West Virginia Behavioral Risk Factor Survey Report

2009-2010

WEST VIRGINIA Department of Health & Human Resources

Bureau for Public Health
Health Statistics Center
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Earl Ray Tomblin, Governor
Rocco S. Fucillo, Cabinet Secretary

2009 - 2010

WEST VIRGINIA

BEHAVIORAL RISK FACTOR

SURVEY REPORT

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EXECUTIVE SUMMARY

INTRODUCTION

Each year since 1984, the West Virginia Behavioral Risk Factor Survey has measured a range of risk factors that can affect our health. This report presents state survey results for the years 2009 and 2010 as well as county data combined for the latest available five years (typically 2006 through 2010).

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 2009 and 3rd highest in 2010 in reporting the general health of adults as either "fair" or "poor."
- Over one-fifth of West Virginia adults (23.7% in 2009 and 23.4% in 2010) consider their health to be either "fair" or "poor."
- "Fair" or "poor" health is most common among groups of adults who are the oldest, least educated, and lowest in household income.

Health Care Access

- About one-fifth of West Virginia adults age 18 to 64 have no health care coverage (21.6% in 2009 and 21.4% in 2010).
- Among adults of all ages, slightly less than one-fifth needed medical care within the past 12 months and could not afford it (18.0% in 2009 and 17.7% in 2010).
- More than one-fifth of all age adults also do not have a specific personal doctor or health care provider (21.4% in 2009 and 24.1% in 2010).

Physical Inactivity

- Approximately one-third of state adults (33.2% in 2009 and 32.9% in 2010) participate in no leisure-time physical activity or exercise.
- The prevalence of physical inactivity was significantly higher among women than men in 2009.
- Physical inactivity is also more prevalent among groups who are older, less educated, or from lower income households.

Nutrition

- Eight out of every 10 adults (83.8%) consume fewer than the recommended five servings of fruits and vegetables each day. West Virginia ranked 3rd highest nationally in the prevalence of this risk factor in 2009.
- Men had a significantly higher prevalence of this risk factor than women.
- Highest prevalence was found among those with less education and lower income.

Obesity and Overweight

- The obese proportion of the adult population was 31.7% in 2009 and 32.9% in 2010, 6th highest nationally in 2009 and 3rd highest nationally in 2010.
- Between 1987 and 2010, a substantial increase in obesity occurred among West Virginia adults. Men and women from a wide range of age, education, and income categories contributed to this unhealthy trend.
- During 2009 and 2010, approximately two-thirds of West Virginia adults were either obese or overweight.

Tobacco Use

- More than one-fourth of adults (25.6% in 2009 and 26.8% in 2010) smoke every day or some days. West Virginia ranked highest in both 2009 and 2010 in the prevalence of this risk factor among national BRFSS participants.
- Smoking prevalence was highest among younger individuals and those with less education and lower annual household incomes.
- West Virginia ranked 2nd highest in smokeless tobacco use in the nation in 2009 and 2010 (8.5% in 2009 and 7.7% in 2010).

Hypertension

- West Virginia ranked highest nationally in 2009 in the prevalence of hypertension (high blood pressure). More than a third of the state's adults (37.6%) have been diagnosed with high blood pressure.
- The prevalence of high blood pressure increased steeply and significantly with increasing age, as would be expected.
- Adults with less income and less education had the highest prevalence of hypertension.

Cholesterol

- In 2009, 38.5% 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

- West Virginia alcohol consumption remains notably low in comparison with levels consumed elsewhere in the U.S.
- The prevalence of binge drinking was 9.2% in 2009 and 9.0% in 2010 (3rd lowest in the nation in both 2009 and 2010).
- Binge drinking was most prevalent among younger WV adults.
- The heavy drinking prevalence was 2.7% in 2009 and 2.8% in 2010 (2nd lowest in the nation in 2009 and 2010).

Oral Health

- More than a third of adults (38.6%) in 2010 had not had their teeth cleaned by a dentist or dental hygienist in the past year. West Virginia's rank was 8th highest nationally.
- The prevalence for this risk factor was significantly higher among men than women.
- The highest prevalence of this risk factor was among those with less than a high school education, in households with an annual income of less than $15,000, and in the 25-34 age group.
- Additionally, 60.1% of adults had at least one and 30.0% had six or more teeth missing. Among those aged 65 and older, 36.0% were missing all of their teeth.

Immunization

- Among adults aged 65 and older, over a fourth had not had a flu shot in the past 12 months (29.4% in 2009 and 33.5% in 2010).
- About 1 in 3 WV seniors never had a pneumonia shot (31.2% in 2009 and 37.6% in 2010).

Colorectal Cancer Screening

- Over three-quarters (86.4% in 2010) of adults aged 50 and older reported that they did not perform a home stool blood test (FOBT) in the past year. The prevalence of this risk factor was significantly higher among women than men.
- Almost half (45.6% in 2010) of West Virginia adults over the age of 50 never had a sigmoidoscopy or colonoscopy (4th highest in the nation).

Prostate Cancer Screening

- Thirty-one percent of men over the age of 50 never had a DRE (digital rectal exam), 3rd highest in the nation.
- One-fourth (25.5%) of men aged 50 and older never had a PSA (prostate specific antigen) test.
- The prevalence of both these risk factors is highest among those with less than a high school education.

Breast and Cervical Cancer Screening

- Among women aged 40 and older, 41.6% did not have a clinical breast exam (CBE) in the past year.
- Among women aged 40 and older, 27.7% did not have a mammogram in the past two years.
- Over one-fifth (21.0%) of all women aged 18 and older did not have a Pap test in the past three years, 12th highest in the nation.
- Additionally, 7.3% of WV female adults have never had a Pap test.

Cardiovascular Disease

- West Virginia ranked highest in the nation in 2009 and 2nd in the nation in 2010 in the prevalence of heart attack among adults. The prevalence of heart attack was 6.5% in 2009 and 6.3% in 2010.
- Men had a significantly higher prevalence of heart attack than women.
- West Virginia also ranked higher than any other state in 2009 and 3rd highest in 2010 in prevalence of angina or coronary health disease among adults (7.1% in 2009 and 6.0% in 2010).
- For the prevalence of stroke among adults, West Virginia ranked 4th highest nationally in 2009 and 11th highest in 2010 (3.7% in 2009 and 3.5% in 2010).
- The prevalence of heart attack, angina, and stroke was significantly higher among those 65 and older, those with less than a high school education, and those with an annual household income of less than $15,000.

Diabetes

- More than 1 in 10 West Virginia adults have diabetes (12.4% in 2009 and 11.7% in 2010). West Virginia ranked 2nd nationally in 2009 and 4th nationally in 2010.
- 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.

Cancer

- About 1 in 10 WV adults are cancer survivors (10.4% in 2009 and 8.8% in 2010).
- Cancer prevalence is higher among females than males.
- About one-fifth of WV seniors had cancer during their lives.

Asthma

- In 2009, 12.4% of adults had ever been diagnosed with asthma while 8.8% currently had asthma.
- In 2010, 10.7% of adults had ever been diagnosed with asthma while 7.3% currently had asthma.
- Women had significantly higher prevalence of both lifetime and current asthma than men in both 2009 and 2010.
- The prevalence of current asthma was significantly higher among those without a high school diploma and those with an income of less than $15,000.

Arthritis

- More than 1 in 3 WV adults have arthritis (33.9% in 2009 and 36.0% in 2010).
- There was a significant age difference associated with arthritis prevalence with the prevalence being higher among older age groups.
- Arthritis prevalence was also highest among those with lower income and less education.

Disability

- West Virginia had the highest disability prevalence nationwide in both 2009 and 2010.
- More than one-fourth of adults were disabled because of a physical, mental, or emotional problem (27.1% in 2009 and 28.2% in 2010).
- Disability prevalence was highest among older adults, adults who did not have a high school degree, and lower income adults.

Emotional Support and Life Satisfaction

- Approximately 8 in 10 West Virginia adults reported that they usually or always get the social and emotional support they need (79.9% in 2009 and 82.3% in 2010).
- Over 9 in 10 West Virginia adults were satisfied or very satisfied with their own lives (92.3% in 2009 and 93.9% in 2010).
- These factors were highest among adults with higher levels of education and income.

HIV Testing

- Less than one-third of adults aged 18-64 in West Virginia have been tested for HIV (31.9% in 2009 and 29.1% in 2010).
- In both 2007 and 2008, the prevalence of HIV testing was highest among those aged 25-34.

Comorbidities

- About 1 in 5 West Virginia adults (17.5%) were both disabled and had arthritis in 2010.
- About 1 in 8 West Virginia adults (12.8%) were obese and did not exercise in 2008.
- Also in 2010, 8.7% of adults were current smokers and had no health care coverage.
- In 2010, 6.6% of WV adults were obese and had diabetes.
- Only 3.5% of WV adults have 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 I: Percentage and number of persons estimated at risk due to selected risk factors (among adults aged 18 and older or appropriate subset): WVBRFSS, 2009-2010

Risk Factor	Year	Percentage Estimated at Risk[a]	Number Estimated at Risk[a]
Self-rated general health is fair or poor	2010	23.4	335,377
No health care coverage, ages 18-64	2010	21.4	240,377
Unable to afford needed medical care	2010	17.7	254,141
No personal doctor or health care provider	2010	24.1	344,528
No leisure-time exercise	2010	32.9	471,356
Fewer than 5 servings of fruit/vegetables per day	2009	83.8	1,190,843
Obesity (BMI 30.0+)	2010	32.9	451,125
Overweight (BMI 25.0-29.9)	2010	35.0	480,417
Current cigarette smoking	2010	26.8	383,293
Binge drinking	2010	9.0	127,907
Heavy drinking	2010	2.8	39,966
Cancer	2010	8.8	123,850
Diabetes	2010	11.7	167,217
High blood pressure	2009	37.6	538,056
High blood cholesterol (among those ever checked)	2009	38.5	440,500
Have had heart attack	2010	6.3	90,302
Have angina or coronary heart disease	2010	6.0	86,198
Have had stroke	2010	3.5	50,145
No home stool blood test in past year, ages 50+	2010	86.4	574,255
Never had sigmoidoscopy or colonoscopy, ages 50+	2010	45.6	307,557
Never had digital rectal exam, men ages 50+	2010	31.0	96,692
Never had Prostate Specific Antigen (PSA) test, men ages 50+	2010	25.5	75,425
No clinical breast exam in past year, women ages 40+	2010	41.6	200,139
No mammogram in past 2 years, women ages 40+	2010	27.7	134,911
No Pap test in past 3 years, women ages 18+	2010	21.0	114,135
Never had Pap test, women ages 18+	2010	7.3	54,146
Lifetime asthma	2010	10.7	153,300
Current asthma	2010	7.3	103,547
Arthritis	2010	36.0	510,850
Disability	2010	28.2	404,160
No flu immunization in past 12 months, ages 65+	2010	33.5	97,973
Never had pneumonia shot, ages 65+	2010	37.6	109,455
No professional dental cleaning in past year (among those with teeth)	2010	38.6	474,582
6 or more teeth removed	2010	30.0	425,872
All teeth removed, ages 65+	2010	36.0	104,882

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 7 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 with estimates derived using the same methodologies. The data can be used by health planners to identify high-risk groups, establish health policy and priorities, and monitor the impact of health promotion efforts.

Twenty 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 2009 and 2010 risk factor prevalence estimates and compares them to the years 1984 through 2010. Table I.1 on the following page shows topics that have been included in the last 11 years of surveillance, many of which are examined in the present report.

Table I.1: Topics administered in the survey: WVBRFSS, 2000-2010

Topic	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Seatbelt use			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	x
Obesity	x	x	x	x	x	x	x	x	x	x	x
Cigarette use	x	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	x
Routine checkup	x					x	x	x	x	x	x
Breast cancer screening	x		x		x		x		x		x
Cervical cancer screening	x		x		x		x		x		x
Prostate cancer screening		x	x		x		x		x		x
Excess sun exposure			x	x	x						
AIDS/HIV	x	x	x	x	x	x	x	x	x	x	x
Cancer survivors										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	x
Health status	x	x	x	x	x	x	x	x	x	x	x
Colorectal cancer screening		x	x		x		x		x		x
Oral health	x		x		x		x		x		x
Emotional support/Life satisfaction						x	x	x	x	x	x
Firearm ownership		x	x		x						
Asthma	x	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	x
Veteran status					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

According to figures from the 2000 U.S. Census, 95.3% of West Virginia households have telephones, compared to 97.6% of households in the United States. 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.

