	1,203	**11.6**	9.5-13.6
65+	566	**10.5**	7.5-13.5	1027	**5.6**	3.9-7.2	1,593	**7.7**	6.1-9.3
Education									
Less than H.S.	284	**35.6**	28.5-42.6	466	**23.4**	18.0-28.9	750	**29.4**	25.0-33.9
H.S. or G.E.D.	833	**33.2**	28.9-37.6	1297	**17.2**	14.5-19.9	2,130	**25.3**	22.7-28.0
Some Post-H.S.	474	**25.0**	20.4-29.7	818	**18.3**	15.1-21.4	1,292	**21.2**	18.5-23.9
College Graduate	474	**19.4**	15.3-23.5	619	**17.7**	13.5-22.0	1,093	**18.6**	15.6-21.5
Income									
Less than $15,000	232	**35.2**	27.4-42.9	450	**22.9**	17.9-27.9	682	**28.4**	23.9-32.9
$15,000- 24,999	351	**35.2**	29.0-41.4	659	**22.7**	18.4-26.9	1,010	**28.2**	24.5-31.8
$25,000- 34,999	298	**25.8**	19.2-32.4	486	**19.7**	15.1-24.3	784	**22.6**	18.6-26.5
$35,000- 49,999	310	**26.7**	20.0-33.5	391	**17.0**	12.3-21.8	701	**22.0**	17.8-26.2
$50,000- 74,999	272	**25.4**	18.4-32.4	294	**16.2**	10.4-22.1	566	**21.3**	16.6-26.1
$75,000+	328	**21.5**	15.1-27.8	350	**15.9**	10.5-21.2	678	**18.9**	14.7-23.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

No Routine Checkup in Past Year

Definition

Responding "More than a year ago" to the question "About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition."

Prevalence

WV: 25.1% (95% CI: 23.6-26.7)
U.S.: 33.1% (95% CI: 32.8-33.4)
The West Virginia prevalence of no checkup in the past year was significantly lower than the national prevalence. West Virginia ranked the 6th lowest among 52 BRFSS participants.

Gender

Men: 29.2% (95% CI: 26.6-31.8)
Women: 21.3% (95% CI: 19.5-23.1)
The prevalence of no routine checkup in the past year was significantly higher for men than for women.

Age

Those 65 and older had a relatively low prevalence of no checkup in the past year (7.6%) while those aged 25-34 had the highest prevalence (42.8%).

Education

There was a small but significant difference in the prevalence of no checkup in the past year between those with less than a high school education (29.4%) and those with a college degree (19.9%). No other education differences in the prevalence of no routine checkup in the past year were found.

Household Income

Those earning less than $25,000 per year had a higher prevalence of no routine checkup in the past year than those earning $25,000 or more per year.

Table 2.5 No routine checkup in past year by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,057	**29.2**	26.6-31.8	3,181	**21.3**	19.5-23.1	5,238	**25.1**	23.6-26.7
Age									
18-24	101	***48.6**	37.4-59.9	152	**28.5**	20.4-36.7	253	**39.0**	31.7-46.3
25-34	234	**48.0**	40.9-55.1	306	**37.5**	31.5-43.4	540	**42.8**	38.1-47.5
35-44	278	**30.5**	24.5-36.6	390	**26.3**	21.3-31.4	668	**28.4**	24.5-32.4
45-54	394	**27.1**	22.3-31.9	571	**22.1**	18.2-26.1	965	**24.5**	21.4-27.6
55-64	480	**21.7**	17.6-25.9	717	**15.9**	12.8-19.0	1,197	**18.8**	16.2-21.4
65+	562	**7.8**	5.3-10.3	1,017	**7.4**	5.6-9.1	1,579	**7.6**	6.1-9.0
Education									
Less than H.S.	282	**35.8**	28.7-43.0	458	**23.1**	17.8-28.4	740	**29.4**	24.9-34.0
H.S. or G.E.D.	830	**29.7**	25.5-33.8	1,286	**20.4**	17.6-23.1	2,116	**25.1**	22.6-27.6
Some Post-H.S.	471	**29.6**	24.7-34.6	815	**22.4**	19.0-25.8	1,286	**25.5**	22.6-28.4
College Graduate	470	**20.3**	16.2-24.5	617	**19.4**	15.2-23.7	1,087	**19.9**	16.9-22.9
Income									
Less than $15,000	231	**37.1**	29.3-44.9	443	**27.9**	22.7-33.2	674	**32.1**	27.5-36.7
$15,000- 24,999	351	**36.6**	30.4-42.8	655	**26.6**	22.4-30.8	1,006	**31.1**	27.4-34.7
$25,000- 34,999	296	**23.1**	16.7-29.5	486	**22.9**	18.1-27.7	782	**23.0**	19.1-26.9
$35,000- 49,999	307	**24.6**	18.2-31.0	387	**18.2**	13.3-23.0	694	**21.4**	17.4-25.5
$50,000- 74,999	271	**24.7**	18.2-31.2	292	**15.7**	10.6-20.7	563	**20.7**	16.4-25.0
$75,000+	326	**23.9**	17.4-30.4	348	**15.2**	10.3-20.1	674	**19.9**	15.7-24.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 3: PHYSICAL ACTIVITY

No Leisure-Time Physical Activity for Exercise

Definition

Responding "No" to the question "During the past month, other than your regular job, did you participate in any physical activities or exercise such as running, calisthenics, golf, gardening, or walking for exercise?"

Prevalence

WV: 35.1% (95% CI: 33.5-36.7)
U.S.: 25.7% (95% CI: 25.5-26.0)
The prevalence of physical inactivity was significantly higher in West Virginia than in the U.S. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 32.5% (95% CI: 30.1-34.9)
Women: 37.5% (95% CI: 35.5-39.5)
Women had a significantly higher prevalence of physical inactivity than men.

Age

In general, the prevalence of physical inactivity increased with age. The prevalence of physical inactivity among persons aged 65 and older was significantly higher than the prevalence among those aged less than 55.

Education

The prevalence of physical inactivity was significantly different for all education groups. About half of those lacking a high school education engaged in no physical activity whereas only 17.1% of college graduates were physically inactive.

Household Income

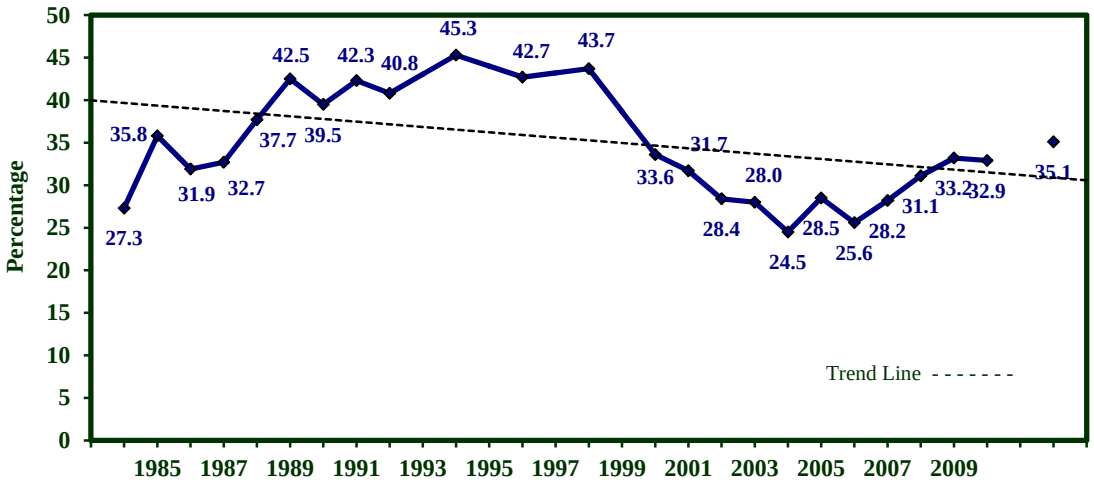
In general, the prevalence of physical inactivity declined with increasing income levels. The prevalence of physical inactivity was significantly higher among adults with incomes of less than $15,000 than the prevalence among persons with incomes in excess of $75,000.

Table 3.1 No leisure-time physical activity for exercise by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,055	**32.5**	30.1-34.9	3,183	**37.5**	35.5-39.5	5,238	**35.1**	33.5-36.7
Age									
18-24	100	***10.9**	4.4-17.5	153	**22.4**	15.0-29.7	253	**16.5**	11.5-21.5
25-34	234	**27.7**	21.1-34.3	303	**25.1**	19.6-30.6	537	**26.4**	22.1-30.7
35-44	277	**33.9**	27.6-40.2	393	**37.8**	32.2-43.3	670	**35.9**	31.7-40.1
45-54	395	**36.6**	31.4-41.9	569	**35.2**	30.8-39.7	964	**35.9**	32.5-39.3
55-64	479	**42.2**	37.2-47.2	720	**41.0**	36.9-45.1	1,199	**41.6**	38.4-44.8
65+	562	**37.0**	32.5-41.4	1,018	**52.1**	48.6-55.6	1,580	**45.6**	42.8-48.4
Education									
Less than H.S.	282	**40.5**	33.9-47.2	463	**60.5**	54.6-66.5	745	**50.6**	46.0-55.2
H.S. or G.E.D.	826	**35.1**	31.2-39.0	1,284	**42.7**	39.5-45.9	2,110	**38.8**	36.3-41.4
Some Post-H.S.	470	**32.9**	27.9-37.9	813	**27.1**	23.7-30.6	1,283	**29.6**	26.7-32.5
College Graduate	472	**16.7**	13.1-20.4	618	**17.5**	14.2-20.8	1,090	**17.1**	14.6-19.6
Income									
Less than $15,000	231	**43.1**	35.5-50.8	443	**51.3**	45.4-57.3	674	**47.6**	42.8-52.4
$15,000- 24,999	348	**38.2**	32.2-44.2	653	**43.6**	39.0-48.2	1,001	**41.2**	37.5-44.9
$25,000- 34,999	297	**33.3**	27.0-39.7	484	**39.9**	34.7-45.1	781	**36.8**	32.7-40.9
$35,000- 49,999	309	**30.2**	24.2-36.2	389	**31.2**	25.8-36.7	698	**30.7**	26.6-34.8
$50,000- 74,999	271	**26.7**	20.7-32.7	294	**26.8**	21.0-32.6	565	**26.7**	22.5-30.9
$75,000+	324	**25.6**	20.0-31.2	348	**19.0**	14.3-23.7	672	**22.5**	18.8-26.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 3.1 No leisure-time physical activity for exercise by year: WVBRFSS, 1984-2011



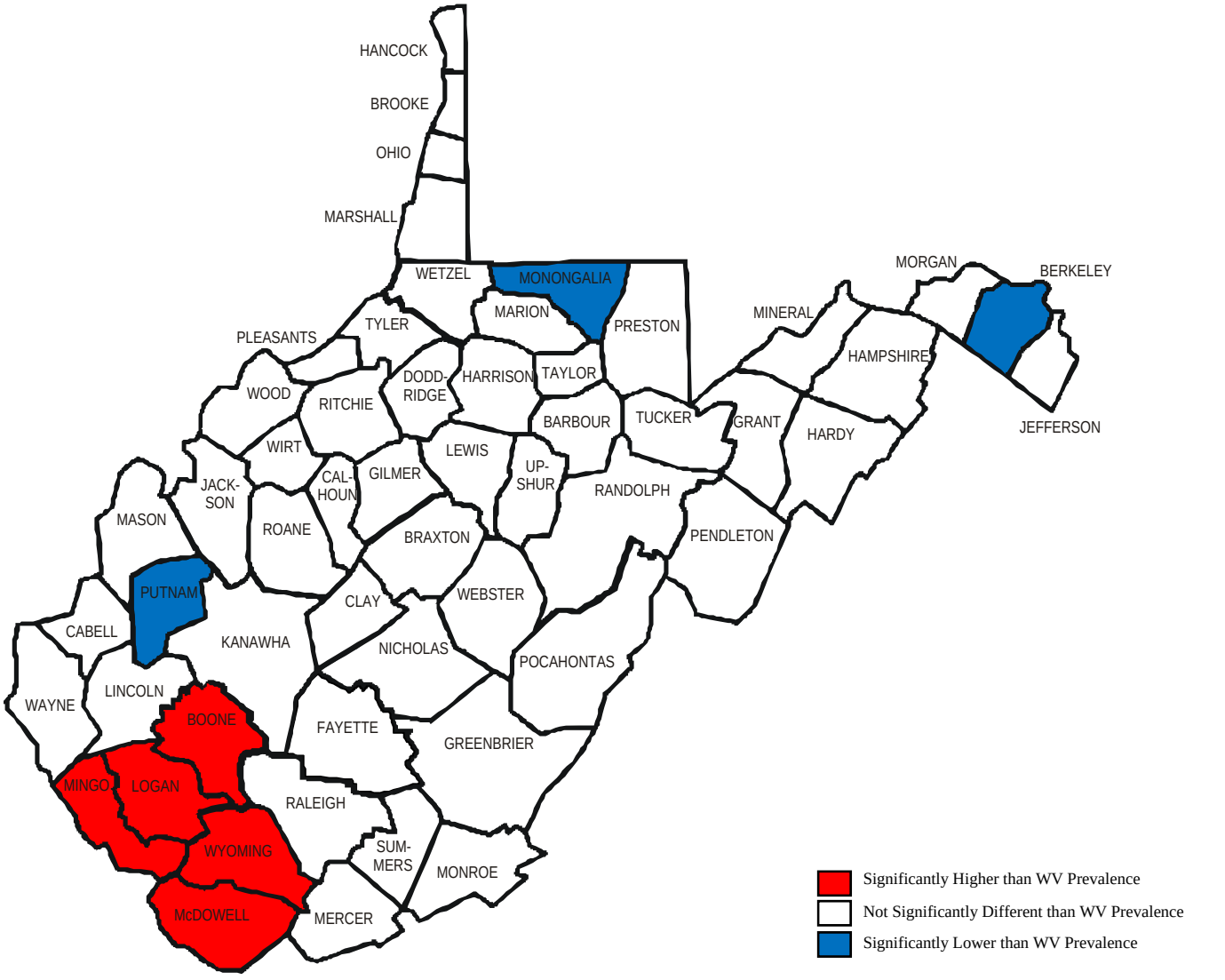
NOTE: Data are not available for the years 1993, 1995, 1997, and 1999.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 3.2 No leisure-time physical activity for exercise by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 24.6%

WV Prevalence (2007-2011) – 32.1%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Physical Activity Levels

Definition

Highly active is defined as doing enough physical activity to meet the 300 minute aerobic recommendation.
Active is defined as doing 150-300 minutes of physical activity.
Insufficiently active is defined as doing insufficient physical activity (11-149 minutes).
Inactive is defined as doing no physical activity.

Prevalence

Highly Active: **26.1%** (95% CI: 24.6-27.7)
Active: **16.7%** (95% CI: 15.4-17.9)
Insufficiently Active: **19.7%** (95% CI: 18.3-21.1)
Inactive: **37.5%** (95% CI: 35.9-39.2)
U.S. comparison was not conducted on physical activity levels.

Gender

Highly Active
Men: 30.2% (95% CI: 27.7-32.7)
Women: 22.3% (95% CI: 20.5-24.2)
Men had a significantly higher prevalence of being highly active than women.
Active
Men: 16.4% (95% CI: 14.418.3)
Women: 16.9% (95% CI: 15.3-18.5)
There was no gender difference in the prevalence of the active level.
Insufficiently Active
Men: 17.6% (95% CI: 15.5-19.7)
Women: 21.6% (95% CI: 19.8-23.5)
Women had a significantly higher prevalence of being insufficiently active than men.
Inactive
Men: 35.8% (95% CI: 33.3-38.4)
Women: 39.1% (95% CI: 37.0-41.2)
There was no gender difference in the prevalence of the inactive level.

Age

The prevalence of highly active, active, and insufficiently active were highest among those aged 18-24 and lowest among those aged 65 and older. The prevalence of inactive was highest among those aged 65 and older and lowest among those aged 18-24.

Education

The prevalence of highly active, active, and insufficiently active were highest among those with a college degree and lowest among those with less than a high school education. The prevalence of inactive was highest among those with less than a high school education and lowest among those with a college degree.

Household Income

In general, the prevalence of highly active, active, and insufficiently active increase with increasing annual household income and the prevalence of inactive decreases with increasing income.

Table 3.2 Physical activity levels by demographic characteristics: WVBRFSS, 2011

Characteristic	Highly Active			Active		Insufficiently Active		Inactive	
	# Resp.	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	5,077	**26.1**	24.6-27.7	**16.7**	15.4-17.9	**19.7**	18.3-21.1	**37.5**	35.9-39.2
Sex									
Males	1,996	**30.2**	27.7-32.7	**16.4**	14.4-18.3	**17.6**	15.5-19.7	**35.8**	33.3-38.4
Females	3,081	**22.3**	20.5-24.2	**16.9**	15.3-18.5	**21.6**	19.8-23.5	**39.1**	37.0-41.2
Age									
18-24	245	**31.7**	24.4-38.9	**21.4**	15.9-27.0	**25.9**	19.2-32.6	**21.0**	15.2-26.8
25-34	516	**25.5**	21.4-29.6	**20.0**	16.1-23.8	**24.9**	20.8-29.0	**29.6**	25.1-34.2
35-44	656	**27.7**	23.4-31.7	**16.2**	13.3-19.2	**18.8**	15.6-21.9	**37.3**	33.1-41.6
45-54	946	**24.9**	21.7-28.1	**17.2**	14.4-19.9	**20.7**	17.8-23.6	**37.3**	33.8-40.8
55-64	1,179	**25.0**	22.2-27.8	**14.2**	12.0-16.4	**17.7**	15.3-20.0	**43.1**	39.9-46.4
65+	1,527	**24.5**	22.0-26.9	**13.6**	11.6-15.6	**13.9**	12.0-15.8	**48.1**	45.2-50.9
Education									
Less than H.S.	717	**23.2**	18.8-27.6	**10.0**	7.3-12.7	**13.9**	10.2-17.6	**52.9**	48.1-57.6
H.S. or G.E.D.	2,040	**24.3**	21.8-26.8	**15.5**	13.5-17.6	**18.2**	16.1-20.3	**42.0**	39.3-44.6
Some Post-H.S.	1,252	**27.3**	24.4-30.2	**18.6**	16.1-21.2	**22.5**	19.7-25.4	**31.5**	28.5-34.5
College Graduate	1,061	**32.1**	28.9-35.3	**23.7**	20.7-26.8	**25.2**	22.0-28.5	**18.9**	16.3-21.5
Income									
Less than $15,000	655	**23.6**	19.0-28.1	**10.9**	7.9-13.9	**15.1**	11.9-18.3	**50.4**	45.5-55.3
$15,000- 24,999	978	**22.1**	18.9-25.3	**15.0**	12.1-18.0	**20.1**	16.9-23.3	**42.8**	39.0-46.5
$25,000- 34,999	769	**25.1**	21.3-28.9	**17.9**	14.7-21.0	**17.9**	14.4-21.4	**39.2**	35.0-43.4
$35,000- 49,999	686	**27.6**	23.3-31.8	**17.9**	14.5-21.2	**21.3**	17.4-25.2	**33.3**	29.0-37.5
$50,000- 74,999	551	**31.1**	26.3-35.9	**18.3**	14.3-22.3	**22.6**	18.2-27.0	**28.0**	23.6-32.3
$75,000+	663	**29.9**	25.6-34.1	**21.4**	17.7-25.1	**24.0**	20.0-28.0	**24.7**	20.9-28.6

Physical Activity Recommendations

Definition

Did not meet aerobic exercise recommendation is defined as doing less than 150 minutes of physical activity.
Did not meet muscle strengthening recommendation is defined as doing physical activity or exercises to strength the muscles less than 2 times per week.

Prevalence

Did not meet aerobic exercise recommendation
57.0% (95% CI: 55.3-58.7)
Did not meet muscle strengthening recommendation
79.8% (95% CI: 78.4-81.2)
U.S. comparison was not conducted on physical activity recommendations.

Gender

Did not meet aerobic exercise recommendation
Men: 53.2% (95% CI: 50.5-55.9)
Women: 60.5% (95% CI: 58.4-62.6)
Women had a significantly higher prevalence of not meeting the aerobic exercise recommendation than men.
Did not meet muscle strengthening recommendation
Men: 75.1% (95% CI: 72.7-77.4)
Women: 84.3% (95% CI: 82.7-85.8)
Women had a significantly higher prevalence of not meeting the muscle strengthening recommendation than men.

Age

The prevalence of both did not meet the aerobic exercise recommendation and did not meet the muscle strengthening recommendation increased with age.

Education

The prevalence of both did not meet the aerobic exercise recommendation and did not meet the muscle strengthening recommendation was highest among those with less than a high school education and lowest among those with a college degree.

Household Income

The prevalence of both did not meet the aerobic exercise recommendation and did not meet the muscle strengthening recommendation was highest among those with an annual household income of less than $15,000 and lowest among those with a $75,000 or more per year household income.

Table 3.3 Physical activity recommendations by demographic characteristics: WVBRFSS, 2011

Characteristic	Did Not Meet Aerobic Exercise Recommendation			Did Not Meet Muscle Strengthening Recommendation		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	5,096	**57.0**	55.3-58.7	5,213	**79.8**	78.4-81.2
Sex						
Males	2,003	**53.2**	50.5-55.9	2,044	**75.1**	72.7-77.4
Females	3,093	**60.5**	58.4-62.6	3,169	**84.3**	82.7-85.8
Age						
18-24	247	**46.7**	39.3-54.1	251	**66.8**	59.8-73.7
25-34	520	**54.0**	49.2-58.8	535	**71.6**	67.3-75.8
35-44	659	**55.9**	51.6-60.1	665	**79.2**	75.8-82.6
45-54	948	**57.9**	54.3-61.5	961	**83.1**	80.4-85.8
55-64	1,181	**60.7**	57.5-63.8	1,194	**84.5**	82.2-86.7
65+	1,533	**61.8**	59.0-64.5	1,572	**86.8**	84.9-88.7
Education						
Less than H.S.	721	**66.5**	61.8-71.1	738	**89.2**	86.1-92.2
H.S. or G.E.D.	2,047	**60.0**	57.3-62.7	2,101	**82.6**	80.4-84.8
Some Post-H.S.	1,257	**53.7**	50.5-57.0	1,275	**75.3**	72.4-78.3
College Graduate	1,064	**44.0**	40.5-47.5	1,090	**69.6**	66.2-72.9
Income						
Less than $15,000	656	**65.5**	60.6-70.3	674	**84.8**	80.5-89.0
$15,000- 24,999	983	**62.4**	58.6-66.2	992	**83.5**	80.4-86.6
$25,000- 34,999	772	**56.8**	52.5-61.1	778	**78.5**	74.8-82.2
$35,000- 49,999	686	**54.6**	50.0-59.2	696	**81.1**	77.7-84.5
$50,000- 74,999	553	**50.3**	45.3-55.4	561	**74.2**	69.4-78.9
$75,000+	663	**48.7**	44.1-53.3	669	**73.9**	70.0-77.8

CHAPTER 4: NUTRITION

Fruit and Vegetable Consumption

Definition

Consuming fewer than five servings of fruits and vegetables on a daily basis in the past month.

Prevalence

WV: 91.7% (95% CI: 90.8-92.6)
U.S.: 82.4% (95% CI: 82.2-82.6)
The West Virginia prevalence of consumption of fewer than five servings of fruits and vegetables daily was significantly higher than the U.S. prevalence. West Virginia ranked the highest among the 52 BRFSS participants.

Gender

Men: 93.7% (95% CI: 92.5-95.0)
Women: 89.8% (95% CI: 89.5-91.0)
Men had a significantly higher prevalence of consumption of fewer than five servings of fruits and vegetables daily than women.

Age

The prevalence of consumption of fewer than 5 servings of fruits and vegetables daily did not vary by age.

Education

College graduates had a significantly lower prevalence of consumption of fewer than 5 servings of fruits and vegetables daily (85.3%) than persons with less than a high school education, a high school degree, or some college.

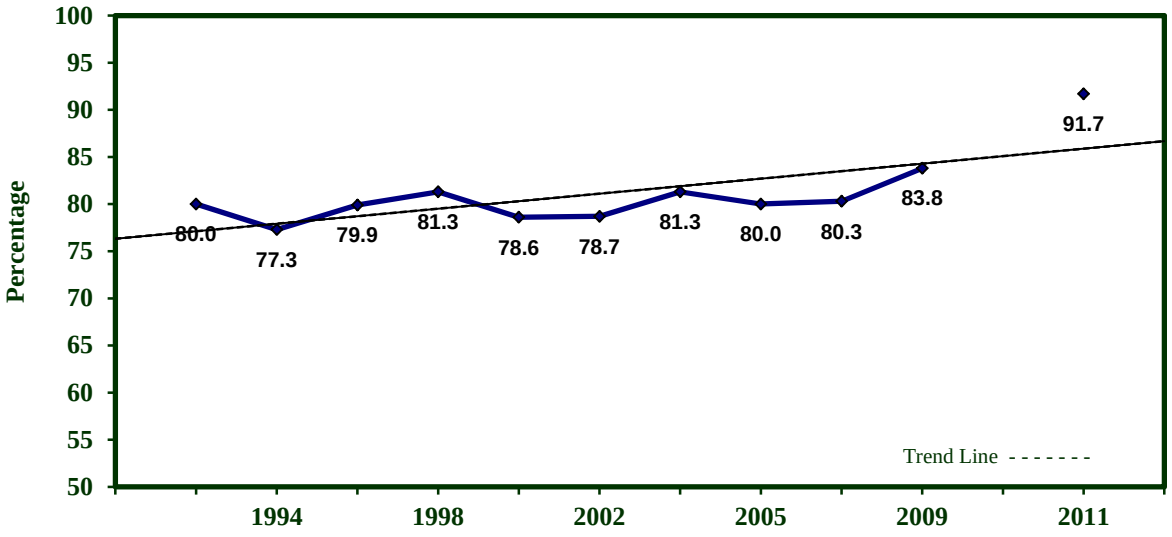
Household Income

The poorest households (those with less than $15,000 in annual income) had a significantly higher prevalence of the consumption of fewer than 5 servings of fruits and vegetables per day than the wealthiest group ($75,000 or more annual household income).

Table 4.1 Consumption of fewer than five servings of fruits and vegetables by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,911	**93.7**	92.5-95.0	2,969	**89.8**	88.5-91.0	4,880	**91.7**	90.8-92.6
Age									
18-24	92	**93.1**	87.6-98.6	140	**92.6**	87.3-97.9	232	**92.8**	89.0-96.7
25-34	219	**92.6**	89.1-96.1	292	**91.8**	88.7-94.8	511	**92.2**	89.8-94.5
35-44	256	**93.9**	91.0-96.8	380	**89.5**	86.1-92.9	636	**91.7**	89.4-93.9
45-54	375	**94.3**	91.4-97.1	551	**87.9**	85.1-90.8	926	**91.0**	89.0-93.0
55-64	440	**93.1**	90.6-95.5	680	**88.0**	85.4-90.7	1,120	**90.5**	88.7-92.3
65+	522	**95.5**	93.8-97.2	903	**90.1**	88.0-92.3	1,425	**92.5**	91.1-94.0
Education									
Less than H.S.	259	**97.1**	94.7-99.5	396	**93.2**	89.8-96.7	655	**95.2**	93.1-97.3
H.S. or G.E.D.	763	**94.7**	92.8-96.7	1,200	**91.6**	89.7-93.4	1,963	**93.2**	91.8-94.5
Some Post-H.S.	433	**92.6**	89.8-95.3	778	**90.1**	87.8-92.3	1,211	**91.1**	89.4-92.9
College Graduate	453	**89.1**	86.0-92.3	591	**81.6**	78.1-85.0	1,044	**85.3**	83.0-87.7
Income									
Less than $15,000	216	**95.9**	92.3-99.5	404	**94.1**	91.3-97.0	620	**95.0**	92.7-97.2
$15,000- 24,999	324	**94.4**	91.6-97.1	617	**91.7**	88.8-94.6	941	**92.9**	90.8-94.9
$25,000- 34,999	276	**93.5**	89.7-97.4	469	**91.4**	88.8-94.0	745	**92.4**	90.1-94.7
$35,000- 49,999	288	**94.2**	91.5-96.9	372	**89.2**	85.8-92.6	660	**91.7**	89.5-93.9
$50,000- 74,999	256	**93.5**	89.6-97.3	286	**87.0**	82.7-91.3	542	**90.6**	87.7-93.4
$75,000+	315	**91.4**	88.2-94.6	338	**84.1**	80.0-88.2	653	**88.0**	85.5-90.6

Figure 4.1 Consumption of fewer than five servings of fruits and vegetables daily by year: WVBRFSS, 1990-2011



NOTE: Data are not available for the years 1991-1993, 1995, 1997, 1999, 2001, 2004, 2006, 2008, and 2010.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

CHAPTER 5: OBESITY AND OVERWEIGHT

Overweight

Definition

Body Mass Index (BMI) is a calculation that standardizes the meaning of the terms obesity and overweight, thereby improving the accuracy of comparisons. BMI is body weight in kilograms divided by height in meters squared (BMI=kg/m^2). Overweight is defined as a BMI of 25.0-29.9.

Prevalence

WV: 36.5% (95% CI: 34.9-38.2)
U.S.: 35.8% (95% CI: 35.6-36.1)
The West Virginia and U.S. prevalence of overweight was similar. West Virginia ranked the 12th highest among 52 BRFSS participants.

Gender

Men: 41.5% (95% CI: 38.9-44.0)
Women: 31.4% (95% CI: 29.4-33.5)
Men had a significantly higher prevalence of overweight than women.

Age

In general, the prevalence of overweight increased with age; however, only the 18-24 age group (28.2%) and the 65 and older age group (38.9%) were significantly different from each other.

Education

There was no significant differences in the prevalence of overweight by educational attainment.

Household Income

The prevalence of overweight was significantly higher among those earning more than $75,000 per year (44.9%) than among those with incomes less than $15,000 (29.3%).

Table 5.1 Overweight but not obese by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,038	**41.5**	38.9-44.0	2,920	**31.4**	29.4-33.5	4,958	**36.5**	34.9-38.2
Age									
18-24	98	**26.8**	17.3-36.3	125	**29.9**	20.3-39.5	223	**28.2**	21.3-35.0
25-34	236	**44.2**	37.1-51.2	274	**27.5**	21.6-33.4	510	**36.3**	31.7-41.0
35-44	275	**43.5**	37.0-50.0	368	**29.8**	24.7-35.0	643	**36.8**	32.6-41.0
45-54	392	**43.7**	38.3-49.2	526	**31.3**	26.8-35.8	918	**37.6**	34.1-41.2
55-64	473	**42.2**	37.3-47.2	655	**33.2**	29.2-37.3	1,128	**37.9**	34.6-41.1
65+	556	**44.2**	39.6-48.9	959	**34.6**	31.2-38.0	1,515	**38.9**	36.0-41.7
Education									
Less than H.S.	279	**34.7**	28.3-41.1	429	**31.1**	25.3-36.9	708	**33.0**	28.7-37.3
H.S. or G.E.D.	821	**40.9**	36.8-45.0	1,174	**32.8**	29.6-36.0	1,995	**37.1**	34.5-39.8
Some Post-H.S.	466	**43.8**	38.6-49.0	745	**29.9**	26.0-33.7	1,211	**36.2**	33.0-39.4
College Graduate	469	**46.6**	41.5-51.7	568	**31.5**	27.1-35.9	1,037	**39.2**	35.8-42.7
Income									
Less than $15,000	227	**30.1**	23.2-37.0	425	**28.5**	23.2-33.9	652	**29.3**	25.0-33.6
$15,000- 24,999	345	**37.6**	31.7-43.6	603	**29.6**	25.3-33.9	948	**33.3**	29.7-36.9
$25,000- 34,999	298	**43.6**	36.7-50.6	451	**27.1**	22.5-31.7	749	**35.3**	31.0-39.6
$35,000- 49,999	305	**41.0**	34.4-47.7	358	**34.6**	28.9-40.4	663	**38.0**	33.6-42.4
$50,000- 74,999	272	**47.9**	40.9-55.0	275	**35.1**	28.4-41.8	547	**42.4**	37.4-47.3
$75,000+	327	**52.1**	45.6-58.6	324	**35.7**	29.3-42.1	651	**44.9**	40.3-49.4

Note: Overweight is defined as a body mass index of 25.0-29.9.

Obesity

Definition

Body Mass Index (BMI) is a calculation that standardizes the meaning of the terms obesity and overweight, thereby improving the accuracy of comparisons. BMI is body weight in kilograms divided by height in meters squared (BMI=kg/m^2). Obesity is defined as a BMI of 30.0 or higher.

Prevalence

WV: 32.4% (95% CI: 30.8-34.0)
U.S.: 27.4% (95% CI: 27.1-27.7)
The prevalence of obesity in West Virginia was significantly higher than the U.S. prevalence. West Virginia ranked the 3rd highest among 52 BRFSS participants.

Gender

Men: 30.7% (95% CI: 28.3-33.0)
Women: 34.2% (95% CI: 32.1-36.3)
There was no significant gender difference for the prevalence of obesity.

Age

There were no consistent age differences in the prevalence of obesity. The 45-54 age group had the highest prevalence of obesity (39.7%) and was significantly higher than the 18-24 age group (19.7%), the 25-34 age group (30.2%), and the 65 and older age group (27.7%).

Education

There were no significant differences in the prevalence of obesity by educational attainment.

Household Income

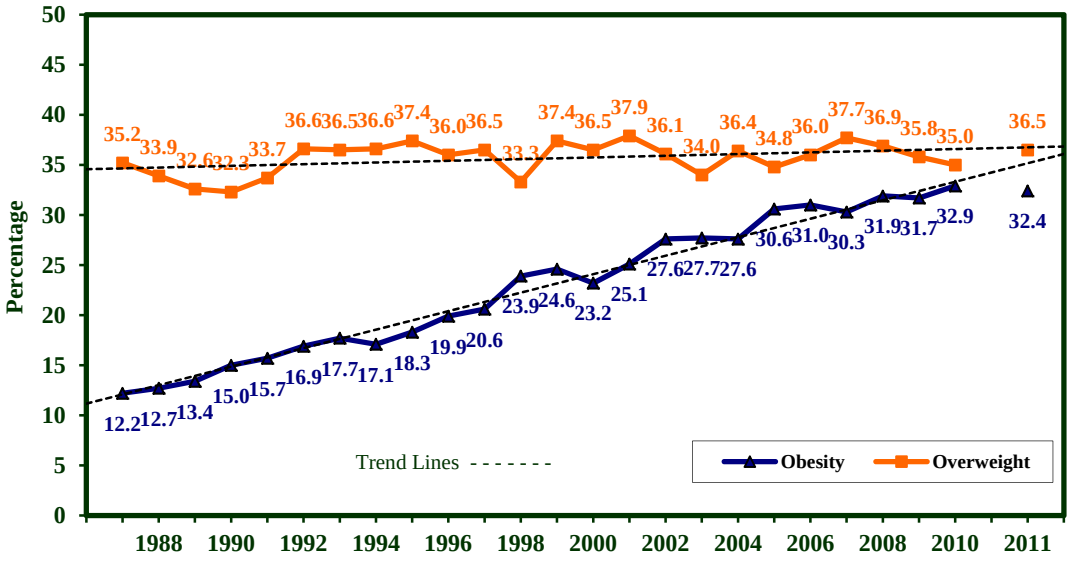
In general, the prevalence of obesity declined with increasing levels of household income. The prevalence of obesity was significantly higher among those earning less than $25,000 per year than among those with incomes of $50,000 or more per year.

Table 5.2 Obesity by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,038	**30.7**	28.3-33.0	2,920	**34.2**	32.1-36.3	4,958	**32.4**	30.8-34.0
Age									
18-24	98	**18.1**	10.1-26.1	125	**21.8**	13.5-30.1	223	**19.7**	13.9-25.5
25-34	236	**27.2**	20.9-33.5	274	**33.4**	27.4-39.5	510	**30.2**	25.7-34.6
35-44	275	**32.9**	26.8-39.0	368	**37.3**	31.8-42.7	643	**35.0**	30.9-39.1
45-54	392	**37.2**	31.9-42.6	526	**42.4**	37.6-47.2	918	**39.7**	36.1-43.4
55-64	473	**36.3**	31.5-41.2	655	**40.4**	36.2-44.6	1,128	**38.3**	35.1-41.5
65+	556	**28.0**	23.9-32.1	959	**27.5**	24.3-30.8	1,515	**27.7**	25.1-30.3
Education									
Less than H.S.	279	**28.3**	22.0-34.7	429	**37.4**	31.8-43.1	708	**32.7**	28.5-37.0
H.S. or G.E.D.	821	**30.3**	26.6-34.0	1174	**36.6**	33.4-39.9	1,995	**33.3**	30.8-35.8
Some Post-H.S.	466	**32.0**	27.2-36.7	745	**33.4**	29.5-37.3	1,211	**32.8**	29.7-35.8
College Graduate	469	**32.5**	27.7-37.4	568	**26.4**	22.0-30.9	1,037	**29.6**	26.2-32.9
Income									
Less than $15,000	227	**31.8**	24.6-39.0	425	**41.7**	36.1-47.4	652	**37.1**	32.5-41.6
$15,000- 24,999	345	**35.3**	29.3-41.4	603	**38.7**	33.9-43.5	948	**37.1**	33.3-40.9
$25,000- 34,999	298	**33.4**	27.1-39.8	451	**37.2**	32.1-42.3	749	**35.3**	31.3-39.4
$35,000- 49,999	305	**37.7**	30.9-44.5	358	**31.8**	26.2-37.4	663	**34.9**	30.4-39.4
$50,000- 74,999	272	**24.7**	18.9-30.5	275	**32.0**	25.6-38.4	547	**27.8**	23.5-32.2
$75,000+	327	**27.2**	21.9-32.4	324	**30.2**	24.3-36.0	651	**28.5**	24.6-32.4

Note: Obesity is defined as a body mass index of 30.0 or higher.

Figure 5.1 Obesity and overweight by year: WVBRFSS, 1987-2011

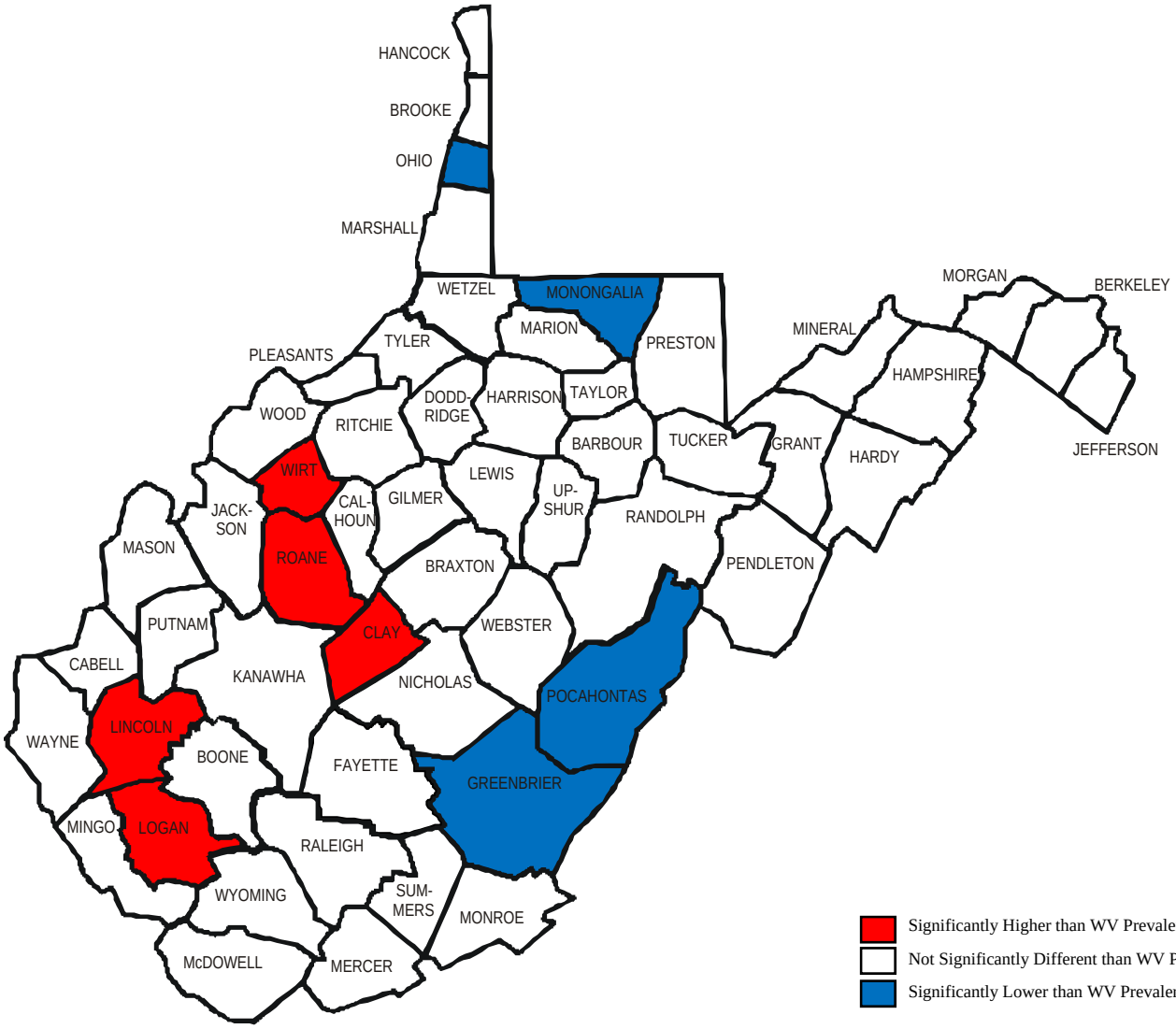


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 5.2 Obesity (body mass index of 30.0 or higher) by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 27.4%

WV Prevalence (2007-2011) – 31.8%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Weight Loss Advice

Definition

Responding "Yes, lose weight" to the question "In the past 12 months, has a doctor, nurse, or other health professional given you advice about your weight?"