CDC provides banks of telephone numbers 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 2009 and 2010, both unweighted and weighted to the population, are presented in Tables M.1 and M.2. Data were weighted by the census age and sex distribution 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, 2009

Demographic characteristic	Number of Interviews	Percent of Unweighted Sample	Percent of Weighted Sample
Total	**4,817**	**100.0**	**100.0**
Sex			
Male	1,845	38.3	48.4
Female	2,972	61.7	51.6
Race/Ethnicity			
White, Non-Hispanic	4,611	96.0	96.0
Black, Non-Hispanic	95	2.0	1.7
Other	96	2.0	2.2
Age			
18-24	167	3.5	11.5
25-34	481	10.0	16.0
35-44	650	13.6	16.6
45-54	870	18.2	18.9
55-64	1,111	23.2	16.7
65+	1,514	31.6	20.4
Education			
< High School	691	14.4	13.6
HS or GED	1,935	40.2	40.8
Some College	1,145	23.8	24.8
College Degree	1,039	21.6	20.8
Household Income			
<$15,000	556	13.1	10.0
$15,000-$24,999	840	19.7	18.1
$25,000-$34,999	787	18.5	18.9
$35,000-$49,999	792	18.6	18.7
$50,000-$74,999	601	14.1	16.0
$75,000+	691	16.0	18.4
Marital Status			
Married	2,681	55.7	61.7
Divorced	701	14.6	10.1
Widowed	784	16.3	8.2
Separated	77	1.6	1.3
Never Married	478	9.9	15.6
Unmarried Couple	91	1.9	3.2
Employment Status			
Employed for wages	1,919	39.8	45.9
Self-Employed	205	4.3	4.7
Out of Work (>1 year)	87	1.8	2.7
Out of Work (<1 year)	103	2.1	3.5
Homemaker	468	9.7	9.1
Student	69	1.4	3.9
Retired	1,446	30.0	20.1
Unable to Work	519	10.8	10.1

Table M.2: Demographic summary: WVBRFSS, 2010

Demographic characteristic	Number of Interviews	Percent of Unweighted Sample	Percent of Weighted Sample
Total	**4,401**	**100.0**	**100.0**
Sex			
Male	1,670	37.9	48.4
Female	2,731	62.1	51.6
Race/Ethnicity			
White, Non-Hispanic	4,195	95.7	96.0
Black, Non-Hispanic	84	1.9	1.8
Other	105	2.4	2.1
Age			
18-24	116	2.7	11.3
25-34	348	8.0	15.9
35-44	563	12.9	16.5
45-54	804	18.4	18.7
55-64	1,021	23.4	16.8
65+	1,514	34.7	20.8
Education			
< High School	666	15.2	14.2
HS or GED	1,778	40.5	41.2
Some College	1,039	23.6	25.0
College Degree	911	20.7	19.8
Household Income			
<$15,000	481	12.8	11.0
$15,000-$24,999	799	21.2	18.0
$25,000-$34,999	660	17.5	16.9
$35,000-$49,999	729	19.4	19.4
$50,000-$74,999	514	13.6	16.9
$75,000+	584	15.5	17.9
Marital Status			
Married	2,342	53.3	59.8
Divorced	676	15.4	10.8
Widowed	796	18.1	8.9
Separated	97	2.2	2.0
Never Married	424	9.7	16.4
Unmarried Couple	57	1.3	2.1
Employment Status			
Employed for wages	1,704	38.8	46.4
Self-Employed	191	4.3	4.5
Unemployed (>1 year)	102	2.3	3.5
Unemployed (1 year)	64	1.5	2.9
Homemaker	411	9.3	9.1
Student	46	1.0	2.8
Retired	1,389	31.6	19.9
Unable to Work	490	11.1	10.7

LIMITATIONS

The target population consists of civilian, noninstitutionalized persons 18 years of age and older who reside in households with telephones. 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 blood pressure or cholesterol levels. In addition, respondents may have a tendency to understate behaviors known to be unhealthy, socially unacceptable, or illegal. 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. 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 the data by age and sex distribution is done 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 prevalence estimates that have been tested and found to be significantly different. Statistically significant differences between estimates are traditionally determined using statistical tests such as a t-test or chi-squared 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; therefore, they 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 7."

[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.

COUNTY-LEVEL DATA

County prevalence rates were calculated by using multiple years of aggregated BRFSS data. The data were reweighted to be representative of the 2000 age and sex population distribution by county. Aggregated sample sizes were large enough for 24 of the 55 counties to stand alone, that is, to yield individual county prevalence calculations. The data from the remaining 31 counties that had sample sizes too small to stand alone were combined into 12 groupings of counties. The aim was to arrive at as many groups of contiguous counties as possible, provided that the groups' sample sizes were sufficiently large for statistical analysis. Similarity in poverty level was an additional factor in deciding which counties to group together. The 12 groups of counties plus the 24 stand-alone counties resulted in 36 geographical entities (see Appendix D).

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, as well as county classifications compared to both West Virginia and the United States, can be found in Appendix E.

PRESENTATION

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 are calculated by excluding unknown responses from the denominators. Consequently, estimates may be slightly higher than would have been the case had the unknown 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 appendixes 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 54 BRFSS participants, ranking 1st in hypertension would mean having the highest prevalence of hypertension while ranking 54th would mean having the lowest prevalence. Some questions are not asked by all BRFSS participants. In these cases, the rankings should be interpreted with caution, as they may be different if information were available from

all participants. 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 rates and rankings were calculated by Health Statistics Center staff. State and county prevalence estimates and rankings for many risk factors are presented in Appendixes A and E.

CHAPTER 1: HEALTH STATUS

Fair or Poor General Health

Definition

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

Prevalence

WV: 23.7% (95% CI: 22.3-25.1) in 2009; **23.4%** (95% CI: 21.9-24.9) in 2010.
US: 16.1% (95% CI: 15.9-16.3) in 2009; **16.3%** (95% CI: 16.1-16.5) in 2010.
West Virginia ranked 2nd highest among 54 BRFSS participants in 2009 and 3rd highest among 54 BRFSS participants in 2010.

Time Trends

From 1993 through 2010, the prevalence of fair or poor general health has not changed.

Gender

Men: 24.0% (95% CI: 21.7-26.2) in 2009; 23.6% (95% CI: 21.2-25.9) in 2010.
Women: 23.5% (95% CI: 21.8-25.2) in 2009; 23.3% (95% CI: 21.4-25.2) in 2010.
There was no gender difference in the prevalence of fair or poor general health status in 2009 or 2010.

Age

Reports of fair or poor health increased significantly with age. The 2009 prevalence ranged from a low of 9.9% among the youngest adults to a high of 36.4% among the oldest. Variation by age was similar in 2010, with a prevalence of 8.2% among 18-24 year olds increasing to a high of 36.6% among those 65 and older.

Education

Adults with less than a high school education had the highest prevalence of fair or poor health, with a prevalence of nearly 50% in 2009 and 46% in 2010. Those with more education had a much lower prevalence, with the prevalence for college graduates about 9%-10%. Differences were significant between every educational bracket in both years.

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) for both 2009 and 2010. The lowest prevalence occurred for those in the highest income bracket of $75,000 or more (6.6% in 2009 and 7.3% in 2010).

Table 1.1 Fair or poor health by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,845	**24.0**	21.7-26.2	2,966	**23.5**	21.8-25.2	4,811	**23.7**	22.3-25.1
Age									
18-24	66	**9.2**	1.7-16.6	101	**10.1**	4.7-16.5	167	**9.9**	5.1-14.7
25-34	173	**13.5**	7.6-19.5	308	**16.4**	12.0-20.8	481	**14.9**	11.2-18.6
35-44	257	**17.9**	12.6-23.1	393	**16.5**	12.4-20.5	650	**17.2**	13.8-20.5
45-54	358	**26.1**	21.1-31.2	511	**22.3**	18.5-26.1	869	**24.2**	21.0-27.3
55-64	447	**35.8**	31.1-40.5	663	**28.0**	24.3-31.7	1,110	**31.9**	28.9-34.9
65+	541	**35.6**	31.3-39.9	969	**37.0**	33.7-40.3	1,510	**36.4**	33.8-39.1
Education									
Less than H.S.	266	**53.0**	45.6-60.4	423	**48.7**	42.8-54.6	689	**50.8**	46.0-55.6
H.S. or G.E.D.	758	**24.1**	20.5-27.7	1,174	**25.2**	22.4-27.9	1,932	**24.6**	22.4-26.9
Some Post-H.S.	385	**17.1**	13.2-21.0	759	**18.9**	15.8-22.1	1,144	**18.1**	15.7-20.6
College Graduate	433	**11.3**	8.4-14.3	606	**10.3**	7.7-12.9	1,039	**10.8**	8.8-12.8
Income									
Less than $15,000	160	**55.9**	45.8-65.9	395	**48.9**	42.6-55.2	555	**51.6**	46.1-57.0
$15,000- 24,999	304	**35.0**	28.5-41.5	535	**34.6**	29.9-39.3	839	**34.8**	30.8-38.7
$25,000- 34,999	304	**32.5**	25.7-39.3	481	**26.4**	21.7-31.1	785	**29.5**	25.3-33.7
$35,000- 49,999	317	**20.7**	15.8-25.5	475	**17.0**	13.2-20.7	792	**18.7**	15.7-21.7
$50,000- 74,999	269	**9.1**	5.8-12.3	332	**8.5**	5.5-11.5	601	**8.8**	6.6-11.0
$75,000+	317	**7.1**	4.3-9.9	374	**5.9**	3.4-8.4	691	**6.6**	4.7-8.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 1.2 Fair or poor health by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,667	**23.6**	21.2-25.9	2,727	**23.3**	21.4-25.2	4,394	**23.4**	21.9-24.9
Age									
18-24	58	***6.4**	0.3-12.6	58	***10.0**	1.9-18.4	116	***8.2**	3.1-13.3
25-34	125	***9.2**	3.4-15.0	223	**9.0**	4.8-13.2	348	**9.1**	5.5-12.7
35-44	225	**16.4**	10.7-22.2	338	**15.7**	11.5-20.0	563	**16.1**	12.5-19.6
45-54	305	**28.5**	23.0-34.1	498	**26.6**	22.1-31.0	803	**27.5**	24.0-31.1
55-64	416	**37.6**	32.3-42.8	604	**29.9**	25.9-33.9	1,020	**33.7**	30.4-37.0
65+	528	**36.5**	32.1-40.9	982	**36.6**	33.3-40.0	1,510	**36.6**	33.9-39.2
Education									
Less than H.S.	268	**44.3**	36.8-51.9	394	**48.6**	42.4-54.9	662	**46.4**	41.5-51.4
H.S. or G.E.D.	690	**26.3**	22.4-30.2	1,086	**26.6**	23.3-29.8	1,776	**26.4**	23.9-29.0
Some Post-H.S.	344	**16.2**	11.8-20.6	695	**16.9**	13.6-20.3	1,039	**16.6**	13.9-19.3
College Graduate	362	**10.1**	7.0-13.2	548	**8.3**	6.1-10.6	910	**9.2**	7.3-11.1
Income									
Less than $15,000	162	**44.6**	35.1-54.0	317	**46.1**	39.1-53.1	479	**45.3**	39.5-51.2
$15,000- 24,999	272	**42.5**	35.2-49.9	526	**41.2**	35.8-46.6	798	**41.8**	37.4-46.2
$25,000- 34,999	251	**30.3**	23.5-37.2	409	**21.2**	16.8-25.6	660	**25.5**	21.4-29.5
$35,000- 49,999	299	**16.8**	12.1-21.4	429	**16.2**	11.4-20.9	728	**16.5**	13.2-19.8
$50,000- 74,999	225	**9.7**	5.6-13.8	289	**8.3**	4.8-11.7	514	**9.0**	6.3-11.7
$75,000+	262	**8.3**	4.8-11.8	322	**6.1**	3.5-8.7	584	**7.3**	5.0-9.5

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 1.1 Fair or poor health by year: WVBRFSS, 1993-2010