Prevalence

WV: 22.4% (95% CI: 21.0-23.7)
Because this was a state added question, no national data are available for comparison.

Gender

Men: 21.2% (95% CI: 19.2-23.2)
Women: 23.5% (95% CI: 21.7-25.2)
There was no gender difference in the prevalence of weight loss advice.

Age

There were no consistent age differences in the prevalence of weight loss advice. The 45-54 age group had the highest prevalence of weight loss advice (30.1%) and was significantly higher than the 18-24 age group (10.4%), the 25-34 age group (18.6%), and the 65 and older age group (17.4%). It is interesting to note that this pattern is similar to the age difference pattern observed with the prevalence of obesity.

Education

The prevalence of weight loss advice was significantly higher among those with some college and those with a college degree than among those with less than a high school education.

Household Income

Few differences in the prevalence of weight loss advice were noted by household income. Only the $15,000-$24,999 income bracket (20.1%) and the $75,000 or more income bracket (27.8%) were significantly different from each other.

Table 5.3 Doctor advice to lose weight by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,024	**21.2**	19.2-23.2	3,142	**23.5**	21.7-25.2	5,166	**22.4**	21.0-23.7
Age									
18-24	92	***7.3**	2.1-12.4	146	**13.6**	6.7-20.5	238	**10.4**	6.0-14.8
25-34	225	**17.1**	11.5-22.6	296	**20.2**	15.2-25.1	521	**18.6**	14.9-22.3
35-44	276	**21.3**	16.2-26.4	384	**28.3**	23.3-33.3	660	**24.8**	21.2-28.4
45-54	388	**27.8**	23.0-32.7	566	**32.2**	27.8-36.5	954	**30.1**	26.8-33.3
55-64	476	**28.4**	23.9-32.9	712	**30.5**	26.7-34.3	1,188	**29.5**	26.5-32.4
65+	560	**19.9**	16.3-23.5	1,011	**15.4**	13.0-17.9	1,571	**17.4**	15.3-19.4
Education									
Less than H.S.	281	**15.2**	10.3-20.1	457	**20.0**	15.4-24.5	738	**17.6**	14.2-20.9
H.S. or G.E.D.	813	**20.8**	17.7-23.9	1,269	**24.0**	21.2-26.7	2,082	**22.4**	20.3-24.4
Some Post-H.S.	466	**23.4**	19.1-27.7	800	**25.4**	21.9-28.9	1,266	**24.6**	21.8-27.3
College Graduate	460	**26.3**	21.8-30.7	611	**22.7**	18.5-26.8	1,071	**24.4**	21.4-27.5
Income									
Less than $15,000	228	**19.4**	13.5-25.2	437	**25.0**	20.1-30.0	665	**22.4**	18.6-26.2
$15,000- 24,999	344	**19.0**	14.1-24.0	643	**21.0**	17.2-24.7	987	**20.1**	17.1-23.1
$25,000- 34,999	297	**23.5**	18.0-29.0	478	**23.2**	19.1-27.2	775	**23.3**	20.0-26.7
$35,000- 49,999	303	**22.2**	16.9-27.4	387	**22.3**	17.6-26.9	690	**22.2**	18.7-25.7
$50,000- 74,999	266	**20.2**	15.2-25.2	287	**26.2**	20.5-31.9	553	**22.9**	19.1-26.6
$75,000+	317	**26.0**	20.6-31.4	345	**29.8**	23.8-35.8	662	**27.8**	23.7-31.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 6: TOBACCO USE

Current Cigarette Smoking

Definition

Current cigarette smoking is defined as smoking at least 100 cigarettes in one's lifetime and currently smoking every day or some days.

Prevalence

WV: 28.6% (95% CI: 27.0-30.2)
U.S.: 20.1% (95% CI: 19.8-20.3)
The West Virginia prevalence of current cigarette smoking was significantly higher than the national prevalence. West Virginia ranked the 2nd highest among the 52 BRFSS participants.

Gender

Men: 31.5% (95% CI: 28.9-34.1)
Women: 25.9% (95% CI: 24.0-27.9)
The prevalence of smoking was significantly higher among men than women.

Age

In general, the prevalence of smoking was higher among those age 18-54 than those aged 55 and older. The prevalence of smoking was significantly lower among those aged 65 and older (10.9%) than among any other age group. The prevalence of smoking was highest in the 25-34 age group (41.4%).

Education

The prevalence of smoking was significantly different for all levels of educational attainment. Adults with less than a high school degree had the highest prevalence of current cigarette smoking (42.3%) while college graduates had the lowest prevalence of smoking (11.8%).

Household Income

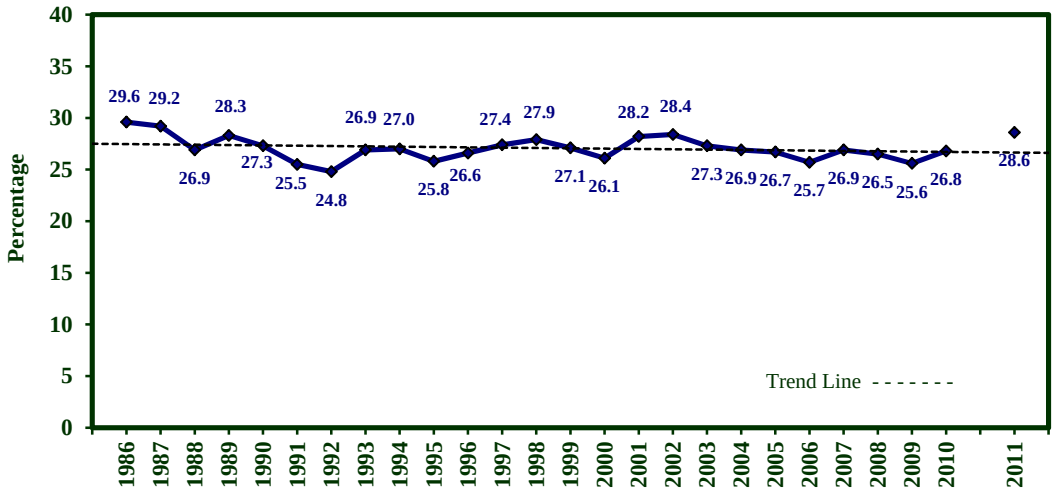
In general, the prevalence of current smoking decreased as household income increased. The highest prevalence of smoking was among those earning less than $15,000 per year (44.2%). The lowest prevalence of smoking was among adults earning $75,000 or more per year (16.4%).

Table 6.1 Current cigarette smoking by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,062	**31.5**	28.9-34.1	3,201	**25.9**	24.0-27.9	5,263	**28.6**	27.0-30.2
Age									
18-24	102	***45.2**	34.0-56.4	154	**31.4**	22.6-40.1	256	**38.5**	31.2-45.8
25-34	235	**44.0**	36.9-51.1	306	**38.7**	32.7-44.8	541	**41.4**	36.7-46.1
35-44	280	**33.3**	27.0-39.6	394	**36.1**	30.7-41.5	674	**34.7**	30.6-38.9
45-54	394	**36.8**	31.5-42.2	572	**30.4**	26.2-34.7	966	**33.6**	30.1-37.0
55-64	479	**22.8**	18.4-27.3	721	**19.2**	15.7-22.6	1,200	**21.0**	18.2-23.8
65+	564	**12.3**	9.2-15.4	1,026	**9.8**	7.8-11.8	1,590	**10.9**	9.1-12.6
Education									
Less than H.S.	282	**45.0**	37.9-52.1	468	**39.6**	33.6-45.5	750	**42.3**	37.6-46.9
H.S. or G.E.D.	827	**36.4**	32.1-40.7	1,294	**27.7**	24.7-30.7	2,121	**32.1**	29.4-34.7
Some Post-H.S.	474	**27.0**	22.3-31.7	816	**21.9**	18.6-25.2	1,290	**24.1**	21.3-26.9
College Graduate	474	**9.7**	6.8-12.6	618	**13.9**	10.4-17.4	1,092	**11.8**	9.5-14.1
Income									
Less than $15,000	231	**44.7**	36.9-52.5	449	**43.8**	38.0-49.6	680	**44.2**	39.4-48.9
$15,000- 24,999	352	**40.7**	34.4-46.9	658	**31.0**	26.5-35.6	1,010	**35.3**	31.6-39.1
$25,000- 34,999	297	**27.0**	20.1-33.8	485	**23.9**	19.1-28.7	782	**25.3**	21.2-29.5
$35,000- 49,999	310	**31.1**	23.8-38.3	391	**23.5**	18.2-28.8	701	**27.4**	22.8-31.9
$50,000- 74,999	270	**25.1**	18.4-31.7	294	**20.2**	13.9-26.4	564	**22.9**	18.3-27.5
$75,000+	327	**20.2**	13.9-26.5	350	**11.9**	7.8-16.0	677	**16.4**	12.4-20.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 6.1 Current cigarette smoking by year: WVBRFSS, 1986-2011

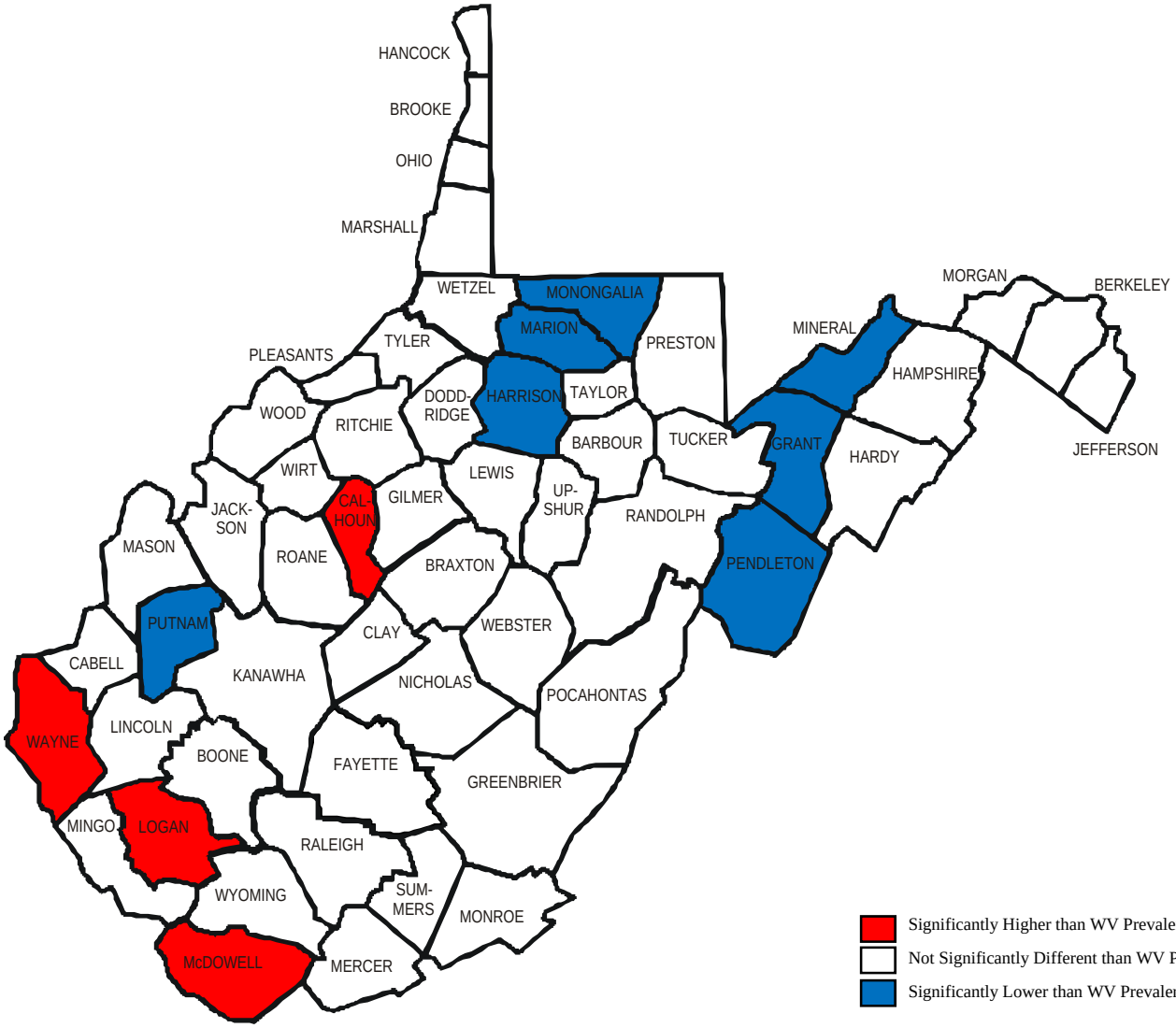


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 6.2 Current cigarette smoking by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 18.0%

WV Prevalence (2007-2011) – 26.9%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Smoking Cessation

Definition Among current smokers, responding "Yes" to the question "During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?"

Prevalence **WV: 53.0%** (95% CI: 49.5-56.5)
U.S.: 59.5% (95% CI: 58.9-60.2)
The U.S. prevalence of smoking cessation was significantly higher than the West Virginia prevalence. West Virginia ranked the 5th lowest among 52 BRFSS participants.

Gender **Men**: 52.4% (95% CI: 47.2-57.7)
Women: 53.6% (95% CI: 49.1-58.1)
There was no gender difference in the prevalence of smoking cessation.

Age There was no age difference in the prevalence of smoking cessation.

Education There was no educational attainment difference in the prevalence of smoking cessation.

Household Income There was no annual household income difference in the prevalence of smoking cessation.

Table 6.2 Trying to quit smoking by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	537	**52.4**	47.2-57.7	717	**53.6**	49.1-58.1	1,254	**53.0**	49.5-56.5
Age									
18-24	43	***61.6**	43.9-79.2	48	***60.9**	44.9-76.9	91	***61.3**	48.9-73.7
25-34	97	***54.1**	43.2-64.9	111	***55.3**	45.2-65.4	208	**54.6**	47.2-62.1
35-44	84	***49.1**	37.0-61.2	138	**51.2**	41.6-60.7	222	**50.2**	42.6-57.8
45-54	138	**49.7**	40.4-59.0	175	**53.5**	45.0-61.9	313	**51.4**	45.1-57.8
55-64	105	***53.9**	42.6-65.2	139	**44.8**	34.8-54.8	244	**49.7**	42.0-57.4
65+	68	***41.6**	28.3-54.8	101	***54.9**	44.3-65.6	169	**48.4**	39.9-57.0
Education									
Less than H.S.	111	***48.1**	37.2-59.1	147	***48.5**	38.1-58.9	258	**48.3**	40.7-55.9
H.S. or G.E.D.	254	**52.8**	45.0-60.7	326	**54.0**	47.5-60.5	580	**53.3**	48.1-58.6
Some Post-H.S.	121	**57.3**	47.4-67.2	169	**53.8**	45.3-62.4	290	**55.5**	49.0-62.0
College Graduate	48	***52.8**	37.4-68.3	75	***66.8**	55.0-78.6	123	**61.0**	51.5-70.6
Income									
Less than $15,000	94	***48.7**	36.7-60.7	178	**48.7**	40.0-57.4	272	**48.7**	41.5-55.9
$15,000- 24,999	123	**59.1**	49.1-69.0	176	**53.6**	44.4-62.7	299	**56.4**	49.6-63.2
$25,000- 34,999	69	***62.0**	46.7-77.2	108	***47.2**	35.6-58.8	177	**54.6**	44.7-64.5
$35,000- 49,999	73	***51.9**	36.6-67.3	72	***59.4**	46.4-72.3	145	***55.1**	44.6-65.6
$50,000- 74,999	51	***59.6**	44.7-74.5	47	***63.2**	47.7-78.7	98	***61.0**	50.1-71.9
$75,000+	52	***40.0**	23.2-56.8	36	***59.5**	40.7-78.3	88	***46.5**	33.2-59.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Smokeless Tobacco Use

Definition

Responding "Every day" or "Some days" to the question "Do you currently use chewing tobacco, snuff, or snus every day, some days, or not at all?"

Prevalence

WV: 7.5% (95% CI: 6.5-8.5)
U.S.: 3.7% (95% CI: 3.6-3.8)
The West Virginia prevalence of smokeless tobacco use was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 15.0% (95% CI: 13.1-16.9)
Women: 0.5% (95% CI: 0.2-0.7)
There was a significant gender difference in the prevalence of smokeless tobacco use with men having a higher prevalence than women. No further analysis with the female smokeless tobacco use data could be performed due to unstable estimates.

Age

Those aged 18-54 had the highest prevalence of smokeless tobacco use. The oldest age group (65 and older) had a relatively low prevalence (3.4%).

Education

College graduates had the lowest prevalence of smokeless tobacco use (3.4%) and this prevalence was significantly lower than the prevalence among those with less than a high school education (9.9%).

Household Income

There was no household income difference in the prevalence of smokeless tobacco use.

Table 6.3 Smokeless tobacco use by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,072	**15.0**	13.1-16.9	5,282	**7.5**	6.5-8.5
Age						
18-24	102	**16.7**	9.2-24.2	256	**8.6**	4.7-12.6
25-34	237	**18.8**	13.4-24.3	545	**9.5**	6.7-12.4
35-44	280	**22.8**	17.2-28.3	675	**12.2**	9.1-15.2
45-54	397	**17.6**	13.4-21.8	969	**8.7**	6.5-10.8
55-64	482	**9.0**	6.2-11.7	1,204	**4.5**	3.1-5.9
65+	566	**7.1**	4.5-9.8	1,597	**3.4**	2.2-4.6
Education						
Less than H.S.	285	**19.0**	13.2-24.7	754	**9.9**	6.8-12.9
H.S. or G.E.D.	834	**17.9**	14.9-20.9	2,132	**9.3**	7.7-10.9
Some Post-H.S.	474	**12.9**	9.3-16.6	1,292	**5.6**	4.0-7.2
College Graduate	474	**6.2**	3.7-8.8	1,094	**3.4**	2.1-4.8
Income						
Less than $15,000	232	**15.1**	9.5-20.7	682	**7.5**	4.8-10.2
$15,000- 24,999	353	**16.8**	11.8-21.8	1,012	**7.6**	5.2-10.0
$25,000- 34,999	298	**12.5**	8.0-17.1	785	**6.1**	3.9-8.4
$35,000- 49,999	310	**18.5**	12.5-24.6	701	**9.7**	6.4-13.0
$50,000- 74,999	272	**14.0**	9.5-18.6	566	**8.0**	5.4-10.6
$75,000+	328	**15.3**	10.8-19.9	678	**8.4**	5.9-10.9

CHAPTER 7: HYPERTENSION

Hypertension Prevalence

Definition

Responding "Yes" to the question "Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?"

Prevalence

WV: 37.0% (95% CI: 35.4-38.5)
U.S.: 31.6% (95% CI: 31.3-31.8)
The prevalence of hypertension among West Virginians was significantly higher than the U.S. prevalence. West Virginia ranked the 6th highest among 52 BRFSS participants.

Gender

Men: 36.5% (95% CI: 34.1-38.9)
Women: 37.4% (95% CI: 35.5-39.4)
There was no gender difference in the prevalence of hypertension.

Age

The prevalence of hypertension increased sharply and significantly with increasing age, a well-known phenomenon. Approximately 60.8% of West Virginia seniors have hypertension.

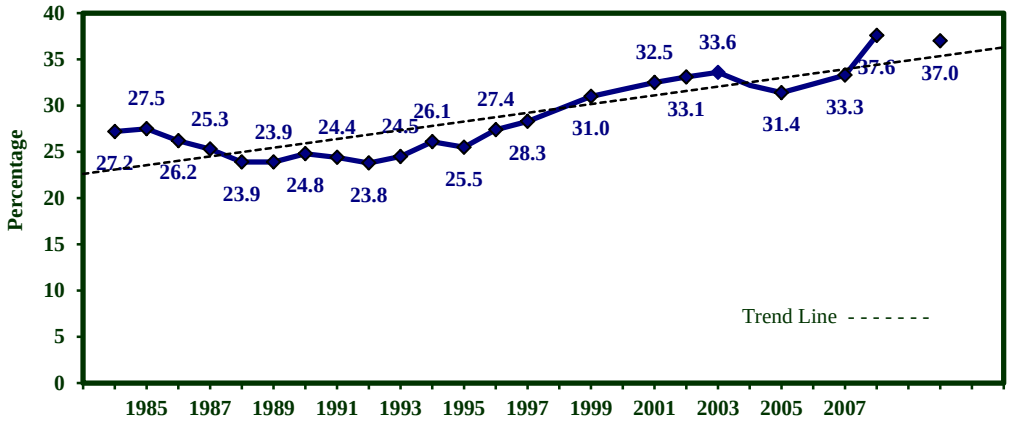
Education

In general, the prevalence of hypertension decreased with higher levels of educational attainment. Adults who did not have a high school diploma had a significantly higher prevalence of hypertension (46.1%) than those with a college degree (28.5%).

Household Income

The prevalence of hypertension among those with an annual household income of less than $15,000 per year (44.4%) was significantly higher than among those with an annual household income of $75,000 or more per year (30.4%).

Figure 7.1 Prevalence of hypertension awareness by year: WVBRFSS, 1984-2011



NOTE: Data not available for the years 1998, 2000, 2004, 2006, 2008, and 2010.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Table 7.1 Hypertension awareness by demographic characteristics: WVBRFSS, 2011

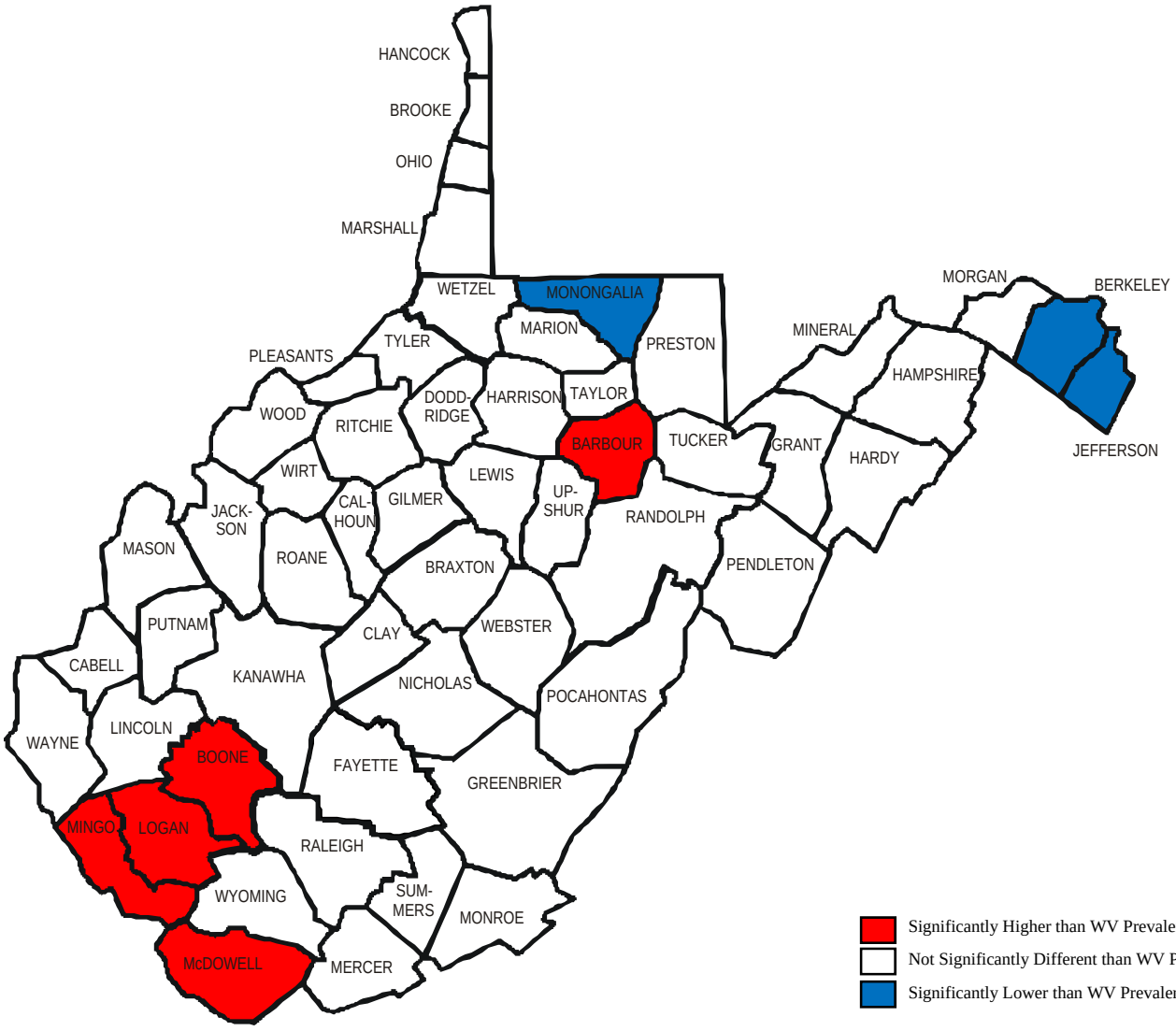
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,071	**36.5**	34.1-38.9	3,204	**37.4**	35.5-39.4	5,275	**37.0**	35.4-38.5
Age									
18-24	102	***5.9**	0.9-11.0	154	***5.4**	1.0-9.8	256	***5.7**	2.3-9.0
25-34	237	**20.5**	14.8-26.3	307	**12.9**	8.7-17.1	544	**16.8**	13.2-20.4
35-44	280	**31.2**	25.3-37.2	395	**24.9**	20.1-29.6	675	**28.0**	24.2-31.8
45-54	397	**40.4**	35.0-45.8	571	**41.8**	37.1-46.4	968	**41.1**	37.6-44.6
55-64	481	**52.8**	47.9-57.8	720	**51.9**	47.8-56.0	1,201	**52.4**	49.1-55.6
65+	566	**57.0**	52.4-61.5	1,029	**63.7**	60.4-67.0	1,595	**60.8**	58.1-63.6
Education									
Less than H.S.	284	**41.3**	34.6-47.9	467	**50.9**	45.0-56.8	751	**46.1**	41.7-50.6
H.S. or G.E.D.	834	**37.3**	33.4-41.2	1,297	**42.2**	39.1-45.3	2,131	**39.7**	37.2-42.2
Some Post-H.S.	474	**33.8**	29.1-38.5	817	**30.0**	26.6-33.4	1,291	**31.6**	28.8-34.4
College Graduate	474	**33.0**	28.4-37.5	618	**24.1**	20.5-27.7	1,092	**28.5**	25.6-31.4
Income									
Less than $15,000	231	**42.0**	34.4-49.5	450	**46.4**	40.7-52.2	681	**44.4**	39.8-49.1
$15,000- 24,999	353	**43.4**	37.2-49.5	657	**43.8**	39.3-48.4	1,010	**43.6**	39.9-47.3
$25,000- 34,999	298	**34.8**	28.6-41.0	487	**38.0**	33.0-42.9	785	**36.5**	32.6-40.4
$35,000- 49,999	310	**35.1**	28.8-41.3	391	**32.2**	27.3-37.2	701	**33.7**	29.7-37.7
$50,000- 74,999	272	**33.2**	27.0-39.3	294	**29.5**	23.8-35.3	566	**31.5**	27.3-35.8
$75,000+	328	**36.8**	30.9-42.8	350	**22.8**	18.0-27.6	678	**30.4**	26.5-34.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 7.2 Hypertension awareness by county: WVBRFSS, 2003, 2005, 2007, 2009, 2011

U.S. Prevalence (2007) – 27.7%

WV Prevalence (2003, 2005, 2007, 2009, 2011) – 34.6%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Hypertension Medication

Definition

Reporting hypertension and responding "Yes" to the questions "Has a doctor or other health professional ever advised you to take medication to help lower or control your high blood pressure?" "Are you currently taking medicine for your high blood pressure?"

Prevalence

Doctor Advised to Take Medication
WV: 90.3% (95% CI: 88.6-92.0)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.
Currently Use Medication
WV: 84.3% (95% CI: 82.3-86.3)
U.S.: 77.3% (95% CI: 76.8-77.7)
The West Virginia prevalence of hypertension medication use was significantly higher than the U.S. prevalence. West Virginia ranked the highest among 52 BRFSS participants.

Gender

Doctor Advised to Take Medication
Men: 89.7% (95% CI: 86.9-92.5)
Women: 90.9% (95% CI: 88.7-93.0)
There was no gender difference in the prevalence of hypertension medication advice.
Currently Use Medication
Men: 82.1% (95% CI: 78.8-85.4)
Women: 86.4% (95% CI: 84.0-88.8)
There was no gender difference in the prevalence of hypertension medication use.

Age

The prevalence of both hypertension medication advice and hypertension medication use increased significantly with increasing age.

Education

There was no educational attainment difference for either the prevalence of hypertension medication advice or the prevalence of hypertension medication use.

Household Income

There was no annual household income difference for either the prevalence of hypertension medication advice or the prevalence of hypertension medication use.

Table 7.2 Use of hypertension medication by demographic characteristics: WVBRFSS, 2011

Characteristic	Doctor Advised to Take Medication			Currently Use Medication		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,242	**90.3**	88.6-92.0	2,282	**84.3**	82.3-86.3
Sex						
Males	853	**89.7**	86.9-92.5	870	**82.1**	78.8-85.4
Females	1,389	**90.9**	88.7-93.0	1,412	**86.4**	84.0-88.8
Age						
18-24	13	***20.8**	0.5-41.1	14	***4.2**	0.0-12.5
25-34	79	***68.1**	57.0-79.3	83	***47.8**	36.0-59.7
35-44	180	**85.7**	79.9-91.6	186	**71.9**	64.6-79.1
45-54	386	**91.3**	87.8-94.7	392	**83.1**	78.9-87.3
55-64	614	**93.8**	91.8-95.9	622	**91.3**	88.9-93.7
65+	963	**96.6**	95.5-97.8	977	**96.1**	94.8-97.4
Education						
Less than H.S.	400	**91.4**	87.3-95.6	412	**81.8**	76.7-86.9
H.S. or G.E.D.	975	**89.2**	86.4-92.0	993	**85.0**	81.9-88.1
Some Post-H.S.	497	**91.3**	88.1-94.4	503	**85.3**	81.5-89.1
College Graduate	367	**90.9**	87.4-94.4	371	**85.3**	81.0-89.7
Income						
Less than $15,000	360	**88.5**	83.8-93.1	367	**82.0**	76.9-87.1
$15,000- 24,999	475	**87.0**	82.3-91.7	485	**79.6**	74.4-84.8
$25,000- 34,999	324	**87.9**	83.1-92.7	328	**87.5**	83.0-92.1
$35,000- 49,999	279	**92.6**	89.2-96.1	282	**87.1**	82.2-92.1
$50,000- 74,999	212	**92.3**	88.5-96.1	214	**85.9**	80.8-91.1
$75,000+	226	**93.6**	89.8-97.4	230	**86.8**	81.6-92.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Hypertension Control – Doctor Advice

Definition

Persons reporting that they have high blood pressure were asked a series of questions about advice a doctor or other health professional gave them about ways to lower or control their high blood pressure. Defined as responding "Yes" to doctor advice about "change eating habits", "cut down on salt", "reduce alcohol use", and "exercise".

Prevalence

Change Eating Habits: **65.0%** (95% CI: 62.6-67.3)
Reduce Salt Intake: **63.0%** (95% CI: 60.6-65.3)
Reduce Alcohol Intake: **10.8%** (95% CI: 9.2-12.5)
Exercise: **73.3%** (95% CI: 71.1-75.5)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Change Eating Habits
Men: 66.2% (95% CI: 62.5-70.0)
Women: 63.8% (95% CI: 60.8-66.8)
There was no gender difference in the prevalence doctor advice to change eating habits.
Reduce Salt Intake
Men: 66.1% (95% CI: 62.5-69.8)
Women: 60.1% (95% CI: 57.0-63.2)
There was no gender difference in the prevalence of doctor advice to reduce salt intake.
Reduce Alcohol Intake
Men: 16.2% (95% CI: 13.2-19.2)
Women: 6.0% (95% CI: 4.5-7.4)
The prevalence of doctor advice to reduce alcohol intake was significantly higher for men than women.
Exercise
Men: 73.9% (95% CI: 70.3-77.4)
Women: 72.8% (95% CI: 70.1-75.5)
There was no gender difference in the prevalence of doctor advice to exercise.

Age

The prevalence of doctor advice to change eating habits, reduce salt intake, reduce alcohol intake, and exercise was lowest among the 65 and older age group.

Education

There were no consistent educational attainment differences in the prevalence of doctor advice to change eating habits, reduce salt intake, reduce alcohol intake, or exercise.

Household Income

There were no consistent annual household income differences in the prevalence of doctor advice to change eating habits, reduce salt intake, reduce alcohol intake, or exercise.

Table 7.3 Doctor's advice about controlling hypertension by demographic characteristics: WVBRFSS, 2011

Characteristic	Change Eating Habits		Reduce Salt Intake		Reduce Alcohol Intake		Exercise	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	**65.0**	62.6-67.3	**63.0**	60.6-65.3	**10.8**	9.2-12.5	**73.3**	71.1-75.5
Sex								
Males	**66.2**	62.5-70.0	**66.1**	62.5-69.8	**16.2**	13.2-19.2	**73.9**	70.3-77.4
Females	**63.8**	60.8-66.8	**60.1**	57.0-63.2	**6.0**	4.5-7.4	**72.8**	70.1-75.5
Age								
18-24	***81.6**	50.5-100.0	***87.7**	70.5-100.0	***12.1**	0.0-29.0	***75.3**	43.9-100.0
25-34	***64.1**	52.6-75.6	***60.0**	48.2-71.7	***20.2**	10.1-30.3	***69.1**	57.9-80.4
35-44	**69.9**	62.3-77.6	**67.2**	59.6-74.7	**19.0**	12.6-25.5	**79.3**	72.5-86.2
45-54	**70.0**	64.7-75.4	**64.1**	58.6-69.6	**15.1**	10.6-19.5	**78.7**	74.0-83.5
55-64	**70.1**	65.9-74.4	**66.5**	62.2-70.9	**10.1**	7.4-12.7	**77.0**	73.0-81.0
65+	**55.8**	52.2-59.4	**57.8**	54.2-61.4	**4.2**	2.8-5.6	**66.2**	62.7-69.6
Education								
Less than H.S.	**60.8**	55.1-66.6	**63.5**	57.9-69.1	**7.0**	3.9-10.0	**68.8**	63.3-74.2
H.S. or G.E.D.	**63.6**	59.9-67.3	**63.7**	60.1-67.3	**12.4**	9.7-15.2	**73.2**	69.7-76.6
Some Post-H.S.	**71.8**	67.3-76.2	**61.4**	56.5-66.4	**12.6**	8.9-16.3	**77.1**	73.0-81.2
College Graduate	**65.6**	60.2-71.1	**62.9**	57.4-68.4	**9.3**	5.8-12.7	**75.6**	70.7-80.5
Income								
Less than $15,000	**61.3**	54.9-67.6	**62.7**	56.4-68.9	**8.3**	4.4-12.1	**65.8**	59.5-72.0
$15,000- 24,999	**61.4**	55.9-66.9	**59.5**	54.1-64.8	**9.4**	6.1-12.8	**67.8**	62.5-73.1
$25,000- 34,999	**70.4**	64.5-76.2	**62.9**	56.7-69.2	**14.2**	9.1-19.3	**78.7**	73.4-84.0
$35,000- 49,999	**66.7**	60.3-73.0	**64.1**	57.6-70.5	**12.1**	7.2-17.1	**78.1**	72.5-83.7
$50,000- 74,999	**70.9**	63.8-77.9	**70.1**	63.2-77.1	**14.1**	8.3-19.8	**76.9**	70.3-83.6
$75,000+	**65.9**	58.8-73.0	**64.7**	57.7-71.7	**15.0**	9.5-20.6	**76.8**	70.5-83.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Hypertension Control – Actions Taken

Definition

Persons reporting that they have high blood pressure were asked a series of questions about actions they are taking to lower or control their high blood pressure. Defined as responding "Yes" to currently taking actions to "change eating habits", "cut down on salt", "reduce alcohol use", and "exercise".

Prevalence

Change Eating Habits: **72.8%** (95% CI: 70.5-75.0)
Reduce Salt Intake: **69.4%** (95% CI: 67.1-71.6)
Reduce Alcohol Intake: **11.4%** (95% CI: 9.7-13.0)
Exercise: **57.8%** (95% CI: 55.3-60.2)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Change Eating Habits
Men: 68.4% (95% CI: 64.6-72.1)
Women: 76.7% (95% CI: 74.1-79.4)
The prevalence of action taken to change eating habits was significantly higher for women than men.
Reduce Salt Intake
Men: 68.5% (95% CI: 64.9-72.1)
Women: 70.2% (95% CI: 67.3-73.0)
There was no gender difference in the prevalence of action taken to reduce salt intake.
Reduce Alcohol Intake
Men: 17.0% (95% CI: 14.0-20.0)
Women: 6.3% (95% CI: 4.8-7.8)
The prevalence of action taken to reduce alcohol intake was significantly higher among men than women.
Exercise
Men: 59.2% (95% CI: 55.4-63.1)
Women: 56.4% (95% CI: 53.4-59.5)
There was no gender difference in the prevalence of action taken to exercise.

Age

There were no consistent age differences in the prevalence of action taken to change eating habits, reduce salt intake, reduce alcohol intake, or exercise.

Education

There were no consistent educational attainment differences in the prevalence of action taken to change eating habits, reduce salt intake, reduce alcohol intake, or exercise.

Household Income

There were no consistent annual household income differences in the prevalence of action taken to change eating habits, reduce salt intake, reduce alcohol intake, or exercise.