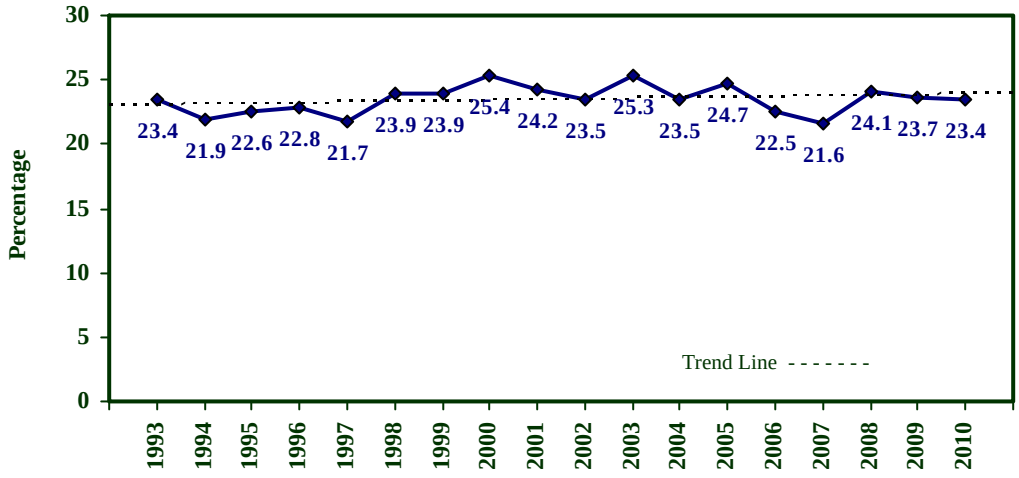
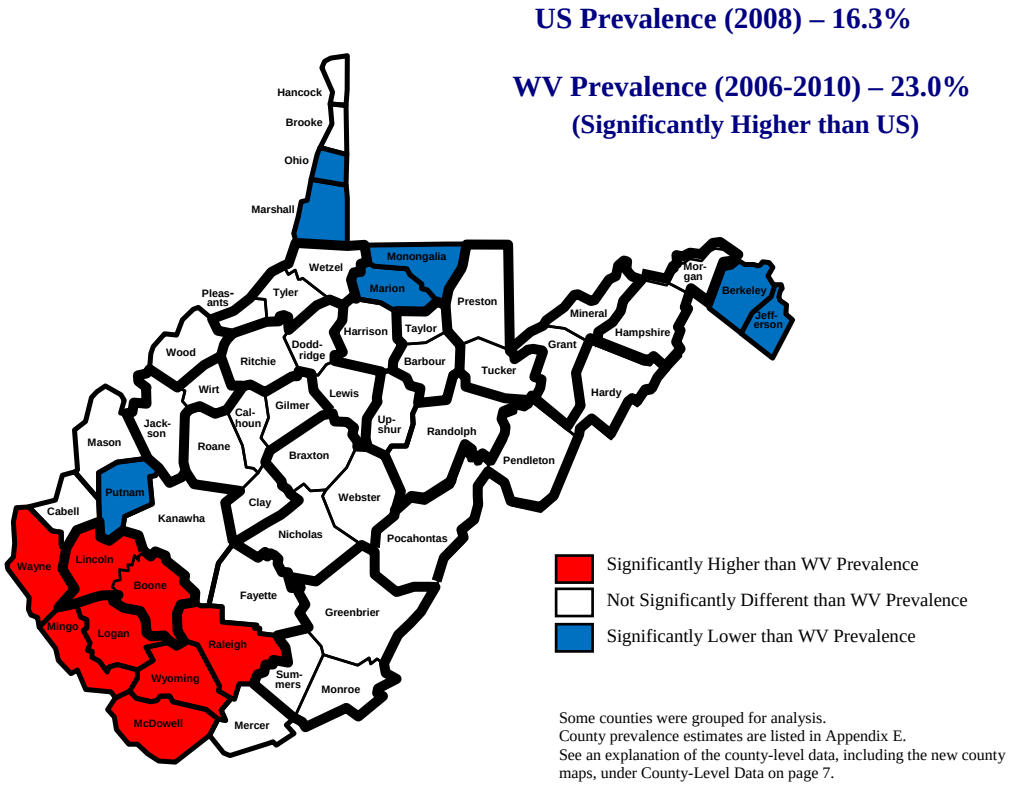


Figure 1.2 Fair or poor health by county: WVBRFSS, 2006-2010



CHAPTER 2: HEALTH CARE ACCESS

No Health Care Coverage (among adults 18 to 64)

Definition

Responding "No" to the following question: "Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?" The results reported for this section have been limited to adults aged 18-64.

Prevalence

WV: 21.6% (95% CI: 19.7-23.5) in 2009; **21.4%** (95% CI: 19.3-23.6) in 2010.
US: 18.2% (95% CI: 17.8-18.5) in 2009; **18.1%** (95% CI: 17.8-18.4) in 2010.
West Virginia ranked 12th highest among 54 BRFSS participants in 2009 and 15th highest among 54 BRFSS participants in 2010.

Time Trends

From 1993 through 2010, the proportion of adults with no health care coverage has remained stable.

Gender

Men: 24.1% (95% CI: 21.0-27.2) in 2009; 21.6% (95% CI: 18.3-25.0) in 2010.
Women: 19.1% (95% CI: 16.8-21.3) in 2009; 21.2% (95% CI: 18.5-24.0) in 2010.
Overall, the lack of health care coverage in this group of working-age adults was similar among men and women in both 2009 and 2010.

Age

Lack of health care coverage was significantly more prevalent among those aged 18-44 compared with those aged 55-64 in both 2009 and 2010.

Education

Adults with the least education had the highest prevalence of no health care coverage than those with any level of education beyond high school. Approximately 1 in 3 adults without a high school diploma lacked health care, while the prevalence for college graduates was 5-7%.

Household Income

Lack of health care coverage was significantly more common among lower income groups than among those with higher income. In both 2009 and 2010, about 40% of those with incomes less than $15,000 per year had no health care coverage. During those years, about 4% 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, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,298	**24.1**	21.0-27.2	1,977	**19.1**	16.8-21.3	3,275	**21.6**	19.7-23.5
Age									
18-24	63	**41.3**	28.5-54.2	101	**32.5**	22.5-42.5	164	**36.9**	28.7-45.2
25-34	173	**37.2**	29.4-45.1	308	**25.3**	20.0-30.6	481	**31.3**	26.5-36.3
35-44	257	**20.9**	15.1-26.7	393	**15.3**	11.5-19.2	650	**18.1**	14.6-21.6
45-54	358	**16.9**	12.7-21.0	511	**16.2**	12.8-19.7	869	**16.6**	13.9-19.2
55-64	447	**11.0**	8.0-14.1	664	**11.2**	8.6-13.8	1,111	**11.1**	9.1-13.1
Education									
Less than H.S.	153	**43.9**	34.2-53.6	202	**28.2**	20.8-35.7	355	**36.7**	30.3-43.2
H.S. or G.E.D.	546	**29.7**	24.6-34.8	743	**23.3**	19.5-27.1	1,289	**26.8**	23.5-30.0
Some Post-H.S.	288	**21.1**	15.0-27.2	547	**20.3**	15.7-24.9	835	**20.7**	16.9-24.4
College Graduate	310	**4.2**	1.4-7.1	485	**6.8**	3.9-9.8	795	**5.6**	3.6-7.7
Income									
Less than $15,000	105	**54.2**	42.5-65.8	217	**40.4**	31.6-49.2	322	**46.1**	39.0-53.3
$15,000- 24,999	174	**48.2**	38.9-57.5	295	**41.5**	34.5-48.4	469	**44.8**	39.0-50.6
$25,000- 34,999	189	**36.4**	27.3-45.4	311	**24.9**	18.5-31.3	500	**30.8**	25.1-36.5
$35,000- 49,999	237	**11.8**	7.1-16.6	340	**10.3**	6.4-14.2	577	**11.0**	8.0-14.1
$50,000- 74,999	222	**7.2**	2.2-12.3	294	**6.7**	2.7-10.7	516	**7.0**	3.7-10.2
$75,000+	266	**6.4**	1.9-10.9	347	**1.8**	0.3-3.4	613	**4.2**	1.7-6.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 2.2 No health care coverage among adults aged 18-64 by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,126	**21.6**	18.3-25.0	1,720	**21.2**	18.5-24.0	2,846	**21.4**	19.3-23.6
Age									
18-24	55	**40.9**	26.2-55.6	56	**33.4**	20.0-46.9	111	**37.2**	27.2-47.3
25-34	125	**24.4**	16.2-32.6	223	**29.4**	22.6-36.1	348	**26.9**	21.5-32.2
35-44	225	**20.7**	14.7-26.7	338	**19.4**	14.7-24.2	563	**20.1**	16.2-23.9
45-54	305	**18.5**	13.7-23.3	498	**13.8**	10.4-17.3	803	**16.1**	13.2-19.1
55-64	416	**10.9**	7.6-14.1	605	**16.2**	12.9-19.5	1,021	**13.5**	11.2-15.9
Education									
Less than H.S.	138	**37.6**	27.4-47.8	174	**30.6**	22.1-39.1	312	**34.5**	27.6-41.3
H.S. or G.E.D.	486	**27.3**	21.5-33.0	643	**28.3**	23.3-33.2	1,129	**27.8**	23.9-31.6
Some Post-H.S.	240	**15.6**	9.6-21.7	480	**18.9**	13.5-24.2	720	**17.5**	13.4-21.5
College Graduate	261	***6.6**	2.1-11.0	423	**7.8**	4.6-10.9	684	**7.2**	4.5-9.9
Income									
Less than $15,000	111	**44.3**	32.7-55.8	174	**37.5**	28.4-46.5	285	**41.0**	33.5-48.5
$15,000- 24,999	141	**27.2**	18.5-36.0	259	**39.7**	32.2-47.3	400	**34.4**	28.6-40.2
$25,000- 34,999	146	**36.8**	26.8-46.8	228	**28.1**	18.9-37.2	374	**32.2**	25.5-39.0
$35,000- 49,999	199	**20.1**	10.9-29.2	308	**18.0**	11.4-24.5	507	**19.0**	13.4-24.6
$50,000- 74,999	188	***11.1**	3.8-18.4	260	**8.6**	4.2-13.0	448	**9.9**	5.5-14.2
$75,000+	219	***6.4**	0.0-13.0	295	***1.4**	0.1-2.7	514	***4.0**	0.4-7.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 2.1 No health care coverage among adults aged 18-64 by year: WVBRFSS, 1993-2010

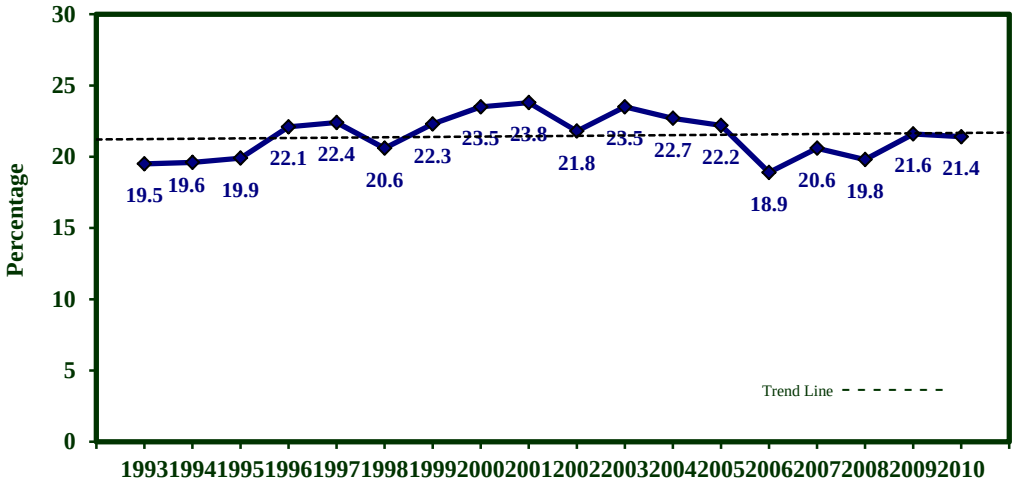
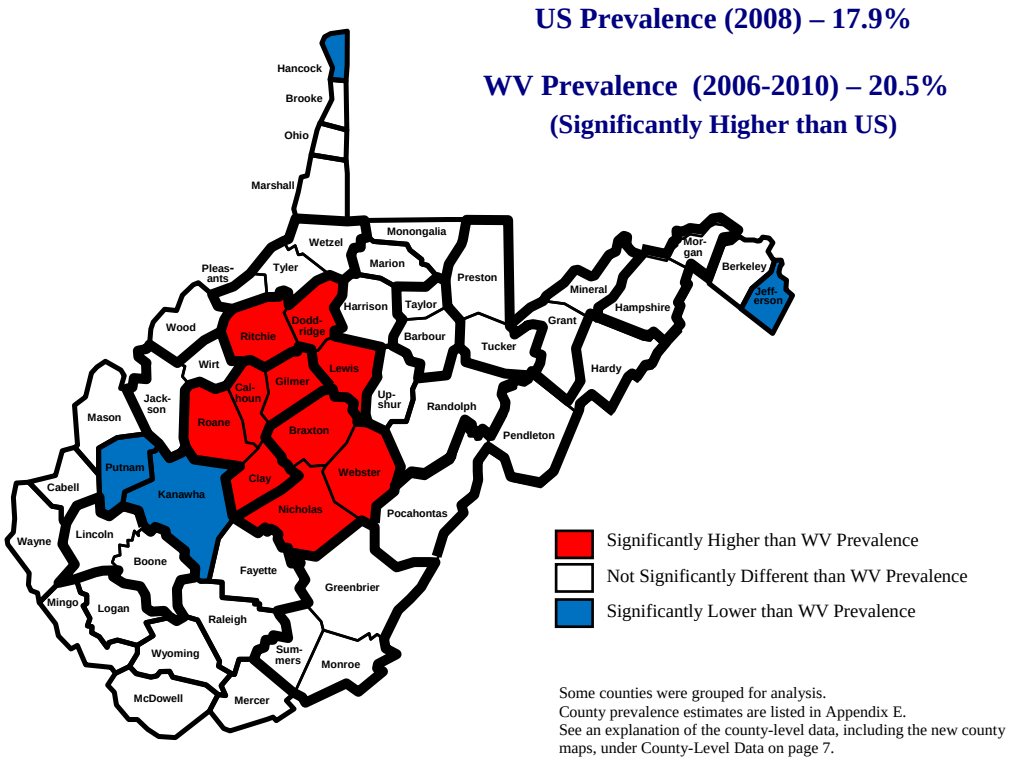


Figure 2.2 No health care coverage among adults aged 18-64 by county: WVBRFSS, 2006-2010



Could Not Afford Needed Medical Care

Definition

Responding "Yes" to the following question: "Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?" This summary applies to both 2007 and 2008 unless stated otherwise.