Table 7.4 Actions taken to control hypertension by demographic characteristics: WVBRFSS, 2011

Characteristic	Change Eating Habits		Reduce Salt Intake		Reduce Alcohol Intake		Exercise	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	**72.8**	70.5-75.0	**69.4**	67.1-71.6	**11.4**	9.7-13.0	**57.8**	55.3-60.2
Sex								
Males	**68.4**	64.6-72.1	**68.5**	64.9-72.1	**17.0**	14.0-20.0	**59.2**	55.4-63.1
Females	**76.7**	74.1-79.4	**70.2**	67.3-73.0	**6.3**	4.8-7.8	**56.4**	53.4-59.5
Age								
18-24	***80.9**	57.3-100.0	***93.6**	83.6-100.0	***5.0**	0.0-14.7	***100.0**	100.0-100.0
25-34	***65.5**	53.3-77.6	***64.6**	53.3-76.0	**18.5**	9.0-28.1	***69.6**	58.0-81.3
35-44	**71.9**	64.0-79.8	**69.8**	62.2-77.5	**16.8**	10.8-22.9	**56.7**	48.5-64.8
45-54	**75.1**	70.2-80.1	**67.3**	61.8-72.7	**15.3**	10.8-19.7	**56.6**	51.0-62.3
55-64	**77.3**	73.3-81.3	**73.8**	69.8-77.8	**11.1**	8.3-13.8	**54.2**	49.6-58.8
65+	**69.4**	66.0-72.8	**67.1**	63.7-70.6	**6.4**	4.5-8.2	**56.9**	53.4-60.4
Education								
Less than H.S.	**70.3**	64.9-75.8	**66.6**	61.1-72.2	**9.1**	5.6-12.5	**48.4**	42.5-54.2
H.S. or G.E.D.	**70.0**	66.3-73.6	**69.6**	66.2-73.1	**9.6**	7.2-12.0	**55.9**	52.2-59.7
Some Post-H.S.	**79.3**	75.3-83.3	**70.9**	66.3-75.4	**14.5**	10.7-18.3	**64.5**	59.8-69.3
College Graduate	**76.1**	71.3-80.9	**71.3**	66.2-76.4	**16.4**	11.9-21.0	**69.2**	63.9-74.4
Income								
Less than $15,000	**74.7**	69.0-80.4	**67.8**	61.9-73.7	**11.8**	7.2-16.4	**48.1**	41.7-54.4
$15,000- 24,999	**72.6**	67.7-77.6	**68.5**	63.4-73.6	**7.8**	5.0-10.6	**55.5**	50.0-60.9
$25,000- 34,999	**75.0**	69.5-80.5	**67.6**	61.6-73.6	**11.1**	6.4-15.9	**59.5**	53.2-65.7
$35,000- 49,999	**76.0**	70.0-82.1	**71.4**	65.0-77.8	**14.4**	9.2-19.6	**65.8**	59.2-72.2
$50,000- 74,999	**73.2**	66.1-80.2	**76.1**	69.8-82.4	**15.9**	10.1-21.7	**63.1**	55.6-70.7
$75,000+	**69.9**	62.7-77.2	**65.4**	58.3-72.6	**17.3**	11.7-22.8	**63.4**	56.1-70.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 8: CHOLESTEROL

Cholesterol Testing

Definition

Responding "Yes" to the question "Have you ever had your blood cholesterol checked?" Responding "Within the past 5 years" to the question "About how long has it been since you last had your blood cholesterol checked?"

Prevalence

Ever
WV: 83.3% (95% CI: 81.8-84.8)
U.S.: 79.4% (95% CI: 79.1-79.6)
The West Virginia prevalence of ever had cholesterol checked was significantly higher than the U.S. prevalence. West Virginia ranked the 10th highest among 52 BRFSS participants.

Past 5 years
WV: 80.5% (95% CI: 79.0-82.1)
U.S.: 75.8% (95% CI: 75.5-76.0)
The West Virginia prevalence of had cholesterol checked in the past 5 years was significantly higher than the U.S. prevalence. West Virginia ranked the 8th highest among 52 BRFSS participants.

Gender

Ever
Men: 81.6% (95% CI: 79.1-84.0)
Women: 84.9% (95% CI: 83.2-86.6)
There was no gender difference in the prevalence of ever had cholesterol checked.

Past 5 years
Men: 78.8% (95% CI: 76.3-81.3)
Women: 82.1% (95% CI: 80.3-84.0)
There was no gender difference in the prevalence of had cholesterol checked in the past 5 years.

Age

Generally, both the prevalence of ever had cholesterol checked and the prevalence of had cholesterol checked in the past 5 years increased with increasing age. The highest prevalence of each indicator was found among the 65 and older age group.

Education

The prevalence of ever had cholesterol checked and the prevalence of had cholesterol checked in the past 5 years were both highest among college graduates and lowest among those with less than a high school education.

Household Income

The prevalence of ever had cholesterol checked and the prevalence of had cholesterol checked in the past 5 years both increased with increasing levels of annual household income.

Table 8.1 Ever had cholesterol checked by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,016	**81.6**	79.1-84.0	3,137	**84.9**	83.2-86.6	5,153	**83.3**	81.8-84.8
Age									
18-24	88	***51.0**	39.1-62.9	141	**56.4**	47.0-65.8	229	**53.7**	46.1-61.4
25-34	227	**62.4**	55.2-69.5	292	**66.7**	60.7-72.7	519	**64.5**	59.8-69.2
35-44	271	**82.3**	77.1-87.5	384	**83.7**	79.7-87.8	655	**83.0**	79.7-86.3
45-54	389	**87.4**	83.5-91.2	567	**91.1**	88.1-94.0	956	**89.3**	86.9-91.7
55-64	479	**94.2**	91.7-96.7	713	**94.2**	92.2-96.1	1,192	**94.2**	92.6-95.8
65+	554	**97.5**	96.1-98.9	1,014	**97.9**	97.1-98.8	1,568	**97.7**	97.0-98.5
Education									
Less than H.S.	268	**79.0**	72.4-85.7	453	**83.0**	78.7-87.4	721	**81.1**	77.1-85.0
H.S. or G.E.D.	811	**77.8**	73.6-82.0	1,268	**83.6**	80.8-86.4	2,079	**80.7**	78.1-83.2
Some Post-H.S.	463	**83.8**	79.5-88.1	801	**84.9**	81.5-88.2	1,264	**84.4**	81.7-87.1
College Graduate	469	**90.9**	87.3-94.4	610	**90.0**	86.7-93.4	1,079	**90.5**	88.0-92.9
Income									
Less than $15,000	217	**76.8**	69.4-84.2	443	**73.7**	68.1-79.3	660	**75.1**	70.6-79.6
$15,000- 24,999	344	**77.7**	71.7-83.7	648	**79.7**	75.7-83.8	992	**78.8**	75.4-82.3
$25,000- 34,999	289	**82.7**	77.2-88.3	479	**86.8**	82.9-90.7	768	**84.9**	81.6-88.2
$35,000- 49,999	308	**81.8**	75.5-88.1	381	**90.9**	87.0-94.8	689	**86.2**	82.4-90.0
$50,000- 74,999	266	**84.1**	77.6-90.5	290	**87.6**	81.8-93.5	556	**85.7**	81.3-90.1
$75,000+	324	**92.6**	86.8-98.4	348	**89.4**	84.6-94.1	672	**91.1**	87.3-94.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Table 8.2 Had cholesterol checked in past five years by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,000	**78.8**	76.3-81.3	3,104	**82.1**	80.3-84.0	5,104	**80.5**	79.0-82.1
Age									
18-24	85	***47.3**	35.2-59.3	138	**53.2**	43.5-62.9	223	**50.3**	42.5-58.1
25-34	226	**59.7**	52.5-66.9	290	**62.8**	56.7-68.9	516	**61.2**	56.5-66.0
35-44	271	**79.8**	74.4-85.2	381	**79.6**	75.2-84.0	652	**79.7**	76.2-83.2
45-54	386	**83.4**	79.2-87.7	564	**88.5**	85.3-91.7	950	**86.0**	83.4-88.7
55-64	475	**91.7**	88.9-94.5	708	**91.6**	89.2-93.9	1,183	**91.6**	89.8-93.5
65+	550	**95.2**	93.2-97.3	997	**96.7**	95.6-97.8	1,547	**96.1**	95.0-97.2
Education									
Less than H.S.	263	**76.1**	69.3-82.9	446	**79.5**	74.3-84.6	709	**77.8**	73.6-82.1
H.S. or G.E.D.	804	**75.3**	71.0-79.5	1,257	**81.3**	78.4-84.2	2,061	**78.3**	75.7-80.9
Some Post-H.S.	461	**81.4**	76.9-85.9	794	**81.4**	77.9-84.9	1,255	**81.4**	78.6-84.2
College Graduate	467	**87.1**	83.2-91.0	602	**88.3**	84.7-91.8	1,069	**87.7**	85.0-90.3
Income									
Less than $15,000	215	**73.8**	66.3-81.4	441	**70.6**	64.9-76.3	656	**72.0**	67.4-76.6
$15,000- 24,999	341	**75.3**	69.3-81.4	643	**77.5**	73.3-81.6	984	**76.5**	73.0-80.1
$25,000- 34,999	287	**79.8**	74.0-85.6	474	**83.5**	79.3-87.6	761	**81.7**	78.2-85.3
$35,000- 49,999	306	**79.8**	73.4-86.3	377	**89.0**	84.9-93.1	683	**84.3**	80.4-88.2
$50,000- 74,999	265	**82.6**	76.1-89.1	286	**84.8**	78.7-90.9	551	**83.6**	79.1-88.1
$75,000+	324	**89.3**	83.3-95.4	348	**87.9**	83.0-92.8	672	**88.7**	84.7-92.6

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

High Cholesterol Prevalence

Definition

Responding "Yes" to the question "Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?"

Prevalence

WV: 40.5% (95% CI: 38.8-42.2)
U.S.: 38.5% (95% CI: 38.2-38.8)
The prevalence of high cholesterol was similar in West Virginia and the U.S. West Virginia ranked the 11th highest among the 52 BRFSS participants.

Gender

Men: 40.7% (95% CI: 38.1-43.4)
Women: 40.3% (95% CI: 38.2-42.5)
There was no gender difference in the prevalence of high cholesterol.

Age

The prevalence of high cholesterol generally increased with age with the highest prevalence being among the 55-64 year old age group.

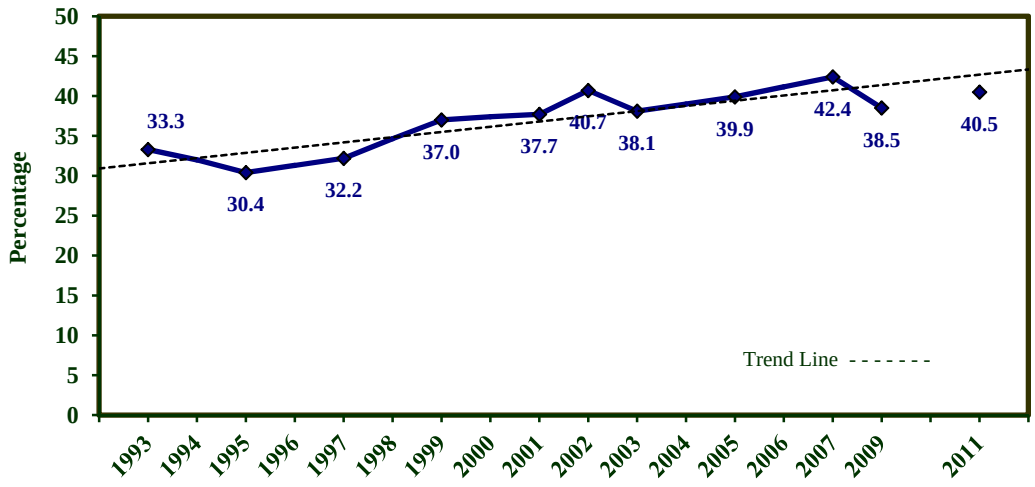
Education

High cholesterol prevalence declined with increasing levels of educational attainment. Adults with less than a high school education had a significantly higher prevalence of high cholesterol than all other educational levels.

Household Income

About half of those with an annual household income of less than $15,000 had high cholesterol. Only about one-third of those in the upper income brackets reported having high cholesterol levels.

Figure 8.1 Prevalence of high blood cholesterol among those who have ever had their blood cholesterol checked by year: WVBRFSS, 1993-2011



NOTES: Data not available for the years 1994, 1996, 1998, 2000, 2004, 2006, 2008 and 2010.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Table 8.3 Prevalence of high cholesterol among those who have ever had their blood cholesterol checked by demographic characteristics: WVBRFSS, 2011

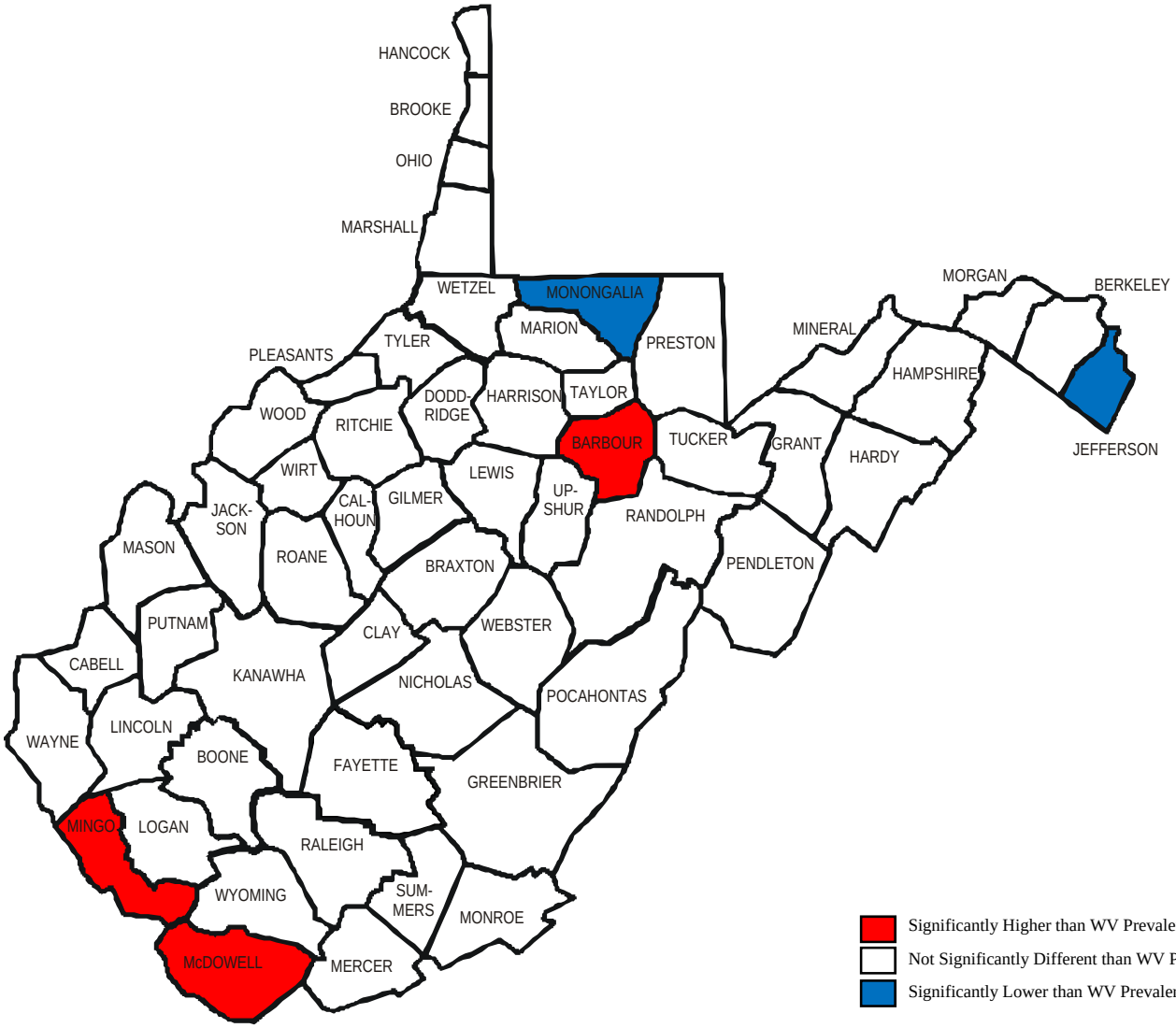
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,755	**40.7**	38.1-43.4	2,771	**40.3**	38.2-42.5	4,526	**40.5**	38.8-42.2
Age									
18-24	48	***5.9**	0.0-12.0	77	***2.1**	0.0-4.4	125	***3.9**	0.7-7.0
25-34	150	**25.0**	16.7-33.2	199	**22.3**	15.7-28.9	349	**23.6**	18.4-28.9
35-44	225	**33.1**	26.4-39.8	314	**32.7**	26.8-38.6	539	**32.9**	28.4-37.3
45-54	341	**43.9**	38.1-49.8	513	**40.7**	35.9-45.5	854	**42.3**	38.5-46.0
55-64	452	**55.4**	50.3-60.5	671	**51.4**	47.2-55.7	1,123	**53.4**	50.1-56.7
65+	532	**49.1**	44.4-53.9	975	**54.0**	50.5-57.5	1,507	**51.9**	49.1-54.8
Education									
Less than H.S.	225	**52.5**	44.8-60.1	381	**52.4**	45.7-59.1	606	**52.4**	47.4-57.5
H.S. or G.E.D.	683	**39.7**	35.5-43.9	1,110	**45.4**	42.0-48.8	1,793	**42.6**	39.9-45.3
Some Post-H.S.	406	**38.5**	33.2-43.8	712	**34.8**	30.9-38.7	1,118	**36.4**	33.2-39.5
College Graduate	437	**34.7**	29.8-39.6	563	**25.5**	21.6-29.4	1,000	**30.1**	27.0-33.3
Income									
Less than $15,000	177	**48.3**	39.4-57.3	358	**55.9**	49.2-62.7	535	**52.5**	47.0-58.0
$15,000- 24,999	291	**45.7**	38.9-52.5	550	**42.2**	37.2-47.1	841	**43.7**	39.6-47.8
$25,000- 34,999	250	**42.4**	35.2-49.5	431	**45.1**	39.6-50.6	681	**43.9**	39.4-48.3
$35,000- 49,999	263	**42.2**	35.1-49.3	353	**33.9**	28.2-39.6	616	**37.9**	33.4-42.5
$50,000- 74,999	239	**39.6**	32.6-46.6	266	**34.5**	28.1-41.0	505	**37.2**	32.5-42.0
$75,000+	312	**34.2**	28.5-40.0	319	**30.6**	24.7-36.4	631	**32.6**	28.5-36.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 8.2 High cholesterol awareness by county: WVBRFSS, 2003, 2005, 2007, 2009, 2011

U.S. Prevalence (2007) – 37.3%

WV Prevalence (2003, 2005, 2007, 2009, 2011) – 39.9%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

CHAPTER 9: ALCOHOL CONSUMPTION

Binge Drinking

Definition

Defined as consumption of five or more alcoholic drinks for males, or four or more alcoholic drinks for females, on a single occasion during the past month.

Prevalence

WV: 10.1% (95% CI: 8.9-11.4)
U.S.: 18.3% (95% CI: 18.0-18.5)
The U.S. prevalence of binge drinking was significantly higher than the West Virginia prevalence. West Virginia ranked the 2nd lowest among 52 BRFSS participants.

Gender

Men: 15.5% (95% CI: 13.3-17.8)
Women: 5.2% (95% CI: 4.2-6.1)
Men had a significantly higher prevalence of binge drinking than women.

Age

Younger adults had a higher prevalence of binge drinking than those aged 55 and older. The prevalence of binge drinking ranged from highs of 22.9% among the 18-24 age group to lows of only 1.4% among those aged 65 and older.

Education

The prevalence of binge drinking was highest among those with some college (11.5%) and lowest among those with less than a high school education (6.0%).

Household Income

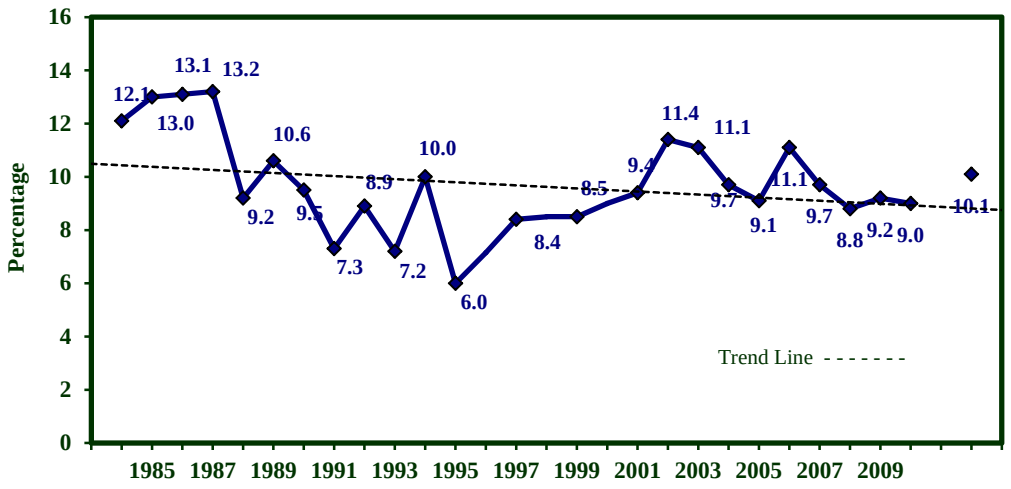
There was no consistent annual household income difference in the prevalence of binge drinking.

Table 9.1 Binge drinking by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,017	**15.5**	13.3-17.8	3,147	**5.2**	4.2-6.1	5,164	**10.1**	8.9-11.4
Age									
18-24	96	***34.2**	22.8-45.7	149	**11.3**	6.0-16.7	245	**22.9**	16.1-29.7
25-34	226	**26.4**	20.2-32.7	300	**7.5**	4.2-10.8	526	**17.0**	13.3-20.6
35-44	272	**16.0**	11.3-20.7	385	**7.9**	5.1-10.6	657	**11.9**	9.2-14.7
45-54	391	**15.0**	11.1-19.0	563	**5.7**	3.6-7.8	954	**10.3**	8.0-12.5
55-64	469	**6.8**	4.1-9.4	716	**2.3**	1.2-3.4	1,185	**4.5**	3.1-5.9
65+	557	***2.5**	1.0-3.9	1,007	***0.6**	0.1-1.1	1,564	**1.4**	0.7-2.1
Education									
Less than H.S.	273	**9.1**	4.1-14.2	456	***2.9**	1.2-4.7	729	**6.0**	3.3-8.6
H.S. or G.E.D.	808	**18.0**	14.1-21.9	1,271	**3.6**	2.3-4.9	2,079	**10.8**	8.7-13.0
Some Post-H.S.	467	**17.8**	13.5-22.1	805	**6.7**	4.5-8.9	1,272	**11.5**	9.2-13.7
College Graduate	466	**13.2**	9.1-17.2	610	**8.7**	5.5-12.0	1,076	**11.0**	8.3-13.6
Income									
Less than $15,000	224	**10.1**	5.3-14.9	439	**6.1**	3.0-9.1	663	**7.9**	5.2-10.6
$15,000- 24,999	342	**17.1**	11.9-22.4	644	**5.0**	2.9-7.0	986	**10.3**	7.6-13.0
$25,000- 34,999	297	**11.6**	6.1-17.1	481	***3.7**	1.5-5.9	778	**7.4**	4.5-10.3
$35,000- 49,999	306	**21.4**	14.2-28.5	388	**5.3**	2.4-8.2	694	**13.5**	9.3-17.6
$50,000- 74,999	265	**20.1**	13.9-26.2	289	***6.2**	2.0-10.3	554	**13.8**	9.9-17.8
$75,000+	321	**18.2**	11.8-24.6	341	**7.8**	4.7-11.0	662	**13.5**	9.6-17.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 9.1 Binge drinking by year: WVBRFSS, 1984-2011



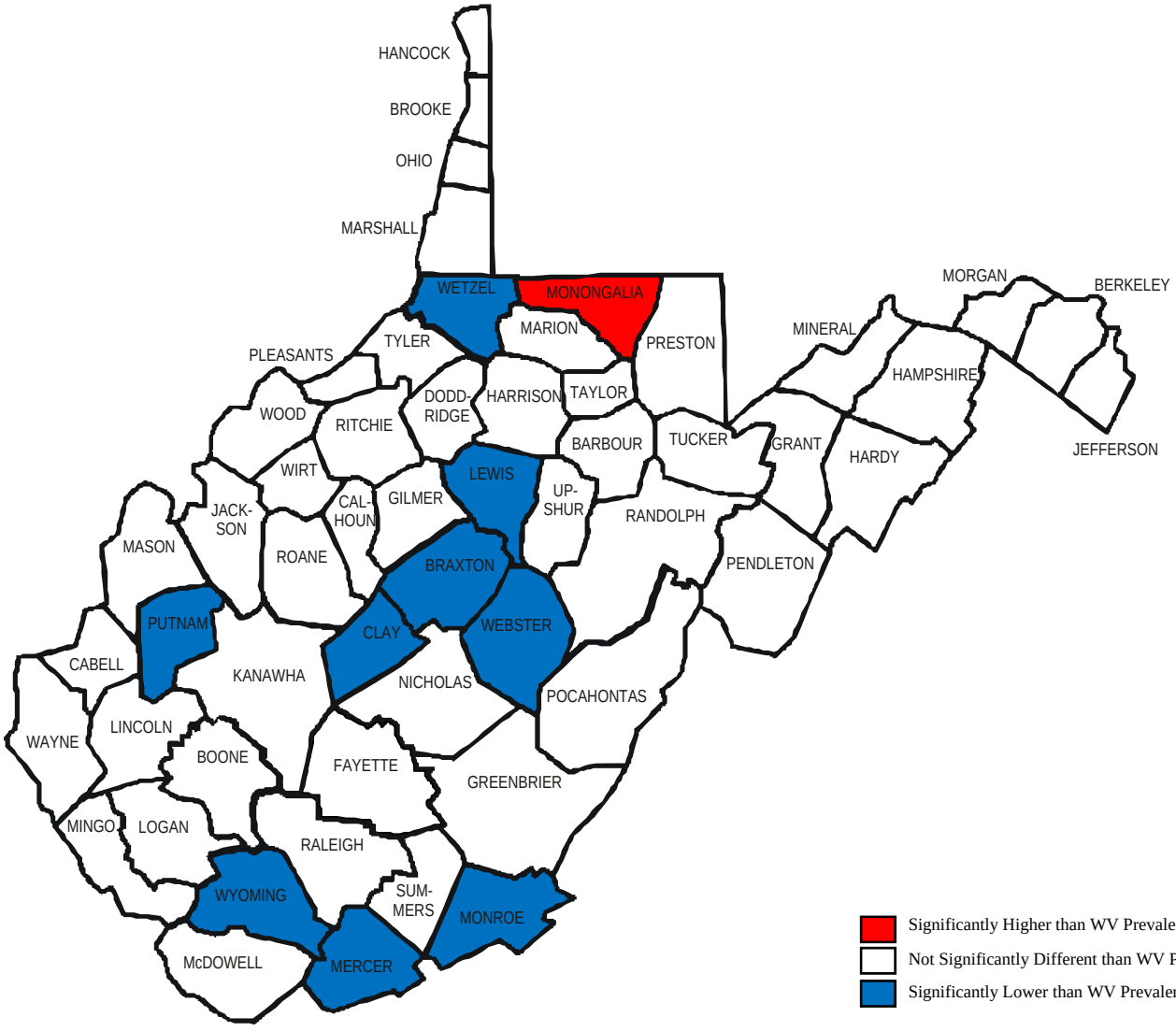
NOTE: Data are not available for the years 1996, 1998, and 2000.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 9.2 Binge drinking by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 15.1%

WV Prevalence (2007-2011) – 9.4%
(Significantly Lower than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Heavy Drinking [1]

Definition

Defined as the consumption of more than two drinks per day for men and more than one drink per day for women during the past month.

Prevalence

WV: 3.9% (95% CI: 3.2-4.7)
U.S.: 6.6% (95% CI: 6.4-6.7)
The U.S. prevalence of heavy drinking was significantly higher than the West Virginia prevalence. West Virginia ranked the 2nd lowest among the 52 BRFSS participants.

Gender

Men: 5.5% (95% CI: 4.0-6.9)
Women: 2.5% (95% CI: 1.8-3.2)
The prevalence of heavy drinking was significantly higher among men than women.

Age

In general, the prevalence of heavy drinking declined with increasing age. The highest prevalence of heavy drinking was among those aged 18-24 and the lowest prevalence was among those aged 65 and older.

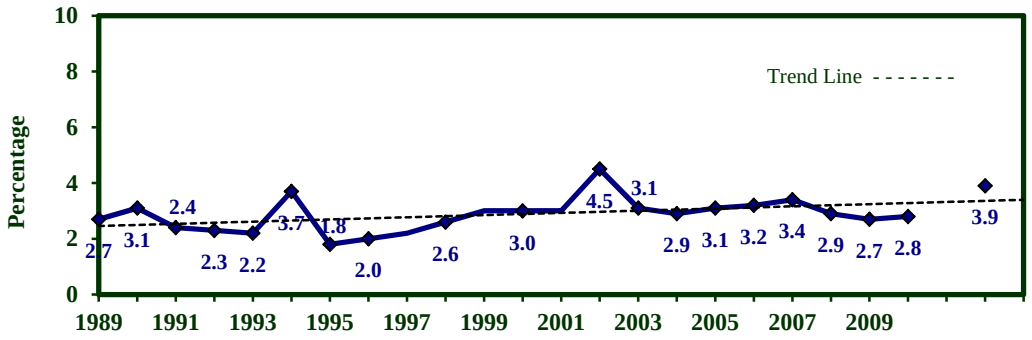
Education

There was educational attainment difference in the prevalence of heavy drinking.

Household Income

There was no annual household income difference in the prevalence of heavy drinking.

Figure 9.3 Heavy drinking by year: WVBRFSS, 1989-2011



NOTE: Data are not available for the years 1996, 1998, and 2000.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

[1] Note: Prior to 2001, heavy drinking was defined as consuming 60 or more drinks during the past month regardless of gender. This report redefines the data prior to 2001 to match the current definition of heavy drinking. Therefore, numbers presented in this chapter may not agree with publications prior to 2003.

Table 9.2 Heavy drinking by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,016	**5.5**	4.0-6.9	3,152	**2.5**	1.8-3.2	5,168	**3.9**	3.2-4.7
Age									
18-24	96	***10.8**	2.5-19.1	150	***2.6**	0.2-5.1	246	***6.8**	2.3-11.3
25-34	228	**7.7**	4.1-11.4	300	***3.0**	0.6-5.4	528	**5.4**	3.2-7.6
35-44	271	***4.5**	1.8-7.2	385	***3.2**	1.3-5.1	656	**3.9**	2.2-5.5
45-54	390	**7.1**	4.1-10.1	566	**4.1**	2.2-5.9	956	**5.5**	3.8-7.3
55-64	470	***1.7**	0.5-3.0	716	**2.6**	1.4-3.8	1,186	**2.2**	1.3-3.0
65+	555	**2.8**	1.4-4.3	1,009	***0.4**	0.1-0.7	1,564	**1.4**	0.8-2.1
Education									
Less than H.S.	272	***5.0**	1.8-8.3	458	***3.1**	1.0-5.1	730	**4.0**	2.1-5.9
H.S. or G.E.D.	808	**7.2**	4.4-10.0	1,271	**2.0**	1.1-2.9	2,079	**4.6**	3.1-6.1
Some Post-H.S.	468	**4.9**	2.6-7.3	805	**2.5**	1.1-3.8	1,273	**3.5**	2.3-4.8
College Graduate	465	**2.5**	1.1-4.0	613	**3.1**	1.7-4.6	1,078	**2.8**	1.8-3.9
Income									
Less than $15,000	225	***4.3**	0.8-7.8	440	***3.4**	1.2-5.6	665	**3.8**	1.8-5.8
$15,000- 24,999	339	**7.6**	3.6-11.7	645	***2.2**	0.7-3.8	984	**4.6**	2.6-6.6
$25,000- 34,999	295	***3.4**	1.2-5.6	480	***3.1**	0.9-5.2	775	**3.2**	1.7-4.8
$35,000- 49,999	306	**4.9**	2.1-7.7	388	***1.9**	0.3-3.4	694	**3.4**	1.8-5.0
$50,000- 74,999	265	**5.8**	2.5-9.0	292	***3.7**	1.2-6.3	557	**4.8**	2.7-7.0
$75,000+	322	***6.6**	1.1-12.2	343	**3.0**	1.3-4.7	665	***5.0**	1.8-8.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

No Drinking

Definition Defined as the consumption of no alcoholic drinks during the past month.

Prevalence

WV: 68.2% (95% CI: 66.5-69.8)
U.S.: 44.9% (95% CI: 44.6-45.2)
The West Virginia prevalence of no drinking in the past month was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among 52 BRFSS participants.

Gender

Men: 59.0% (95% CI: 56.3-61.6)
Women: 76.7% (95% CI: 74.8-78.6)
The prevalence of no drinking in the past month was significantly higher among women than men.

Age The prevalence of no drinking in the past month generally increased with increasing age.

Education The prevalence of no drinking in the past month was significantly different for each level of educational attainment. The prevalence of no drinking in the past month was highest among those with less than a high school education and lowest among those with a college degree.

Household Income The prevalence of no drinking in the past month was highest among those with an annual household income of less than $15,000 while the lowest prevalence was among those with a household income of $75,000 or more per year.

Table 9.3 No drinking in past month by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,029	**59.0**	56.3-61.6	3,159	**76.7**	74.8-78.6	5,188	**68.2**	66.5-69.8
Age									
18-24	98	***50.4**	39.0-61.8	150	**66.8**	57.5-76.0	248	**58.4**	50.9-65.8
25-34	230	**42.9**	35.8-50.1	300	**71.1**	65.5-76.7	530	**56.9**	52.2-61.6
35-44	273	**58.4**	52.1-64.8	386	**69.2**	64.2-74.3	659	**63.9**	59.8-67.9
45-54	391	**56.0**	50.5-61.4	567	**72.6**	68.4-76.8	958	**64.4**	61.0-67.9
55-64	473	**66.5**	61.8-71.2	719	**81.4**	78.4-84.3	1,192	**74.0**	71.2-76.8
65+	557	**75.0**	71.0-78.9	1,009	**90.2**	88.2-92.2	1,566	**83.7**	81.6-85.8
Education									
Less than H.S.	276	**74.3**	67.7-80.9	458	**87.7**	82.8-92.6	734	**81.1**	77.0-85.2
H.S. or G.E.D.	814	**60.4**	56.1-64.7	1,275	**81.3**	78.6-84.1	2,089	**70.8**	68.1-73.4
Some Post-H.S.	469	**52.6**	47.3-57.9	807	**73.5**	69.8-77.2	1,276	**64.5**	61.3-67.6
College Graduate	467	**46.9**	41.8-52.0	614	**59.0**	54.2-63.8	1,081	**53.0**	49.5-56.5
Income									
Less than $15,000	225	**71.7**	64.7-78.7	440	**82.6**	77.3-87.9	665	**77.7**	73.4-82.0
$15,000- 24,999	343	**63.1**	56.8-69.4	647	**80.7**	76.9-84.4	990	**72.9**	69.4-76.5
$25,000- 34,999	297	**64.2**	57.4-71.1	482	**79.5**	75.1-83.8	779	**72.3**	68.2-76.3
$35,000- 49,999	308	**51.3**	44.3-58.3	388	**77.8**	72.9-82.7	696	**64.3**	59.7-68.8
$50,000- 74,999	266	**54.0**	46.8-61.1	292	**70.0**	63.3-76.7	558	**61.2**	56.2-66.1
$75,000+	322	**41.9**	35.5-48.2	343	**53.4**	47.0-59.7	665	**47.1**	42.6-51.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 10: SEAT BELT USE

Usually Wear Seat Belt

Definition

Responding "Always" or "Nearly always" to the question "How often do you use seat belts when you drive or ride in a car?"

Prevalence

WV: 90.5% (95% CI: 89.4-91.7)
U.S.: 93.9% (95% CI: 93.8-94.1)
The U.S. prevalence of usually wear a seat belt was significantly higher than the West Virginia prevalence. West Virginia ranked the 38th highest among 52 BRFSS participants.

Gender

Men: 87.0% (95% CI: 85.1-89.0)
Women: 93.9% (95% CI: 92.7-95.0)
The prevalence of usually wear a seat belt was significantly higher among women than men.

Age

The prevalence of usually wear a seat belt generally increased with age with the highest prevalence being among the 55-64 age group (93.7%) and the lowest among the 18-24 age group (83.2%).

Education

The prevalence of usually wear a seat belt was highest among those with a college degree (94.5%) and lowest among those with less than a high school education (87.4%).

Household Income

The prevalence of usually wear a seat belt varied somewhat by household income but the highest prevalence was among those adults having an annual household income of $75,000 or more (94.9%) and the lowest prevalence among those earning less than $15,000 per year (87.1%).

Table 10.1 Usually wear seat belt by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,050	**87.0**	85.1-89.0	3,178	**93.9**	92.7-95.0	5,228	**90.5**	89.4-91.7
Age									
18-24	100	**76.3**	66.5-86.2	153	**90.4**	84.7-96.0	253	**83.2**	77.3-89.1
25-34	233	**83.6**	78.1-89.0	301	**89.9**	85.8-94.0	534	**86.7**	83.3-90.1
35-44	277	**87.7**	83.6-91.9	391	**93.5**	90.6-96.4	668	**90.6**	88.1-93.2
45-54	394	**88.8**	85.4-92.3	569	**95.0**	93.1-97.0	963	**92.0**	90.0-93.9
55-64	478	**91.9**	89.2-94.6	720	**95.4**	93.4-97.4	1,198	**93.7**	92.0-95.3
65+	560	**90.0**	87.3-92.7	1,016	**96.1**	94.8-97.4	1,576	**93.5**	92.1-94.8
Education									
Less than H.S.	280	**81.5**	75.5-87.5	460	**93.2**	90.2-96.2	740	**87.4**	84.0-90.8
H.S. or G.E.D.	824	**84.5**	81.3-87.8	1,283	**92.7**	90.8-94.5	2,107	**88.5**	86.7-90.4
Some Post-H.S.	471	**90.4**	87.3-93.6	813	**95.5**	93.9-97.1	1,284	**93.3**	91.7-95.0
College Graduate	471	**94.5**	92.0-97.1	617	**94.5**	90.9-98.2	1,088	**94.5**	92.3-96.8
Income									
Less than $15,000	229	**85.2**	79.2-91.2	444	**88.6**	84.8-92.3	673	**87.1**	83.6-90.5
$15,000- 24,999	347	**85.4**	81.2-89.7	653	**92.6**	90.1-95.2	1,000	**89.4**	87.1-91.8
$25,000- 34,999	298	**85.5**	80.0-91.1	483	**96.8**	95.2-98.4	781	**91.5**	88.6-94.3
$35,000- 49,999	308	**84.8**	78.4-91.1	389	**93.5**	90.0-97.0	697	**89.1**	85.3-92.8
$50,000- 74,999	271	**83.0**	77.0-89.0	292	**96.5**	93.3-99.7	563	**89.0**	85.3-92.7
$75,000+	323	**93.5**	90.3-96.6	347	**96.5**	93.4-99.7	670	**94.9**	92.7-97.1

Always Wear Seat Belt

Definition

Responding "Always" to the question "How often do you use seat belts when you drive or ride in a car?"

Prevalence

WV: 82.5% (95% CI: 81.1-83.9)
U.S.: 86.9% (95% CI: 86.7-87.1)
The U.S. prevalence of always wear a seat belt was significantly higher than the West Virginia prevalence. West Virginia ranked the 33rd highest among the 52 BRFSS participants.

Gender

Men: 76.4% (95% CI: 74.0-78.7)
Women: 88.3% (95% CI: 86.8-89.9)
The prevalence of always wear a seat belt was significantly higher among women than men.

Age

The prevalence of always wear a seat belt increased as age increased. The prevalence of always wear a seat belt was highest among those aged 65 and older (87.4%) and lowest among those aged 18-24 (69.5%).

Education

The prevalence of always wear a seat belt was significantly higher among college graduates (87.8%) than among those with less than a high school education (78.2%).

Household Income

The prevalence of always wear a seat belt was significantly higher among those with an annual household income of $75,000 or more (87.6%) than among those with less than $15,000 annual income (80.3%).

Table 10.2 Always wear seat belt by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,050	**76.4**	74.0-78.7	3,178	**88.3**	86.8-89.9	5,228	**82.5**	81.1-83.9
Age									
18-24	100	***61.0**	50.0-72.0	153	**78.4**	70.5-86.3	253	**69.5**	62.6-76.4
25-34	233	**71.9**	65.2-78.5	301	**85.8**	81.3-90.3	534	**78.7**	74.6-82.8
35-44	277	**75.2**	69.7-80.8	391	**86.2**	81.9-90.5	668	**80.8**	77.2-84.3
45-54	394	**80.0**	75.8-84.2	569	**90.9**	88.3-93.5	963	**85.5**	83.0-88.0
55-64	478	**83.8**	80.2-87.4	720	**90.8**	88.2-93.4	1,198	**87.3**	85.1-89.5
65+	560	**80.6**	76.9-84.4	1,016	**92.5**	90.6-94.3	1,576	**87.4**	85.5-89.4
Education									
Less than H.S.	280	**70.6**	63.7-77.5	460	**85.7**	81.0-90.5	740	**78.2**	74.0-82.5
H.S. or G.E.D.	824	**73.4**	69.6-77.2	1,283	**87.1**	84.8-89.4	2,107	**80.1**	77.9-82.4
Some Post-H.S.	471	**80.0**	75.7-84.3	813	**90.3**	87.8-92.8	1,284	**85.9**	83.5-88.2
College Graduate	471	**85.0**	81.1-88.9	617	**90.6**	86.7-94.5	1,088	**87.8**	85.1-90.6
Income									
Less than $15,000	229	**78.1**	71.4-84.8	444	**82.1**	76.8-87.3	673	**80.3**	76.1-84.4
$15,000- 24,999	347	**69.7**	63.5-75.9	653	**85.9**	82.5-89.3	1,000	**78.7**	75.3-82.1
$25,000- 34,999	298	**71.7**	65.1-78.2	483	**89.1**	85.4-92.9	781	**80.9**	77.1-84.7
$35,000- 49,999	308	**74.8**	68.0-81.7	389	**88.1**	83.9-92.3	697	**81.3**	77.2-85.5
$50,000- 74,999	271	**75.3**	68.7-81.8	292	**93.2**	88.8-97.5	563	**83.2**	79.0-87.5
$75,000+	323	**83.6**	78.9-88.3	347	**92.3**	88.5-96.1	670	**87.6**	84.6-90.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 11: IMMUNIZATION

Adults Lacking a Flu Immunization

Definition

Responding "No" to the question "During the past 12 months, have you had either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose?"

Prevalence

All adults

WV: 55.3% (95% CI: 53.6-56.9)
U.S.: 63.3% (95% CI: 63.0-63.6)
The U.S. prevalence of no flu immunization in the past year among all adults was significantly higher than the West Virginia prevalence. West Virginia ranked the 3rd lowest among 52 BRFSS participants.

Adults 65 and older

WV: 31.5% (95% CI: 28.8-34.1)
U.S.: 39.8% (95% CI: 39.3-40.3)
The U.S. prevalence of no flu immunization in the past year among adults 65 and older was significantly higher than the West Virginia prevalence. West Virginia ranked the 3rd lowest among 52 BRFSS participants.

Gender

All adults

Men: 59.0% (95% CI: 56.5-61.5)
Women: 51.7% (95% CI: 49.6-53.9)
The prevalence of no flu immunization in the past year among all adults was significantly higher among men than women.

Adults 65 and older

Men: 34.6% (95% CI: 30.1-39.1)
Women: 29.1% (95% CI: 26.0-32.2)
There was no gender difference in the prevalence of no flu immunization in the past year among adults 65 and older.

Age

The prevalence of no flu immunization in the past year among all adults was lowest among the 65 and older age group (31.5%) and was significantly lower among this age group than all other age groups.

Education

The prevalence of no flu immunization in the past year among all adults was significantly lower among college graduates (44.9%) than all other educational attainment groups. There was no educational attainment difference in the prevalence of no flu immunization in the past year among adults 65 and older.

Household Income

There was no annual household income difference in the prevalence of no flu immunization in the past year among all adults or the prevalence of no flu immunization in the past year among adults 65 and older.

Table 11.1 No flu immunization in past year among all adults by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,046	**59.0**	56.5-61.5	3,175	**51.7**	49.6-53.9	5,221	**55.3**	53.6-56.9
Age									
18-24	98	**77.7**	68.4-87.1	151	**63.9**	54.8-73.0	249	**70.9**	64.3-77.5
25-34	231	**75.5**	69.7-81.4	301	**65.3**	59.6-71.0	532	**70.5**	66.4-74.6
35-44	277	**70.5**	64.8-76.2	391	**64.3**	59.0-69.6	668	**67.4**	63.5-71.3
45-54	393	**61.4**	56.1-66.7	569	**55.8**	51.1-60.4	962	**58.5**	55.0-62.1
55-64	479	**44.0**	39.0-48.9	719	**46.5**	42.4-50.7	1,198	**45.3**	42.0-48.5
65+	562	**34.6**	30.1-39.1	1016	**29.1**	26.0-32.2	1,578	**31.5**	28.8-34.1
Education									
Less than H.S.	281	**67.6**	61.7-73.6	458	**55.5**	49.7-61.3	739	**61.5**	57.2-65.7
H.S. or G.E.D.	821	**59.0**	54.9-63.0	1283	**52.9**	49.6-56.1	2,104	**56.0**	53.3-58.6
Some Post-H.S.	470	**62.5**	57.6-67.4	812	**51.8**	47.8-55.9	1,282	**56.4**	53.3-59.6
College Graduate	470	**44.9**	39.8-50.0	617	**44.9**	40.1-49.7	1,087	**44.9**	41.4-48.4
Income									
Less than $15,000	229	**61.3**	53.6-69.0	443	**59.1**	53.5-64.8	672	**60.1**	55.5-64.8
$15,000- 24,999	348	**62.4**	56.6-68.3	653	**54.1**	49.4-58.7	1,001	**57.8**	54.1-61.4
$25,000- 34,999	297	**57.3**	50.6-64.0	483	**50.0**	44.7-55.3	780	**53.4**	49.2-57.7
$35,000- 49,999	308	**55.4**	48.6-62.2	389	**48.9**	43.1-54.7	697	**52.2**	47.7-56.8
$50,000- 74,999	270	**56.0**	49.0-62.9	292	**45.2**	38.3-52.1	562	**51.2**	46.2-56.2
$75,000+	323	**55.2**	48.9-61.5	347	**50.0**	43.7-56.3	670	**52.8**	48.3-57.3

Table 11.2 No flu immunization in past year among adults aged 65 and older by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	562	**34.6**	30.1-39.1	1,016	**29.1**	26.0-32.2	1,578	**31.5**	28.8-34.1
Age									
65+	562	**34.6**	30.1-39.1	1,016	**29.1**	26.0-32.2	1,578	**31.5**	28.8-34.1
Education									
Less than H.S.	111	***43.9**	33.6-54.2	221	**34.1**	27.0-41.2	332	**38.4**	32.3-44.5
H.S. or G.E.D.	210	**31.8**	25.0-38.6	497	**26.7**	22.5-30.9	707	**28.5**	24.9-32.2
Some Post-H.S.	112	**36.2**	26.3-46.1	184	**28.4**	21.3-35.5	296	**32.0**	26.0-37.9
College Graduate	127	**24.5**	16.7-32.4	113	**29.3**	19.5-39.1	240	**26.5**	20.3-32.6
Income									
Less than $15,000	56	***34.9**	20.8-49.0	153	**33.5**	25.3-41.7	209	**34.0**	26.7-41.3
$15,000- 24,999	114	***30.4**	20.3-40.5	266	**27.0**	21.2-32.8	380	**28.3**	23.0-33.6
$25,000- 34,999	108	***38.2**	27.9-48.4	162	**25.0**	16.6-33.3	270	**31.1**	24.5-37.6
$35,000- 49,999	94	***30.8**	20.3-41.2	95	***33.5**	23.2-43.8	189	**32.0**	24.7-39.4
$50,000- 74,999	55	***31.8**	18.4-45.2	50	***30.8**	15.5-46.2	105	***31.4**	21.3-41.5
$75,000+	49	***38.4**	23.3-53.6	28	***18.6**	3.8-33.5	77	***32.8**	20.8-44.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Adults Lacking a Pneumonia Immunization

Definition

Responding "No" to the question "Have you ever had a pneumonia shot?"

Prevalence

All adults

WV: 68.7% (95% CI: 67.2-70.2)
U.S.: 69.4% (95% CI: 69.1-69.6)
The prevalence of never had a pneumonia vaccination among all adults was similar for the U.S. and West Virginia. West Virginia ranked the 28th highest among 52 BRFSS participants.

Adults 65 and older

WV: 35.6% (95% CI: 32.9-38.4)
U.S.: 31.0% (95% CI: 30.5-31.4)
The West Virginia prevalence of never had a pneumonia vaccination among adults 65 and older was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

All adults

Men: 69.2% (95% CI: 66.9-71.6)
Women: 68.2% (95% CI: 66.3-70.1)
There was no gender difference in the prevalence of never had a pneumonia vaccination among all adults.

Adults 65 and older

Men: 39.9% (95% CI: 35.3-44.5)
Women: 32.5% (95% CI: 29.2-35.8)
There was no gender difference in the prevalence of never had a pneumonia vaccination among adults 65 and older.

Age

The prevalence of never had a pneumonia vaccination among all adults was lowest among those aged 65 and older (35.6%) and was significantly lower than all other age groups.

Education

The prevalence of never had a pneumonia vaccination among all adults was highest among those with less than a high school education (61.6%) and was significantly lower than the prevalence among those with some college or a college degree. There was no educational attainment difference in the prevalence of never had a pneumonia vaccination among adults 65 and older.

Household Income

The prevalence of never had a pneumonia vaccination among all adults was lowest among those with an annual household income of less than $15,000 (62.4%) and highest among those with a household income of $75,000 or more per year (80.4%). There was no annual household income difference in the prevalence of never had a pneumonia vaccination among adults 65 and older.

Table 11.3 No pneumonia immunization among all adults by demographic characteristics: WVBRFSS, 2011

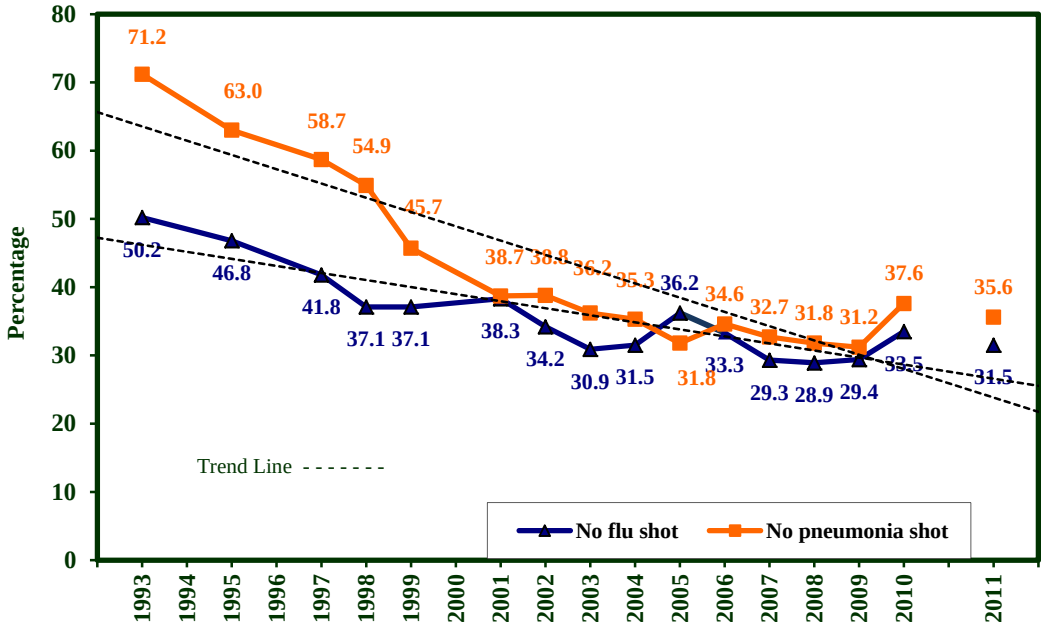
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,937	**69.2**	66.9-71.6	3,084	**68.2**	66.3-70.1	5,021	**68.7**	67.2-70.2
Age									
18-24	84	**81.6**	72.0-91.1	138	**90.2**	84.4-96.0	222	**86.0**	80.4-91.5
25-34	212	**81.1**	74.9-87.3	283	**90.3**	86.7-93.8	495	**85.7**	82.0-89.3
35-44	259	**84.6**	79.8-89.5	375	**78.5**	73.5-83.5	634	**81.5**	78.0-85.0
45-54	375	**78.1**	73.6-82.5	556	**76.2**	72.2-80.2	931	**77.1**	74.1-80.1
55-64	453	**59.7**	54.6-64.8	704	**67.5**	63.6-71.3	1,157	**63.7**	60.5-66.9
65+	548	**39.9**	35.3-44.5	1001	**32.5**	29.2-35.8	1,549	**35.6**	32.9-38.4
Education									
Less than H.S.	272	**62.7**	56.1-69.3	446	**60.6**	55.0-66.2	718	**61.6**	57.3-65.9
H.S. or G.E.D.	779	**70.7**	66.9-74.4	1249	**64.2**	61.2-67.2	2,028	**67.4**	65.0-69.8
Some Post-H.S.	441	**71.0**	66.3-75.7	783	**74.6**	71.3-77.9	1,224	**73.1**	70.3-75.8
College Graduate	441	**70.4**	65.7-75.2	601	**74.8**	70.8-78.8	1,042	**72.7**	69.6-75.8
Income									
Less than $15,000	218	**63.5**	56.0-71.0	431	**61.5**	55.9-67.1	649	**62.4**	57.8-66.9
$15,000- 24,999	329	**65.0**	58.8-71.2	641	**66.8**	62.6-71.1	970	**66.0**	62.4-69.6
$25,000- 34,999	285	**63.3**	56.9-69.7	471	**66.4**	61.5-71.4	756	**65.0**	61.0-68.9
$35,000- 49,999	290	**66.3**	59.8-72.9	378	**73.2**	68.3-78.0	668	**69.8**	65.7-73.9
$50,000- 74,999	257	**77.4**	71.8-83.0	283	**72.6**	66.6-78.6	540	**75.2**	71.1-79.3
$75,000+	308	**77.7**	72.6-82.9	337	**83.5**	79.2-87.8	645	**80.4**	77.0-83.3

Table 11.4 No pneumonia immunization among adults aged 65 and older by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	548	**39.9**	35.3-44.5	1,001	**32.5**	29.2-35.8	1,549	**35.6**	32.9-38.4
Age									
65+	548	**39.9**	35.3-44.5	1,001	**32.5**	29.2-35.8	1,549	**35.6**	32.9-38.4
Education									
Less than H.S.	109	***38.8**	28.5-49.0	219	**35.9**	28.4-43.4	328	**37.1**	31.0-43.3
H.S. or G.E.D.	201	**39.5**	32.1-46.8	490	**30.1**	25.7-34.5	691	**33.5**	29.6-37.4
Some Post-H.S.	110	***45.1**	34.9-55.3	180	**35.2**	27.7-42.8	290	**39.7**	33.4-46.0
College Graduate	126	**36.6**	27.8-45.4	111	**30.4**	21.0-39.9	237	**34.1**	27.6-40.6
Income									
Less than $15,000	54	***27.4**	14.4-40.4	152	**22.9**	15.5-30.2	206	**24.5**	17.9-31.1
$15,000- 24,999	110	***35.2**	24.9-45.6	264	**34.7**	28.3-41.1	374	**34.9**	29.3-40.5
$25,000- 34,999	105	***39.6**	28.9-50.2	159	**43.1**	33.8-52.3	264	**41.5**	34.5-48.4
$35,000- 49,999	94	***42.1**	31.2-53.1	95	***38.5**	27.9-49.2	189	**40.5**	32.8-48.2
$50,000- 74,999	53	***49.3**	34.7-63.9	48	***29.9**	15.7-44.0	101	***41.4**	30.9-51.9
$75,000+	48	***44.4**	29.1-59.8	28	***22.6**	6.8-38.3	76	***38.1**	26.0-50.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 11.1 No flu immunization (in past 12 months) and no pneumonia immunization (in lifetime) among adults aged 65 and older by year: WVBRFSS, 1993-2011



NOTE: Data are not available for the years 1994, 1996, and 2000.

*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

CHAPTER 12: CARDIOVASCULAR DISEASE

Heart Attack

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you a heart attack also called a myocardial infarction?"

Prevalence

WV: **6.2%** (95% CI: 5.5-6.9)
U.S.: **4.3%** (95% CI: 4.2-4.4)
The West Virginia prevalence of heart attack was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among 52 BRFSS participants.

Gender

Men: 8.0% (95% CI: 6.8-9.1)
Women: 4.5% (95% CI: 3.8-5.2)
Men had a significantly higher prevalence of heart attack than women.

Age

Heart attack prevalence was significantly higher among the 65 and older age group (14.7%) than among any other age group.

Education

Adults with less than a high school education had the highest prevalence of heart attack (10.0%) and was significantly higher than all other educational attainment groups.

Household Income

Heart attack prevalence was also highest among the lowest income groups and lowest among those highest household incomes.

Table 12.1 Heart attack by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,066	**8.0**	6.8-9.1	3,198	**4.5**	3.8-5.2	5,264	**6.2**	5.5-6.9
Age									
18-24	102	***0.0**	0.0-0.0	154	***0.0**	0.0-0.0	256	***0.0**	0.0-0.0
25-34	237	***0.4**	0.0-1.0	308	***1.2**	0.0-2.6	545	***0.8**	0.0-1.6
35-44	280	***3.4**	0.9-5.8	393	***1.6**	0.4-2.8	673	**2.5**	1.1-3.9
45-54	397	**8.7**	5.7-11.6	571	**3.2**	1.5-4.9	968	**5.9**	4.2-7.6
55-64	480	**12.5**	9.0-16.0	720	**5.3**	3.5-7.0	1,200	**8.9**	6.9-10.9
65+	562	**19.3**	15.8-22.9	1,024	**11.2**	9.1-13.3	1,586	**14.7**	12.7-16.6
Education									
Less than H.S.	284	**13.7**	9.6-17.8	466	**6.3**	4.2-8.4	750	**10.0**	7.7-12.3
H.S. or G.E.D.	830	**7.5**	5.8-9.2	1,294	**5.7**	4.4-7.0	2,124	**6.6**	5.5-7.7
Some Post-H.S.	474	**7.2**	5.0-9.4	814	**3.4**	2.1-4.6	1,288	**5.0**	3.8-6.2
College Graduate	473	**4.0**	2.4-5.6	619	**1.7**	0.8-2.5	1,092	**2.8**	1.9-3.7
Income									
Less than $15,000	230	**16.3**	11.0-21.6	447	**8.9**	6.2-11.6	677	**12.2**	9.4-15.1
$15,000- 24,999	353	**11.6**	8.2-15.0	655	**5.5**	3.6-7.3	1,008	**8.2**	6.4-10.0
$25,000- 34,999	297	**6.6**	4.0-9.2	487	**3.8**	2.1-5.4	784	**5.1**	3.6-6.6
$35,000- 49,999	309	**6.9**	4.2-9.6	391	***1.2**	0.2-2.3	700	**4.1**	2.7-5.6
$50,000- 74,999	272	***3.3**	1.2-5.4	294	***1.9**	0.5-3.4	566	**2.7**	1.3-4.0
$75,000+	327	**5.6**	2.9-8.4	350	***1.1**	0.2-2.0	677	**3.5**	2.0-5.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Angina

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had angina or coronary heart disease?"

Prevalence

WV: **6.7%** (95% CI: 6.0-7.4)
U.S.: **4.3%** (95% CI: 4.2-4.4)
The West Virginia prevalence of angina was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among 52 BRFSS participants.

Gender

Men: 7.6% (95% CI: 6.5-8.7)
Women: 5.8% (95% CI: 4.9-6.7)
There was no gender difference in the prevalence of angina.

Age

The prevalence of angina was highest among seniors (15.5%) and was significantly higher than any other age group.

Education

Adults with less than a high school education had the highest prevalence of angina (9.0%) and was significantly higher than the prevalence among college graduates (4.8%).

Household Income

Angina prevalence was highest among the lowest income groups and was significantly higher than among those with the highest household incomes.

Table 12.2 Angina by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,050	**7.6**	6.5-8.7	3,178	**5.8**	4.9-6.7	5,228	**6.7**	6.0-7.4
Age									
18-24	102	***0.7**	0.0-2.1	153	***0.0**	0.0-0.0	255	***0.4**	0.0-1.1
25-34	236	***0.0**	0.0-0.0	308	***1.4**	0.2-2.6	544	***0.7**	0.1-1.3
35-44	278	***2.0**	0.5-3.4	393	***3.4**	1.2-5.6	671	**2.7**	1.3-4.0
45-54	394	**6.5**	4.0-8.9	570	**4.3**	2.3-6.2	964	**5.4**	3.8-6.9
55-64	478	**14.8**	11.3-18.3	715	**7.8**	5.6-10.0	1,193	**11.3**	9.2-13.3
65+	554	**18.7**	15.1-22.3	1,011	**13.1**	10.7-15.5	1,565	**15.5**	13.4-17.5
Education									
Less than H.S.	276	**9.9**	6.4-13.4	457	**8.0**	5.1-10.9	733	**9.0**	6.7-11.2
H.S. or G.E.D.	828	**6.5**	5.0-8.1	1,282	**7.1**	5.7-8.6	2,110	**6.8**	5.8-7.9
Some Post-H.S.	472	**8.3**	6.0-10.6	816	**4.4**	3.0-5.8	1,288	**6.1**	4.8-7.4
College Graduate	469	**7.0**	4.8-9.1	618	**2.7**	1.5-3.9	1,087	**4.8**	3.6-6.0
Income									
Less than $15,000	228	**10.6**	6.6-14.6	441	**10.1**	7.1-13.1	669	**10.3**	7.9-12.8
$15,000- 24,999	350	**9.6**	6.5-12.7	655	**7.9**	5.6-10.2	1,005	**8.7**	6.8-10.6
$25,000- 34,999	296	**8.6**	5.6-11.7	485	**6.6**	4.1-9.1	781	**7.5**	5.6-9.5
$35,000- 49,999	306	**6.7**	4.1-9.4	389	***2.2**	0.9-3.5	695	**4.5**	3.0-6.0
$50,000- 74,999	272	**5.2**	2.7-7.6	294	***3.7**	1.3-6.2	566	**4.5**	2.8-6.2
$75,000+	326	**6.1**	3.7-8.6	349	***2.1**	0.4-3.7	675	**4.3**	2.7-5.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Stroke

Definition Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had a stroke?"

Prevalence **WV**: **3.8%** (95% CI: 3.3-4.4)
U.S.: **2.9%** (95% CI: 2.8-3.0)
The West Virginia prevalence of stroke was significantly higher than the U.S. prevalence. West Virginia ranked the 5th highest among 52 BRFSS participants.

Gender **Men**: 3.7% (95% CI: 2.8-4.6)
Women: 4.0% (95% CI: 3.3-4.7)
There was no gender difference in stroke prevalence.

Age Stroke prevalence was significantly higher among the 65 and older age group (9.0%) than all other age groups.

Education Adults with less than a high school education had the highest prevalence of stroke (7.0%) and was significantly higher than all other educational attainment groups.

Household Income Stroke prevalence was highest among those with an annual household income of less than $15,000 (6.6%) and lowest among those with household income of $75,000 or more per year (0.7%).

Table 12.3 Stroke by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,069	**3.7**	2.8-4.6	3,204	**4.0**	3.3-4.7	5,273	**3.8**	3.3-4.4
Age									
18-24	102	***1.4**	0.0-4.1	154	***0.0**	0.0-0.0	256	***0.7**	0.0-2.1
25-34	237	***0.4**	0.0-1.2	308	***0.5**	0.0-1.3	545	***0.5**	0.0-1.0
35-44	280	***1.2**	0.0-2.5	393	***2.5**	1.0-4.0	673	**1.8**	0.8-2.8
45-54	395	**4.2**	2.0-6.3	571	**3.0**	1.2-4.8	966	**3.6**	2.2-5.0
55-64	481	**5.7**	3.0-8.3	721	**4.1**	2.6-5.7	1,202	**4.9**	3.4-6.4
65+	566	**7.9**	5.4-10.4	1029	**9.9**	7.8-12.0	1,595	**9.0**	7.4-10.6
Education									
Less than H.S.	283	**7.3**	3.9-10.6	468	**6.8**	4.2-9.4	751	**7.0**	4.9-9.1
H.S. or G.E.D.	833	**3.5**	2.3-4.7	1295	**4.1**	3.1-5.2	2,128	**3.8**	3.0-4.6
Some Post-H.S.	474	**2.3**	0.9-3.6	817	**2.9**	1.8-3.9	1,291	**2.6**	1.8-3.4
College Graduate	474	***2.2**	0.8-3.6	619	**2.6**	1.3-3.9	1,093	**2.4**	1.4-3.4
Income									
Less than $15,000	230	***5.0**	1.9-8.1	450	**7.9**	5.1-10.7	680	**6.6**	4.5-8.7
$15,000- 24,999	353	**7.0**	4.3-9.7	659	**5.7**	3.9-7.6	1,012	**6.3**	4.7-7.9
$25,000- 34,999	298	***2.8**	0.9-4.7	486	**4.0**	2.2-5.7	784	**3.4**	2.1-4.7
$35,000- 49,999	310	***1.8**	0.4-3.2	391	***1.4**	0.3-2.5	701	**1.6**	0.7-2.5
$50,000- 74,999	272	***3.9**	1.2-6.5	293	***1.4**	0.0-2.8	565	**2.8**	1.2-4.4
$75,000+	328	***0.8**	0.0-1.9	350	***0.5**	0.0-0.9	678	***0.7**	0.0-1.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Any Cardiovascular Disease

Definition

Responding "Yes" to any of the questions "Has a doctor, nurse, or other health professional ever told you that you had any of the following?" ". . . ever told you had a heart attack, also called a myocardial infarction?" ". . . ever told you had angina or coronary heart disease?" ". . . ever told you had a stroke?"

Prevalence

WV: **12.3%** (95% CI: 11.3-13.2)
U.S.: **8.4%** (95% CI: 8.2-8.5)
The prevalence of cardiovascular disease was significantly higher in West Virginia than in the U.S. West Virginia ranked the highest among 52 BRFSS participants.

Gender

Men: 13.9% (95% CI: 12.3-15.4)
Women: 10.8% (95% CI: 9.6-11.9)
Cardiovascular disease prevalence was significantly higher among men than women.

Age

The prevalence of cardiovascular disease was significantly higher among the 65 and older age group (28.3%) than among any other age group.

Education

Adults with less than a high school education had the highest prevalence of cardiovascular disease (19.8%) and was significantly higher than all other educational attainment groups.

Household Income

Cardiovascular disease prevalence was highest among the lowest income groups and lowest among those with the highest household incomes.

Table 12.4 Any cardiovascular disease by demographic characteristics: WVBRFSS, 2011

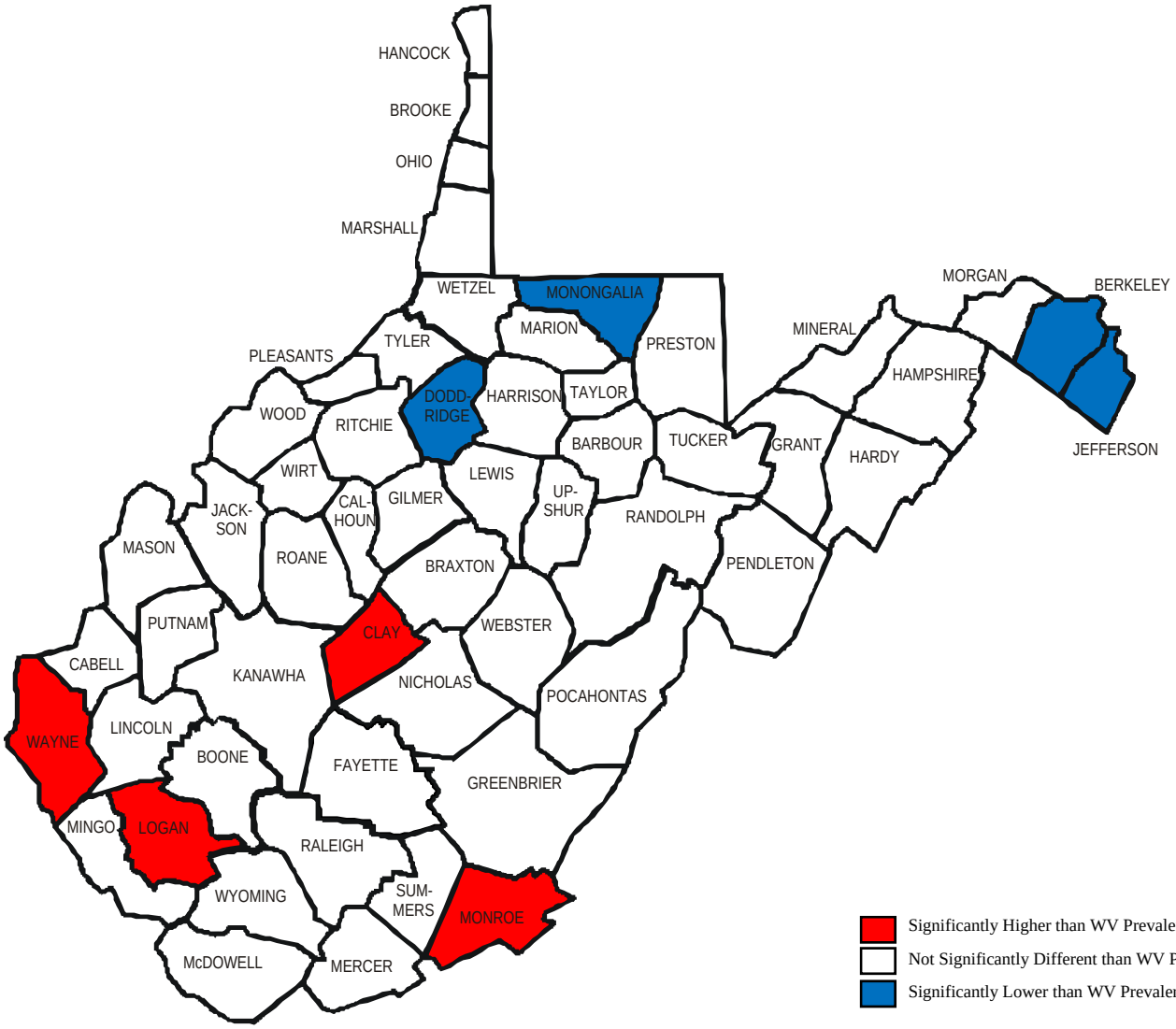
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,052	**13.9**	12.3-15.4	3,190	**10.8**	9.6-11.9	5,242	**12.3**	11.3-13.2
Age									
18-24	102	***2.1**	0.0-5.1	153	***0.0**	0.0-0.0	255	***1.1**	0.0-2.7
25-34	236	***0.8**	0.0-1.9	308	***2.0**	0.3-3.6	544	***1.4**	0.4-2.4
35-44	278	**6.0**	2.9-9.1	393	**6.1**	3.4-8.8	671	**6.1**	4.0-8.1
45-54	395	**12.6**	9.1-16.2	570	**8.6**	5.8-11.4	965	**10.6**	8.4-12.8
55-64	479	**23.4**	19.0-27.8	716	**13.4**	10.7-16.2	1,195	**18.4**	15.8-21.0
65+	554	**33.1**	28.7-37.4	1,022	**24.8**	21.8-27.8	1,576	**28.3**	25.8-30.9
Education									
Less than H.S.	280	**22.6**	17.3-27.9	462	**17.1**	13.2-21.0	742	**19.8**	16.5-23.1
H.S. or G.E.D.	826	**12.7**	10.4-14.9	1,288	**12.3**	10.5-14.2	2,114	**12.5**	11.0-14.0
Some Post-H.S.	472	**12.1**	9.2-14.9	816	**7.8**	5.9-9.6	1,288	**9.6**	8.0-11.2
College Graduate	469	**10.1**	7.5-12.7	619	**5.5**	3.7-7.2	1,088	**7.8**	6.2-9.3
Income									
Less than $15,000	228	**24.2**	18.0-30.4	446	**19.0**	14.9-23.1	674	**21.4**	17.8-25.0
$15,000- 24,999	351	**17.6**	13.5-21.8	657	**14.8**	11.9-17.8	1,008	**16.1**	13.6-18.5
$25,000- 34,999	296	**12.5**	8.9-16.2	487	**10.6**	7.6-13.6	783	**11.5**	9.2-13.9
$35,000- 49,999	306	**11.6**	8.1-15.1	390	**3.9**	2.1-5.7	696	**7.8**	5.8-9.8
$50,000- 74,999	272	**9.4**	5.7-13.1	293	**6.1**	3.1-9.1	565	**7.9**	5.5-10.4
$75,000+	326	**10.6**	7.1-14.1	350	**3.5**	1.6-5.4	676	**7.3**	5.2-9.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 12.1 Adults diagnosed with any cardiovascular disease by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 7.7%

WV Prevalence (2007-2011) – 12.6%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

CHAPTER 13: DIABETES

Diabetes Prevalence

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have diabetes?"

Prevalence

WV: 12.0% (95% CI: 11.1-13.0)
U.S.: 9.8% (95% CI: 9.7-10.0)
West Virginia's diabetes prevalence was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 11.7% (95% CI: 10.2-13.1)
Women: 12.4% (95% CI: 11.1-13.6)
There was no gender difference in diabetes prevalence.

Age

The oldest adults (65 and older) had the highest diabetes prevalence (21.0%). It is interesting to note that the first significant increase in the prevalence of diabetes was found between the 35-44 age group (7.1%) and the 45-54 age group (14.8%).

Education

Adults with less than a high school education had the highest prevalence of diabetes (17.0%) while college graduates had the lowest prevalence of diabetes (7.5%).

Household Income

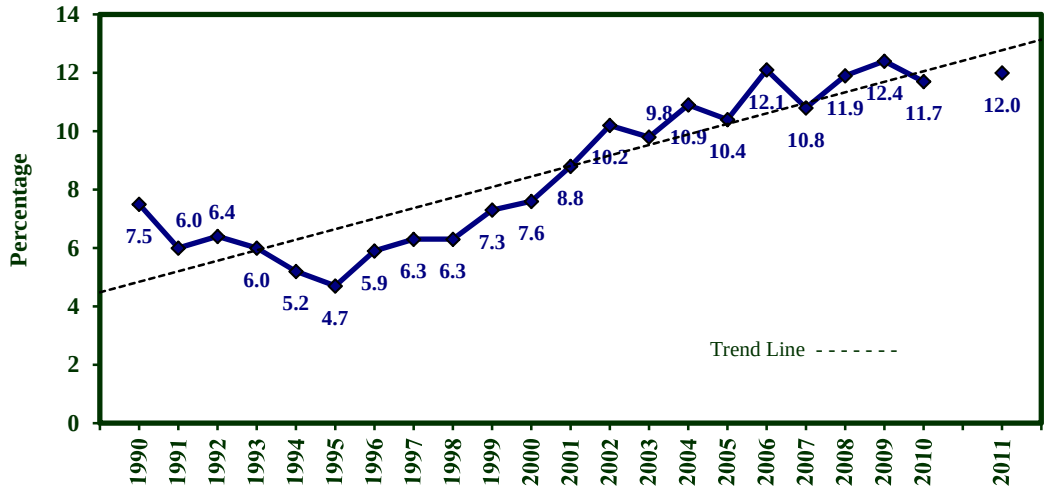
There was a significant income difference in the prevalence of diabetes. The prevalence of diabetes was highest among those with an annual household income of less than $15,000 (18.2%) and lowest among those with a household income of $75,000 or more per year (7.1%).

Table 13.1 Diabetes prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,065	**11.7**	10.2-13.1	3,207	**12.4**	11.1-13.6	5,272	**12.0**	11.1-13.0
Age									
18-24	101	***0.0**	0.0-0.0	154	***1.2**	0.0-2.6	255	***0.6**	0.0-1.3
25-34	237	***2.5**	0.1-4.9	308	***2.0**	0.3-3.7	545	***2.3**	0.8-3.7
35-44	279	**5.7**	2.8-8.6	395	**8.4**	5.3-11.5	674	**7.1**	4.9-9.2
45-54	397	**14.3**	10.4-18.2	571	**15.2**	11.6-18.8	968	**14.8**	12.1-17.4
55-64	480	**21.5**	17.4-25.6	721	**18.0**	14.9-21.2	1,201	**19.8**	17.2-22.4
65+	563	**21.1**	17.3-24.8	1,030	**21.0**	18.1-23.9	1,593	**21.0**	18.7-23.3
Education									
Less than H.S.	281	**14.6**	10.4-18.8	467	**19.2**	15.1-23.3	748	**17.0**	14.0-19.9
H.S. or G.E.D.	833	**12.0**	9.7-14.2	1,298	**13.5**	11.5-15.5	2,131	**12.7**	11.2-14.2
Some Post-H.S.	473	**11.0**	8.1-13.8	818	**10.1**	7.9-12.3	1,291	**10.5**	8.7-12.2
College Graduate	474	**8.9**	6.2-11.6	619	**6.1**	4.3-7.9	1,093	**7.5**	5.8-9.1
Income									
Less than $15,000	230	**16.3**	11.0-21.5	449	**19.7**	15.4-24.0	679	**18.2**	14.8-21.5
$15,000- 24,999	353	**15.8**	11.9-19.8	659	**13.5**	10.6-16.5	1,012	**14.6**	12.2-17.0
$25,000- 34,999	297	**11.6**	7.5-15.8	486	**13.9**	10.4-17.5	783	**12.9**	10.1-15.6
$35,000- 49,999	308	**9.8**	6.4-13.1	391	**7.5**	5.0-10.0	699	**8.6**	6.5-10.7
$50,000- 74,999	272	**7.0**	4.2-9.9	294	**7.8**	4.7-10.8	566	**7.4**	5.3-9.4
$75,000+	327	**8.5**	5.2-11.7	350	**5.4**	3.0-7.8	677	**7.1**	5.0-9.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 13.1 Diabetes awareness by year: WVBRFSS, 1990-2011

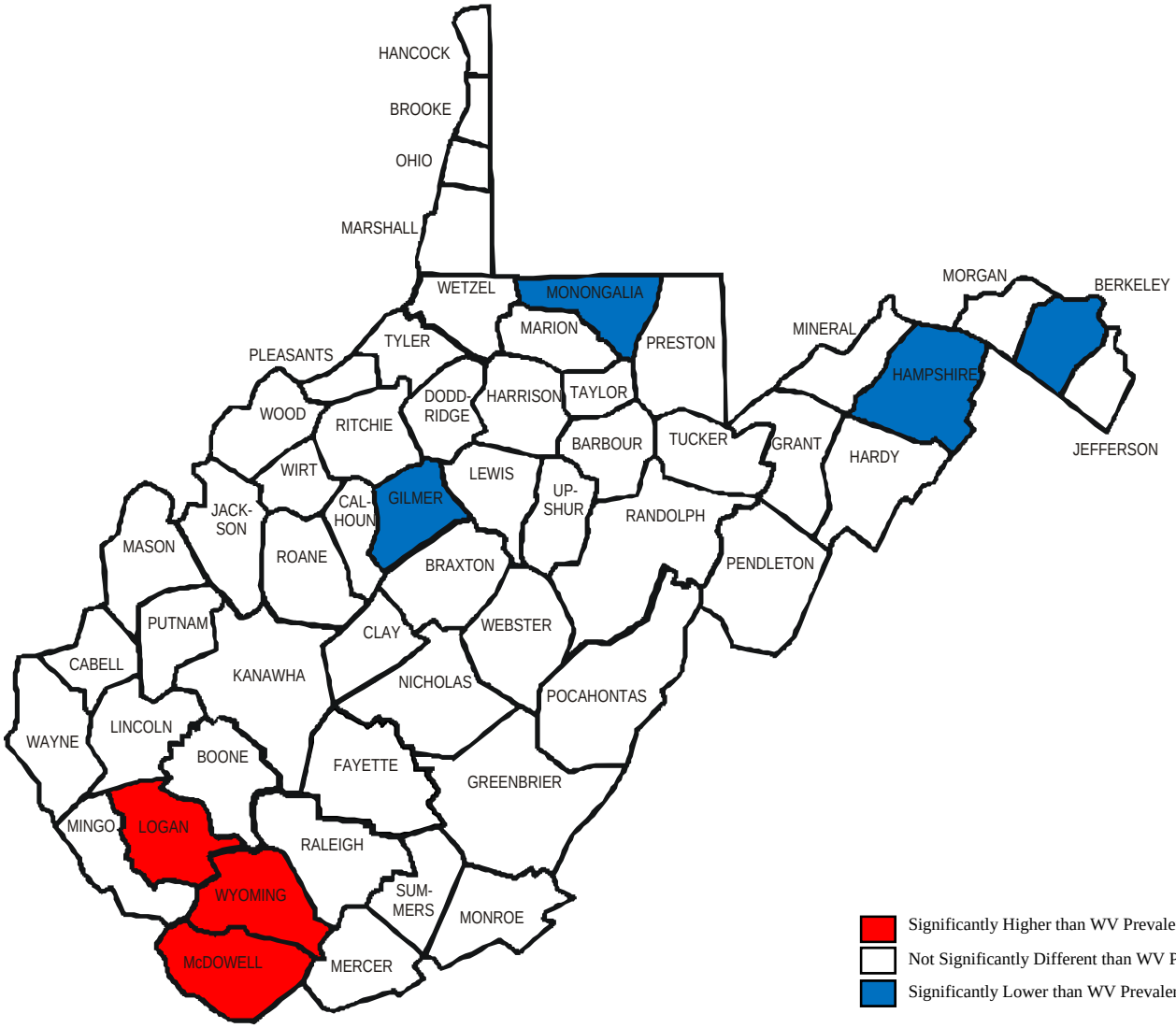


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 13.2 Diabetes awareness by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 9.1%

WV Prevalence (2007-2011) – 11.8%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Diabetes Management – Medical Care

Definition

Persons reporting that they have diabetes were asked a series of questions about medical care for their diabetes.
At least 2 doctor visits in the past year is defined as responding "2" or more to the question "About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?"
At least 2 A1C tests in the past year is defined as responding "2" or more to the following question "About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for A1C?"
Doctor checked feet in the past year is defined as responding "1" or more to the question "About how many times in the past 12 months has a doctor, nurse, or other health professional checked your feet for any sores or irritations?"
Eye exam in the past year is defined as responding "Within the past month" or "Within the past year" to the question "When was the last time you had an eye exam in which the pupils were dilated?"