Prevalence

WV: 18.0% (95% CI: 16.6-19.4) in 2009; **17.7%** (95% CI: 16.1-19.4) in 2010.
US: 14.9% (95% CI: 14.6-15.1) in 2009; **14.6%** (95% CI: 14.4-14.9) in 2010.
West Virginia ranked 7th highest among 54 BRFSS participants in both 2009 and 2010.

Time Trends

From 1993 through 2010, the percentage of adults unable to afford needed medical care remained stable.

Gender

Men: 16.4% (95% CI: 14.1-18.6) in 2009; 16.0% (95% CI: 13.4-18.5) in 2010.
Women: 19.5% (95% CI: 17.7-21.3) in 2009; 19.4% (95% CI: 17.3-21.4) in 2010.
The prevalence of this risk factor did not differ significantly between men and women in 2009 or 2010.

Age

The 25-34 age group experienced the highest frequency of this risk factor in 2009 and the 18-24 age group in 2010. For both years, those aged 65 and older had the lowest prevalence of not being able to afford medical care than adults in any other age category.

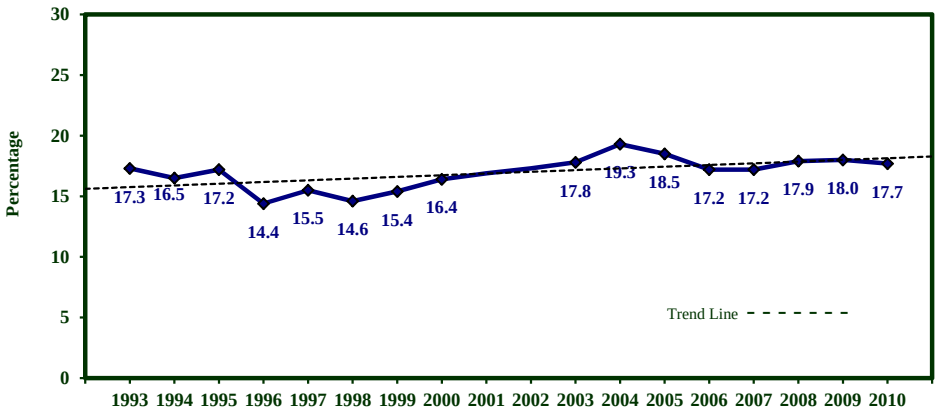
Education

Adults with less than a high school education had a higher prevalence of this risk factor than other adults in both 2009 and 2010. College graduates had a significantly lower prevalence of having problems affording needed health care than those with any lower level of education in both years.

Household Income

The prevalence of this risk factor became steadily higher as household income declined. Overall, the risk was under 8% for those from the $50,000 and higher income households in both 2009 and 2010.

Figure 2.3 Could not afford needed medical care by year: WVBRFSS, 1993-2010



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

Table 2.3 Could not afford needed medical care in past 12 months by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,840	**16.4**	14.1-18.6	2,971	**19.5**	17.7-21.3	4,811	**18.0**	16.6-19.4
Age									
18-24	66	**16.6**	7.2-26.0	101	**28.2**	19.0-37.4	167	**22.2**	15.6-28.8
25-34	172	**33.0**	25.2-40.7	308	**31.2**	25.6-36.8	480	**32.1**	27.3-36.9
35-44	257	**18.4**	13.0-23.8	393	**28.0**	23.1-32.9	650	**23.2**	19.6-26.9
45-54	357	**15.5**	11.6-19.3	512	**20.2**	16.5-23.8	869	**17.9**	15.2-20.5
55-64	447	**11.2**	8.1-14.3	664	**14.9**	12.0-17.9	1,111	**13.1**	10.9-15.2
65+	538	**4.9**	2.9-6.8	972	**4.5**	3.0-6.0	1,510	**4.6**	3.4-5.8
Education									
Less than H.S.	262	**29.4**	22.3-36.4	425	**23.9**	19.0-28.9	687	**26.6**	22.3-30.9
H.S. or G.E.D.	757	**19.7**	15.9-23.6	1,176	**21.5**	18.5-24.5	1,933	**20.6**	18.1-23.1
Some Post-H.S.	385	**11.8**	7.7-15.9	760	**21.1**	17.3-24.9	1,145	**17.0**	14.2-19.9
College Graduate	433	**5.4**	3.0-7.9	606	**11.2**	8.1-14.3	1,039	**8.4**	6.4-10.4
Income									
Less than $15,000	159	**43.8**	33.9-53.8	396	**33.5**	27.1-39.9	555	**37.4**	31.9-42.9
$15,000- 24,999	304	**25.0**	18.5-31.5	535	**30.1**	25.1-35.2	839	**27.7**	23.6-31.7
$25,000- 34,999	304	**19.5**	13.3-25.7	483	**25.9**	20.8-31.0	787	**22.7**	18.6-26.7
$35,000- 49,999	317	**10.7**	6.6-14.8	475	**14.9**	11.1-18.6	792	**12.9**	10.2-15.7
$50,000- 74,999	269	**7.4**	3.9-10.9	332	**12.5**	8.2-16.9	601	**9.9**	7.1-12.7
$75,000+	317	**6.1**	1.9-10.3	374	**5.1**	2.6-7.7	691	**5.7**	3.1-8.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 2.4 Could not afford needed medical care in past 12 months by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,670	**16.0**	13.4-18.5	2,729	**19.4**	17.3-21.4	4,399	**17.7**	16.1-19.4
Age									
18-24	58	**24.3**	10.9-37.8	58	**23.9**	12.5-35.3	116	**24.1**	15.3-33.0
25-34	125	**18.3**	11.1-25.4	223	**28.5**	22.0-34.9	348	**23.3**	18.4-28.2
35-44	225	**17.6**	12.2-23.0	338	**28.4**	23.0-33.9	563	**23.0**	19.2-26.9
45-54	306	**18.7**	13.7-23.6	497	**19.4**	15.7-23.2	803	**19.0**	15.9-22.1
55-64	416	**14.2**	10.3-18.2	605	**17.8**	14.4-21.1	1,021	**16.0**	13.5-18.6
65+	530	**5.9**	3.6-8.1	984	**6.4**	4.6-8.2	1,514	**6.2**	4.8-7.6
Education									
Less than H.S.	271	**21.5**	15.0-28.0	394	**25.4**	19.9-31.0	665	**23.4**	19.1-27.7
H.S. or G.E.D.	690	**20.1**	15.4-24.8	1,087	**22.9**	19.3-26.4	1,777	**21.5**	18.5-24.4
Some Post-H.S.	344	**11.4**	7.2-15.6	695	**16.2**	12.6-19.8	1,039	**14.2**	11.4-16.9
College Graduate	362	**8.0**	4.4-11.5	549	**12.6**	8.5-16.8	911	**10.3**	7.6-13.1
Income									
Less than $15,000	163	**33.2**	24.0-42.4	318	**37.9**	30.8-45.0	481	**35.6**	29.9-41.4
$15,000- 24,999	272	**22.1**	15.7-28.5	527	**33.3**	28.0-38.5	799	**28.7**	24.6-32.7
$25,000- 34,999	251	**19.5**	13.0-26.0	409	**18.2**	12.1-24.4	660	**18.8**	14.3-23.3
$35,000- 49,999	300	**12.1**	5.0-19.2	429	**14.2**	10.0-18.5	729	**13.2**	9.1-17.3
$50,000- 74,999	225	***9.9**	4.0-15.7	289	**10.1**	5.7-14.6	514	**10.0**	6.3-13.7
$75,000+	262	***8.7**	2.4-15.0	322	**5.5**	2.4-8.6	584	**7.3**	3.5-11.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

No Personal Doctor or Health Care Provider

Definition

Responding "No" to the following question: "Do you have one (or more than one) person you think of as your personal doctor or health care provider?"

Prevalence

WV: 21.4% (95% CI: 19.8-23.1) in 2009; **24.1%** (95% CI: 22.1-26.0) in 2010.
US: 19.0% (95% CI: 18.7-19.3) in 2009; **18.2%** (95% CI: 17.9-18.5) in 2010.
West Virginia ranked 17th highest among 54 BRFSS participants in 2009 and 9th highest among 54 BRFSS participants in 2010.

Time Trends

From 2001 to 2010 the prevalence has remained fairly stable.

Gender

Men: 27.2% (95% CI: 24.4-30.0) in 2009; 30.9% (95% CI: 27.8-34.1) in 2010.
Women: 16.0% (95% CI: 14.2-17.8) in 2009; 17.6% (95% CI: 15.4-19.9) in 2010.
The prevalence of not having a personal doctor or health care provider was significantly higher for men than for women in both 2009 and 2010.

Age

The youngest age group, those aged 18-34, had the highest prevalence of this risk factor. The oldest age group (65 and older) had a relatively low prevalence, 7.5% and 6.3%, respectively, in 2009 and 2010.

Education

There was a significant difference in the prevalence of no doctor between those with less than a high school education and those with some college or a college degree in 2009. However, this difference was not significant in 2010.

Household Income

Household income was associated with inconsistent differences in this risk factor. In general, those earning less than $25,000 per year had a higher prevalence of not having a doctor than those earning $50,000 or more per year.

Table 2.5 No personal doctor or health care provider by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,844	**27.2**	24.4-30.0	2,971	**16.0**	14.2-17.8	4,815	**21.4**	19.8-23.1
Age									
18-24	66	**41.3**	28.8-53.9	101	**37.3**	26.8-47.8	167	**39.4**	31.2-47.6
25-34	173	**53.0**	45.1-61.0	308	**25.8**	20.5-31.0	481	**39.6**	34.5-44.6
35-44	257	**34.7**	28.2-41.2	393	**18.0**	14.0-22.1	650	**26.4**	22.4-30.3
45-54	357	**16.5**	12.5-20.5	512	**13.0**	9.9-16.0	869	**14.7**	12.2-17.2
55-64	447	**13.4**	10.1-16.8	663	**10.0**	7.4-12.6	1,110	**11.7**	9.6-13.8
65+	541	**11.0**	8.1-13.9	973	**4.9**	3.4-6.4	1,514	**7.5**	6.0-9.0
Education									
Less than H.S.	266	**37.5**	29.8-45.3	425	**18.3**	13.3-23.2	691	**27.8**	23.0-32.6
H.S. or G.E.D.	757	**30.8**	26.2-35.3	1,176	**17.4**	14.3-20.4	1,933	**24.2**	21.4-27.0
Some Post-H.S.	385	**24.5**	18.8-30.1	760	**14.8**	11.1-18.5	1,145	**19.0**	15.8-22.3
College Graduate	433	**15.7**	11.3-20.0	606	**13.7**	10.3-17.0	1,039	**14.6**	11.9-17.4
Income									
Less than $15,000	160	**35.8**	25.7-45.9	395	**24.4**	17.7-31.1	555	**28.7**	23.0-34.4
$15,000- 24,999	303	**33.9**	26.7-41.1	536	**25.9**	20.8-31.0	839	**29.7**	25.3-34.1
$25,000- 34,999	304	**29.1**	21.8-36.4	483	**13.8**	9.5-18.2	787	**21.5**	17.2-25.9
$35,000- 49,999	317	**24.0**	18.2-29.8	475	**13.0**	8.8-17.2	792	**18.1**	14.6-21.7
$50,000- 74,999	269	**19.5**	13.6-25.4	332	**11.6**	7.0-16.2	601	**15.7**	11.9-19.5
$75,000+	317	**17.7**	21.1-23.2	374	**9.1**	5.9-12.3	691	**13.7**	10.3-17.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 2.6 No personal doctor or health care provider by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,668	**30.9**	27.8-34.1	2,727	**17.6**	15.4-19.9	4,395	**24.1**	22.1-26.0
Age									
18-24	58	**63.4**	50.1-76.6	58	**36.5**	23.1-50.0	116	**50.3**	40.5-60.2
25-34	124	**46.4**	37.0-55.8	223	**37.1**	30.1-44.1	347	**41.8**	35.9-47.7
35-44	225	**39.9**	33.0-46.9	336	**20.9**	16.0-25.7	561	**30.4**	26.1-34.7
45-54	306	**26.0**	20.5-31.4	498	**10.8**	7.7-13.8	804	**18.3**	15.1-21.4
55-64	416	**14.7**	10.9-18.4	605	**9.3**	6.7-11.9	1,021	**12.0**	9.7-14.2
65+	529	**7.7**	5.2-10.2	983	**5.2**	3.8-6.7	1,512	**6.3**	4.9-7.6
Education									
Less than H.S.	270	**34.7**	26.6-42.8	395	**20.1**	14.1-26.1	665	**27.6**	22.4-32.8
H.S. or G.E.D.	689	**32.4**	27.4-37.4	1,085	**19.2**	15.5-23.0	1,774	**25.9**	22.7-29.0
Some Post-H.S.	344	**31.5**	24.5-38.4	694	**15.5**	11.1-19.9	1,038	**22.3**	18.3-26.3
College Graduate	362	**24.0**	17.8-30.1	549	**15.7**	11.4-20.0	911	**19.8**	16.0-23.5
Income									
Less than $15,000	163	**43.2**	33.2-53.2	318	**27.4**	20.5-34.4	481	**35.1**	28.8-41.3
$15,000- 24,999	272	**27.3**	19.9-34.7	527	**16.4**	11.9-20.9	799	**20.9**	16.8-25.0
$25,000- 34,999	250	**32.2**	24.2-40.2	408	**26.3**	19.0-33.7	658	**29.1**	23.7-34.5
$35,000- 49,999	300	**31.5**	23.4-39.5	429	**13.5**	8.5-18.5	729	**22.4**	17.5-27.3
$50,000- 74,999	225	**25.0**	17.5-32.5	288	**11.1**	6.2-16.0	513	**18.3**	13.6-23.0
$75,000+	261	**27.8**	20.0-35.6	321	**13.7**	8.9-18.5	582	**21.4**	16.5-26.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 3: PHYSICAL INACTIVITY

No Leisure-Time Physical Activity for Exercise

Definition

Responding "No" to the following 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: 33.2% (95% CI: 31.6-34.8) in 2009; **32.9%** (95% CI: 31.1-34.7) in 2010.
US: 24.6% (95% CI: 24.4-24.9) in 2009; **24.4%** (95% CI: 24.2-24.7) in 2010.
West Virginia ranked 2nd highest among 54 BRFSS participants in 2009, and 3rd highest among 54 BRFSS participants in 2010.