Prevalence

At Least 2 Doctor Visits in Past Year: **81.0%** (95% CI: 77.7-84.3)
At Least 2 A1C Tests in Past Year: **70.1%** (95% CI: 66.1-74.0)
Doctor Checked Feet in Past Year: **68.6%** (95% CI: 64.8-72.5)
Eye Exam in Past Year: **64.6%** (95% CI: 60.5-68.7)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

At Least 2 Doctor Visits in Past Year
Men: 78.5% (95% CI: 73.3-83.8)
Women: 83.2% (95% CI: 78.9-87.4)
There was no gender difference in the prevalence of had at least 2 doctor visits in the past year.
At Least 2 A1C Tests in Past Year
Men: 66.7% (95% CI: 60.5-72.9)
Women: 73.0% (95% CI: 68.0-78.1)
There was no gender difference in the prevalence of had at least 2 A1C tests in the past year.
Doctor Checked Feet in Past Year
Men: 71.9% (95% CI: 66.1-77.7)
Women: 65.8% (95% CI: 60.6-70.9)
There was no gender difference in the prevalence of doctor checked feet in the past year.
Eye Exam in Past Year
Men: 62.0% (95% CI: 55.5-68.5)
Women: 66.8% (95% CI: 61.7-72.0)
There was no gender difference in the prevalence of had an eye exam in the past year.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of at least 2 doctor visits in the past year, at least 2 A1C tests in the past year, or doctor checked feet in the past year. The prevalence of eye exam in the past year was significantly higher among the 65 and older age group (78.7%) than among the 45-54 and 55-64 age groups.

Education

There was no educational attainment difference in the prevalence of at least 2 doctor visits in the past year, at least 2 A1C tests in the past year, doctor checked feet in the past year, or eye exam in the past year.

Household Income

Due to a low response rate some prevalence estimates for various annual household income brackets were unreliable. There was no annual household income difference in the prevalence of at least 2 doctor visits in the past year, at least 2 A1C tests in the past year, doctor checked feet in the past year, or eye exam in the past year.

Table 13.2 Medical management of diabetes by demographic characteristics: WVBRFSS, 2011

Characteristic	At Least 2 Doctor Visits in Past Year		At Least 2 A1C Tests in Past Year		Doctor Checked Feet in Past Year		Eye Exam in Past Year	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	**81.0**	77.7-84.3	**70.1**	66.1-74.0	**68.6**	64.8-72.5	**64.6**	60.5-68.7
Sex								
Males	**78.5**	73.3-83.8	**66.7**	60.5-72.9	**71.9**	66.1-77.7	**62.0**	55.5-68.5
Females	**83.2**	78.9-87.4	**73.0**	68.0-78.1	**65.8**	60.6-70.9	**66.8**	61.7-72.0
Age								
18-24	***100.0**	100.0-100.0	***100.0**	100.0-100.0	***100.0**	100.0-100.0	***56.3**	0.0-100.0
25-34	***61.4**	31.5-91.3	***47.4**	14.5-80.2	***38.7**	5.7-71.7	***56.1**	23.7-88.4
35-44	***77.1**	63.9-90.3	***60.9**	45.3-76.5	***54.3**	38.6-70.0	***51.5**	35.7-67.4
45-54	**79.4**	72.1-86.8	**69.1**	60.2-78.0	**70.9**	62.1-79.6	**50.7**	40.9-60.6
55-64	**82.7**	76.9-88.5	**73.3**	66.7-79.9	**73.7**	67.4-79.9	**63.2**	55.8-70.5
65+	**82.9**	77.9-87.9	**71.9**	65.9-77.8	**69.0**	63.3-74.7	**78.7**	73.5-83.9
Education								
Less than H.S.	**79.2**	71.4-87.0	**67.0**	57.6-76.3	**70.5**	62.3-78.7	**56.9**	47.5-66.3
H.S. or G.E.D.	**81.4**	76.6-86.3	**68.4**	62.4-74.3	**70.0**	64.3-75.7	**65.7**	59.6-71.8
Some Post-H.S.	**79.5**	72.5-86.6	**72.7**	64.9-80.4	**63.9**	55.3-72.5	**67.1**	58.8-75.5
College Graduate	**86.7**	79.6-93.7	**78.0**	69.0-87.0	***68.5**	58.4-78.6	**72.7**	63.0-82.3
Income								
Less than $15,000	**84.3**	77.4-91.1	**77.3**	68.2-86.4	**67.2**	58.0-76.5	***56.6**	46.5-66.8
$15,000- 24,999	**81.5**	75.0-88.1	**70.4**	62.4-78.4	**67.2**	58.8-75.6	**59.9**	50.9-68.8
$25,000- 34,999	**76.1**	66.2-86.0	***63.4**	52.4-74.3	**75.4**	66.3-84.5	***67.3**	57.1-77.5
$35,000- 49,999	**90.0**	82.3-97.7	***65.3**	52.7-77.9	***65.4**	53.5-77.2	***70.0**	58.2-81.8
$50,000- 74,999	***86.5**	75.1-97.9	**87.1**	77.3-97.0	***72.1**	59.2-85.0	***74.6**	61.8-87.4
$75,000+	**86.5**	77.0-95.9	***82.8**	72.3-93.2	***65.0**	50.6-79.5	***66.6**	52.3-81.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Diabetes Management – Self-Care

Definition

Persons responding that they have diabetes were asked a series of questions about how they care for their own diabetes.
Take insulin is defined as responding "Yes" to the question "Are you now taking insulin?"
Check glucose daily is defined as responding daily to the question "About how often do you check your blood for glucose or sugar?"
Check feet daily is defined as responding at least 1 time per day to the question "About how often do you check your feet for any sores or irritations?"
Taken a diabetes education class is defined as responding "Yes" to the question "Have you ever taken a course or class in how to manage your diabetes yourself?"

Prevalence

Take Insulin: **31.0%** (95% CI: 27.1-34.9)
Check Glucose Daily: **67.5%** (95% CI: 63.6-71.3)
Check Feet Daily: **68.6%** (95% CI: 64.8-72.5)
Taken a Diabetes Education Class: **43.6%** (95% CI: 39.5-47.8)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Take Insulin
Men: 31.2% (95% CI: 25.1-37.3)
Women: 30.8% (95% CI: 25.8-35.9)
There was no gender difference in the prevalence of take insulin.
Check Glucose Daily
Men: 64.0% (95% CI: 57.9-70.1)
Women: 70.6% (95% CI: 65.7-75.4)
There was no gender difference in the prevalence of check glucose daily.
Check Feet Daily
Men: 71.9% (95% CI: 66.1-77.7)
Women: 65.8% (95% CI: 60.6-70.9)
There was no gender difference in the prevalence of check feet daily.
Taken a Diabetes Education Class
Men: 44.1% (95% CI: 37.6-50.5)
Women: 43.2% (95% CI: 37.9-48.6)
There was no gender difference in the prevalence of taken a diabetes education class.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of take insulin, check glucose daily, check feet daily, or taken a diabetes education class.

Education

Due to a low response rate, all the prevalence estimates for the college graduate group was unreliable. There was no educational attainment difference in the prevalence of take insulin, check glucose daily, or check feet daily. The prevalence of taken a diabetes education class was significantly higher among those with some college (59.4%) than among those with a high school degree (39.2%) or less than a high school education (30.2%).

Household Income

Due to a low response rate, all the prevalence estimates for the $35,000 and more annual household income brackets were unreliable. There was no annual household income difference in the prevalence of take insulin, check feet daily, or taken a diabetes education class. The prevalence of check glucose daily was significantly lower among the $15,000-24,999 annual household income bracket (61.6%) than among the less than $15,000 income bracket (79.3%) and the $25,000-34,999 income bracket (79.3%).

Table 13.3 Self-care of diabetes by demographic characteristics: WVBRFSS, 2011

Characteristic	Take Insulin		Check Glucose Daily		Check Feet Daily		Taken a Diabetes Education Class	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	**31.0**	27.1-34.9	**67.5**	63.6-71.3	**68.6**	64.8-72.5	**43.6**	39.5-47.8
Sex								
Males	**31.2**	25.1-37.3	**64.0**	57.9-70.1	**71.9**	66.1-77.7	**44.1**	37.6-50.5
Females	**30.8**	25.8-35.9	**70.6**	65.7-75.4	**65.8**	60.6-70.9	**43.2**	37.9-48.6
Age								
18-24	***68.1**	15.1-100.0	***100.0**	100.0-100.0	***100.0**	100.0-100.0	***100.0**	100.0-100.0
25-34	***38.1**	4.9-71.3	***47.4**	14.5-80.2	***38.7**	5.7-71.7	***60.1**	28.2-92.1
35-44	***43.1**	27.4-58.7	***70.5**	57.1-84.0	***54.3**	38.6-70.0	***59.5**	44.3-74.7
45-54	**27.8**	19.0-36.5	**65.4**	56.6-74.3	**70.9**	62.1-79.6	**45.1**	35.4-54.9
55-64	**31.9**	25.0-38.8	**65.3**	58.2-72.4	**73.7**	67.4-79.9	**45.9**	38.7-53.2
65+	**28.1**	22.3-33.8	**70.9**	65.3-76.5	**69.0**	63.3-74.7	**34.7**	28.9-40.5
Education								
Less than H.S.	**34.2**	25.4-43.0	**75.4**	67.7-83.0	**70.5**	62.3-78.7	**30.2**	21.8-38.6
H.S. or G.E.D.	**33.5**	27.6-39.3	**68.5**	62.7-74.3	**70.0**	64.3-75.7	**39.2**	33.0-45.4
Some Post-H.S.	**27.6**	19.6-35.6	**61.4**	52.9-69.8	**63.9**	55.3-72.5	**59.4**	50.8-68.1
College Graduate	***20.1**	9.3-30.8	***57.3**	46.2-68.5	***68.5**	58.4-78.6	***61.5**	50.8-72.2
Income								
Less than $15,000	**36.8**	27.2-46.5	**79.3**	71.7-86.9	**67.2**	58.0-76.5	**37.2**	27.6-46.7
$15,000- 24,999	**38.2**	29.5-47.0	**61.6**	53.1-70.1	**67.2**	58.8-75.6	**41.9**	33.2-50.5
$25,000- 34,999	**29.8**	19.9-39.6	**79.3**	70.9-87.7	**75.4**	66.3-84.5	***37.0**	25.9-48.1
$35,000- 49,999	***21.6**	11.5-31.8	***56.0**	43.3-68.7	***65.4**	53.5-77.2	***48.4**	35.8-60.9
$50,000- 74,999	***23.9**	11.5-36.4	***59.0**	44.6-73.3	***72.1**	59.2-85.0	***72.9**	59.5-86.2
$75,000+	***24.9**	10.5-39.3	***57.0**	42.4-71.5	***65.0**	50.6-79.5	***75.1**	62.8-87.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Other Diabetes Indicators

Definition

Responding "Yes" to the question "Have you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?"

Prevalence

7.6% (95% CI: 6.7-8.5)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Men: 6.8% (95% CI: 5.6-8.0)
Women: 8.4% (95% CI: 7.2-9.6)
There was no gender difference in the prevalence of pre-diabetes or borderline diabetes.

Age

The prevalence of borderline or pre-diabetes was highest among those aged 65 and older (11.6%) and was significantly higher than the prevalence among those aged 18-34.

Education

The prevalence of borderline or pre-diabetes was significantly higher among those with less than a high school education (10.0%) than among college graduates (5.5%).

Household Income

There was no annual household income difference in the prevalence of borderline or pre-diabetes.

Table 13.4 Borderline or pre-diabetes prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,744	**6.8**	5.6-8.0	2,725	**8.4**	7.2-9.6	4,469	**7.6**	6.7-8.5
Age									
18-24	94	***1.3**	0.0-3.2	145	***3.5**	0.0-7.3	239	***2.4**	0.3-4.5
25-34	224	***1.5**	0.0-3.5	296	**5.9**	3.1-8.8	520	**3.7**	2.0-5.5
35-44	262	**6.0**	2.7-9.2	362	**10.3**	6.9-13.8	624	**8.1**	5.7-10.5
45-54	338	**7.1**	4.3-9.8	487	**8.7**	6.0-11.4	825	**7.9**	6.0-9.8
55-64	376	**11.7**	8.3-15.1	591	**9.4**	6.4-12.3	967	**10.5**	8.2-12.7
65+	443	**12.6**	9.3-16.0	818	**10.9**	8.5-13.3	1,261	**11.6**	9.7-13.6
Education									
Less than H.S.	232	**8.6**	4.9-12.3	367	**11.5**	7.8-15.3	599	**10.0**	7.4-12.7
H.S. or G.E.D.	694	**6.2**	4.5-7.9	1,085	**9.0**	7.1-10.9	1,779	**7.6**	6.3-8.9
Some Post-H.S.	400	**7.0**	4.5-9.6	708	**7.7**	5.3-10.1	1,108	**7.4**	5.7-9.2
College Graduate	414	**6.0**	3.7-8.2	560	**5.0**	3.0-6.9	974	**5.5**	4.0-6.9
Income									
Less than $15,000	180	**6.7**	3.0-10.3	341	**10.4**	6.8-14.1	521	**8.7**	6.1-11.3
$15,000- 24,999	277	**7.7**	4.7-10.7	561	**10.7**	7.7-13.6	838	**9.4**	7.2-11.5
$25,000- 34,999	257	**7.1**	3.7-10.6	406	**8.6**	5.7-11.5	663	**7.9**	5.7-10.2
$35,000- 49,999	271	**8.0**	4.8-11.1	351	**6.3**	3.9-8.6	622	**7.1**	5.2-9.1
$50,000- 74,999	240	***4.5**	1.4-7.6	261	**6.7**	3.5-9.9	501	**5.5**	3.2-7.7
$75,000+	293	**7.5**	4.4-10.6	324	**6.6**	3.0-10.2	617	**7.1**	4.7-9.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Definition Responding "Yes" to the question "Have you had a test for high blood sugar or diabetes within the past three years?"

Prevalence **61.5%** (95% CI: 59.6-63.4)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender **Men**: 58.3% (95% CI: 55.3-61.3)
Women: 64.4% (95% CI: 62.1-66.7)
The prevalence of had a diabetes test in the past 3 years was significantly higher among women than men.

Age The prevalence of had a diabetes test in the past 3 years was highest among those aged 65 and older (76.4%).

Education Adults with less than a high school education had the lowest prevalence of had a diabetes test in the past 3 years (50.6%) and was significantly lower than all other educational attainment groups.

Household Income The prevalence of had a diabetes test in the past 3 years was significantly lower among those with an annual household income of $15,000 or less (48.1%) than the prevalence among those with a household income of $75,000 or more per year (74.2%).

Table 13.5 Had a diabetes test in past 3 years by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,664	**58.3**	55.3-61.3	2,614	**64.4**	62.1-66.7	4,278	**61.5**	59.6-63.4
Age									
18-24	91	***30.0**	19.7-40.3	143	**52.4**	42.8-61.9	234	**41.2**	33.9-48.6
25-34	213	**40.5**	33.2-47.8	285	**59.0**	52.7-65.3	498	**49.7**	44.8-54.6
35-44	249	**57.0**	50.1-64.0	350	**58.9**	53.1-64.7	599	**58.0**	53.4-62.5
45-54	325	**60.5**	54.5-66.5	474	**67.1**	62.2-71.9	799	**63.9**	60.0-67.7
55-64	359	**76.8**	71.8-81.7	572	**71.8**	67.5-76.0	931	**74.2**	70.9-77.4
65+	420	**81.0**	76.7-85.3	766	**72.9**	69.2-76.5	1,186	**76.4**	73.6-79.2
Education									
Less than H.S.	225	**50.2**	42.4-58.1	349	**51.0**	44.1-57.9	574	**50.6**	45.4-55.9
H.S. or G.E.D.	660	**54.6**	49.8-59.4	1,043	**64.2**	60.7-67.7	1,703	**59.3**	56.3-62.4
Some Post-H.S.	381	**66.0**	60.4-71.6	679	**67.1**	62.9-71.3	1,060	**66.6**	63.2-70.0
College Graduate	394	**65.9**	60.2-71.5	538	**73.9**	69.1-78.6	932	**70.0**	66.3-73.7
Income									
Less than $15,000	175	**46.9**	38.0-55.8	328	**49.2**	42.2-56.1	503	**48.1**	42.6-53.7
$15,000- 24,999	269	**51.6**	44.4-58.8	544	**58.1**	53.0-63.2	813	**55.3**	51.0-59.5
$25,000- 34,999	243	**57.8**	50.0-65.7	399	**64.3**	58.5-70.1	642	**61.3**	56.5-66.1
$35,000- 49,999	264	**62.6**	54.8-70.4	339	**73.3**	67.7-78.8	603	**67.9**	63.0-72.8
$50,000- 74,999	226	**58.7**	50.8-66.6	251	**72.9**	66.5-79.3	477	**65.1**	59.7-70.5
$75,000+	278	**72.4**	65.1-79.6	307	**76.2**	70.2-82.1	585	**74.2**	69.4-78.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Definition Persons reporting that they have diabetes and responding "Yes" to the question "Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?"

Prevalence **20.0%** (95% CI: 16.5-23.5)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender **Men**: 17.8% (95% CI: 12.9-22.7)
Women: 21.9% (95% CI: 17.0-26.8)
There was no gender difference in the prevalence of retinopathy.

Age Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of retinopathy.

Education The prevalence of retinopathy was significantly higher among those with a high school degree (22.8%) than among those with a college degree (11.4%).

Household Income Due to a low response rate, the prevalence estimates for the annual household income brackets of $50,000 or more were unreliable. There was no annual household income difference in the prevalence of retinopathy.

Table 13.6 Told that diabetes affected eyes or have retinopathy by demographic characteristics: WVBRFSS, 2011

Characteristic	Total		
	# Resp.	%	95% CI
TOTAL	756	**20.0**	16.5-23.5
Sex			
Males	301	**17.8**	12.9-22.7
Females	455	**21.9**	17.0-26.8
Age			
18-24	3	***0.0**	0.0-0.0
25-34	11	***0.0**	0.0-0.0
35-44	44	***25.9**	11.3-40.6
45-54	137	**25.3**	16.6-34.1
55-64	229	**21.3**	15.1-27.6
65+	329	**16.2**	11.4-20.9
Education			
Less than H.S.	150	**22.9**	14.6-31.2
H.S. or G.E.D.	33	**22.8**	17.5-28.1
Some Post-H.S.	171	**15.1**	8.6-21.6
College Graduate	101	**11.4**	5.3-17.4
Income			
Less than $15,000	148	**28.4**	19.0-37.8
$15,000- 24,999	164	**21.4**	13.7-29.0
$25,000- 34,999	116	**23.8**	13.8-33.8
$35,000- 49,999	75	**17.6**	7.8-27.4
$50,000- 74,999	56	***8.2**	1.2-15.1
$75,000+	52	***11.9**	2.7-21.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 14: CANCER

Skin Cancer Prevalence

Definition Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had skin cancer?"

Prevalence

WV: 6.3% (95% CI: 5.6-7.0)
U.S.: 5.7% (95% CI: 5.6-5.8)
The U.S. and West Virginia prevalence of skin cancer were similar. West Virginia ranked the 13th highest among 52 BRFSS participants.

Gender

Men: 6.1% (95% CI: 5.1-7.2)
Women: 6.4% (95% CI: 5.5-7.3)
There was no gender difference in skin cancer prevalence.

Age The prevalence of skin cancer was highest among those aged 65 and older (14.8%) and was significantly higher than all other age groups.

Education There was no educational attainment difference in the prevalence of skin cancer.

Household Income There was no annual household income difference in the prevalence of skin cancer.

Table 14.1 Skin cancer prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,068	**6.1**	5.1-7.2	3,201	**6.4**	5.5-7.3	5,269	**6.6**	5.6-7.0
Age									
18-24	102	***0.0**	0.0-0.0	154	***0.9**	0.0-2.2	256	***0.4**	0.0-1.1
25-34	236	***0.8**	0.0-1.9	308	***1.3**	0.0-2.6	544	***1.0**	0.2-1.9
35-44	280	***1.0**	0.0-2.0	394	***2.5**	0.4-4.5	674	***1.7**	0.6-2.9
45-54	397	**5.2**	2.6-7.8	571	**6.5**	4.1-8.9	968	**5.8**	4.1-7.6
55-64	482	**10.1**	7.0-13.3	718	**8.6**	6.1-11.1	1,200	**9.4**	7.3-11.4
65+	563	**16.8**	13.4-20.3	1,028	**13.2**	10.9-15.5	1,591	**14.8**	12.8-16.7
Education									
Less than H.S.	284	**7.8**	4.5-11.0	468	**7.6**	4.9-10.4	752	**7.7**	5.6-9.8
H.S. or G.E.D.	833	**6.1**	4.6-7.7	1,297	**6.8**	5.3-8.3	2,130	**6.4**	5.4-7.5
Some Post-H.S.	474	**5.1**	3.2-7.0	813	**5.1**	3.6-6.5	1,287	**5.1**	3.9-6.2
College Graduate	472	**5.5**	3.6-7.4	619	**6.5**	4.4-8.5	1,091	**6.0**	4.6-7.4
Income									
Less than $15,000	231	**7.1**	3.2-10.9	448	**4.8**	2.9-6.7	679	**5.9**	3.8-7.9
$15,000- 24,999	353	**7.4**	4.7-10.1	657	**6.9**	4.8-9.0	1,010	**7.1**	5.4-8.8
$25,000- 34,999	297	**5.6**	3.1-8.2	485	**5.9**	3.9-8.0	782	**5.8**	4.2-7.4
$35,000- 49,999	310	**6.6**	3.9-9.3	391	**7.7**	4.8-10.6	701	**7.1**	5.2-9.1
$50,000- 74,999	272	**5.4**	2.6-8.3	294	**6.5**	3.3-9.6	566	**5.9**	3.8-8.0
$75,000+	327	**4.6**	2.3-6.8	350	**5.5**	2.7-8.3	677	**5.0**	3.2-6.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Other Cancer Prevalence

Definition Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had any other types of cancer?"

Prevalence

WV: 7.8% (95% CI: 7.0-8.6)
U.S.: 6.5% (95% CI: 6.3-6.6)
The West Virginia prevalence of other types of cancer was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among 52 BRFSS participants.

Gender

Men: 5.5% (95% CI: 4.5-6.5)
Women: 10.0% (95% CI: 8.8-11.1)
There was a significant gender difference in other cancer prevalence with females having a higher prevalence than males.

Age The prevalence of other cancer was highest among those aged 65 and older (16.4%) and was significantly higher than all other age groups.

Education The prevalence of other cancer was significantly higher among those with less than a high school education (10.6%) than among college graduates (6.1%).

Household Income There was no consistent annual household income difference in the prevalence of other types of cancer.

Table 14.2 Other cancer prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,068	**5.5**	4.5-6.5	3,202	**10.0**	8.8-11.1	5,270	**7.8**	7.0-8.6
Age									
18-24	102	***0.0**	0.0-0.0	153	***5.0**	1.4-8.6	255	***2.4**	0.7-4.2
25-34	235	***0.0**	0.0-0.0	308	***3.4**	1.1-5.7	543	***1.7**	0.5-2.9
35-44	280	***1.0**	0.0-2.1	395	**9.5**	6.4-12.6	675	**5.3**	3.5-7.0
45-54	397	**3.9**	1.8-6.0	569	**10.2**	7.2-13.3	966	**7.1**	5.2-9.0
55-64	482	**9.7**	6.7-12.7	720	**10.2**	7.8-12.5	1,202	**10.0**	8.0-11.9
65+	564	**15.8**	12.4-19.3	1029	**16.8**	14.3-19.4	1,593	**16.4**	14.4-18.5
Education									
Less than H.S.	284	**8.0**	4.9-11.2	469	**13.2**	9.6-16.7	753	**10.6**	8.2-13.0
H.S. or G.E.D.	834	**3.9**	2.7-5.2	1,295	**10.9**	9.1-12.8	2,129	**7.4**	6.2-8.5
Some Post-H.S.	472	**6.3**	4.1-8.4	815	**8.6**	6.5-10.7	1,287	**7.6**	6.1-9.1
College Graduate	473	**5.5**	3.5-7.4	618	**6.7**	4.7-8.7	1,091	**6.1**	4.7-7.5
Income									
Less than $15,000	231	**6.6**	2.9-10.3	449	**13.0**	9.3-16.6	680	**10.1**	7.5-12.7
$15,000- 24,999	351	**6.1**	3.7-8.5	656	**11.1**	8.4-13.7	1,007	**8.9**	7.0-10.7
$25,000- 34,999	298	**4.8**	2.3-7.3	487	**9.7**	7.0-12.4	785	**7.4**	5.5-9.3
$35,000- 49,999	309	**5.2**	2.7-7.7	391	**5.9**	3.3-8.5	700	**5.5**	3.7-7.3
$50,000- 74,999	272	**7.1**	4.1-10.0	292	**6.4**	3.4-9.5	564	**6.8**	4.7-8.9
$75,000+	328	**4.8**	2.5-7.1	350	**8.2**	5.2-11.2	678	**6.4**	4.5-8.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Overall Cancer Prevalence

Definition

Responding "Yes" to either of the questions "Has a doctor, nurse, or other health professional ever told you that you had skin cancer?" "Has a doctor, nurse, or other health professional ever told you that you had any other types of cancer?"

Prevalence

WV: 12.7% (95% CI: 11.7-13.7)
U.S.: 11.1% (95% CI: 10.9-11.2)
The West Virginia cancer prevalence was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 10.3% (95% CI: 9.0-11.6)
Women: 15.0% (95% CI: 13.6-16.3)
There was a significant gender difference in cancer prevalence with females having a higher prevalence than males.

Age

The oldest adults (65 and older) had the highest cancer prevalence among all age groups in West Virginia. More than one-fourth of WV adults 65 and older, or 27.7% had cancer during their life. The prevalence of cancer generally increased as age increased.

Education

Cancer prevalence was significantly higher among those with less than a high school education (16.2%) than among those with some college (11.2%) or college graduates (11.3%).

Household Income

There was no annual household income difference in the prevalence of cancer.

Table 14.3 Overall cancer prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,065	**10.3**	9.0-11.6	3,197	**15.0**	13.6-16.3	5,262	**12.7**	11.7-13.7
Age									
18-24	102	***0.0**	0.0-0.0	153	***5.9**	2.2-9.7	255	***2.9**	1.0-4.7
25-34	234	***0.8**	0.0-1.9	308	**4.7**	2.1-7.4	542	**2.7**	1.3-4.2
35-44	280	***1.9**	0.4-3.4	395	**11.6**	8.0-15.1	675	**6.8**	4.8-8.8
45-54	397	**7.3**	4.4-10.3	568	**14.5**	11.1-17.9	965	**11.0**	8.7-13.2
55-64	482	**18.5**	14.5-22.4	718	**17.0**	13.9-20.2	1,200	**17.7**	15.2-20.3
65+	562	**28.5**	24.3-32.7	1,027	**27.2**	24.1-30.2	1,589	**27.7**	25.3-30.2
Education									
Less than H.S.	284	**13.7**	9.6-17.9	469	**18.7**	14.6-22.8	753	**16.2**	13.3-19.2
H.S. or G.E.D.	833	**9.2**	7.3-11.1	1,294	**16.1**	13.9-18.3	2,127	**12.6**	11.1-14.1
Some Post-H.S.	472	**9.3**	6.8-11.9	812	**12.7**	10.2-15.2	1,284	**11.2**	9.5-13.0
College Graduate	471	**10.5**	7.8-13.1	618	**12.1**	9.4-14.8	1,089	**11.3**	9.4-13.2
Income									
Less than $15,000	231	**12.2**	7.4-17.1	448	**16.3**	12.4-20.2	679	**14.4**	11.4-17.5
$15,000- 24,999	351	**11.8**	8.4-15.1	655	**16.5**	13.3-19.6	1,006	**14.4**	12.1-16.7
$25,000- 34,999	297	**8.9**	5.7-12.1	486	**14.6**	11.3-17.9	783	**11.9**	9.6-14.2
$35,000- 49,999	309	**10.7**	7.2-14.1	391	**12.4**	8.8-16.1	700	**11.5**	9.0-14.0
$50,000- 74,999	272	**11.6**	7.7-15.5	292	**11.8**	7.7-15.9	564	**11.7**	8.9-14.5
$75,000+	327	**8.1**	5.2-11.0	350	**12.5**	8.7-16.4	677	**10.1**	7.7-12.5

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 15: ASTHMA

Lifetime Asthma

Definitions

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you had asthma?"

Prevalence

WV: 12.0% (95% CI: 10.8-13.1)
U.S.: 13.5% (95% CI: 13.3-13.7)
The West Virginia prevalence of lifetime asthma was significantly lower than the U.S. prevalence. West Virginia ranked the 10th lowest among 52 BRFSS participants.

Gender

Men: 9.6% (95% CI: 7.9-11.4)
Women: 14.1% (95% CI: 12.6-15.6)
Women had a significantly higher prevalence of lifetime asthma than men.

Age

The prevalence of lifetime asthma generally decreased with increasing age. The prevalence of lifetime asthma was significantly higher among those aged 18-24 (17.8%) than among those aged 65 and older (9.8%).

Education

The prevalence of lifetime asthma was significantly higher among those with less than a high school education (17.0%) than among those with some college (10.1%) or college graduates (9.8%).

Household Income

The prevalence of lifetime asthma was significantly higher among those with an annual household income of less than $15,000 (20.6%) than among those with a household income of $75,000 or more per year (7.4%).

Table 15.1 Lifetime asthma by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,062	**9.6**	7.9-11.4	3,204	**14.1**	12.6-15.6	5,266	**12.0**	10.8-13.1
Age									
18-24	102	**16.7**	7.9-25.5	154	**19.0**	11.7-26.3	256	**17.8**	12.1-23.6
25-34	236	**7.9**	3.9-11.9	308	**15.4**	10.9-19.8	544	**11.6**	8.6-14.6
35-44	279	**11.1**	6.7-15.5	393	**13.1**	9.4-16.7	672	**12.1**	9.2-14.9
45-54	397	**8.8**	5.3-12.4	570	**15.9**	12.5-19.2	967	**12.4**	10.0-14.9
55-64	478	**8.7**	5.9-11.4	721	**12.4**	9.7-15.0	1,199	**10.5**	8.6-12.4
65+	562	**6.9**	4.5-9.2	1,030	**11.9**	9.6-14.2	1,592	**9.8**	8.1-11.4
Education									
Less than H.S.	280	**15.1**	9.2-21.0	469	**18.9**	14.3-23.5	749	**17.0**	13.3-20.8
H.S. or G.E.D.	833	**9.2**	6.6-11.9	1,294	**14.4**	12.1-16.7	2,127	**11.8**	10.0-13.5
Some Post-H.S.	473	**7.1**	4.6-9.6	816	**12.4**	9.6-15.1	1,289	**10.1**	8.2-12.0
College Graduate	471	**8.3**	5.1-11.5	620	**11.3**	8.2-14.4	1,091	**9.8**	7.6-12.0
Income									
Less than $15,000	229	**14.5**	8.9-20.2	447	**25.5**	20.4-30.6	676	**20.6**	16.8-24.3
$15,000- 24,999	353	**13.2**	8.7-17.6	657	**19.8**	15.6-23.9	1,010	**16.8**	13.8-19.9
$25,000- 34,999	297	**8.7**	4.8-12.6	486	**10.9**	7.8*14.1	783	**9.9**	7.4-12.4
$35,000- 49,999	307	**11.4**	5.8-17.1	391	**9.5**	6.3-12.8	698	**10.5**	7.2-13.8
$50,000- 74,999	271	***5.3**	1.2-9.4	294	**10.2**	5.8-14.7	565	**7.5**	4.5-10.5
$75,000+	328	**6.0**	3.2-8.7	350	**9.0**	5.8-12.3	678	**7.4**	5.3-9.5

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Current Asthma

Definitions Responding "Yes" to the lifetime asthma question and "Yes" to the question "Do you still have asthma?"

Prevalence **WV: 9.2%** (95% CI: 8.1-10.2)
U.S.: 8.8% (95% CI: 8.6-9.0)
The West Virginia and U.S. prevalence of current asthma was similar. West Virginia ranked the 25th highest among 52 BRFSS participants.

Gender **Men**: 6.6% (95% CI: 5.0-8.2)
Women: 11.6% (95% CI: 10.2-13.0)
The prevalence of current asthma was significantly higher among women than men.

Age There was no age difference in the prevalence of current asthma.

Education The prevalence of current asthma was highest among adults with less than a high school education (14.8%) and was significantly higher than all other educational attainment groups.

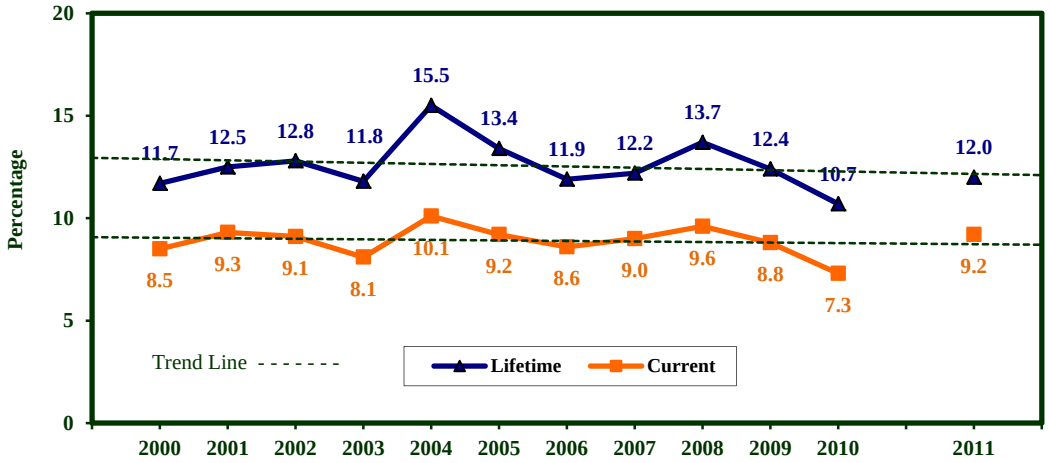
Household Income The prevalence of current asthma was highest among those with an annual household income of less than $15,000 (17.5%) and lowest among those with a household income of $75,000 or more per year (5.0%).

Table 15.2 Current asthma by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,060	**6.6**	5.0-8.2	3,202	**11.6**	10.2-13.0	5,262	**9.2**	8.1-10.2
Age									
18-24	102	***11.4**	3.4-19.3	154	**14.5**	7.8-21.2	256	**12.9**	7.6-18.1
25-34	236	***4.1**	0.9-7.2	307	**10.8**	7.0-14.5	543	**7.4**	4.9-9.8
35-44	277	***5.5**	1.8-9.1	392	**11.1**	7.7-14.6	669	**8.3**	5.8-10.8
45-54	397	**7.3**	3.9-10.6	570	**14.0**	10.8-17.2	967	**10.7**	8.4-13.0
55-64	478	**6.6**	4.2-9.1	721	**11.1**	8.6-13.6	1,199	**8.9**	7.1-10.6
65+	562	**6.0**	3.8-8.2	1030	**9.7**	7.6-11.8	1,592	**8.1**	6.6-9.6
Education									
Less than H.S.	280	**12.9**	7.1-18.6	469	**16.6**	12.2-21.0	749	**14.8**	11.2-18.3
H.S. or G.E.D.	832	**7.2**	4.8-9.6	1293	**11.6**	9.5-13.7	2,125	**9.4**	7.8-11.0
Some Post-H.S.	473	**2.7**	1.3-4.1	815	**9.5**	7.1-11.8	1,288	**6.5**	5.0-8.0
College Graduate	470	**3.7**	1.8-5.6	620	**9.8**	6.8-12.7	1,090	**6.8**	5.0-8.5
Income									
Less than $15,000	229	**13.5**	8.0-19.1	446	**20.8**	16.2-25.5	675	**17.5**	13.9-21.1
$15,000- 24,999	353	**8.3**	4.6-12.0	657	**16.9**	12.9-20.9	1,010	**13.0**	10.3-15.8
$25,000- 34,999	297	***4.9**	1.9-8.0	486	**8.8**	5.9-11.7	783	**7.0**	4.9-9.1
$35,000- 49,999	307	***7.5**	2.6-12.4	391	**7.7**	4.7-10.8	698	**7.6**	4.7-10.5
$50,000- 74,999	271	***2.6**	0.0-5.7	293	**8.1**	4.5-11.7	564	**5.0**	2.7-7.4
$75,000+	327	**3.6**	1.6-5.7	350	**6.6**	3.7-9.5	677	**5.0**	3.3-6.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 18.1 Lifetime and current asthma by year: WVBRFSS, 2000-2011

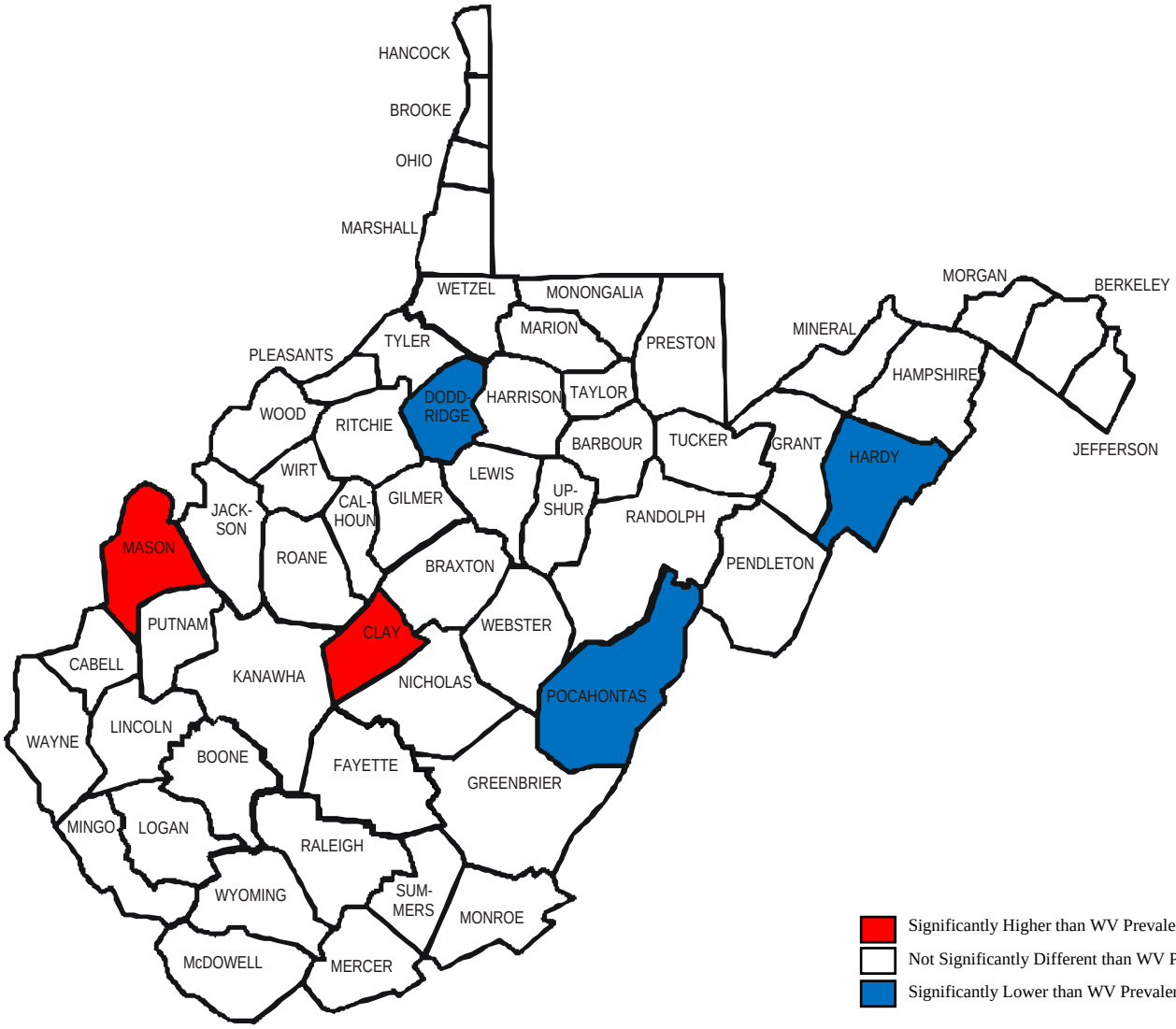


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 18.2 Current asthma by county: WVBRFSS, 2007-2011

U.S. Prevalence (2009) – 8.4%

WV Prevalence (2007-2011) – 8.8%
(Similar to U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

CHAPTER 16: CHRONIC OBSTRUCTIVE PULMONARY DISEASE

COPD Prevalence

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have (COPD) chronic obstructive pulmonary disease, emphysema, or chronic bronchitis?"

Prevalence

WV: 8.8% (95% CI: 7.9-9.7)
U.S.: 6.3% (95% CI: 6.2-6.5)
The West Virginia prevalence of COPD was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 7.7% (95% CI: 6.4-9.0)
Women: 9.9% (95% CI: 8.7-11.1)
There was no gender difference in the prevalence of COPD.

Age

The prevalence COPD generally increased with age and was highest among those aged 65 and older (13.7%).

Education

The prevalence of COPD was highest among those with less than a high school education (16.6%) and was significantly higher than all other educational attainment groups.

Household Income

The prevalence of COPD was highest among those with an annual household income of less than $15,000 (20.5%) and was significantly higher than among all other income levels.

Table 16.1 COPD prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,066	**7.7**	6.4-9.0	3,198	**9.9**	8.7-11.1	5,264	**8.8**	7.9-9.7
Age									
18-24	102	***2.9**	0.0-6.3	154	***2.8**	0.0-7.2	256	***2.9**	0.1-5.6
25-34	237	***1.7**	0.0-4.0	307	**5.8**	2.8-8.8	544	**3.7**	1.8-5.6
35-44	280	**5.2**	2.4-8.1	394	**8.0**	5.0-11.0	674	**6.6**	4.5-8.7
45-54	394	**6.7**	4.1-9.4	571	**13.5**	10.2-16.7	965	**10.1**	8.0-12.3
55-64	481	**13.5**	9.8-17.2	721	**11.8**	9.0-14.6	1,202	**12.6**	10.3-15.0
65+	564	**14.2**	10.7-17.6	1023	**13.3**	11.0-15.5	1,587	**13.7**	11.7-15.6
Education									
Less than H.S.	283	**14.4**	10.1-18.7	464	**18.8**	14.2-23.4	747	**16.6**	13.4-19.8
H.S. or G.E.D.	833	**7.6**	5.5-9.6	1293	**10.3**	8.5-12.0	2,126	**8.9**	7.5-10.3
Some Post-H.S.	472	**6.1**	4.1-8.1	816	**7.5**	5.6-9.5	1,288	**6.9**	5.5-8.3
College Graduate	473	***3.0**	1.2-4.7	620	**3.4**	2.0-4.8	1,093	**3.2**	2.1-4.3
Income									
Less than $15,000	230	**14.0**	9.1-18.8	448	**25.9**	20.5-31.3	678	**20.5**	16.8-24.3
$15,000- 24,999	351	**12.7**	8.8-16.5	658	**11.6**	8.8-14.4	1,009	**12.1**	9.7-14.4
$25,000- 34,999	297	**5.9**	3.2-8.5	487	**7.1**	4.6-9.6	784	**6.5**	4.7-8.3
$35,000- 49,999	309	**5.6**	2.6-8.6	390	**5.3**	2.8-7.8	699	**5.4**	3.5-7.4
$50,000- 74,999	272	***4.6**	1.5-7.8	294	***4.9**	2.0-7.9	566	**4.8**	2.6-7.0
$75,000+	328	***2.2**	0.5-3.8	350	***2.3**	0.7-3.9	678	**2.2**	1.1-3.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

COPD Management – Medical Care

Definition

Persons reporting that they have chronic obstructive pulmonary disease were asked a series of questions about medical care for their COPD.

Ever had a COPD test is defined as responding "Yes" to the question "Have you ever been given a breathing test to diagnose your COPD, chronic bronchitis, or emphysema?"

Seen a doctor in the past year is defined as responding "Yes" to the question "Other than a routine visit, have you had to see a doctor in the past 12 months for symptoms related to shortness of breath, bronchitis, or other COPD, or emphysema flare?"

Been to the hospital or ER in the past year is defined as responding "Yes" to the question "Did you have to visit an emergency room or be admitted to the hospital in the past 12 months because of your COPD, chronic bronchitis, or emphysema?"

Take no medication for COPD is defined as responding "0" to the question "How many different medications do you currently take each day to help with your COPD, chronic bronchitis, or emphysema?"

Prevalence

Ever Had a COPD Test: **80.3%** (95% CI: 76.2-84.3)
Seen a Doctor in Past Year: **44.2%** (95% CI: 39.0-49.5)
Been to Hospital or ER in Past Year: **20.8%** (95% CI: 16.1-25.5)
Take No Medication for COPD: **37.3%** (95% CI: 32.1-42.6)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Ever Had a COPD Test
Men: 83.5% (95% CI: 77.3-89.8)
Women: 77.8% (95% CI: 72.5-83.2)
There was no gender difference in the prevalence of ever had a COPD test.

Seen a Doctor in Past Year
Men: 41.1% (95% CI: 32.9-49.3)
Women: 46.5% (95% CI: 39.8-53.3)
There was no gender difference in the prevalence of seen a doctor in the past year.

Been to Hospital or ER in Past Year
Men: 16.8% (95% CI: 10.6-22.9)
Women: 23.7% (95% CI: 17.0-30.3)
There was no gender difference in the prevalence of been to the hospital or ER in the past year.

Take No Medication for COPD
Men: 40.0% (95% CI: 31.2-48.7)
Women: 35.4% (95% CI: 29.0-41.8)
There was no gender difference in the prevalence of take no medication for COPD.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of ever had a COPD test, seen a doctor in the past year, been to a hospital or ER in the past year, or take no medication for COPD.

Education

Due to a low response rate, the prevalence estimate for college graduates was unreliable. There was no consistent educational attainment difference in the prevalence of ever had a COPD test, seen a doctor in the past year, been to a hospital or ER in the past year, or take no medication for COPD.

Household Income

Due to a low response rate, the prevalence estimates for annual household income of $35,000 or higher were unreliable. There was no consistent annual household income difference in the prevalence of ever had a COPD test, seen a doctor in the past year, been to a hospital or ER in the past year, or take no medication for COPD.

Table 16.2 Medical management of COPD by demographic characteristics: WVBRFSS, 2011

Characteristic	Ever Had a COPD Test		Seen a Doctor in Past Year		Been to Hospital or ER in Past Year		Take No Medication for COPD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL	**80.3**	76.2-84.3	**44.2**	39.0-49.5	**20.8**	16.1-25.5	**37.3**	32.1-42.6
Sex								
Males	**83.5**	77.3-89.8	**41.1**	32.9-49.3	**16.8**	10.6-22.9	**40.0**	31.2-48.7
Females	**77.8**	72.5-83.2	**46.5**	39.8-53.3	**23.7**	17.0-30.3	**35.4**	29.0-41.8
Age								
18-24	***50.6**	0.0-100.0	***50.6**	0.0-100.0	***62.4**	11.8-100.0	***49.4**	0.0-100.0
25-34	***89.8**	75.7-100.0	***34.4**	10.6-58.2	***29.3**	5.6-53.0	***54.6**	27.8-81.4
35-44	***71.6**	57.4-85.8	***46.6**	30.4-62.9	***27.6**	13.0-42.1	***49.8**	33.3-66.2
45-54	**81.2**	72.4-90.0	***51.2**	40.0-62.4	**21.6**	13.0-30.2	***36.2**	25.1-47.2
55-64	**81.5**	74.5-88.4	**41.4**	31.6-51.1	**16.7**	8.8-24.7	**32.9**	23.6-42.2
65+	**82.9**	77.1-88.8	**42.3**	34.6-50.1	**14.9**	9.4-20.4	**32.1**	24.7-39.5
Education								
Less than H.S.	**89.4**	83.9-94.9	***51.9**	41.5-62.3	***29.0**	18.2-39.7	**30.4**	20.7-40.1
H.S. or G.E.D.	**75.2**	68.4-82.0	**41.3**	33.8-48.8	**14.8**	9.8-19.7	**39.0**	30.9-47.1
Some Post-H.S.	**80.3**	71.6-89.0	***39.9**	29.5-50.3	**19.9**	11.8-28.0	***42.4**	31.9-52.9
College Graduate	***62.9**	43.7-82.0	***35.1**	18.7-51.5	***16.8**	5.2-28.4	***47.1**	28.3-65.9
Income								
Less than $15,000	**81.5**	73.8-89.3	***48.3**	37.9-58.6	***33.8**	22.8-44.8	***35.4**	25.2-45.5
$15,000- 24,999	**85.9**	79.5-92.3	***45.7**	35.5-55.8	**20.3**	12.1-28.5	***33.3**	23.2-43.5
$25,000- 34,999	***74.2**	61.2-87.1	***43.3**	28.7-58.0	**12.6**	3.0-22.2	***49.2**	34.5-63.9
$35,000- 49,999	***85.2**	72.9-97.4	***49.2**	30.7-67.7	***13.6**	2.6-24.5	***36.3**	19.0-53.6
$50,000- 74,999	***70.1**	49.8-90.3	***29.6**	8.3-50.9	***5.1**	0.0-12.4	***36.7**	15.6-57.8
$75,000+	***92.6**	78.6-100.0	***36.1**	10.9-61.3	***10.0**	0.0-23.5	***37.2**	12.6-61.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

COPD – Quality of Life

Definition

Persons reporting that they have COPD and responding "Yes" to the question "Would you say that shortness of breath affects the quality of your life?"

Prevalence

WV: 75.6% (95% CI: 71.1-80.1)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Men: 83.5% (95% CI: 77.1-89.9)
Women: 69.9% (95% CI: 63.9-76.0)
The prevalence of COPD affects quality of life was significantly higher among men than women.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. The prevalence of COPD affects quality of life was significantly lower among those aged 65 and older (69.8%) than among those aged 55-64 (85.5%).

Education

Due to a low response rate, the prevalence estimate for college graduates was unreliable. There was no educational attainment difference in the prevalence of COPD affects quality of life.

Household Income

Due to a low response rate, the prevalence estimates for annual household income brackets of $35,000 or higher were unreliable. There was no annual household income difference in the prevalence of COPD affects quality of life.

Table 16.3 COPD quality of life by demographic characteristics: WVBRFSS, 2011

Characteristic	COPD Quality of Life		
	# Resp.	%	95% CI
TOTAL	516	**75.6**	71.1-80.1
Sex			
Males	177	**83.5**	77.1-89.9
Females	339	**69.9**	63.9-76.0
Age			
18-24	4	***50.6**	0.0-100.0
25-34	18	***57.5**	31.7-83.3
35-44	44	***70.1**	55.1-85.1
45-54	99	**85.1**	76.8-93.3
55-64	143	**85.5**	79.1-91.8
65+	207	**69.8**	62.8-76.9
Education			
Less than H.S.	138	**84.3**	76.9-91.6
H.S. or G.E.D.	228	**76.0**	69.4-82.7
Some Post-H.S.	108	***65.7**	55.5-76.0
College Graduate	42	***56.8**	38.1-75.5
Income			
Less than $15,000	159	**79.1**	70.4-87.8
$15,000- 24,999	136	**78.9**	71.1-86.6
$25,000- 34,999	58	***72.1**	59.2-85.0
$35,000- 49,999	39	***61.1**	43.6-78.5
$50,000- 74,999	24	***71.0**	50.9-91.2
$75,000+	17	***75.9**	55.6-96.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 17: ARTHRITIS

Arthritis Prevalence

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?"

Prevalence

WV: 35.9% (95% CI: 34.4-37.5)
U.S.: 24.8% (95% CI: 24.6-25.0)
The West Virginia prevalence of arthritis was significantly higher than the U.S. prevalence. West Virginia ranked the highest among 52 BRFSS participants.

Gender

Men: 32.0% (95% CI: 29.6-34.3)
Women: 39.7% (95% CI: 37.7-41.7)
The prevalence of arthritis was significantly higher among women than men.

Age

The prevalence of arthritis significantly increased with age and was highest among those aged 65 and older (60.0%).

Education

The prevalence of arthritis was significantly higher among those with less than a high school education (51.3%) than all other educational attainment groups.

Household Income

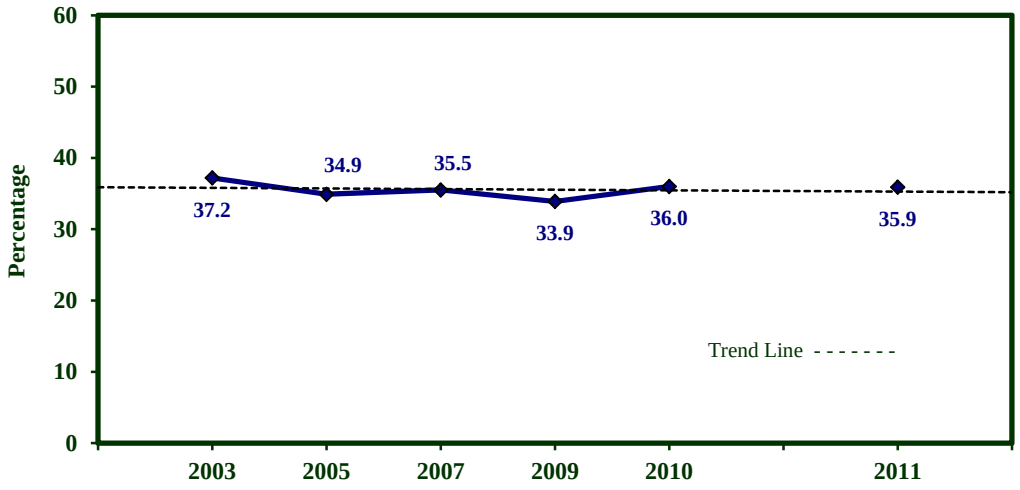
The prevalence of arthritis was highest among those with an annual household income of less than $15,000 (52.9%) and lowest among those with a household income of $75,000 or more per year (21.4%).

Table 17.1 Arthritis by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,053	**32.0**	29.6-34.3	3,197	**39.7**	37.7-41.7	5,250	**35.9**	34.4-37.5
Age									
18-24	102	***4.7**	0.9-8.5	154	**13.8**	6.2-21.5	256	**9.1**	4.8-13.4
25-34	237	**9.9**	5.3-14.5	307	**14.6**	10.2-19.1	544	**12.2**	9.0-15.4
35-44	280	**27.3**	21.3-33.2	394	**27.3**	22.3-32.2	674	**27.3**	23.4-31.1
45-54	394	**36.3**	30.9-41.6	570	**41.5**	36.9-46.2	964	**39.0**	35.4-42.5
55-64	478	**50.2**	45.2-55.1	719	**54.8**	50.8-58.9	1,197	**52.5**	49.3-55.7
65+	555	**53.2**	48.6-57.8	1,027	**65.0**	61.7-68.3	1,582	**60.0**	57.3-62.8
Education									
Less than H.S.	276	**49.1**	41.9-56.2	466	**53.4**	47.5-59.3	742	**51.3**	46.7-55.9
H.S. or G.E.D.	829	**30.1**	26.7-33.6	1,292	**44.1**	40.9-47.2	2,121	**37.0**	34.6-39.4
Some Post-H.S.	471	**28.1**	23.7-32.5	816	**33.5**	29.8-37.1	1,287	**31.2**	28.3-34.0
College Graduate	472	**22.9**	18.9-27.0	618	**24.7**	20.9-28.5	1,090	**23.8**	21.1-26.6
Income									
Less than $15,000	229	**49.9**	42.0-57.8	446	**55.3**	49.4-61.2	675	**52.9**	48.0-57.7
$15,000- 24,999	348	**38.1**	32.2-43.9	659	**47.7**	43.1-52.3	1,007	**43.4**	39.7-47.1
$25,000- 34,999	297	**32.4**	26.3-38.4	486	**41.1**	36.0-46.1	783	**37.0**	33.1-40.9
$35,000- 49,999	310	**31.1**	25.0-37.3	391	**29.5**	24.5-34.5	701	**30.3**	26.4-34.3
$50,000- 74,999	267	**24.7**	19.2-30.3	294	**33.5**	27.3-39.7	561	**28.7**	24.5-32.9
$75,000+	327	**19.9**	15.4-24.4	349	**23.2**	18.4-27.9	676	**21.4**	18.1-24.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Figure 17.1 Arthritis by year: WVBRFSS, 1990-2011

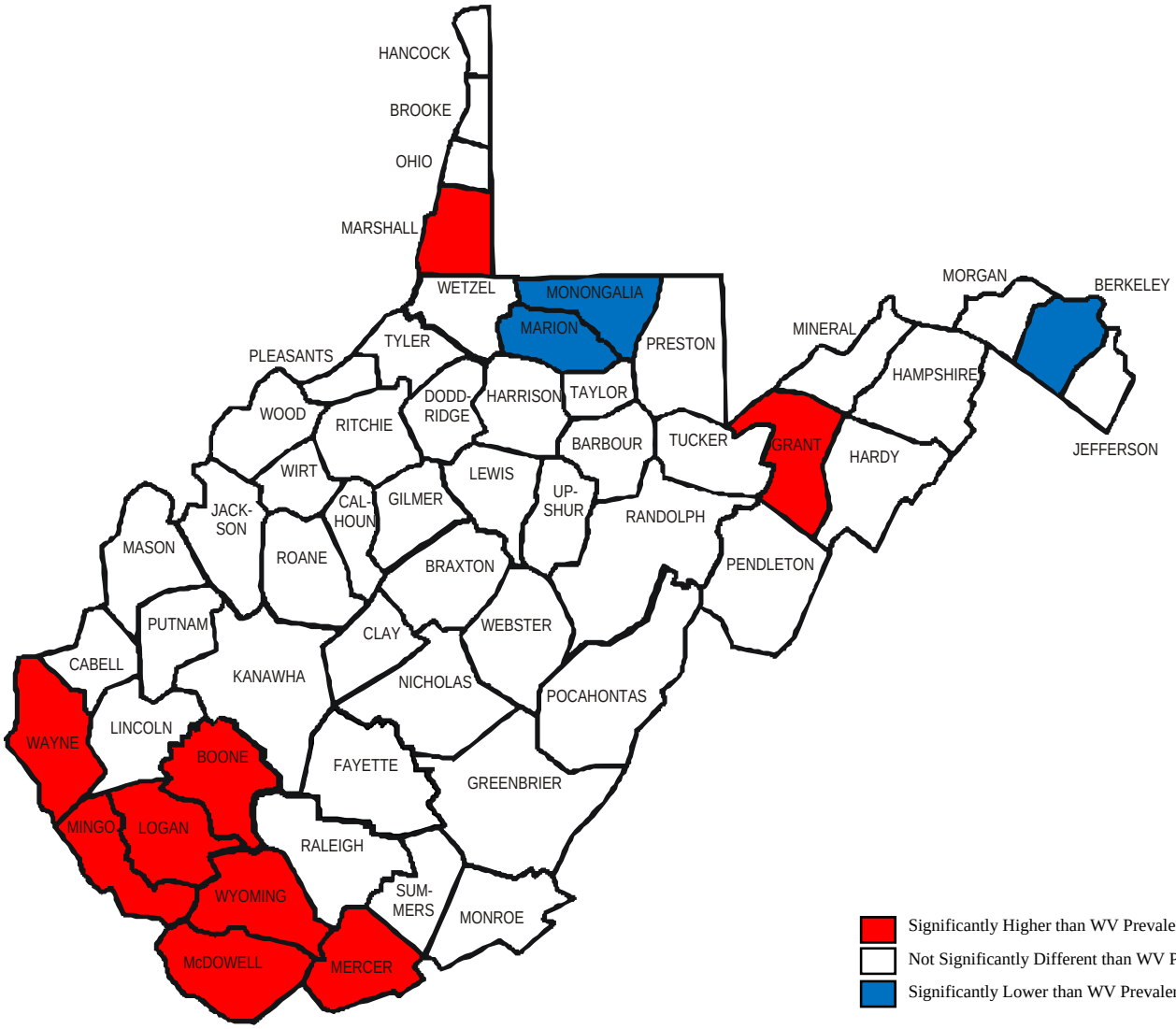


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 19.1 Arthritis by county: WVBRFSS, 2005, 2007, 2009-2011

U.S. Prevalence (2009) – 25.9%

WV Prevalence (2005, 2007, 2009-2011) – 35.2%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Living With Arthritis

Definition

Persons reporting that they have arthritis and responding "Yes" to the question "Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?"

Prevalence

WV: 56.5% (95% CI: 54.0-59.0)
U.S.: 51.4% (95% CI: 50.9-51.9)
The West Virginia prevalence of limited due to arthritis was significantly higher than the U.S prevalence. West Virginia ranked the 5th highest among 52 BRFSS participants.

Gender

Men: 56.1% (95% CI: 52.0-60.2)
Women: 56.7% (95% CI: 53.6-59.9)
There was no gender difference in the prevalence of limited due to arthritis.

Age

There was no age difference in the prevalence of limited due to arthritis.

Education

The prevalence of limited due to arthritis was significantly higher among those with less than a high school education (61.9%) than among college graduates (49.1%).

Household Income

The prevalence of limited due to arthritis was significantly higher among those with an annual household income of less than $15,000 (64.5%) than among those with a household income of $75,000 or more per year (41.3%).

Table 17.2 Limited in any way because of arthritis by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	751	**56.1**	52.0-60.2	1,421	**56.7**	53.6-59.9	2,172	**56.5**	54.0-59.0
Age									
18-24	6	***60.3**	18.7-100.0	15	***61.9**	33.1-90.6	21	***61.4**	37.5-85.3
25-34	21	***74.0**	54.3-93.7	40	***51.8**	35.0-68.6	61	***61.0**	47.4-74.5
35-44	71	***50.8**	37.8-63.9	97	***63.6**	53.2-74.0	168	**57.1**	48.7-65.6
45-54	138	**62.9**	53.9-71.8	235	**58.4**	51.1-65.8	373	**60.4**	54.7-66.2
55-64	227	**55.2**	47.8-62.5	379	**60.7**	55.2-66.1	606	**58.1**	53.5-62.6
65+	287	**51.1**	44.7-57.5	653	**51.8**	47.5-56.1	940	**51.5**	47.9-55.1
Education									
Less than H.S.	151	**63.1**	54.4-71.8	270	**60.9**	53.4-68.5	421	**61.9**	56.2-67.7
H.S. or G.E.D.	307	**53.6**	47.4-59.8	643	**55.7**	51.2-60.1	950	**54.8**	51.2-58.5
Some Post-H.S.	161	**56.1**	47.3-65.0	320	**57.8**	51.4-64.1	481	**57.1**	51.9-62.3
College Graduate	129	**49.2**	39.3-59.0	186	**49.0**	40.5-57.5	315	**49.1**	42.6-55.6
Income									
Less than $15,000	122	***62.4**	52.3-72.4	270	**66.0**	58.8-73.3	392	**64.5**	58.5-70.4
$15,000- 24,999	151	**67.3**	58.9-75.7	347	**54.1**	47.5-60.8	498	**59.2**	53.9-64.5
$25,000- 34,999	112	***61.6**	51.5-71.8	220	**56.6**	48.9-64.3	332	**58.7**	52.5-64.9
$35,000- 49,999	107	***51.8**	40.4-63.2	130	**47.4**	37.7-57.1	237	**49.7**	42.1-57.3
$50,000- 74,999	79	***43.9**	31.9-55.9	109	***61.4**	51.1-71.7	188	**53.0**	44.8-61.2
$75,000+	81	***37.5**	25.9-49.1	96	***45.3**	34.0-56.5	177	**41.3**	33.2-49.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Definition

Persons reporting that they have arthritis and responding "Yes" to the question "Do arthritis or joint symptoms now affect whether you work, the type of work you do, or the amount of work you do?"

Prevalence

WV: 46.1% (95% CI: 43.6-48.7)
U.S.: 35.8% (95% CI: 35.3-36.3)
The West Virginia prevalence of arthritis affects work was significantly higher than the U.S. prevalence. West Virginia ranked the 4th highest among 52 BRFSS participants.

Gender

Men: 48.4% (95% CI: 44.2-52.6)
Women: 44.4% (95% CI: 41.3-47.6)
There was no gender difference in the prevalence of arthritis affects work.

Age

The prevalence of arthritis affects work was lowest among those aged 65 and older (32.9%) and was significantly lower than all other age groups.

Education

The prevalence of arthritis affects work was highest among those with less than a high school education (56.6%) and was significantly higher than all other educational attainment groups.

Household Income

The prevalence of arthritis affects work was significantly higher among those with an annual household income of less than $15,000 (62.7%) than among those with a household income of $75,000 or more per year (25.6%).

Table 17.3 Arthritis affects work by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	747	**48.4**	44.2-52.6	1,419	**44.4**	41.3-47.6	2,166	**46.1**	43.6-48.7
Age									
18-24	6	***73.6**	40.1-100.0	15	***54.0**	23.9-84.1	21	***59.2**	35.1-83.2
25-34	21	***65.9**	44.2-87.7	40	***52.6**	36.0-69.3	61	***58.1**	44.6-71.7
35-44	71	***58.2**	45.4-71.1	99	***55.8**	45.2-66.4	170	**57.0**	48.7-65.4
45-54	137	**60.0**	50.9-69.0	229	**49.9**	42.5-57.4	366	**54.5**	48.7-60.4
55-64	223	**47.6**	40.2-55.0	381	**49.5**	43.8-55.2	604	**48.6**	44.0-53.2
65+	288	**32.6**	26.4-38.8	653	**33.2**	29.1-37.2	941	**32.9**	29.5-36.4
Education									
Less than H.S.	150	**59.7**	50.9-68.6	270	**53.8**	46.1-61.4	420	**56.6**	50.8-62.4
H.S. or G.E.D.	305	**46.3**	40.1-52.4	641	**44.4**	40.0-48.9	946	**45.2**	41.5-48.8
Some Post-H.S.	160	**45.9**	37.0-54.8	320	**43.4**	37.0-49.8	480	**44.4**	39.2-49.6
College Graduate	129	***34.4**	24.3-44.5	186	**25.1**	18.3-32.0	315	**29.6**	23.4-35.8
Income									
Less than $15,000	122	**64.3**	54.4-74.1	266	**61.5**	54.3-68.7	388	**62.7**	56.8-68.6
$15,000- 24,999	150	**57.1**	48.0-66.2	346	**44.1**	37.4-50.8	496	**49.1**	43.6-54.5
$25,000- 34,999	111	***49.8**	39.1-60.4	220	**50.4**	42.7-58.0	331	**50.1**	43.8-56.4
$35,000- 49,999	107	***45.3**	33.8-56.8	129	**39.1**	29.6-48.6	236	**42.4**	34.8-50.0
$50,000- 74,999	79	***31.5**	20.2-42.8	110	***36.4**	25.8-47.0	189	**34.1**	26.4-41.9
$75,000+	81	***26.4**	15.9-37.0	96	**24.8**	15.3-34.3	177	**25.6**	18.5-32.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Definition

Persons reporting that they have arthritis and responding "A lot" to the question "During the past 30 days, to what extent has your arthritis or joint symptoms interfered with your normal social activities, such as going shopping, to the movies, or to religious or social gatherings?"

Prevalence

WV: 27.7% (95% CI: 25.4-30.0)
U.S.: 20.8% (95% CI: 20.4-21.2)
The West Virginia prevalence of arthritis affects social activities was significantly higher than the U.S. prevalence. West Virginia ranked the 6th highest among 52 BRFSS participants.

Gender

Men: 26.9% (95% CI: 23.2-30.6)
Women: 28.4% (95% CI: 25.5-31.3)
There was no gender difference in the prevalence of arthritis affects social activities.

Age

The prevalence of arthritis affects social activities was lowest among those aged 65 and older (20.3%) and was significantly lower than all other age groups.

Education

The prevalence of arthritis affects social activities was significantly higher among those with less than a high school education (34.4%) than among college graduates (15.5%).

Household Income

The prevalence of arthritis affects social activities was significantly higher among those with an annual household income of less than $15,000 (47.2%) than among those with a household income of $75,000 or more per year (12.1%).

Table 17.4 Arthritis affects social activities by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	749	**26.9**	23.2-30.6	1,420	**28.4**	25.5-31.3	2,169	**27.7**	25.4-30.0
Age									
18-24	6	***18.4**	0.0-50.9	15	***26.7**	0.0-57.3	21	***24.5**	0.2-48.9
25-34	21	***20.6**	1.5-39.8	40	***28.0**	13.9-42.0	61	***24.9**	13.5-36.4
35-44	71	***27.5**	16.9-38.1	98	***46.5**	35.7-57.2	169	**36.9**	29.0-44.8
45-54	138	**39.2**	29.9-48.4	235	**32.5**	25.6-39.3	373	**35.5**	29.8-41.1
55-64	225	**31.2**	24.1-38.3	378	**26.2**	21.3-31.1	603	**28.6**	24.3-32.8
65+	287	**16.0**	11.3-20.7	652	**22.9**	19.3-26.4	939	**20.3**	17.4-23.1
Education									
Less than H.S.	151	**34.0**	25.4-42.6	269	**34.7**	27.2-42.1	420	**34.4**	28.7-40.0
H.S. or G.E.D.	307	**25.3**	20.0-30.7	643	**31.0**	26.8-35.1	950	**28.6**	25.3-31.9
Some Post-H.S.	159	**26.9**	19.0-34.8	321	**23.2**	17.7-28.7	480	**24.6**	20.1-29.2
College Graduate	129	**16.2**	8.4-23.9	185	**15.0**	9.0-20.9	314	**15.5**	10.7-20.4
Income									
Less than $15,000	122	***47.7**	37.3-58.1	269	**46.9**	39.1-54.6	391	**47.2**	40.9-53.5
$15,000- 24,999	151	**43.1**	33.7-52.5	346	**30.5**	24.7-36.3	497	**35.3**	30.2-40.5
$25,000- 34,999	111	**17.6**	9.6-25.7	219	**21.1**	15.2-27.1	330	**19.7**	14.9-24.5
$35,000- 49,999	107	***9.6**	3.9-15.4	130	**20.1**	12.2-28.1	237	**14.6**	9.7-19.6
$50,000- 74,999	78	***14.8**	5.9-23.7	109	**17.0**	8.3-25.6	187	**15.9**	9.7-22.1
$75,000+	81	***15.3**	5.9-24.7	96	***8.9**	2.6-15.2	177	**12.1**	6.4-17.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 18: DISABILITY

Physical, Mental or Emotional Disability

Definition

Responding "Yes" to the question "Are you limited in any way in any activities because of physical, mental, or emotional problems?"

Prevalence

WV: 31.4% (95% CI: 29.9-32.9)
U.S.: 23.7% (95% CI: 23.5-23.9)
The West Virginia prevalence of disability was significantly higher than the U.S. prevalence. West Virginia ranked the highest among 52 BRFSS participants.

Gender

Men: 30.4% (95% CI: 28.1-32.7)
Women: 32.2% (95% CI: 30.3-34.1)
There was no gender difference in the prevalence of disability.

Age

Disability prevalence generally increased with age with the highest prevalence among those aged 55-64 (42.7%).

Education

The prevalence of disability was significantly higher among those with less than a high school education (44.3%) than among all other educational attainment groups.

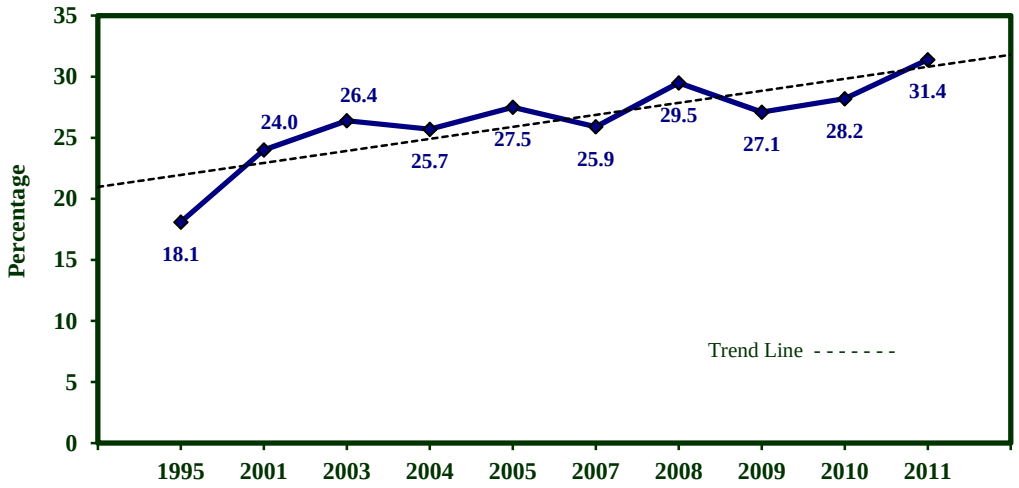
Household Income

The prevalence of disability was highest among those with an annual household income of less than $15,00 (52.2%) and lowest among those with a household income of $75,000 or more per year (16.5%).

Table 18.1 Disability by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,051	**30.4**	28.1-32.7	3,176	**32.2**	30.3-34.1	5,227	**31.4**	29.9-32.9
Age									
18-24	100	**14.8**	7.5-22.1	153	**16.3**	9.4-23.2	253	**15.6**	10.5-20.6
25-34	235	**16.5**	11.0-21.9	301	**20.4**	15.5-25.3	536	**18.4**	14.7-22.1
35-44	277	**22.6**	17.2-28.0	390	**26.6**	21.8-31.5	667	**24.6**	21.0-28.3
45-54	392	**38.4**	33.0-43.7	570	**33.9**	29.6-38.3	962	**36.1**	32.7-39.5
55-64	477	**43.3**	38.4-48.3	718	**42.0**	37.9-46.1	1,195	**42.7**	39.5-45.9
65+	562	**40.6**	36.1-45.2	1,016	**43.2**	39.7-46.6	1,578	**42.1**	39.3-44.8
Education									
Less than H.S.	281	**45.0**	38.1-52.0	460	**43.5**	37.8-49.2	741	**44.3**	39.8-48.7
H.S. or G.E.D.	825	**27.5**	24.1-30.9	1,281	**35.1**	32.1-38.1	2,106	**31.2**	28.9-33.5
Some Post-H.S.	471	**31.2**	26.5-35.9	812	**27.4**	24.0-30.8	1,283	**29.1**	26.3-31.9
College Graduate	470	**21.0**	16.9-25.1	618	**21.6**	17.6-25.6	1,088	**21.3**	18.4-24.2
Income									
Less than $15,000	229	**56.3**	48.3-64.3	445	**48.7**	42.9-54.6	674	**52.2**	47.3-57.0
$15,000- 24,999	347	**40.8**	34.7-46.9	652	**37.6**	33.2-42.1	999	**39.0**	35.3-42.7
$25,000- 34,999	297	**27.6**	21.6-33.5	482	**31.1**	26.5-35.6	779	**29.4**	25.7-33.1
$35,000- 49,999	310	**24.4**	19.1-29.8	389	**22.9**	18.4-27.4	699	**23.7**	20.2-27.2
$50,000- 74,999	271	**20.3**	14.9-25.8	293	**29.0**	22.8-35.2	564	**24.2**	20.1-28.3
$75,000+	322	**18.6**	13.9-23.3	348	**14.1**	9.8-18.5	670	**16.5**	13.3-19.8

Figure 18.1 Disability prevalence by year: WVBRFSS, 1990-2011

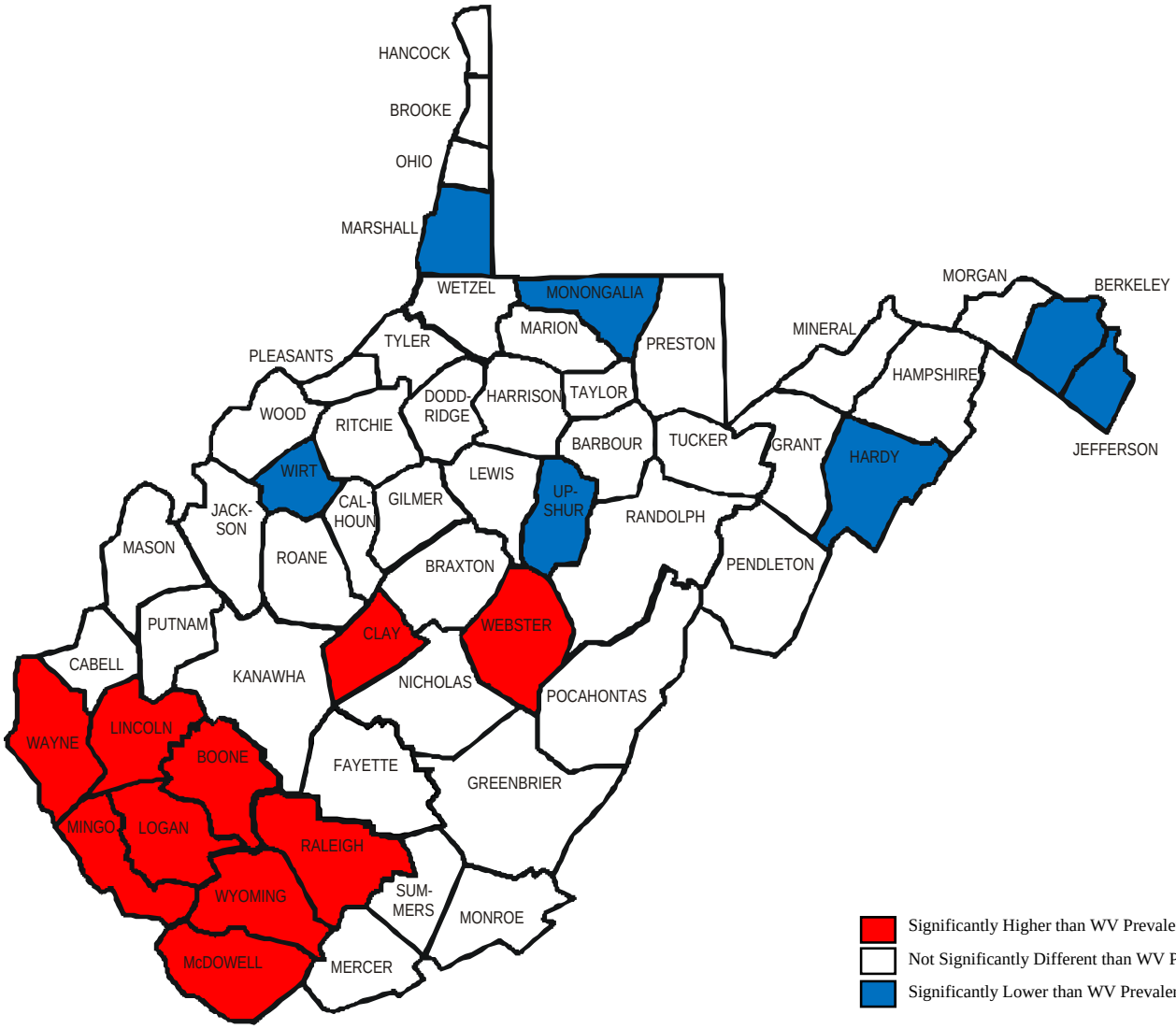


*Due to changes in sample composition and weighting methodology, 2011 results are not directly comparable to previous years.