Time Trends

From 1984 until 1994, the physical inactivity risk increased from 27.3% to 45.3%. After 1998, however, the trend improved, with the prevalence dropping to a low of 24.5% in 2004. The prevalence has once again begun to rise, to 32.9% in 2010.

Gender

Men: 29.4% (95% CI: 26.9-31.9) in 2009; 31.4% (95% CI: 28.6-34.2) in 2010.
Women: 36.8% (95% CI: 34.7-38.9) in 2009; 34.3% (95% CI: 32.0-36.6) in 2010.
Women had a significantly higher prevalence of physical inactivity than men in 2009 but not 2010.

Age

In general, the prevalence of physical inactivity increased with age. In both years, the prevalence of physical inactivity among persons aged 65 and older was significantly higher than the prevalence among those aged less than 45.

Education

The prevalence of physical inactivity was highest among those with the least education in both 2009 and 2010. About half of those lacking a high school education engaged in no physical activity.

Household Income

The prevalence of physical inactivity was significantly higher among adults with incomes of less than $15,000 in both 2009 and 2010 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, 2009

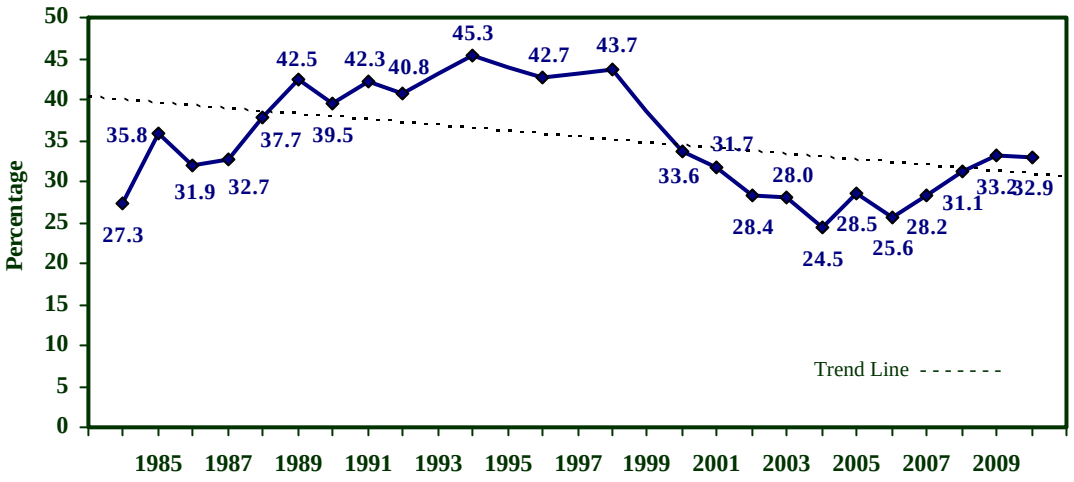
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,845	**29.4**	26.9-31.9	2,972	**36.8**	34.7-38.9	4,817	**33.2**	31.6-34.8
Age									
18-24	66	**14.8**	5.8-23.8	101	**27.8**	18.6-37.0	167	**21.1**	14.6-27.6
25-34	173	**23.5**	16.4-30.5	308	**29.7**	24.1-35.3	481	**26.6**	22.0-31.1
35-44	257	**27.6**	21.6-33.7	393	**28.7**	23.8-33.7	650	**28.2**	24.3-32.1
45-54	358	**34.0**	28.6-39.4	512	**38.0**	33.4-42.6	870	**36.0**	32.5-39.6
55-64	447	**34.5**	29.8-39.2	664	**40.5**	36.4-44.6	1,111	**37.5**	34.4-40.6
65+	541	**36.9**	32.5-41.2	973	**47.9**	44.5-51.3	1,514	**43.2**	40.5-46.0
Education									
Less than H.S.	266	**47.5**	40.1-54.9	425	**55.6**	49.6-61.6	691	**51.6**	46.8-56.4
H.S. or G.E.D.	758	**32.3**	28.2-36.3	1,177	**42.7**	39.3-46.1	1,935	**37.4**	34.7-40.0
Some Post-H.S.	385	**23.3**	18.3-28.4	760	**29.9**	25.9-33.8	1,145	**27.0**	23.9-30.1
College Graduate	433	**17.6**	13.7-21.6	606	**23.1**	19.3-26.9	1,039	**20.5**	17.7-23.2
Income									
Less than $15,000	160	**35.7**	27.0-44.5	396	**50.8**	44.5-57.2	556	**45.1**	39.9-50.4
$15,000- 24,999	304	**37.9**	31.2-44.5	536	**47.7**	42.5-52.9	840	**43.0**	38.8-47.3
$25,000- 34,999	304	**31.8**	25.2-38.4	483	**37.0**	31.7-42.4	787	**34.4**	30.1-38.6
$35,000- 49,999	317	**25.1**	19.5-30.6	475	**29.6**	25.0-34.2	792	**27.5**	23.9-31.1
$50,000- 74,999	269	**25.9**	19.7-32.2	332	**28.8**	23.2-34.5	601	**27.3**	23.1-31.6
$75,000+	317	**19.9**	15.0-24.8	374	**21.2**	16.6-25.7	691	**20.5**	17.1-23.9

Table 3.2 No leisure-time physical activity for exercise by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,670	**31.4**	28.6-34.2	2,729	**34.3**	32.0-36.6	4,399	**32.9**	31.1-34.7
Age									
18-24	58	**28.6**	16.2-41.0	58	**25.2**	13.2-37.1	116	**26.9**	18.3-35.6
25-34	125	**24.4**	16.3-32.6	223	**25.6**	19.5-31.7	348	**25.0**	19.9-30.1
35-44	225	**31.8**	25.0-38.6	338	**31.0**	25.5-36.5	563	**31.4**	27.0-35.8
45-54	306	**29.8**	24.2-35.5	497	**36.8**	32.1-41.6	803	**33.4**	29.7-37.1
55-64	416	**39.5**	34.2-44.7	605	**34.9**	30.7-39.1	1,021	**37.2**	33.8-40.5
65+	530	**33.6**	29.2-38.0	983	**44.4**	40.9-47.8	1,513	**39.8**	37.0-42.5
Education									
Less than H.S.	271	**44.9**	37.2-52.5	394	**50.8**	44.5-57.1	665	**47.7**	42.7-52.7
H.S. or G.E.D.	690	**36.9**	32.2-41.6	1,088	**40.6**	36.9-44.4	1,778	**38.8**	35.8-41.7
Some Post-H.S.	344	**23.7**	18.0-29.5	694	**26.4**	22.0-30.8	1,038	**25.2**	21.7-28.8
College Graduate	362	**17.9**	13.1-22.8	549	**21.4**	17.0-25.8	911	**19.7**	16.4-23.0
Income									
Less than $15,000	163	**37.3**	28.1-46.4	318	**43.0**	36.0-50.0	481	**40.2**	34.5-46.0
$15,000- 24,999	272	**45.8**	38.3-53.3	527	**44.2**	38.8-49.7	799	**44.9**	40.5-49.3
$25,000- 34,999	251	**37.6**	30.0-45.1	409	**33.0**	27.3-38.8	660	**35.1**	30.4-39.9
$35,000- 49,999	300	**27.6**	21.3-33.9	428	**30.8**	25.7-35.9	728	**29.2**	25.1-33.3
$50,000- 74,999	225	**24.5**	17.7-31.4	289	**22.9**	17.1-28.8	514	**23.8**	19.2-28.3
$75,000+	262	**17.7**	12.0-23.4	322	**23.5**	18.4-28.7	584	**20.3**	16.4-24.2

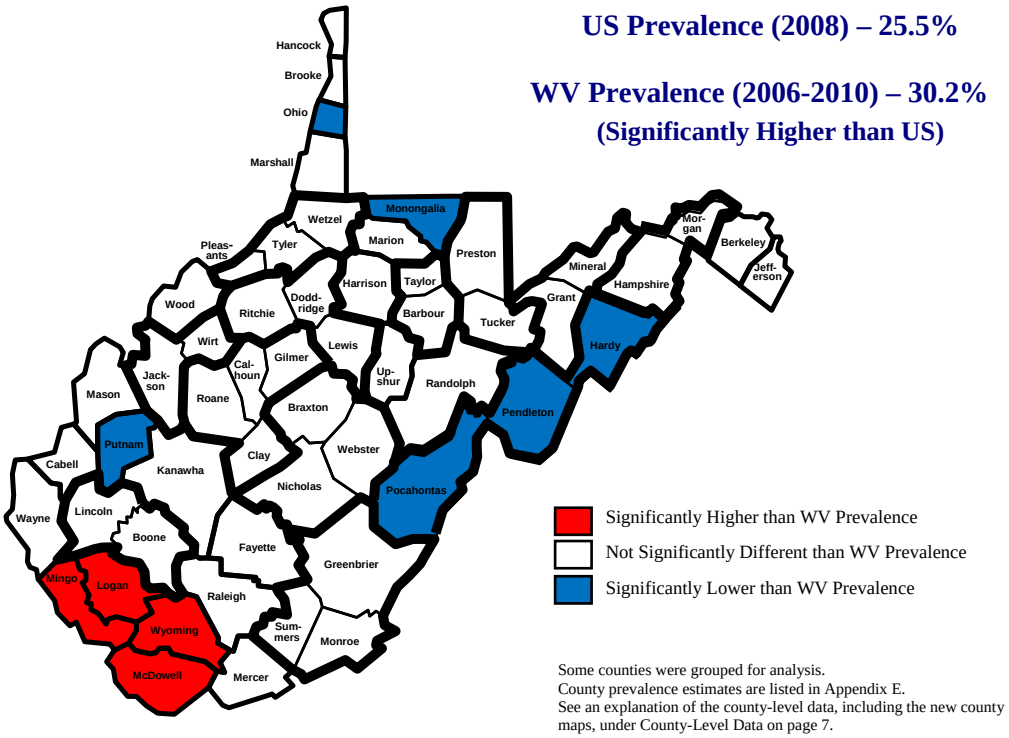
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 3.1 No leisure-time physical activity for exercise by year: WVBRFSS, 1984-2010



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

Figure 3.2 No leisure-time physical activity for exercise by county: WVBRFSS, 2006-2010