Figure 18.2 Disability by county: WVBRFSS 2007-2011

U.S. Prevalence (2009) – 18.9%

WV Prevalence (2007-2011) – 28.4%
(Significantly Higher than U.S.)



County prevalence estimates are listed in Appendix B.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 6.

Use Special Equipment

Definition

Responding "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?"

Prevalence

WV: 11.2% (95% CI: 10.3-12.2)
U.S.: 7.9% (95% CI: 7.7-8.0)
The West Virginia prevalence of use special equipment was significantly higher than the U.S. prevalence. West Virginia ranked the 2nd highest among the 52 BRFSS participants.

Gender

Men: 10.9% (95% CI: 9.5-12.3)
Women: 11.6% (95% CI: 10.4-12.8)
There was no gender difference for the prevalence of use special equipment.

Age

The prevalence of use special equipment increased with age. The largest significant difference in the prevalence of use special equipment was found between the 45-54 age group (11.3%) and the 55-64 age group (18.1%) with the senior population having the largest prevalence (21.4%).

Education

The prevalence of use special equipment was highest among those with less than a high school education (17.4%) and lowest among college graduates (5.5%).

Household Income

The prevalence of use special equipment was highest among those with an annual household income of less than $15,000 (20.3%) and lowest among those with a household income of $75,000 or more per year (4.3%).

Table 18.2 Use special equipment by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,054	**10.9**	9.5-12.3	3,180	**11.6**	10.4-12.8	5,234	**11.2**	10.3-12.2
Age									
18-24	100	***0.7**	0.0-2.2	153	***1.7**	0.0-4.9	253	***1.2**	0.0-2.9
25-34	234	***1.6**	0.0-3.1	301	***3.0**	1.1-5.0	535	**2.3**	1.0-3.5
35-44	277	**7.1**	4.0-10.2	391	**6.6**	3.9-9.3	668	**6.9**	4.8-8.9
45-54	394	**13.0**	9.4-16.6	570	**9.7**	6.8-12.5	964	**11.3**	9.0-13.6
55-64	479	**20.1**	15.9-24.3	719	**16.1**	12.9-19.3	1,198	**18.1**	15.4-20.8
65+	562	**18.6**	15.0-22.3	1018	**23.5**	20.7-26.4	1,580	**21.4**	19.2-23.7
Education									
Less than H.S.	282	**17.6**	13.0-22.3	462	**17.2**	13.1-21.2	744	**17.4**	14.3-20.4
H.S. or G.E.D.	826	**10.3**	8.2-12.4	1,283	**13.7**	11.7-15.8	2,109	**12.0**	10.5-13.4
Some Post-H.S.	471	**10.8**	8.0-13.6	813	**8.5**	6.6-10.3	1,284	**9.5**	7.9-11.1
College Graduate	471	**5.4**	3.4-7.3	617	**5.6**	3.7-7.5	1,088	**5.5**	4.1-6.8
Income									
Less than $15,000	230	**22.9**	16.9-28.9	445	**18.2**	14.4-21.9	675	**20.3**	16.9-23.7
$15,000- 24,999	348	**17.4**	13.0-21.7	653	**15.4**	12.1-18.7	1,001	**16.3**	13.6-19.0
$25,000- 34,999	298	**10.4**	7.0-13.9	483	**10.3**	7.6-13.1	781	**10.4**	8.2-12.6
$35,000- 49,999	309	**7.5**	4.5-10.5	389	**5.7**	3.3-8.0	698	**6.6**	4.6-8.5
$50,000- 74,999	271	**4.9**	2.2-7.6	293	**6.7**	3.5-9.9	564	**5.7**	3.6-7.8
$75,000+	323	**4.7**	2.3-7.1	348	**3.9**	1.7-6.2	671	**4.3**	2.7-6.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 19: KIDNEY DISEASE

Kidney Disease Prevalence

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have kidney disease?"

Prevalence

WV: 2.8% (95% CI: 2.4-3.3)
U.S.: 2.5% (95% CI: 2.4-2.6)
The West Virginia and U.S. prevalence of kidney disease were similar. West Virginia ranked the 9th highest among the 52 BRFSS participants.

Gender

Men: 2.5% (95% CI: 1.9-3.2)
Women: 3.1% (95% CI: 2.4-3.8)
There was no gender difference in the prevalence of kidney disease.

Age

The prevalence of kidney disease was highest among adults aged 65 and older (6.5%) and was significantly higher than all other age groups.

Education

The prevalence of kidney disease was significantly higher among those with less than a high school education (3.9%) than among college graduates (1.6%).

Household Income

There was a significant household income difference in the prevalence of kidney disease between those earning less than $15,000 (4.6%) and those earning $50,000-74,999 (1.6%). No other household income differences in kidney disease prevalence were found.

Table 19.1 Kidney disease prevalence by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,066	**2.5**	1.9-3.2	3,205	**3.1**	2.4-3.8	5,271	**2.8**	2.4-3.3
Age									
18-24	101	***0.0**	0.0-0.0	154	***0.0**	0.0-0.0	255	***0.0**	0.0-0.0
25-34	237	***0.4**	0.0-1.1	308	***1.5**	0.1-3.0	545	***0.9**	0.2-1.7
35-44	280	***2.4**	0.4-4.5	395	***2.5**	0.5-4.5	675	**2.5**	1.0-3.9
45-54	396	***2.0**	0.7-3.4	572	**2.3**	1.0-3.7	968	**2.2**	1.2-3.1
55-64	481	**3.8**	2.0-5.6	720	**2.1**	1.0-3.2	1,201	**3.0**	1.9-4.0
65+	563	**5.6**	3.5-7.7	1,028	**7.2**	5.2-9.2	1,591	**6.5**	5.1-8.0
Education									
Less than H.S.	282	***3.4**	1.3-5.4	468	**4.4**	2.4-6.4	750	**3.9**	2.5-5.4
H.S. or G.E.D.	832	**2.5**	1.5-3.5	1,295	**4.0**	2.7-5.3	2,127	**3.2**	2.4-4.1
Some Post-H.S.	473	**2.4**	1.0-3.7	817	**2.1**	1.2-3.1	1,290	**2.2**	1.5-3.0
College Graduate	474	***2.0**	0.8-3.2	620	***1.2**	0.4-2.1	1,094	**1.6**	0.9-2.4
Income									
Less than $15,000	231	***3.0**	1.0-5.1	448	**5.9**	3.5-8.3	679	**4.6**	3.0-6.2
$15,000- 24,999	352	**3.1**	1.5-4.7	658	**4.3**	2.5-6.1	1,010	**3.8**	2.6-5.0
$25,000- 34,999	296	***2.6**	0.8-4.4	486	***2.9**	1.0-4.8	782	**2.8**	1.5-4.1
$35,000- 49,999	310	***2.6**	0.9-4.3	391	***2.0**	0.7-3.3	701	**2.3**	1.2-3.4
$50,000- 74,999	272	***2.2**	0.5-3.8	294	***1.0**	0.0-2.0	566	***1.6**	0.6-2.6
$75,000+	328	***1.6**	0.2-3.1	350	***2.0**	0.0-4.2	678	***1.8**	0.5-3.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 20: VISION IMPAIRMENT

Prevalence of Vision Impairment

Definition

Responding "Yes" or "Blind" to the question "Has a doctor, nurse, or other health professional ever said that you have vision impairment in one or both eyes, even when wearing glasses?"

Prevalence

WV: 19.0% (95% CI: 17.8-20.3)
U.S.: 19.9% (95% CI: 19.7-20.2)
The West Virginia and U.S. prevalence of vision impairment was similar. West Virginia ranked the 25th highest among 52 BRFSS participants.

Gender

Men: 17.6% (95% CI: 15.7-19.5)
Women: 20.3% (95% CI: 18.7-22.0)
There was no gender difference in the prevalence of vision impairment.

Age

The prevalence of vision impairment varied somewhat by age but the largest prevalence was found among those aged 65 and older (32.4%) and was significantly higher than all other age groups.

Education

The prevalence of vision impairment was significantly higher among those with less than a high school education (25.9%) than among college graduates (14.1%).

Household Income

The prevalence of vision impairment generally decreased with increasing levels of annual household income with significant differences found between most income brackets.

Table 20.1 Vision Impairment by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,070	**17.6**	15.7-19.5	3,201	**20.3**	18.7-22.0	5,271	**19.0**	17.8-20.3
Age									
18-24	102	***11.7**	3.9-19.4	154	**13.5**	6.7-20.2	256	**12.5**	7.4-17.7
25-34	237	**8.6**	4.9-12.2	308	**10.2**	6.6-13.9	545	**9.4**	6.8-12.0
35-44	279	**10.4**	6.6-14.2	395	**13.6**	9.5-17.6	674	**12.0**	9.2-14.8
45-54	397	**18.2**	13.7-22.6	568	**17.5**	14.1-20.9	965	**17.8**	15.0-20.6
55-64	481	**23.7**	19.5-27.9	721	**24.1**	20.6-27.6	1,202	**23.9**	21.2-26.6
65+	566	**30.0**	25.8-34.2	1,027	**34.3**	31.0-37.6	1,593	**32.4**	29.8-35.0
Education									
Less than H.S.	285	**22.5**	16.7-28.3	466	**29.2**	23.9-34.4	751	**25.9**	21.9-29.8
H.S. or G.E.D.	833	**16.0**	13.2-18.7	1,294	**22.4**	19.9-25.0	2,127	**19.1**	17.3-21.0
Some Post-H.S.	473	**19.4**	15.3-23.4	816	**15.6**	12.9-18.3	1,289	**17.2**	14.9-19.5
College Graduate	474	**14.0**	10.8-17.3	620	**14.1**	11.0-17.2	1,094	**14.1**	11.8-16.3
Income									
Less than $15,000	232	**20.8**	14.9-26.7	446	**27.0**	21.7-32.3	678	**24.2**	20.2-28.2
$15,000- 24,999	353	**25.0**	19.7-30.3	659	**24.2**	20.4-27.9	1,012	**24.5**	21.4-27.7
$25,000- 34,999	298	**19.6**	14.5-24.7	486	**22.6**	18.1-27.1	784	**21.2**	17.8-24.6
$35,000- 49,999	310	**17.9**	11.8-23.9	391	**16.3**	12.2-20.4	701	**17.1**	13.4-20.8
$50,000- 74,999	271	**13.5**	8.9-18.1	294	**11.7**	8.0-15.4	565	**12.7**	9.7-15.7
$75,000+	328	**10.6**	7.0-14.3	350	**10.8**	7.1-14.6	678	**10.7**	8.1-13.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 21: DEPRESSION

Prevalence of Depression

Definition

Responding "Yes" to the question "Has a doctor, nurse, or other health professional ever told you that you have a depressive disorder (including depression, major depression, dysthymia, or minor depression)?"

Prevalence

WV: 20.1% (95% CI: 18.8-21.5)
U.S.: 16.8% (95% CI: 16.6-17.0)
The West Virginia prevalence of depression was significantly higher than the U.S. prevalence. West Virginia ranked the 14th highest among 52 BRFSS participants.

Gender

Men: 15.6% (95% CI: 13.6-17.6)
Women: 24.4% (95% CI: 22.6-26.2)
The prevalence of depression was significantly higher among women than among men.

Age

The prevalence of depression varied quite a bit by age with general increases observed until the age of 54 and then decreases with the age of 55 and older. The prevalence of depression was highest for the 45-54 year old age group (26.9%) and lowest among those aged 65 and older (12.4%).

Education

The prevalence of depression was significantly higher among those with less than a high school education (23.6%) than among college graduates (13.8%). Depression prevalence was significantly lower among college graduates than among all other educational attainment groups.

Household Income

The prevalence of depression also varied somewhat by annual household income. In general, the prevalence of depression was significantly higher among those with an annual household income of less than $25,000 than among those with a household income of $25,000 or more per year.

Table 21.1 Depression by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,062	**15.6**	13.6-17.6	3,204	**24.4**	22.6-26.2	5,266	**20.1**	18.8-21.5
Age									
18-24	102	**17.1**	8.1-26.2	153	**23.2**	15.5-30.8	255	**20.0**	14.1-26.0
25-34	235	**9.6**	5.8-13.5	307	**29.2**	23.6-34.8	542	**19.3**	15.7-22.9
35-44	280	**13.1**	9.0-17.2	395	**27.2**	22.3-32.0	675	**20.2**	17.0-23.4
45-54	394	**22.2**	17.5-26.9	572	**31.5**	27.2-35.8	966	**26.9**	23.8-30.1
55-64	480	**22.6**	18.3-27.0	721	**24.4**	20.9-27.9	1,201	**23.5**	20.8-26.3
65+	563	**9.0**	6.4-11.6	1,029	**14.9**	12.5-17.3	1,592	**12.4**	10.6-14.2
Education									
Less than H.S.	282	**18.8**	13.5-24.2	467	**28.3**	23.1-33.6	749	**23.6**	19.9-27.4
H.S. or G.E.D.	830	**15.9**	12.7-19.2	1,296	**24.9**	22.1-27.6	2,126	**20.3**	18.2-22.5
Some Post-H.S.	472	**16.4**	12.8-20.1	816	**25.1**	21.7-28.5	1,288	**21.4**	18.8-23.9
College Graduate	473	**10.3**	7.2-13.3	620	**17.3**	13.5-21.1	1,093	**13.8**	11.4-16.3
Income									
Less than $15,000	230	**30.8**	23.8-37.8	450	**46.6**	40.7-52.5	680	**39.5**	34.9-44.2
$15,000- 24,999	351	**19.3**	14.5-24.0	659	**31.3**	27.0-35.6	1,010	**26.0**	22.7-29.2
$25,000- 34,999	298	**10.6**	6.3-14.9	487	**13.0**	9.5-16.5	785	**11.9**	9.1-14.6
$35,000- 49,999	308	**12.6**	7.8-17.5	391	**15.5**	11.4-19.7	699	**14.0**	10.8-17.3
$50,000- 74,999	271	**13.4**	8.6-18.2	294	**20.3**	14.6-26.0	565	**16.5**	12.8-20.2
$75,000+	327	***8.9**	3.4-14.4	350	**19.1**	14.2-24.1	677	**13.6**	9.9-17.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 22: COGNITIVE IMPAIRMENT

Cognitive Impairment

Definition

Responding "Yes" to the question "During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?"

Prevalence

7.2% (95% CI: 6.3-8.0)
Because this question was part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Men: **7.0%** (95% CI: 5.7-8.3)
Women: **7.3%** (95% CI: 6.2-8.5)
There was no gender difference in the prevalence of cognitive impairment.

Age

The prevalence of cognitive impairment was highest among those aged 55-64 (9.6%).

Education

The prevalence of cognitive impairment was significantly higher among those with less than a high school education (11.7%) than among those with a college degree (2.7%).

Household Income

The prevalence of cognitive impairment was highest among those with an annual household income of less than $15,000 (18.1%) and was significantly higher than all other income brackets.

Table 22.1 Prevalence of cognitive impairment by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,021	**7.0**	5.7-8.3	3,146	**7.3**	6.2-8.5	5,167	**7.2**	6.3-8.0
Age									
18-24	92	***2.2**	0.0-5.6	146	***5.4**	0.3-10.6	238	***3.8**	0.7-6.9
25-34	225	***1.7**	0.2-3.2	296	**5.4**	2.5-8.3	521	**3.5**	1.9-5.2
35-44	274	**6.0**	3.1-9.0	383	**7.9**	4.9-10.9	657	**6.9**	4.8-9.0
45-54	391	**10.1**	6.8-13.5	568	**8.9**	6.3-11.6	959	**9.5**	7.4-11.7
55-64	476	**11.3**	7.8-14.9	713	**7.9**	5.7-10.1	1,189	**9.6**	7.5-11.7
65+	556	**8.2**	5.5-10.9	1,012	**7.4**	5.6-9.1	1,568	**7.7**	6.2-9.3
Education									
Less than H.S.	281	**12.1**	8.2-16.0	456	**11.3**	7.1-15.4	737	**11.7**	8.8-14.5
H.S. or G.E.D.	813	**7.6**	5.5-9.7	1,271	**7.5**	5.9-9.1	2,084	**7.5**	6.2-8.9
Some Post-H.S.	463	**4.9**	2.9-6.9	805	**7.0**	5.2-8.9	1,268	**6.1**	4.8-7.5
College Graduate	460	**2.6**	1.2-4.0	609	**2.9**	1.3-4.5	1,069	**2.7**	1.7-3.8
Income									
Less than $15,000	227	**18.3**	12.7-23.9	437	**17.9**	12.6-23.1	664	**18.1**	14.2-21.9
$15,000- 24,999	342	**9.6**	6.1-13.1	645	**9.4**	6.6-12.2	987	**9.5**	7.3-11.7
$25,000- 34,999	296	**6.4**	3.3-9.5	481	**6.3**	4.1-8.4	777	**6.3**	4.5-8.2
$35,000- 49,999	304	**6.7**	3.7-9.7	388	**5.1**	2.4-7.8	692	**5.9**	3.9-7.9
$50,000- 74,999	264	***4.3**	0.6-8.1	289	***1.8**	0.5-3.1	553	***3.2**	1.0-5.3
$75,000+	318	***1.8**	0.3-3.4	342	***1.5**	0.2-2.8	660	***1.7**	0.7-2.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Cognitive Impairment – Medical Care

Definition

Persons reporting that they have cognitive impairment were asked a series of questions about medical care related to their cognitive impairment.
Discussed cognitive impairment with doctor is defined as responding "Yes" to the question "Has anyone discussed with a health care professional, increases in your confusion or memory loss?"
Treatment for cognitive impairment is defined as responding "Yes" to the question "Have you received treatment such as therapy or medications for confusion or memory loss?"

Prevalence

Discussed Cognitive Impairment with Doctor
39.4% (95% CI: 33.8-45.0)
Treatment for Cognitive Impairment
48.5% (95% CI: 38.8-58.2)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Discussed Cognitive Impairment with Doctor
Men: **36.5%** (95% CI: 27.4-45.7)
Women: **42.0%** (95% CI: 35.3-48.7)
There was no gender difference in the prevalence of discussed cognitive impairment with doctor.
Treatment for Cognitive Impairment
Men: **50.2%** (95% CI: 32.7-67.6)
Women: **47.2%** (95% CI: 36.9-57.6)
There was no gender difference in the prevalence of treatment for cognitive impairment.

Age

Due to a low response rate, most prevalence estimates for the age groups were unreliable and comparison was not possible.

Education

Due to a low response rate, most prevalence estimates for the educational attainment groups were unreliable and comparison was not possible.

Household Income

Due to a low response rate, most prevalence estimates for the annual household income groups were unreliable and comparison was not possible.

Table 22.2 Medical care for cognitive impairment by demographic characteristics: WVBRFSS, 2011

Characteristic	Discussed Cognitive Impairment with Doctor			Treatment for Cognitive Impairment		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	524	**39.4**	33.8-45.0	197	**48.5**	38.8-58.2
Sex						
Males	200	**36.5**	27.4-45.7	65	***50.2**	32.7-67.6
Females	324	**42.0**	35.3-48.7	132	***47.2**	36.9-57.6
Age						
18-24	13	***39.9**	4.2-75.6	4	***57.6**	0.0-100.0
25-34	30	***45.4**	23.7-67.0	12	***36.3**	5.7-66.8
35-44	68	***35.4**	22.5-48.3	23	***36.6**	13.9-59.3
45-54	118	***45.2**	34.9-55.5	56	***59.1**	44.4-73.8
55-64	139	**37.4**	27.9-46.8	53	***44.4**	28.4-60.4
65+	152	**36.2**	27.5-45.0	48	***51.3**	35.8-66.8
Education						
Less than H.S.	109	***38.7**	27.7-49.8	40	***49.7**	32.5-67.0
H.S. or G.E.D.	228	**35.1**	25.8-44.4	71	***51.8**	33.6-69.9
Some Post-H.S.	133	***47.6**	37.5-57.7	61	***44.0**	28.9-59.1
College Graduate	52	***38.6**	23.1-54.0	23	***44.2**	21.9-66.6
Income						
Less than $15,000	138	***35.6**	25.5-45.7	50	***46.8**	29.8-63.8
$15,000- 24,999	117	**32.2**	22.3-42.1	35	***56.1**	37.5-74.7
$25,000- 34,999	71	***35.6**	23.3-48.0	25	***37.9**	18.0-57.7
$35,000- 49,999	58	***35.3**	21.2-49.4	22	***32.5**	10.4-54.5
$50,000- 74,999	33	***41.5**	16.5-66.4	15	***33.0**	2.3-63.8
$75,000+	25	***53.5**	21.4-85.6	9	***81.3**	52.5-100.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Cognitive Impairment – Quality of Life

Definition

Persons reporting that they have cognitive impairment were asked a series of questions about quality of life related to their cognitive impairment.
Provided care in the past month is defined as responding "Always" or "Usually" to the question "During the past 30 days, how often has a family member or friend provided any care or assistance for you because of confusion or memory loss?"
Gave up household activities in the past year is defined as responding "Always" or "Usually" to the question "During the past 12 months, how often have you given up household activities or chores you used to do, because of confusion or memory loss that is happening more often or is getting worse?"
Interfered with work or social activities in the past year is defined as responding "Always" or "Usually" to the question "During the past 12 months, how often has confusion or memory loss interfered with your ability to work, volunteer, or engage in social activities?"

Prevalence

Provided Care in Past Month
24.2% (95% CI: 19.0-29.3)
Gave up Household Activities in Past Year
21.9% (95% CI: 16.8-27.1)
Interfered with Work or Social Activities in Past Year
27.4% (95% CI: 22.1-32.8)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Provided Care in Past Month
Men: **26.7%** (95% CI: 17.7-35.7)
Women: **21.9%** (95% CI: 16.6-27.1)
There was no gender difference in the prevalence of provided care in the past month.
Gave up Household Activities in Past Year
Men: **25.1%** (95% CI: 15.9-34.3)
Women: **19.1%** (95% CI: 14.1-24.0)
There was no gender difference in the prevalence of gave up household activities in the past year.
Interfered with Work or Social Activities in Past Year
Men: **33.3%** (95% CI: 24.1-42.6)
Women: **22.1%** (95% CI: 16.9-27.2)
There was no gender difference in the prevalence of interfered with work or social activities in the past year.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of provided care in the past month, gave up household activities in the past year, or interfered with work or social activities in the past year.

Education

Due to a low response rate, the prevalence estimates for those with less than a high school education and college graduates were unreliable. There was no educational attainment difference in the prevalence of provided care in the past month, gave up household activities in the past year, or interfered with work or social activities in the past year.

Household Income

Due to a low response rate, the prevalence estimates for the $35,000 and over annual household income brackets were unreliable. There was no annual household income difference in the prevalence of provided care in the past month, gave up household activities in the past year, or interfered with work or social activities in the past year.

Table 22.3 Quality of life for cognitive impairment by demographic characteristics: WVBRFSS, 2011

Characteristic	Provided Care in Past Month			Gave up Household Activities in Past Year			Interfered with Work or Social Activities in Past Year		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	530	**24.2**	19.0-29.3	516	**21.9**	16.8-27.1	527	**27.4**	22.1-32.8
Sex									
Males	201	**26.7**	17.7-35.7	194	**25.1**	15.9-34.3	200	**33.3**	24.1-42.6
Females	329	**21.9**	16.6-27.1	322	**19.1**	14.1-24.0	327	**22.1**	16.9-27.2
Age									
18-24	13	***25.2**	0.0-61.6	12	***38.4**	0.0-77.4	13	***36.2**	0.0-72.4
25-34	30	***23.0**	5.5-40.4	30	***15.5**	3.1-27.8	30	***19.3**	1.9-36.7
35-44	69	***19.7**	8.7-30.8	69	***20.6**	9.5-31.8	68	***32.1**	19.6-44.6
45-54	119	**22.4**	13.5-31.2	116	**17.0**	9.0-25.0	119	**24.4**	15.5-33.4
55-64	139	**27.3**	17.9-36.7	133	**26.1**	16.9-35.3	139	**33.0**	23.2-42.8
65+	156	**25.1**	17.2-33.0	152	**21.7**	14.2-29.3	154	**23.0**	15.1-30.9
Education									
Less than H.S.	112	***32.4**	21.96-43.0	108	***29.2**	19.0-39.3	110	***33.7**	22.8-44.6
H.S. or G.E.D.	228	**20.2**	11.2-29.2	224	**22.2**	13.0-31.4	228	**28.3**	18.9-37.6
Some Post-H.S.	135	**23.6**	15.6-31.5	130	**15.8**	8.9-22.8	134	**23.2**	15.4-31.0
College Graduate	53	***19.5**	7.7-31.2	52	***12.5**	2.4-22.5	53	***13.2**	2.9-23.5
Income									
Less than $15,000	140	**22.6**	13.5-31.8	135	**20.8**	12.6-29.0	139	***33.1**	22.9-43.4
$15,000- 24,999	118	**26.8**	17.6-36.0	115	**17.8**	9.7-26.0	117	**24.6**	15.5-33.8
$25,000- 34,999	71	**16.6**	7.2-26.1	69	***19.7**	8.7-30.7	71	***20.3**	9.7-30.9
$35,000- 49,999	58	***14.2**	5.1-23.3	58	***11.6**	3.1-20.1	58	***14.4**	5.3-23.5
$50,000- 74,999	33	***14.9**	2.9-26.9	32	***24.4**	2.0-46.8	33	***26.3**	4.1-48.5
$75,000+	25	***37.5**	0.0-77.2	25	***40.7**	2.4-79.0	25	***36.0**	0.0-76.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

Alzheimer's Disease or Dementia Prevalence

Definition

Persons reporting that they have cognitive impairment were asked "Has a health care professional ever said that you have Alzheimer's disease or some other form of dementia?"

Prevalence

Alzheimer's Disease
11.7% (95% CI: 6.4-17.1)
Dementia
16.8% (95% CI: 10.5-23.1)
Because this question is part of a state selected optional module and complete national data are not available, a U.S. comparison was not conducted.

Gender

Alzheimer's Disease
Men: 13.7% (95% CI: 3.6-23.7)
Women: 10.2% (95% CI: 4.8-15.5)
There was no gender difference in the prevalence of Alzheimer's Disease.
Dementia
Men: 20.1% (95% CI: 8.8-31.5)
Women: 14.1% (95% CI: 7.0-21.2)
There was no gender difference in the prevalence of dementia.

Age

Due to a low response rate, all the prevalence estimates for age groups 18-44 were unreliable. The following results are from comparison of the 45-54, 55-64, and 65 and older age groups. There was no age difference in the prevalence of Alzheimer's Disease or dementia.

Education

Due to a low response rate, the prevalence estimates for those with less than a high school education and college graduates were unreliable. There was no educational attainment difference in the prevalence of Alzheimer's Disease or dementia.

Household Income

Due to a low response rate, most prevalence estimates for the annual household income groups were unreliable and comparison was not possible.

Table 22.4 Alzheimer's Disease and Dementia by demographic characteristics: WVBRFSS, 2011

Characteristic	Alzheimer's Disease			Dementia		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	194	**11.7**	6.4-17.1	194	**16.8**	10.5-23.1
Sex						
Males	66	***13.7**	3.6-23.7	66	***20.1**	8.8-31.5
Females	128	**10.2**	4.8-15.5	128	**14.1**	7.0-21.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 23: HIV

HIV Testing Prevalence

Definition

Persons responding "Yes" to the question "Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation. Include testing fluid from your mouth."

Prevalence

WV: 27.6% (95% CI: 26.1-29.2)
U.S.: 37.4% (95% CI: 37.1-37.7)
The West Virginia prevalence of HIV testing was significantly lower than the U.S. prevalence. West Virginia ranked the 7th lowest among the 52 BRFSS participants.

Gender

Men: 26.8% (95% CI: 24.4-29.2)
Women: 28.4% (95% CI: 26.3-30.5)
There was no gender difference in the prevalence of HIV testing.

Age

HIV testing prevalence was highest among those aged 25-34 (45.3%), followed by the 35-44 age group (40.5%) and both of these were significantly higher than the 45 and older age groups. Approximately 1 in 3 adults aged 18-24 (34.9%) have ever had a HIV test.

Education

There was no educational attainment difference in the prevalence of HIV testing.

Household Income

The HIV testing prevalence was highest among those with an annual household income of less than $15,000 (39.5%) and was significantly higher than all other annual income brackets except the $75,000 or more per year bracket (32.4%).

Table 22.1 HIV testing by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,963	**26.8**	24.4-29.2	3,067	**28.4**	26.3-30.5	5,030	**27.6**	26.1-29.2
Age									
18-24	98	**25.0**	15.8-34.2	149	**45.4**	36.0-54.8	247	**34.9**	28.1-41.8
25-34	230	**36.6**	29.7-43.5	290	**54.4**	48.1-60.7	520	**45.3**	40.5-50.0
35-44	269	**36.4**	30.1-42.8	375	**44.5**	38.9-50.1	644	**40.5**	36.2-44.7
45-54	383	**28.9**	23.8-33.9	554	**24.6**	20.4-28.7	937	**26.7**	23.4-29.9
55-64	455	**23.9**	19.6-28.2	691	**13.5**	10.5-16.4	1,146	**18.6**	16.0-21.2
65+	521	**11.0**	8.1-13.8	980	**6.7**	4.9-8.5	1,501	**8.5**	6.9-10.1
Education									
Less than H.S.	262	**25.8**	19.5-32.2	438	**30.2**	23.8-36.5	700	**28.0**	23.5-32.5
H.S. or G.E.D.	795	**25.9**	22.2-29.7	1,235	**25.6**	22.5-28.7	2,030	**25.8**	23.3-28.2
Some Post-H.S.	450	**28.2**	23.3-33.1	787	**29.4**	25.6-33.3	1,237	**28.9**	25.9-31.9
College Graduate	452	**28.5**	23.8-33.2	602	**31.6**	27.0-36.1	1,054	**30.0**	26.8-33.3
Income									
Less than $15,000	217	**39.5**	31.6-47.4	422	**39.6**	33.3-45.8	639	**39.5**	34.6-44.5
$15,000- 24,999	338	**30.1**	24.0-36.2	635	**31.4**	26.8-36.0	973	**30.8**	27.1-34.5
$25,000- 34,999	285	**22.5**	16.7-28.4	471	**19.5**	15.2-23.8	756	**20.9**	17.3-24.5
$35,000- 49,999	294	**28.6**	22.0-35.1	376	**24.8**	19.2-30.4	670	**26.7**	22.4-31.1
$50,000- 74,999	263	**19.2**	13.4-24.9	283	**28.0**	21.4-34.6	546	**23.1**	18.7-27.5
$75,000+	307	**31.3**	25.3-37.3	339	**33.8**	27.9-39.6	646	**32.4**	28.2-36.7

High Risk for HIV

Definition

Responding "Yes" to the question "Do any of these situations apply to you?" "You have used intravenous drugs in the past year." "You have been treated for a sexually transmitted or venereal disease in the past year." "You have given or received money or drugs in exchange for sex in the past year." "You had anal sex without a condom in the past year."

Prevalence

WV: 2.3% (95% CI: 1.7-2.9)
U.S.: 3.8% (95% CI: 3.7-4.0)
The West Virginia prevalence of high risk for HIV was significantly lower than the U.S. prevalence. West Virginia ranked the 2nd lowest among the 52 BRFSS participants.

Gender

Men: 2.8% (95% CI: 1.8-3.8)
Women: 1.8% (95% CI: 1.1-2.5)
There was no gender difference in the prevalence of high risk for HIV.

Age

There was no age difference in the prevalence of high risk for HIV.

Education

There was no educational attainment difference in the prevalence of high risk for HIV.

Household Income

There was no annual household income difference in the prevalence of high risk for HIV.

Table 22.2 High risk for HIV by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,033	**2.8**	1.8-3.8	3,155	**1.8**	1.1-2.5	5,188	**2.3**	1.7-2.9
Age									
18-24	100	***6.6**	1.1-12.2	151	***5.4**	1.4-9.4	251	**6.0**	2.6-9.5
25-34	232	***3.1**	0.9-5.3	301	***3.3**	0.6-6.0	533	**3.2**	1.5-4.9
35-44	276	***2.3**	0.2-4.4	391	***1.9**	0.5-3.2	667	***2.1**	0.8-3.3
45-54	388	***4.4**	1.8-7.1	568	***1.5**	0.3-2.7	956	**2.9**	1.5-4.4
55-64	478	***1.1**	0.1-2.1	716	***0.5**	0.0-1.1	1,194	***0.8**	0.2-1.4
65+	552	***0.2**	0.0-0.6	1,000	***0.3**	0.0-0.7	1,552	***0.3**	0.0-0.5
Education									
Less than H.S.	280	***4.9**	1.8-8.1	451	***2.8**	0.6-5.0	731	**3.9**	1.9-5.8
H.S. or G.E.D.	814	***2.8**	1.1-4.6	1,275	***1.1**	0.2-2.0	2,089	**2.0**	1.0-3.0
Some Post-H.S.	470	***2.5**	1.0-4.1	808	**2.3**	1.0-3.5	1,278	**2.4**	1.4-3.4
College Graduate	466	***0.9**	0.0-1.8	616	***1.6**	0.0-3.5	1,082	***1.2**	0.2-2.3
Income									
Less than $15,000	229	***4.6**	1.0-8.2	439	***2.0**	0.4-3.5	668	**3.2**	1.3-5.0
$15,000- 24,999	344	***2.9**	0.8-4.9	648	***2.1**	0.4-3.9	992	**2.4**	1.1-3.8
$25,000- 34,999	296	***2.1**	0.0-4.4	482	***1.5**	0.0-3.2	778	***1.8**	0.4-3.2
$35,000- 49,999	306	***1.6**	0.2-3.0	389	***1.3**	0.0-2.7	695	***1.4**	0.4-2.4
$50,000- 74,999	269	***4.8**	1.2-8.4	290	***2.1**	0.0-5.1	559	***3.6**	1.2-6.0
$75,000+	320	***0.0**	0.0-0.0	347	***1.4**	0.0-3.0	667	***0.6**	0.0-1.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 5.

CHAPTER 24: END OF LIFE CARE

Living Will / Medical Power of Attorney

Definition

Responding "Neither" to the question "A living will and a medical power of attorney are written advance directives that say who you would want to make medical decisions for you if you could not make them for yourself. Have you completed a living will, a medical power of attorney, both, or neither?"

Prevalence

65.6% (95% CI: 64.1-67.2)
Because this is a state added question, no U.S. data are available for comparison.

Gender

Men: 67.1% (95% CI: 64.7-69.5)
Women: 64.3% (95% CI: 62.3-66.2)
There was no gender difference in the prevalence of no living will or medical power of attorney.

Age

The prevalence of no living will or medical power of attorney generally decreased with age. The prevalence of no living will or medical power of attorney was lowest among those aged 65 and older (39.4%) and was significantly lower than all other age groups.

Education

The prevalence of no living will or medical power of attorney was lowest among those with a college degree (56.6%) and was significantly lower than all other educational attainment groups.

Household Income

The prevalence of no living will or medical power of attorney was highest among those with an annual household income of less than $15,000 (75.9%) and was significantly higher than all other annual household income brackets except the $50,000-74,999 bracket (68.1%).

Table 24.1 Do not have a living will or medical power of attorney by demographic characteristics: WVBRFSS, 2011

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,998	**67.1**	64.7-69.5	3,114	**64.3**	62.3-66.2	5,112	**65.6**	64.1-67.2
Age									
18-24	91	**87.6**	79.2-96.0	145	**89.1**	81.8-96.4	236	**88.3**	82.8-93.9
25-34	222	**81.7**	76.5-87.0	295	**81.4**	76.4-86.3	517	**81.6**	78.0-85.2
35-44	271	**70.3**	64.5-76.1	382	**72.7**	67.9-77.6	653	**71.5**	67.7-75.3
45-54	385	**71.2**	66.3-76.1	562	**68.8**	64.6-73.1	947	**70.0**	66.8-73.2
55-64	472	**58.4**	53.4-63.3	707	**58.3**	54.2-62.3	1,179	**58.3**	55.1-61.5
65+	550	**42.9**	38.3-47.6	1,001	**36.8**	33.4-40.2	1,551	**39.4**	36.7-42.2
Education									
Less than H.S.	279	**70.2**	63.7-76.7	451	**68.9**	63.3-74.5	730	**69.6**	65.3-73.8
H.S. or G.E.D.	805	**70.9**	67.4-74.3	1,260	**65.1**	62.1-68.0	2,065	**68.0**	65.7-70.3
Some Post-H.S.	459	**66.1**	61.3-71.0	795	**63.9**	60.1-67.7	1,254	**64.8**	61.9-67.8
College Graduate	452	**55.0**	49.9-60.1	604	**58.1**	53.5-62.7	1,056	**56.6**	53.2-60.0
Income									
Less than $15,000	225	**82.6**	77.3-87.9	431	**70.2**	65.1-75.3	656	**75.9**	72.1-79.6
$15,000- 24,999	341	**67.8**	62.2-73.5	643	**66.4**	62.1-70.7	984	**67.0**	63.6-70.5
$25,000- 34,999	296	**66.5**	60.4-72.5	476	**59.3**	54.3-64.4	772	**62.7**	58.8-66.6
$35,000- 49,999	297	**57.4**	50.3-64.5	387	**61.7**	56.1-67.2	684	**59.5**	55.0-64.0
$50,000- 74,999	264	**66.8**	60.4-73.2	285	**69.6**	63.8-75.5	549	**68.1**	63.7-72.5
$75,000+	314	**61.1**	54.9-67.2	339	**61.5**	55.5-67.4	653	**61.2**	57.0-65.5

Discussions about End of Life Care

Definition

Important to talk about end of life care is defined as responding "Agree" or "Strongly agree" to the statement "It is important to talk with my family and doctor about how I want to be treated at the end of life."
Discussed end of life care with doctor is defined as responding "Yes" to the question "Have you ever discussed with your doctor how you would want to be treated if you were dying?"
Discussed end of life care with family is defined as responding "Yes" to the question "Have you ever discussed with your family how you would want to be treated if you were dying?"

Prevalence

Important to Talk about End of Life Care: **83.5%** (95% CI: 82.1-84.8)
Discussed End of Life Care with Doctor: **15.7%** (95% CI: 14.6-16.8)
Discussed End of Life Care with Family: **64.6%** (95% CI: 62.9-66.3)
Because these are state added questions, no U.S. data are available for comparison.

Gender

Important to Talk about End of Life Care
Men: 77.8% (95% CI: 75.4-80.2)
Women: 88.7% (95% CI: 87.4-90.1)
The prevalence of important to talk about end of life care was significantly higher among women than among men.
Discussed End of Life Care with Doctor
Men: 14.0% (95% CI: 12.4-15.6)
Women: 17.3% (95% CI: 15.8-18.8)
The prevalence of discussed end of life care with doctor was significantly higher among women than among men.
Discussed End of Life Care with Family
Men: 59.5% (95% CI: 56.8-62.2)
Women: 69.5% (95% CI: 67.4-71.5)
The prevalence of discussed end of life care with family was significantly higher among women than among men.

Age

The prevalence of important to talk about end of life care was lowest among those aged 18-24 (74.7%) and was significantly lower than among those aged 45 and older. The prevalence of discussed end of life care with doctor and discussed end of life care with family was highest among those aged 65 and older.