CHAPTER 4: NUTRITION

Consumption of Fewer than Five Servings of Fruits and Vegetables Daily

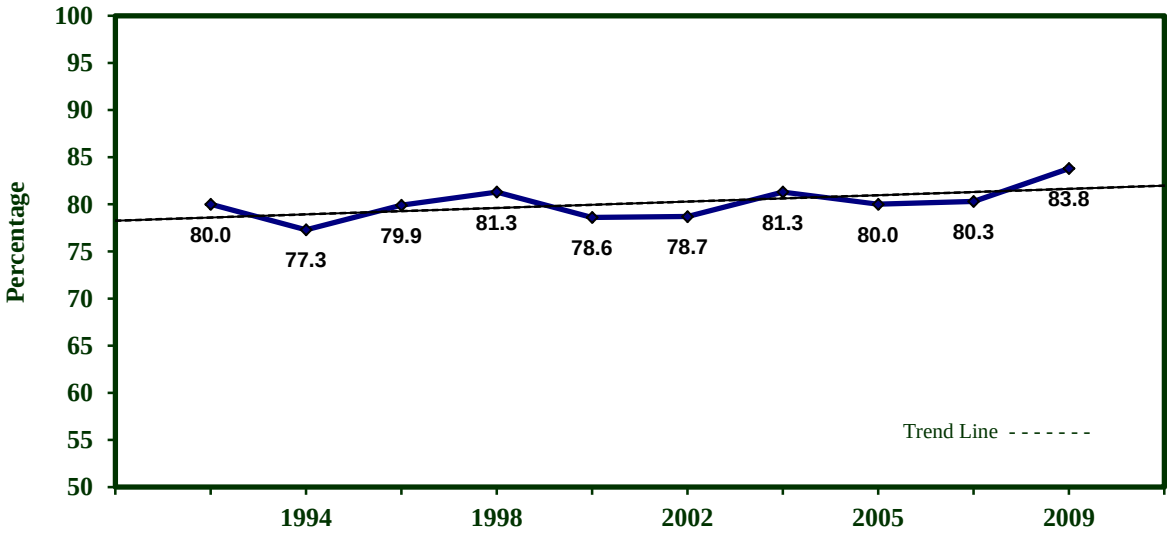
Definition	Consuming fewer than five servings of fruits and vegetables on a daily basis.
Prevalence	**WV: 83.8%** (95% CI: 82.6-85.1) in 2009. **US: 76.3%** (95% CI: 76.0-76.5) in 2009. West Virginia ranked 3rd highest among 54 BRFSS participants in 2009.
Time Trends	From 1990 through 2009, the prevalence of this risk factor has remained stable.
Gender	**Men:** 86.7% (95% CI: 84.8-88.6) in 2009. **Women:** 81.2% (95% CI: 79.5-82.8) in 2009. Men had a significantly higher prevalence of this risk factor than women.
Age	The prevalence of consumption of fewer than 5 servings of fruits and vegetables daily did not vary by age.
Education	Overall, college graduates had a significantly lower prevalence of this risk factor than persons with less than a high school education.
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). Little difference was noted among the other income groups.

Table 4.1 Consumption of fewer than five servings of fruits and vegetables by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,827	**86.7**	84.8-88.6	2,954	**81.2**	79.5-82.8	4,781	**83.8**	82.6-85.1
Age									
18-24	66	**85.2**	76.7-93.7	99	**84.6**	77.2-92.0	165	**84.9**	79.2-90.6
25-34	172	**86.7**	81.1-92.3	307	**82.5**	78.0-87.0	479	**84.6**	81.0-88.2
35-44	255	**87.2**	82.7-91.6	391	**82.0**	77.9-86.1	646	**84.6**	81.6-87.6
45-54	355	**90.5**	87.0-94.0	508	**80.3**	76.5-84.0	863	**85.3**	82.7-87.9
55-64	443	**84.8**	81.3-88.4	662	**81.3**	78.1-84.6	1,105	**83.1**	80.6-85.5
65+	533	**84.9**	81.5-88.2	966	**78.6**	75.8-81.4	1,499	**81.2**	79.1-83.4
Education									
Less than H.S.	260	**92.7**	89.1-96.4	421	**86.4**	82.0-90.7	681	**89.5**	86.7-92.4
H.S. or G.E.D.	752	**89.0**	86.2-91.8	1,169	**85.5**	83.2-87.8	1,921	**87.3**	85.5-89.1
Some Post-H.S.	382	**83.6**	78.6-88.5	756	**78.5**	75.0-81.9	1,138	**80.7**	77.8-83.6
College Graduate	430	**81.1**	77.0-85.3	604	**73.5**	69.6-77.5	1,034	**77.2**	74.3-80.0
Income									
Less than $15,000	156	**91.0**	85.5-96.5	393	**86.3**	82.4-90.2	549	**88.1**	84.9-91.3
$15,000- 24,999	299	**85.7**	80.7-90.7	536	**82.3**	78.1-86.5	835	**83.9**	80.7-87.1
$25,000- 34,999	303	**87.9**	82.7-93.0	481	**83.7**	80.1-87.2	784	**85.8**	82.7-88.9
$35,000- 49,999	316	**87.1**	83.2-90.9	474	**81.5**	77.7-85.4	790	**84.1**	81.3-86.9
$50,000- 74,999	269	**83.6**	77.9-89.3	330	**80.4**	75.6-85.1	599	**82.1**	78.3-85.8
$75,000+	314	**84.9**	80.4-89.4	372	**73.3**	68.4-78.2	686	**79.6**	76.2-82.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 4.1 Consumption of fewer than five servings of fruits and vegetables daily by year: WVBRFSS, 1990-2009



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

CHAPTER 5: OBESITY AND OVERWEIGHT

Obesity and 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). Obesity is defined as a BMI of 30.0 or higher and overweight as a BMI of 25.0-29.9.

Prevalence

Obesity

WV: 31.7% (95% CI: 30.0-33.4) in 2009; **32.9%** (95% CI: 31.0-34.8) in 2010.
US: 27.4% (95% CI: 27.1-27.7) in 2009; **27.8%** (95% CI: 27.6-28.1) in 2010.
West Virginia ranked 6th highest among 54 BRFSS participants in 2009 and 3rd highest among 54 BRFSS participants in 2010.

Overweight

WV: 35.8% (95% CI: 34.1-37.6) in 2009; **35.0%** (95% CI: 33.2-36.9) in 2010.
US: 36.3% (95% CI: 36.0-36.6) in 2009; **36.3%** (95% CI: 36.0-36.6) in 2010.
West Virginia ranked 33rd highest among 54 BRFSS participants in 2009 and 41st highest among 54 BRFSS participants in 2010.

Time Trends

Between 1987 and 2010, a substantial increase in obesity prevalence occurred among West Virginia adults. The prevalence of overweight, in contrast, had only slight year-to-year variations around a flat long-term trend line. During both 2009 and 2010, approximately two-thirds of West Virginia adults were either obese or overweight.

Gender

Obesity

Men: 31.3% (95% CI: 28.7-33.9) in 2009; 33.3% (95% CI: 30.3-36.3) in 2010.
Women: 32.1% (95% CI: 30.0-34.2) in 2009; 32.4% (95% CI: 30.0-34.3) in 2010.

Overweight

Men: 42.3% (95% CI: 39.5-45.1) in 2009; 41.4% (95% CI: 38.4-44.4) in 2010.
Women: 29.4% (95% CI: 27.4-31.4) in 2009; 28.7% (95% CI: 26.5-30.9) in 2010.
There was no significant gender difference for the prevalence of obesity in 2009 or 2010. However, men had a significantly higher prevalence of overweight than women in both years.

Age

There are no consistent age differences in the prevalence of obesity in 2009 or 2010. In contrast, the prevalence of overweight increased with age in both years.

Education and Household Income

Few differences were significant in the prevalence of either obesity or overweight by educational attainment in 2009 and 2010. Similarly, few differences in the prevalence of obesity were noted by household income. While no income differences in the prevalence of overweight were noted in 2009, the prevalence of overweight was significantly higher among those earning more than $75,000 than among those with incomes less than $15,000 in 2010.

Table 5.1 Obesity by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,825	**31.3**	28.7-33.9	2,784	**32.1**	30.0-34.2	4,609	**31.7**	30.0-33.4
Age									
18-24	65	**22.0**	11.7-32.4	94	**21.9**	12.5-31.3	159	**22.0**	14.9-29.0
25-34	172	**22.7**	16.2-29.2	291	**34.2**	28.3-40.2	463	**28.2**	23.7-32.7
35-44	255	**39.8**	33.2-46.4	375	**36.5**	31.3-41.8	630	**38.2**	33.9-42.4
45-54	349	**39.5**	33.9-45.2	479	**39.0**	34.2-43.7	828	**39.2**	35.5-43.0
55-64	445	**36.5**	31.7-41.2	613	**35.2**	31.1-39.3	1,058	**35.8**	32.7-39.0
65+	538	**23.7**	20.0-27.5	922	**24.7**	21.7-27.7	1,460	**24.3**	21.9-26.6
Education									
Less than H.S.	263	**29.4**	23.0-35.8	405	**30.4**	25.2-35.6	668	**29.9**	25.8-34.0
H.S. or G.E.D.	749	**33.5**	29.3-37.7	1,093	**32.3**	29.0-35.7	1,842	**32.9**	30.2-35.6
Some Post-H.S.	381	**31.0**	25.5-36.6	714	**35.5**	31.1-39.9	1,095	**33.5**	30.0-37.0
College Graduate	430	**28.6**	23.7-33.6	571	**28.5**	24.3-32.7	1,001	**28.5**	25.3-31.8
Income									
Less than $15,000	157	**31.0**	22.6-39.4	382	**39.7**	33.3-46.0	539	**36.3**	31.2-41.5
$15,000- 24,999	301	**27.0**	20.7-33.3	509	**29.1**	24.5-33.8	810	**28.1**	24.2-32.0
$25,000- 34,999	299	**28.1**	21.8-34.3	454	**33.3**	27.9-38.7	753	**30.6**	26.4-34.8
$35,000- 49,999	316	**34.4**	28.4-40.5	448	**32.5**	27.5-37.4	764	**33.4**	29.5-37.3
$50,000- 74,999	268	**32.2**	25.8-38.5	309	**33.4**	27.2-39.7	577	**32.8**	28.3-37.2
$75,000+	316	**31.8**	26.0-37.6	357	**31.4**	26.1-36.6	673	**31.6**	27.6-35.6

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

Table 5.2 Obesity by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,651	**33.3**	30.3-36.3	2,527	**32.4**	30.0-34.9	4,178	**32.9**	31.0-34.8
Age									
18-24	56	**34.0**	19.6-48.4	56	**29.2**	16.4-42.1	112	**31.7**	21.9-41.4
25-34	125	**31.5**	22.7-40.3	203	**33.7**	26.7-40.7	328	**32.5**	26.8-38.2
35-44	222	**41.8**	34.8-48.8	310	**32.7**	26.9-38.4	532	**37.4**	32.8-41.9
45-54	306	**33.9**	28.1-39.7	463	**35.3**	30.4-40.1	769	**34.6**	30.8-38.4
55-64	411	**35.9**	30.7-41.0	552	**37.7**	33.2-42.1	963	**36.7**	33.3-40.1
65+	523	**23.8**	19.9-27.7	928	**27.5**	24.3-30.7	1,451	**25.9**	23.4-28.3
Education									
Less than H.S.	266	**28.2**	21.5-34.8	368	**36.8**	30.3-43.3	634	**32.2**	27.5-37.0
H.S. or G.E.D.	683	**35.4**	30.5-40.4	1,010	**34.9**	30.9-38.8	1,693	**35.2**	32.0-38.4
Some Post-H.S.	340	**37.2**	30.7-43.6	635	**28.4**	23.8-32.9	975	**32.3**	28.4-36.1
College Graduate	359	**28.8**	23.0-34.7	510	**30.2**	25.1-35.3	869	**29.5**	25.6-33.4
Income									
Less than $15,000	160	**29.5**	21.1-38.0	308	**40.4**	33.1-47.7	468	**35.1**	29.4-40.8
$15,000- 24,999	268	**28.7**	21.9-35.4	497	**32.0**	27.0-37.0	765	**30.6**	26.5-34.6
$25,000- 34,999	249	**28.2**	21.5-34.9	382	**34.7**	28.0-41.4	631	**31.5**	26.8-36.3
$35,000- 49,999	299	**37.7**	29.9-45.5	396	**30.1**	24.9-35.4	695	**34.0**	29.1-38.9
$50,000- 74,999	224	**37.5**	29.5-45.4	263	**28.5**	22.0-35.1	487	**33.3**	28.0-38.7
$75,000+	262	**39.2**	31.7-46.7	311	**29.3**	23.5-35.1	573	**34.8**	29.9-39.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 5.3 Overweight but not obese by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,825	**42.3**	39.5-45.1	2,784	**29.4**	27.4-31.4	4,609	**35.8**	34.1-37.6
Age									
18-24	65	**31.1**	19.0-43.2	94	**25.0**	15.3-34.7	159	**28.2**	20.3-36.1
25-34	172	**44.0**	36.0-52.0	291	**26.9**	21.6-32.3	463	**35.8**	30.8-40.8
35-44	255	**40.4**	33.9-46.8	375	**25.3**	20.5-30.1	630	**33.0**	28.9-37.0
45-54	349	**44.3**	38.6-50.1	479	**28.7**	24.3-33.2	828	**36.6**	32.9-40.3
55-64	445	**42.5**	37.6-47.5	613	**35.1**	31.0-39.3	1,058	**39.0**	35.7-42.2
65+	538	**48.1**	43.5-52.6	922	**32.5**	29.2-35.8	1,460	**39.3**	36.5-42.1
Education									
Less than H.S.	263	**44.3**	36.8-51.8	405	**31.4**	25.8-36.9	668	**37.9**	33.1-42.6
H.S. or G.E.D.	749	**38.4**	34.1-42.7	1,093	**30.5**	27.3-33.6	1,842	**34.6**	31.9-37.3
Some Post-H.S.	381	**42.7**	36.4-49.1	714	**28.4**	24.3-32.4	1,095	**34.8**	31.1-38.5
College Graduate	430	**48.7**	43.3-54.2	571	**27.4**	23.2-31.7	1,001	**38.0**	34.5-41.4
Income									
Less than $15,000	157	**37.9**	28.6-47.3	382	**25.1**	19.9-30.3	539	**30.0**	25.2-34.9
$15,000- 24,999	301	**39.8**	32.8-46.8	509	**31.5**	26.5-36.5	810	**35.5**	31.2-39.8
$25,000- 34,999	299	**43.4**	36.0-50.9	454	**32.4**	27.2-37.5	753	**38.1**	33.4-42.8
$35,000- 49,999	316	**40.4**	34.2-46.5	448	**30.6**	25.5-35.6	764	**35.3**	31.3-39.2
$50,000- 74,999	268	**46.9**	39.9-53.9	309	**30.5**	24.7-36.3	577	**39.3**	34.7-44.0
$75,000+	316	**46.9**	40.5-53.3	357	**27.0**	21.8-32.2	673	**38.0**	33.7-42.2

Note: Overweight is defined as a body mass index of 25.0-29.9.
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 5.4 Overweight but not obese by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,651	**41.4**	38.4-44.4	2,527	**28.7**	26.5-30.9	4,178	**35.0**	33.2-36.9
Age									
18-24	56	**20.9**	9.7-32.1	56	***14.5**	5.3-23.6	112	**17.7**	10.4-25.1
25-34	125	**42.5**	33.4-51.7	203	**25.1**	18.7-31.5	328	**34.3**	28.5-40.0
35-44	222	**43.4**	36.4-50.5	310	**29.5**	24.1-34.9	532	**36.7**	32.1-41.2
45-54	306	**40.8**	34.8-46.9	463	**30.6**	25.9-35.3	769	**35.8**	31.9-39.7
55-64	411	**47.1**	41.8-52.5	552	**30.8**	26.6-35.1	963	**39.2**	35.7-42.7
65+	523	**46.4**	41.8-51.0	928	**34.3**	31.0-37.7	1,451	**39.6**	36.8-42.4
Education									
Less than H.S.	266	**33.1**	26.2-40.1	368	**31.1**	25.2-36.9	634	**32.2**	27.6-36.7
H.S. or G.E.D.	683	**41.9**	37.2-46.6	1,010	**28.2**	24.7-31.6	1,693	**35.3**	32.3-38.3
Some Post-H.S.	340	**41.6**	34.9-48.2	635	**27.1**	22.7-31.5	975	**33.5**	29.6-37.4
College Graduate	359	**45.8**	39.6-52.0	510	**30.2**	25.6-34.8	869	**38.1**	34.2-42.1
Income									
Less than $15,000	160	**33.0**	24.2-41.8	308	**22.9**	17.7-28.2	468	**27.8**	22.7-32.9
$15,000- 24,999	268	**39.0**	31.8-46.3	497	**31.2**	25.9-36.5	765	**34.5**	30.2-38.8
$25,000- 34,999	249	**46.9**	39.1-54.7	382	**26.7**	21.2-32.1	631	**36.4**	31.5-41.4
$35,000- 49,999	299	**44.6**	37.3-51.8	396	**31.5**	26.0-37.0	695	**38.2**	33.6-42.7
$50,000- 74,999	224	**46.4**	38.5-54.3	263	**27.4**	20.9-33.9	487	**37.6**	32.3-43.0
$75,000+	262	**46.4**	38.9-53.8	311	**32.4**	26.7-38.1	573	**40.2**	35.3-45.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 5.1 Obesity and overweight by year: WVBRFSS, 1987-2010

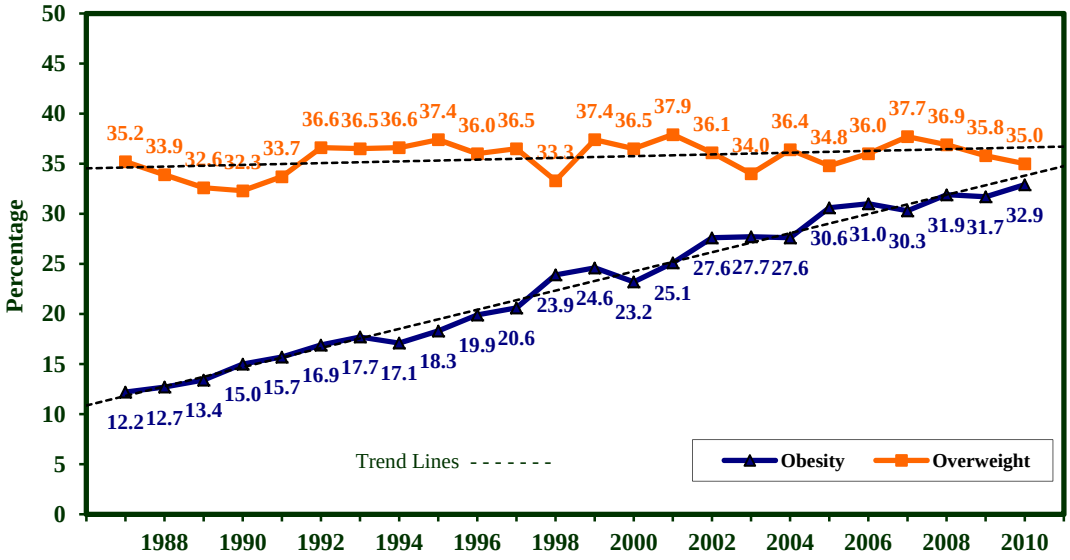
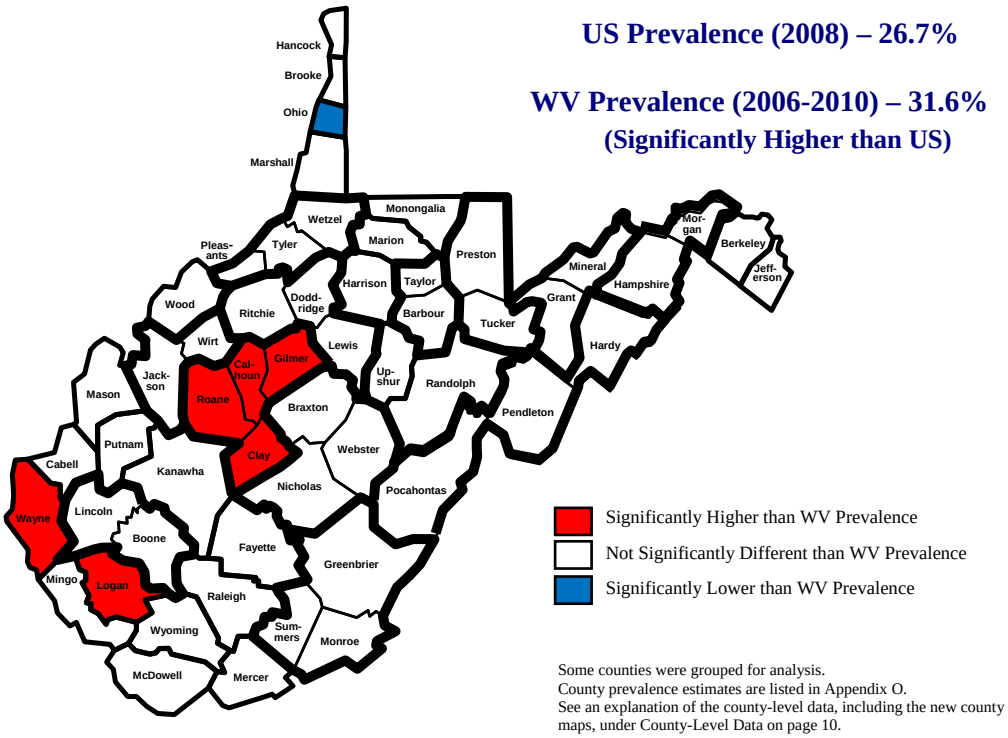


Figure 5.2 Obesity (body mass index of 30.0 or higher) by county: WVBRFSS, 2006-2010



Some counties were grouped for analysis.
County prevalence estimates are listed in Appendix O.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 10.

CHAPTER 6: TOBACCO USE

Current Cigarette Smoking

Definition

Smoking at least 100 cigarettes in one's lifetime and currently smoking every day or some days.

Prevalence

WV: 25.6% (95% CI: 24.0-27.2) in 2009; **26.8%** (95% CI: 25.0-28.6) in 2010.
US: 18.0% (95% CI: 17.8-18.3) in 2009; **17.1%** (95% CI: 16.8-17.3) in 2010.
West Virginia ranked 2nd highest among in 2009 and highest in 2010 among the 54 BRFSS participants.

Time Trends

The 1986 through 2010 trend line shows a very slight decline in the prevalence of smoking among West Virginia adults.

Gender

Men: 27.7% (95% CI: 25.0-30.4) in 2009; 28.3% (95% CI: 25.4-31.1) in 2010.
Women: 23.6% (95% CI: 21.7-25.6) in 2009; 25.4% (95% CI: 23.1-27.7) in 2010.
There were no gender differences in the prevalence of smoking in 2009 or 2010.

Age

The prevalence of smoking was significantly lower among those aged 65 and older than among any other age group in both 2009 and 2010. In both years the prevalence was highest in the 25-34 age group.

Education

Adults with less than a high school degree had a higher prevalence of current cigarette smoking than any group with post-high school educations in both 2009 and 2010. The smoking prevalence among college graduates was significantly lower than other groups in both years.

Household Income

The prevalence of current smoking decreased as household income increased in both years. The highest prevalence was among those earning less than $15,000 per year with over 1 in 3 smoking in 2009 and 1 in 2 smoking in 2010. Less than 1 in 5 adults earning $75,000 or more per year smoked in both 2009 and 2010.

Table 6.1 Current cigarette smoking by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,841	**27.7**	25.0-30.4	2,967	**23.6**	21.7-25.6	4,808	**25.6**	24.0-27.2
Age									
18-24	66	**30.6**	18.5-42.7	101	**30.7**	20.9-40.5	167	**30.7**	22.8-38.5
25-34	173	**49.5**	41.5-57.6	308	**33.5**	27.9-39.2	481	**41.6**	36.6-46.6
35-44	256	**25.8**	19.9-31.7	392	**28.1**	23.2-33.0	648	**26.9**	23.1-30.8
45-54	358	**29.0**	23.8-34.2	512	**25.8**	21.7-29.9	870	**27.4**	24.1-30.7
55-64	447	**22.8**	18.7-27.0	663	**20.8**	17.5-24.2	1,110	**21.8**	19.2-24.5
65+	539	**10.3**	7.5-13.1	971	**11.0**	8.8-13.1	1,510	**10.7**	9.0-12.4
Education									
Less than H.S.	265	**44.1**	36.5-51.8	423	**35.6**	29.8-41.4	688	**39.8**	35.0-44.7
H.S. or G.E.D.	756	**32.0**	27.6-36.4	1,176	**24.6**	21.6-27.6	1,932	**28.4**	25.7-31.1
Some Post-H.S.	385	**24.1**	18.7-29.5	759	**25.8**	21.7-29.8	1,144	**25.0**	21.7-28.3
College Graduate	432	**11.5**	7.8-15.3	606	**11.6**	8.6-14.7	1,038	**11.6**	9.2-14.0
Income									
Less than $15,000	160	**36.6**	27.0-46.2	394	**34.2**	28.0-40.5	554	**35.1**	29.8-40.4
$15,000- 24,999	304	**37.0**	29.8-44.2	536	**32.6**	27.5-37.6	840	**34.7**	30.3-39.0
$25,000- 34,999	303	**36.5**	28.8-44.2	482	**26.5**	21.6-31.5	785	**31.6**	26.9-36.3
$35,000- 49,999	317	**26.1**	20.4-31.7	475	**22.8**	18.0-27.7	792	**24.3**	20.7-28.0
$50,000- 74,999	268	**20.2**	14.3-26.1	332	**15.6**	11.0-20.2	600	**18.0**	14.2-21.8
$75,000+	316	**13.9**	9.1-18.8	374	**13.4**	9.3-17.6	690	**13.7**	10.4-16.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 6.2 Current cigarette smoking by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,667	**28.3**	25.4-31.1	2,726	**25.4**	23.1-27.7	4,393	**26.8**	25.0-28.6
Age									
18-24	58	**32.6**	19.5-45.7	58	**36.5**	23.5-49.6	116	**34.5**	25.2-43.8
25-34	125	**36.7**	27.8-45.7	220	**36.8**	29.9-43.8	345	**36.8**	31.1-42.5
35-44	225	**28.5**	21.8-35.1	338	**29.3**	23.9-34.8	563	**28.9**	24.6-33.2
45-54	305	**36.0**	30.1-41.9	498	**28.9**	24.4-33.4	803	**32.4**	28.7-36.1
55-64	414	**26.2**	21.4-31.1	603	**21.6**	17.9-25.3	1,017	**23.9**	20.8-27.0
65+	530	**11.6**	8.7-14.6	984	**10.2**	8.2-12.2	1,514	**10.8**	9.1-12.5
Education									
Less than H.S.	271	**45.7**	37.9-53.5	393	**38.1**	31.6-44.6	664	**42.1**	36.9-47.2
H.S. or G.E.D.	688	**30.2**	25.5-34.8	1,086	**27.5**	23.7-31.3	1,774	**28.8**	25.8-31.8
Some Post-H.S.	343	**24.3**	18.3-30.2	694	**25.8**	21.2-30.4	1,037	**25.2**	21.5-28.8
College Graduate	362	**15.2**	10.2-20.1	549	**12.1**	8.8-15.4	911	**13.6**	10.7-16.6
Income									
Less than $15,000	163	**53.0**	43.4-62.7	317	**42.0**	34.8-49.2	480	**47.3**	41.3-53.4
$15,000- 24,999	272	**39.7**	32.0-47.4	527	**35.4**	29.7-41.2	799	**37.2**	32.6-41.8
$25,000- 34,999	250	**36.1**	28.1-44.0	408	**21.6**	16.3-27.0	658	**28.4**	23.6-33.3
$35,000- 49,999	299	**20.2**	14.4-26.0	429	**22.4**	17.0-27.8	728	**21.3**	17.3-25.3
$50,000- 74,999	225	**15.9**	10.0-21.7	289	**20.6**	14.6-26.7	514	**18.2**	14.0-22.4
$75,000+	261	**19.3**	12.2-26.4	322	**14.7**	10.4-19.0	583	**17.2**	12.8-21.6