Education

The prevalence of important to talk about end of life care was significantly lower among those with less than a high school education (78.3%) than among those with some college (86.5%) and college graduates (87.9%). The prevalence of discussed end of life care with doctor and discussed end of life care with family was highest among college graduates.

Household Income

The prevalence of important to talk about end of life care varied somewhat by annual household income but was lowest among those earning less than $15,000 per year (78.5%). The prevalence of discussed end of life care with doctor and discussed end of life care with family did not vary consistently across levels of annual household income.

Table 24.2 Discussions about end of life care by demographic characteristics: WVBRFSS, 2011

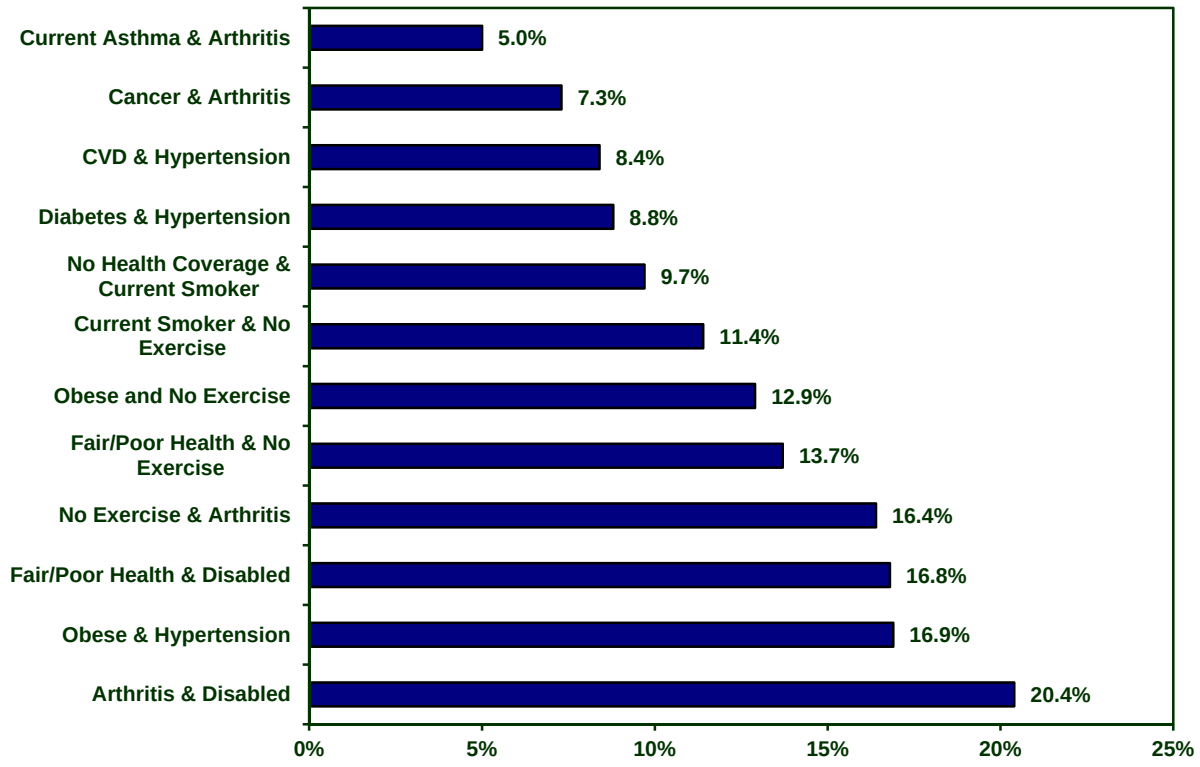
Characteristic	Important to Talk about End of Life Care			Discussed End of Life Care with Doctor			Discussed End of Life Care with Family		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	5,084	**83.5**	82.1-84.8	5,142	**15.7**	14.6-16.8	5,159	**64.6**	62.9-66.3
Sex									
Males	1,987	**77.8**	75.4-80.2	2,016	**14.0**	12.4-15.6	2,021	**59.5**	56.8-62.2
Females	3,097	**88.7**	87.4-90.1	3,126	**17.3**	15.8-18.8	3,138	**69.5**	67.4-71.5
Age									
18-24	236	**74.7**	68.0-81.4	238	**5.3**	2.3-8.3	238	**38.7**	31.3-46.1
25-34	514	**81.2**	77.3-85.1	520	**8.0**	5.6-10.3	519	**55.9**	51.0-60.7
35-44	651	**83.8**	80.5-87.2	658	**14.8**	11.8-17.7	660	**62.4**	58.1-66.7
45-54	939	**86.4**	83.9-89.0	950	**15.3**	12.8-17.7	950	**70.5**	67.2-73.8
55-64	1,183	**86.3**	84.0-88.7	1,185	**18.1**	15.7-20.5	1,190	**72.8**	69.8-75.8
65+	1,529	**84.6**	82.5-86.7	1,558	**26.1**	23.6-28.6	1,569	**74.9**	72.4-77.4
Education									
Less than H.S.	704	**78.3**	74.2-82.3	734	**14.0**	11.1-16.9	736	**56.2**	51.6-60.8
H.S. or G.E.D.	2,054	**82.0**	79.7-84.2	2,073	**14.9**	13.3-16.6	2,082	**62.0**	59.2-64.8
Some Post-H.S.	1,257	**86.5**	84.1-88.9	1,262	**16.3**	14.0-18.5	1,263	**68.4**	65.3-71.6
College Graduate	1,060	**87.9**	85.4-90.4	1,064	**18.7**	16.2-21.3	1,069	**74.6**	71.4-77.9
Income									
Less than $15,000	638	**78.5**	74.3-82.8	659	**15.1**	12.0-18.2	666	**53.0**	48.1-57.9
$15,000- 24,999	977	**81.1**	77.8-84.4	986	**16.4**	13.8-19.0	989	**62.6**	58.8-66.5
$25,000- 34,999	767	**86.0**	82.6-89.3	776	**22.2**	18.9-25.6	775	**69.1**	64.9-73.4
$35,000- 49,999	689	**85.5**	81.6-89.3	687	**15.6**	12.5-18.7	690	**71.5**	67.1-75.9
$50,000- 74,999	548	**89.3**	86.3-92.3	547	**13.7**	10.8-16.7	550	**69.5**	64.6-74.4
$75,000+	658	**85.2**	81.8-88.5	662	**13.9**	11.1-16.6	661	**69.1**	64.4-73.9

CHAPTER 25: COMORBIDITIES

Comorbid Health Conditions and Risk Factors

Many behavior risk factors and health conditions are interrelated. For example, physical activity and nutrition are related to obesity, which is related to cardiovascular diseases. Comorbidity is the presence of more than one health condition or risk factor in an individual at the same time. Identifying common comorbid factors is important to understanding how to prevent and reduce serious health conditions and chronic diseases. The purpose of this chapter is to introduce some of the common comorbidities among West Virginia adults in 2011 (see Figure 25.1 and Table 25.1). For definitions of risk factors and health conditions please refer to appropriate chapter in this report.

Figure 25.1 Common comorbid conditions: WVBRFSS, 2011



Percentage of Adults with Both Conditions/Risk Factors

Table 25.1 Comorbidities: The prevalence of multiple risk behaviors and/or health conditions among adults: WVBRFSS, 2011

% of Total Population	Fair/Poor Health	No Health Coverage	No Exercise	Obese	Current Smoker	CVD	Hyper-tension	Diabetes	Current Asthma	Disabled	Cancer	Arthritis
Fair/Poor Health	**25.1** (23.7-26.5)	**5.4** (4.5-6.2)	**13.7** (12.7-14.8)	**11.2** (10.2-12.3)	**9.4** (8.4-10.4)	**7.7** (6.9-8.5)	**14.8** (13.7-15.9)	**6.6** (5.9-7.4)	**4.5** (3.8-5.1)	**16.8** (15.7-18.0)	**5.2** (4.6-5.8)	**16.4** (15.2-17.5)
No Health Coverage	**5.4** (4.5-6.2)	**20.2** (18.7-21.7)	**7.1** (6.2-8.0)	**6.6** (5.6-7.5)	**9.7** (8.5-10.9)	**1.5** (1.1-1.9)	**5.3** (4.5-6.0)	**1.7** (1.3-2.1)	**2.2** (1.6-2.8)	**5.8** (5.0-6.7)	**1.5** (1.1-1.8)	**5.6** (4.8-6.5)
No Exercise	**13.7** (12.7-14.8)	**7.1** (6.2-8.0)	**35.1** (33.5-36.7)	**12.9** (11.8-13.9)	**11.4** (10.3-12.6)	**6.3** (5.6-7.0)	**16.8** (15.6-17.9)	**6.2** (5.5-6.9)	**3.8** (3.2-4.4)	**15.3** (14.1-16.4)	**5.4** (4.7-6.0)	**16.4** (15.3-17.5)
Obese	**11.2** (10.2-12.3)	**6.6** (5.6-7.5)	**12.9** (11.8-13.9)	**32.4** (30.8-34.0)	**7.9** (7.0-8.9)	**4.7** (4.1-5.4)	**16.9** (15.7-18.1)	**7.0** (6.2-7.8)	**4.1** (3.4-4.8)	**13.5** (12.4-14.6)	**4.2** (3.6-4.8)	**14.9** (13.8-16.1)
Current Smoker	**9.4** (8.4-10.4)	**9.7** (8.5-10.9)	**11.4** (10.3-12.6)	**7.9** (7.0-8.9)	**28.6** (27.0-30.2)	**3.3** (2.7-3.9)	**8.9** (7.9-9.8)	**2.3** (1.8-2.8)	**3.5** (2.8-4.2)	**10.5** (9.5-11.5)	**2.8** (2.2-3.3)	**10.0** (9.0-11.0)
CVD	**7.7** (6.9-8.5)	**1.5** (1.1-1.9)	**6.3** (5.6-7.0)	**4.7** (4.1-5.4)	**3.3** (2.7-3.9)	**12.3** (11.3-13.2)	**8.4** (7.6-9.2)	**3.8** (3.2-4.3)	**1.8** (1.5-2.2)	**7.8** (7.0-8.6)	**3.2** (2.7-3.8)	**8.1** (7.3-8.9)
Hypertension	**14.8** (13.7-15.9)	**5.3** (4.5-6.0)	**16.8** (15.6-17.9)	**16.9** (15.7-18.1)	**8.9** (7.9-9.8)	**8.4** (7.6-9.2)	**37.0** (35.4-38.5)	**8.8** (8.0-9.7)	**4.6** (3.9-5.2)	**16.6** (15.5-17.7)	**6.7** (6.0-7.4)	**20.1** (18.9-21.3)
Diabetes	**6.6** (5.9-7.4)	**1.7** (1.3-2.1)	**6.2** (5.5-6.9)	**7.0** (6.2-7.8)	**2.3** (1.8-2.8)	**3.8** (3.2-4.3)	**8.8** (8.0-9.7)	**12.0** (11.1-13.0)	**1.8** (1.4-2.2)	**6.6** (5.9-7.3)	**2.5** (2.1-3.0)	**7.1** (6.4-7.8)
Current Asthma	**4.5** (3.8-5.1)	**2.2** (1.6-2.8)	**3.8** (3.2-4.4)	**4.1** (3.4-4.8)	**3.5** (2.8-4.2)	**1.8** (1.5-2.2)	**4.6** (3.9-5.2)	**1.8** (1.4-2.2)	**9.2** (8.1-10.2)	**4.7** (4.1-5.4)	**1.6** (1.2-1.9)	**5.0** (4.3-5.7)
Disabled	**16.8** (15.7-18.0)	**5.8** (5.0-6.7)	**15.3** (14.1-16.4)	**13.5** (12.4-14.6)	**10.5** (9.5-11.5)	**7.8** (7.0-8.6)	**16.6** (15.5-17.7)	**6.6** (5.9-7.3)	**4.7** (4.1-5.4)	**31.4** (29.9-32.9)	**6.2** (5.5-6.9)	**20.4** (19.1-21.6)
Cancer	**5.2** (4.6-5.8)	**1.5** (1.1-1.8)	**5.4** (4.7-6.0)	**4.2** (3.6-4.8)	**2.8** (2.2-3.3)	**3.2** (2.7-3.8)	**6.7** (6.0-7.4)	**2.5** (2.1-3.0)	**1.6** (1.2-1.9)	**6.2** (5.5-6.9)	**12.7** (11.7-13.7)	**7.3** (6.5-8.0)
Arthritis	**16.4** (15.2-17.5)	**5.6** (4.8-6.5)	**16.4** (15.3-17.5)	**14.9** (13.8-16.1)	**10.0** (9.0-11.0)	**8.1** (7.3-8.9)	**20.1** (18.9-21.3)	**7.1** (6.4-7.8)	**5.0** (4.3-5.7)	**20.4** (19.1-21.6)	**7.3** (6.5-8.0)	**35.9** (34.4-37.5)

*Table interpretation: Each cell represents the percentage of WV adults with **both** of the conditions/risk factors.*
*For example, 3.8% of WV adults have **both** cardiovascular disease and diabetes.*

Appendix A

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories [a]
United States, 2011

State	Fair or Poor Health		Depression		Physical Inactivity		Obesity		Current Smoking		Cardiovascular Disease		Hypertension		Diabetes		Arthritis		Cancer	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Alabama	23.2	5	21.2	9	32.6	6	32.0	4	24.3	10	11.1	4	40.0	1	11.8	6	30.2	4	14.1	2
Alaska	15.5	33	16.5	33	22.0	42	27.4	28	22.9	16	6.0	51	29.4	39	7.9	48	21.3	46	8.6	49
Arizona	17.9	21	17.5	26	24.2	36	24.7	41	19.2	38	8.5	25	28.1	48	9.5	26	23.5	34	11.9	15
Arkansas	24.9	3	22.8	4	30.9	8	30.9	7	27.0	3	11.1	3	35.8	9	11.2	7	28.7	9	11.0	29
California	18.7	18	12.3	50	19.1	50	23.8	47	13.7	51	6.6	47	27.8	49	8.9	35	21.5	45	10.5	40
Colorado	13.8	46	17.6	25	16.5	52	20.7	52	18.3	42	5.4	52	25.0	51	6.7	51	21.8	44	11.1	28
Connecticut	14.9	38	15.4	41	25.5	29	24.5	44	17.1	47	7.1	46	29.7	37	9.3	32	22.5	42	10.7	37
Delaware	14.6	40	14.2	47	27.0	15	28.8	19	21.7	24	8.6	22	34.8	11	9.7	24	26.3	19	12.7	5
D.C.	13.7	47	16.1	37	19.8	48	23.7	48	20.8	30	7.2	45	30.0	34	9.1	34	20.9	47	6.9	51
Florida	20.6	9	16.5	34	26.9	18	26.6	32	19.3	36	10.6	6	34.2	13	10.4	13	26.9	14	14.5	1
Georgia	18.9	16	14.9	45	26.7	20	28.0	24	21.2	26	8.7	21	32.4	19	10.2	19	23.3	37	140.7	35
Hawaii	15.0	36	10.6	52	21.3	46	21.8	51	16.8	48	6.4	49	28.7	44	8.4	40	18.2	52	8.5	50
Idaho	15.4	34	19.6	18	21.4	45	27.0	30	17.2	46	7.8	33	29.4	38	9.4	31	23.1	40	11.2	25
Illinois	17.4	24	16.3	36	25.1	32	27.1	29	20.9	27	7.6	35	31.0	26	9.7	23	24.3	28	9.8	46
Indiana	18.9	17	20.8	10	29.2	10	30.8	8	25.6	7	9.6	12	32.8	16	10.2	17	27.5	13	10.6	38
Iowa	13.0	50	15.2	43	25.9	28	29.0	18	20.4	31	7.5	37	29.9	36	8.2	45	24.4	27	10.8	32
Kansas	15.0	37	15.9	39	26.8	19	29.6	14	22.0	21	8.5	24	30.8	28	9.5	28	23.1	39	11.8	17
Kentucky	22.4	7	19.7	17	29.3	9	30.4	11	29.0	1	11.2	2	38.0	5	10.8	11	31.9	2	12.6	7
Louisiana	23.0	6	18.1	23	33.8	5	33.4	2	25.7	6	10.1	8	38.4	4	11.8	5	25.3	23	10.6	39
Maine	15.9	32	24.4	1	23.0	39	27.8	25	22.8	18	9.5	15	32.2	20	9.6	25	29.7	5	12.1	10
Maryland	14.2	44	13.6	49	26.2	27	28.3	22	19.1	40	7.7	34	31.3	23	9.5	29	23.3	38	10.0	45
Massachusetts	14.0	45	16.7	31	23.5	38	22.7	50	18.2	43	7.3	43	29.2	41	8.0	46	23.6	33	10.9	30
Michigan	17.2	26	20.6	11	23.6	37	31.3	5	23.3	11	9.5	14	34.2	14	10.0	21	31.0	3	11.8	16
Minnesota	12.0	52	15.1	44	21.9	44	25.7	37	19.1	41	6.5	48	26.3	50	7.3	50	20.5	48	10.0	44
Mississippi	24.0	4	18.9	22	36.0	2	34.9	1	26.0	5	10.6	5	39.3	2	12.3	2	29.1	7	10.9	31
Missouri	18.2	19	20.1	15	28.4	11	30.3	12	25.0	9	9.9	10	34.3	12	10.2	16	28.8	8	12.6	6
Montana	17.2	25	20.5	12	24.4	34	24.6	42	22.1	20	8.7	20	30.2	32	8.0	47	26.4	18	13.5	3
Nebraska	14.3	43	16.8	29	26.3	23	28.4	21	20.0	33	8.0	28	28.5	46	8.4	41	23.4	36	11.2	26
Nevada	20.2	10	15.8	40	24.3	35	24.5	45	22.9	17	8.6	23	30.8	27	10.3	15	22.9	41	11.3	21
New Hampshire	13.7	48	21.5	8	22.5	41	26.2	36	19.4	35	7.5	40	30.7	29	8.7	38	25.8	21	12.3	9
New Jersey	16.2	30	11.1	51	26.4	22	23.7	49	16.8	49	8.0	27	30.6	31	8.8	37	22.3	43	9.5	47
New Mexico	19.9	12	20.4	13	25.3	31	26.3	35	21.5	25	7.8	32	28.4	47	9.9	22	24.2	29	10.7	36
New York	16.9	27	15.9	38	26.3	24	24.5	43	18.1	44	7.2	44	30.7	30	10.4	12	24.4	26	10.2	43
North Carolina	19.6	13	17.5	27	26.7	21	29.1	17	21.8	23	9.2	19	32.4	18	10.9	10	25.2	25	12.1	11
North Dakota	14.7	39	17.3	28	27.1	14	27.8	26	21.9	22	7.6	36	29.1	42	8.2	43	24.1	31	9.0	48
Ohio	18.0	20	17.7	24	27.0	16	29.6	13	25.1	8	9.6	13	32.7	17	10.0	20	29.2	6	10.8	34
Oklahoma	20.2	11	21.9	7	31.2	7	31.1	6	26.1	4	9.7	11	35.5	10	11.1	9	27.7	12	11.3	22
Oregon	17.6	22	23.9	2	19.8	49	26.7	31	19.7	34	7.3	42	29.9	35	9.3	33	26.5	17	12.6	8
Pennsylvania	16.8	29	19.3	19	26.2	25	28.6	20	22.4	19	9.3	18	31.3	21	9.5	30	28.4	10	11.3	23
Puerto Rico	34.5	1	16.8	30	47.3	1	26.3	34	14.8	50	10.5	7	36.8	7	13.5	1	19.7	51	4.0	52
Rhode Island	17.4	23	22.0	6	26.2	26	25.4	39	20.0	32	7.9	30	32.9	15	8.4	39	26.6	16	12.0	12
South Carolina	19.1	14	15.3	42	27.2	12	30.8	9	23.1	12	9.5	16	36.4	8	12.1	3	27.9	11	11.9	13
South Dakota	14.6	41	16.4	35	27.0	17	28.1	23	23.0	14	9.3	17	31.0	25	9.5	27	23.5	35	11.9	14
Tennessee	21.0	8	19.2	20	35.1	3	29.2	15	23.0	15	10.0	9	38.7	3	11.2	8	25.9	20	11.4	19
Texas	19.0	15	16.6	32	27.2	13	30.4	10	19.2	37	7.5	39	31.3	22	10.2	18	20.2	49	10.4	41
Utah	13.4	49	22.0	5	18.9	51	24.4	46	11.8	52	6.1	50	22.9	52	6.7	52	19.8	50	10.4	42
Vermont	12.9	51	23.0	3	21.0	47	25.4	38	19.1	39	7.9	29	29.3	40	7.7	49	26.6	15	11.6	18
Virginia	16.8	28	14.1	48	25.0	33	29.2	16	20.9	28	8.2	26	31.2	24	10.4	14	25.7	22	11.2	27
Washington	16.1	31	19.7	16	22.0	43	26.5	33	17.5	45	7.3	41	30.0	33	8.9	36	23.7	32	11.3	24
West Virginia	25.1	2	20.1	14	35.1	4	32.4	3	28.6	2	12.3	1	37.0	6	12.0	4	35.9	1	12.7	4
Wisconsin	14.6	42	14.8	46	22.7	40	27.7	27	20.9	29	7.5	38	28.9	43	8.4	42	25.3	24	10.8	33
Wyoming	15.4	35	19.0	21	25.5	30	25.0	40	23.0	13	7.8	31	28.6	45	8.2	44	24.2	30	11.4	20
United States	**18.2**		**16.8**		**25.7**		**27.4**		**20.1**		**8.4**		**31.6**		**9.8**		**24.8**		**11.1**	

Source: Centers for Disease Control & Prevention, 2011 Behavioral Risk Factor Surveillance System data; West Virginia Health Statistics Center, 2012

a. 52 states/territories conducted the survey.

Appendix B
2007-2011 WV Behavioral Risk Factors and Health Conditions by County

County	Fair or Poor Health			No Health Insurance Ages 18-64			No Leisure Exercise			Obesity			Cigarette Smoking			Binge Drinking		
	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.
Barbour	28.7	14	ns	31.6	4	ns	37.1	10	ns	35.0	18	ns	26.0	32	ns	*5.8	45	ns
Berkeley	16.9	51	L	19.0	43	ns	27.3	48	L	32.2	32	ns	27.3	23	ns	11.3	11	ns
Boone	31.9	9	H	19.0	42	ns	40.9	5	H	35.2	17	ns	31.2	10	ns	7.1	40	ns
Braxton	29.7	11	ns	30.5	9	ns	33.4	25	ns	31.6	36	ns	26.9	24	ns	*3.9	54	L
Brooke	23.0	35	ns	21.1	37	ns	36.6	11	ns	33.9	22	ns	26.8	25	ns	12.4	5	ns
Cabell	24.3	27	ns	17.4	46	ns	30.4	38	ns	31.9	33	ns	26.7	27	ns	9.3	23	ns
Calhoun	28.5	15	ns	*33.2	2	ns	*33.1	26	ns	*38.5	6	ns	*41.0	1	H	*11.2	12	ns
Clay	*38.4	3	H	*27.8	12	ns	*38.7	7	ns	*45.3	2	H	23.1	42	ns	*3.9	53	L
Doddridge	17.5	50	ns	*26.7	13	ns	32.8	29	ns	27.3	48	ns	26.2	31	ns	*7.2	37	ns
Fayette	24.5	25	ns	25.8	16	ns	34.4	18	ns	33.4	25	ns	29.9	12	ns	9.8	20	ns
Gilmer	22.2	37	ns	*50.4	1	H	*29.2	41	ns	*40.8	4	ns	*34.6	4	ns	*14.9	3	ns
Grant	30.0	10	ns	25.6	19	ns	29.2	42	ns	34.2	21	ns	18.2	53	L	*4.9	49	ns
Greenbrier	24.9	23	ns	29.0	10	ns	30.6	37	ns	26.1	52	L	26.6	29	ns	8.9	25	ns
Hampshire	23.5	31	ns	17.0	49	ns	33.4	24	ns	34.5	20	ns	31.4	9	ns	10.6	15	ns
Hancock	20.7	41	ns	12.2	54	L	30.7	36	ns	31.7	35	ns	23.6	41	ns	10.6	14	ns
Hardy	17.9	47	ns	14.7	53	ns	28.6	44	ns	33.3	27	ns	22.5	45	ns	7.6	30	ns
Harrison	20.0	42	ns	18.4	44	ns	30.2	39	ns	31.5	37	ns	22.4	46	L	7.6	31	ns
Jackson	23.4	33	ns	17.1	48	ns	34.2	19	ns	34.9	19	ns	24.0	38	ns	10.4	17	ns
Jefferson	15.9	53	L	9.8	55	L	27.3	47	ns	30.7	40	ns	22.6	44	ns	13.1	4	ns
Kanawha	23.5	32	ns	18.2	45	L	29.8	40	ns	31.0	39	ns	25.3	34	ns	10.1	19	ns
Lewis	27.3	18	ns	24.3	26	ns	28.6	45	ns	33.3	26	ns	24.5	36	ns	*4.2	51	L
Lincoln	35.1	5	H	25.3	21	ns	35.8	13	ns	40.7	5	H	26.6	28	ns	8.0	28	ns
Logan	34.4	7	H	25.0	22	ns	43.9	4	H	37.6	8	H	35.4	3	H	8.1	27	ns
Marion	20.8	40	ns	22.8	29	ns	31.1	32	ns	29.9	42	ns	21.0	49	L	9.2	24	ns
Marshall	19.6	43	ns	22.3	31	ns	31.4	31	ns	29.0	46	ns	24.1	37	ns	11.6	7	ns
Mason	27.1	19	ns	24.5	25	ns	37.3	8	ns	37.6	9	ns	33.1	6	ns	7.3	35	ns
McDowell	39.0	1	H	30.8	5	H	47.6	1	H	37.9	7	ns	36.7	2	H	10.6	13	ns
Mercer	26.8	21	ns	19.2	41	ns	33.6	22	ns	32.2	31	ns	28.9	16	ns	6.2	44	L
Mineral	17.8	48	L	14.8	52	ns	26.8	51	ns	32.3	30	ns	15.3	55	L	7.6	32	ns
Mingo	38.9	2	H	21.7	34	ns	44.4	3	H	33.1	29	ns	33.1	7	ns	7.2	38	ns
Monongalia	12.4	55	L	17.3	47	ns	19.5	55	L	23.0	54	L	19.1	52	L	19.5	1	H
Monroe	23.5	30	ns	19.5	40	ns	31.9	30	ns	27.0	49	ns	20.1	50	ns	*4.8	50	L
Morgan	24.8	24	ns	26.0	15	ns	28.7	43	ns	33.2	28	ns	26.8	26	ns	11.6	8	ns
Nicholas	26.9	20	ns	28.7	11	ns	33.0	27	ns	33.8	23	ns	30.3	11	ns	6.6	42	ns
Ohio	15.6	54	L	*25.4	20	ns	26.4	52	ns	23.8	53	L	28.9	17	ns	11.4	10	ns
Pendleton	19.3	45	ns	*22.0	33	ns	31.0	34	ns	*35.5	15	ns	17.4	54	L	*7.2	39	ns
Pleasants	18.8	46	ns	*24.5	24	ns	*28.4	46	ns	*26.2	51	ns	*27.7	21	ns	*5.0	46	ns
Pocahontas	24.4	26	ns	*30.6	7	ns	24.1	53	ns	22.6	55	L	*29.3	15	ns	*17.7	2	ns
Preston	25.1	22	ns	26.3	14	ns	34.4	16	ns	31.9	34	ns	27.9	20	ns	7.8	29	ns
Putnam	19.5	44	L	15.2	51	L	27.2	49	L	27.8	47	ns	19.8	51	L	6.3	43	L
Raleigh	27.8	17	H	20.5	38	ns	33.5	23	ns	31.2	38	ns	23.9	39	ns	6.8	41	ns
Randolph	24.0	29	ns	25.8	17	ns	32.9	28	ns	29.8	43	ns	25.8	33	ns	9.7	21	ns
Ritchie	22.1	38	ns	*32.5	3	ns	34.4	17	ns	33.4	24	ns	29.3	14	ns	*7.5	34	ns
Roane	29.2	12	ns	25.7	18	ns	33.9	20	ns	41.1	3	H	29.8	13	ns	8.8	26	ns
Summers	28.7	13	ns	*16.1	50	ns	33.9	21	ns	37.4	10	ns	22.0	47	ns	*7.3	36	ns
Taylor	28.1	16	ns	20.0	39	ns	38.7	6	ns	26.5	50	ns	26.5	30	ns	9.3	22	ns
Tucker	24.1	28	ns	*22.0	32	ns	*37.2	9	ns	29.1	45	ns	21.4	48	ns	*7.5	33	ns
Tyler	17.8	49	ns	*30.6	6	ns	26.9	50	ns	*36.5	13	ns	23.8	40	ns	11.9	6	ns
Upshur	21.3	39	ns	22.5	30	ns	31.0	35	ns	29.1	44	ns	22.8	43	ns	*4.9	47	ns
Wayne	33.2	8	H	24.2	27	ns	34.7	15	ns	35.4	16	ns	33.7	5	H	10.4	16	ns
Webster	34.7	6	H	*30.6	8	ns	*36.5	12	ns	*36.3	14	ns	*28.8	18	ns	*4.1	52	L
Wetzel	23.2	34	ns	*21.5	35	ns	35.6	14	ns	37.3	11	ns	24.7	35	ns	*3.3	55	L
Wirt	16.6	52	ns	*24.7	23	ns	22.4	54	ns	*47.6	1	H	*27.6	22	ns	*11.5	9	ns
Wood	22.5	36	ns	21.4	36	ns	31.0	33	ns	30.4	41	ns	28.8	19	ns	10.4	18	ns
Wyoming	37.6	4	H	23.0	28	ns	47.4	2	H	36.8	12	ns	33.0	8	ns	*4.9	48	L
WV / US[a] / Sig.	**23.6**	**16.1**	**H**	**21.7**	**18.2**	**H**	**32.1**	**24.6**	**H**	**31.8**	**27.4**	**H**	**26.9**	**18.0**	**H**	**9.4**	**15.1**	**L**

Source:West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, 2012.

Sig. - Indicates whether county prevalence estimate is significantly different than WV prevalance. H = signficantly higher, ns = not significantly different, L = signficantly lower.

* Unreliable prevalence estimate - use caution when reporting and interpreting.

a. US prevalence for all indicators is 2009.

Appendix B, continued
2007-2011 WV Behavioral Risk Factors and Health Conditions by County

County	Diabetes			Hypertension[b]			High Cholesterol[b]			Cardiovascular Disease			Current Asthma			Disability			Arthritis[b]		
	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.	%	Rank	Sig.
Barbour	9.5	47	ns	45.1	4	H	52.9	1	H	15.1	13	ns	*7.8	39	ns	28.0	28	ns	35.2	37	ns
Berkeley	9.2	49	L	28.1	52	L	37.2	41	ns	10.2	46	L	7.6	40	ns	22.3	45	L	28.0	53	L
Boone	15.2	8	ns	41.5	10	H	43.7	23	ns	16.4	7	ns	11.8	9	ns	36.8	9	H	45.2	4	H
Braxton	14.7	11	ns	31.3	46	ns	39.4	36	ns	15.4	12	ns	6.5	46	ns	34.5	11	ns	38.9	19	ns
Brooke	17.3	7	ns	32.5	41	ns	35.1	50	ns	15.8	9	ns	7.9	37	ns	25.6	39	ns	37.9	23	ns
Cabell	13.7	17	ns	33.1	39	ns	43.1	26	ns	13.1	27	ns	8.5	34	ns	30.5	21	ns	32.1	48	ns
Calhoun	10.2	38	ns	*33.9	36	ns	*44.8	17	ns	*12.4	33	ns	*11.5	10	ns	*30.1	22	ns	*34.9	39	ns
Clay	17.4	6	ns	42.1	8	ns	*50.1	4	ns	20.7	1	H	18.6	1	H	*40.7	2	H	*43.7	8	ns
Doddridge	10.2	40	ns	26.9	54	ns	*35.7	49	ns	*6.4	55	L	*4.1	54	L	20.9	49	ns	*36.6	30	ns
Fayette	11.3	33	ns	37.2	23	ns	39.2	38	ns	12.7	30	ns	10.0	19	ns	30.8	19	ns	40.4	13	ns
Gilmer	*6.6	55	L	*29.1	50	ns	*48.1	7	ns	11.2	42	ns	13.3	5	ns	*37.4	7	ns	*27.0	54	ns
Grant	17.5	5	ns	37.4	22	ns	*45.8	14	ns	14.0	18	ns	13.2	6	ns	28.7	24	ns	46.3	2	H
Greenbrier	11.9	30	ns	37.8	20	ns	40.7	34	ns	13.8	19	ns	9.2	28	ns	27.6	32	ns	38.1	21	ns
Hampshire	7.4	53	L	32.3	43	ns	36.7	43	ns	10.4	45	ns	9.5	24	ns	27.3	34	ns	37.3	27	ns
Hancock	13.8	16	ns	32.5	42	ns	36.1	46	ns	12.5	32	ns	8.2	35	ns	28.3	26	ns	37.1	29	ns
Hardy	10.9	34	ns	34.6	33	ns	36.6	44	ns	9.0	50	ns	*3.9	55	L	20.8	50	L	36.5	31	ns
Harrison	12.2	26	ns	33.1	40	ns	38.0	40	ns	12.6	31	ns	8.6	33	ns	27.6	31	ns	33.6	45	ns
Jackson	11.7	31	ns	39.9	14	ns	45.4	15	ns	13.2	23	ns	8.2	36	ns	27.8	29	ns	36.3	33	ns
Jefferson	9.4	48	ns	28.8	51	L	33.6	52	L	8.7	52	L	9.7	22	ns	20.6	51	L	29.6	52	ns
Kanawha	12.0	29	ns	35.5	31	ns	40.8	33	ns	13.1	25	ns	7.3	42	ns	26.2	37	ns	34.3	42	ns
Lewis	14.7	12	ns	36.1	28	ns	46.4	13	ns	17.5	4	ns	6.3	48	ns	25.0	41	ns	33.4	46	ns
Lincoln	14.8	9	ns	39.9	15	ns	47.5	9	ns	13.1	26	ns	9.4	25	ns	36.9	8	H	39.4	16	ns
Logan	17.9	4	H	43.7	6	H	44.5	19	ns	19.1	3	H	10.2	16	ns	39.7	5	H	44.7	5	H
Marion	10.5	35	ns	33.4	38	ns	34.8	51	ns	12.8	29	ns	10.8	15	ns	27.8	30	ns	30.3	51	L
Marshall	9.8	44	ns	32.0	44	ns	46.6	11	ns	11.9	38	ns	9.1	30	ns	20.5	52	L	42.1	10	H
Mason	12.7	22	ns	38.5	18	ns	39.3	37	ns	13.7	20	ns	14.2	3	H	33.7	14	ns	39.4	15	ns
McDowell	18.8	2	H	45.2	3	H	50.3	3	H	16.1	8	ns	14.1	4	ns	38.7	6	H	46.6	1	H
Mercer	13.5	18	ns	38.8	17	ns	41.9	30	ns	13.4	22	ns	10.1	18	ns	31.1	17	ns	41.2	12	H
Mineral	8.3	52	ns	34.1	35	ns	43.0	27	ns	11.0	43	ns	11.3	11	ns	29.9	23	ns	37.5	26	ns
Mingo	13.1	21	ns	45.9	2	H	47.6	8	H	15.7	10	ns	9.3	26	ns	34.9	10	H	44.0	7	H
Monongalia	7.0	54	L	23.9	55	L	29.4	55	L	6.6	54	L	6.1	49	ns	21.3	48	L	20.6	55	L
Monroe	12.0	28	ns	36.6	26	ns	46.5	12	ns	20.3	2	H	7.2	43	ns	28.5	25	ns	37.9	25	ns
Morgan	10.5	36	ns	36.8	24	ns	43.2	25	ns	14.5	17	ns	10.1	17	ns	32.5	15	ns	34.3	41	ns
Nicholas	9.9	42	ns	36.0	29	ns	37.0	42	ns	12.9	28	ns	6.8	44	ns	34.1	12	ns	41.6	11	ns
Ohio	10.3	37	ns	29.6	48	ns	39.0	39	ns	12.3	34	ns	11.0	12	ns	25.4	40	ns	34.5	40	ns
Pendleton	*8.6	51	ns	*29.2	49	ns	*44.9	16	ns	*9.1	49	ns	*10.9	14	ns	20.1	53	ns	*31.7	49	ns
Pleasants	*9.9	43	ns	27.2	53	ns	*32.6	53	ns	8.9	51	ns	*5.8	51	ns	22.1	46	ns	*35.6	36	ns
Pocahontas	9.6	46	ns	34.2	34	ns	*41.5	31	ns	11.8	39	ns	*4.5	53	L	24.5	43	ns	36.3	34	ns
Preston	10.2	39	ns	31.1	47	ns	35.8	48	ns	9.5	48	ns	6.3	47	ns	27.0	35	ns	33.8	43	ns
Putnam	11.5	32	ns	36.2	27	ns	42.0	29	ns	10.7	44	ns	6.8	45	ns	26.1	38	ns	32.5	47	ns
Raleigh	12.1	27	ns	36.6	25	ns	43.5	24	ns	14.7	16	ns	9.2	29	ns	33.7	13	H	39.0	18	ns
Randolph	10.0	41	ns	37.5	21	ns	35.9	47	ns	11.9	37	ns	9.3	27	ns	31.1	18	ns	37.3	28	ns
Ritchie	12.2	25	ns	42.1	7	ns	*42.8	28	ns	11.4	40	ns	*8.9	32	ns	27.5	33	ns	36.5	32	ns
Roane	14.7	10	ns	40.2	12	ns	44.0	22	ns	13.5	21	ns	13.1	7	ns	28.2	27	ns	34.9	38	ns
Summers	13.4	19	ns	40.8	11	ns	50.0	5	ns	14.8	15	ns	9.6	23	ns	30.7	20	ns	39.2	17	ns
Taylor	8.8	50	ns	33.6	37	ns	36.1	45	ns	12.1	35	ns	9.8	21	ns	26.4	36	ns	36.2	35	ns
Tucker	*14.1	15	ns	*45.9	1	ns	*30.9	54	ns	12.0	36	ns	*12.3	8	ns	22.1	47	ns	*38.5	20	ns
Tyler	9.7	45	ns	*34.9	32	ns	*41.3	32	ns	*8.5	53	ns	*7.4	41	ns	23.2	44	ns	*38.0	22	ns
Upshur	12.4	24	ns	31.3	45	ns	44.3	20	ns	10.1	47	ns	8.9	31	ns	19.9	54	L	31.2	50	ns
Wayne	12.5	23	ns	40.1	13	ns	44.6	18	ns	17.0	5	H	10.9	13	ns	40.3	4	H	44.5	6	H
Webster	14.3	13	ns	*44.5	5	ns	*50.7	2	ns	16.9	6	ns	16.4	2	ns	*40.3	3	H	*40.0	14	ns
Wetzel	14.3	14	ns	37.9	19	ns	44.2	21	ns	15.5	11	ns	*5.5	52	ns	25.0	42	ns	33.7	44	ns
Wirt	20.1	1	ns	*39.0	16	ns	*49.1	6	ns	11.3	41	ns	*9.8	20	ns	17.5	55	L	*42.1	9	ns
Wood	13.3	20	ns	35.9	30	ns	39.7	35	ns	13.2	24	ns	7.8	38	ns	31.5	16	ns	37.9	24	ns
Wyoming	18.4	3	H	42.1	9	ns	47.5	10	ns	15.0	14	ns	6.1	50	ns	42.4	1	H	46.3	3	H
WV / US[a] / Sig.	**11.8**	**9.1**	**H**	**34.6**	**27.7**	**H**	**39.9**	**37.3**	**H**	**12.6**	**7.7**	**H**	**8.8**	**8.4**	**ns**	**28.4**	**18.9**	**H**	**35.2**	**25.9**	**H**

Source:West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, 2012.

Sig. - Indicates whether county prevalence estimate is significantly different than WV prevalance. H = signficantly higher, ns = not significantly different, L = signficantly lower.

* Unreliable prevalence estimate - use caution when reporting and interpreting.

a. US prevalence for Hypertension and High Cholesterol is 2007. US prevalence for all others is 2009.

b. Data only available for limited years: Hypertension, High Cholesterol (2003, 2005, 2007, 2009, 2011); Arthritis (2005, 2007, 2009-2011).