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 6.1 Current cigarette smoking by year: WVBRFSS, 1986-2010

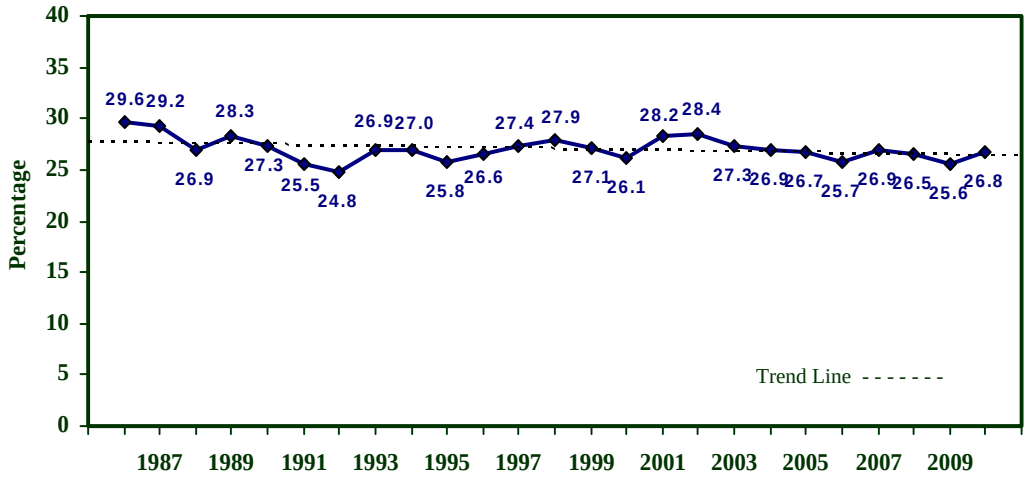
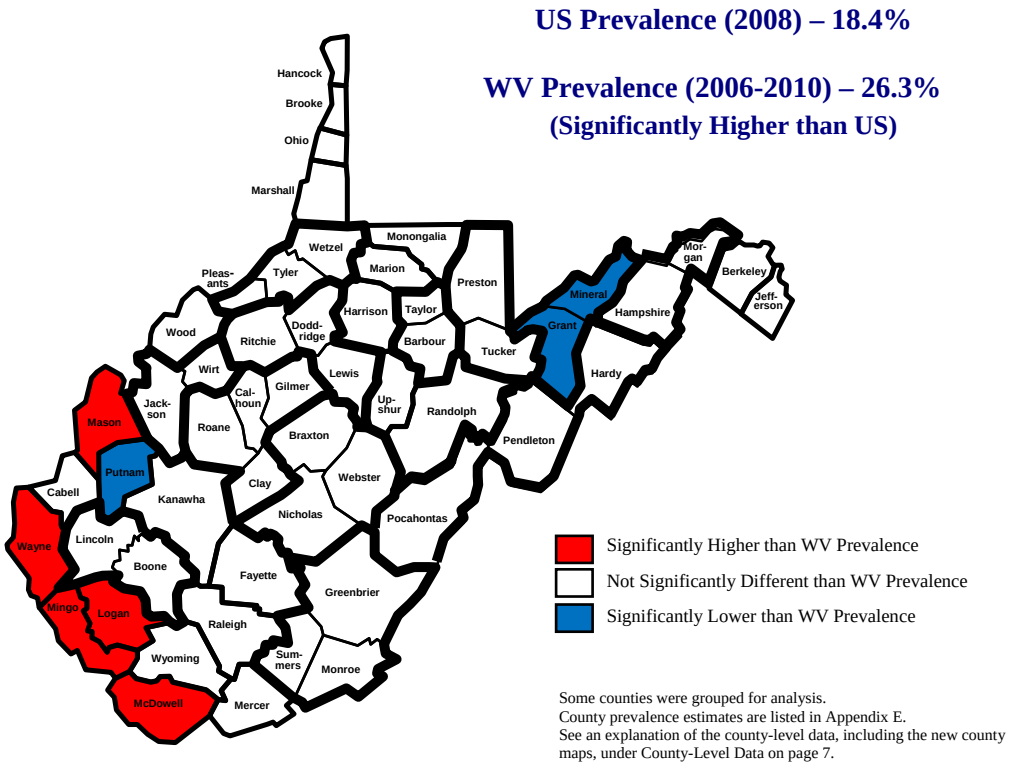


Figure 6.2 Current cigarette smoking by county: WVBRFSS, 2006-2010



Smokeless Tobacco Use

Definition

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

Prevalence

WV: 8.5% (95% CI: 7.3-9.7) in 2009; **7.7%** (95% CI: 6.5-8.8) in 2010.
US: 3.6% (95% CI: 3.5-3.7) in 2009; **3.2%** (95% CI: 3.1-3.3) in 2010.
West Virginia ranked 2nd highest among 54 BRFSS participants in 2009 and 2010.

Gender

Men: 17.1% (95% CI: 14.8-19.4) in 2009; 15.5% (95% CI: 13.2-17.7) in 2010.
Women: *0.4% (95% CI: 0.1-0.6) in 2009; *0.4% (95% CI: 0.1-0.6) in 2010.
The prevalence estimate for SLT use among women was not reliable and should be interpreted with caution. Because of this, no further analysis with the female SLT use data could be performed. (* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.)

Age

Those aged 18-54 had the highest prevalence of this risk factor in 2009 and the 18-44 age group had the highest prevalence in 2010. The oldest age group (65 and older) had a relatively low prevalence, 3.1% and 3.7%, respectively, in 2009 and 2010.

Education

College graduates had the lowest smokeless tobacco use prevalence in both 2009 and 2010 and was significantly lower than among those with a high school education or less.

Household Income

No income differences in the prevalence of smokeless tobacco use were found in 2009 or 2010.

Table 6.3 Smokeless tobacco use by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,844	**17.1**	14.8-19.4	4,816	**8.5**	7.3-9.7
Age						
18-24	66	**19.4**	9.1-29.7	167	**10.3**	4.7-16.0
25-34	173	**22.0**	15.4-28.6	481	**11.1**	7.6-14.6
35-44	257	**24.3**	18.4-30.2	650	**12.3**	9.1-15.5
45-54	358	**20.7**	15.9-25.5	870	**10.3**	7.8-12.8
55-64	447	**10.9**	7.8-14.0	1,111	**5.5**	3.9-7.1
65+	541	**6.2**	3.9-8.5	1,514	**3.1**	2.1-4.2
Education						
Less than H.S.	266	**17.6**	12.3-22.9	691	**9.1**	6.4-11.8
H.S. or G.E.D.	757	**21.3**	17.5-25.2	1,934	**11.0**	8.9-13.1
Some Post-H.S.	385	**17.3**	11.9-22.6	1,145	**7.9**	5.4-10.4
College Graduate	433	**7.9**	4.8-11.0	1,039	**4.0**	2.4-5.5
Income						
Less than $15,000	160	**21.8**	13.2-30.4	556	**8.7**	5.1-12.2
$15,000- 24,999	304	**12.7**	8.1-17.4	840	**6.0**	3.8-8.3
$25,000- 34,999	303	**12.1**	6.7-17.5	786	**6.4**	3.6-9.3
$35,000- 49,999	317	**16.7**	11.3-22.1	792	**8.2**	5.5-10.9
$50,000- 74,999	269	**22.4**	16.1-28.7	601	**11.6**	8.1-15.2
$75,000+	317	**14.2**	9.6-18.7	691	**7.8**	5.3-10.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 6.4 Smokeless tobacco use by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,670	**15.5**	13.2-17.7	4,401	**7.7**	6.5-8.8
Age						
18-24	58	**16.3**	7.0-25.6	116	**8.4**	3.5-13.3
25-34	125	**20.9**	13.3-28.5	348	**10.8**	6.7-14.8
35-44	225	**22.6**	16.7-28.5	563	**11.5**	8.4-14.7
45-54	306	**15.4**	10.9-19.8	804	**7.7**	5.5-10.0
55-64	416	**9.5**	6.3-12.6	1,021	**5.2**	3.5-6.9
65+	530	**8.6**	5.9-11.4	1,514	**3.7**	2.5-5.0
Education						
Less than H.S.	271	**16.5**	10.6-22.4	666	**9.3**	6.1-12.5
H.S. or G.E.D.	690	**19.5**	15.6-23.4	1,778	**9.9**	7.9-12.0
Some Post-H.S.	344	**13.3**	8.6-18.1	1,039	**5.8**	3.7-7.9
College Graduate	362	**8.6**	5.3-11.9	911	**4.3**	2.7-6.0
Income						
Less than $15,000	163	**12.9**	7.1-18.8	481	**6.4**	3.5-9.3
$15,000- 24,999	272	**15.7**	10.1-21.3	799	**6.8**	4.3-9.3
$25,000- 34,999	251	**15.1**	9.1-21.2	660	**7.5**	4.5-10.5
$35,000- 49,999	300	**13.5**	8.4-18.6	729	**6.7**	4.1-9.3
$50,000- 74,999	225	**17.0**	11.1-23.0	514	**8.8**	5.6-12.1
$75,000+	262	**16.2**	10.9-21.4	584	**9.0**	6.0-12.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 7: HYPERTENSION

Hypertension Awareness

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

Prevalence **WV: 37.6%** (95% CI: 36.0-39.3) in 2009.
US: 29.3% (95% CI: 29.0-29.5) in 2009.
West Virginia ranked highest among 54 BRFSS participants in 2009.

Time Trends From 1995 through 2009, hypertension awareness grew steadily.

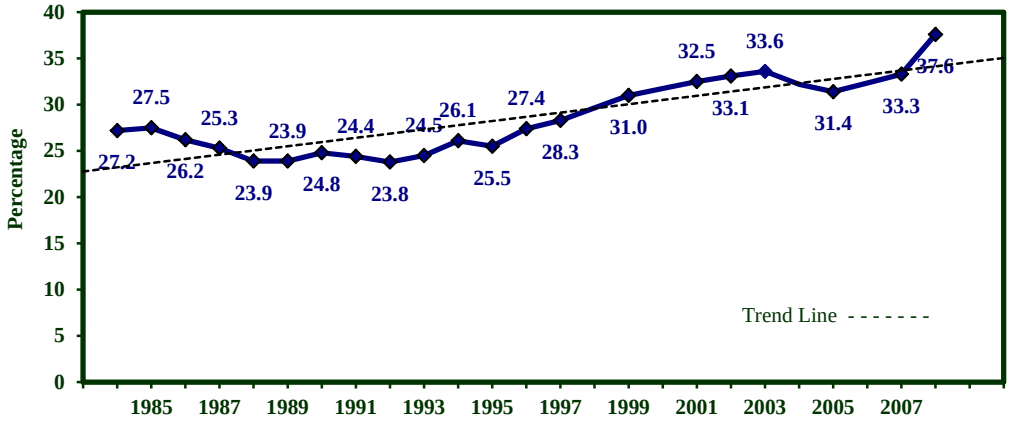
Gender **Men**: 39.0% (95% CI: 36.2-41.7) in 2009.
Women: 36.3% (95% CI: 34.4-38.3) in 2009.
There was no significant gender difference in the prevalence of hypertension in 2009.

Age The prevalence of hypertension increased sharply and significantly with increasing age, a well-known phenomenon.

Education Adults without a high school diploma had a significantly higher prevalence of hypertension than those with more education.

Household Income Similarly, those with less income had significantly higher hypertension prevalence than those with higher incomes.

Figure 7.1 Prevalence of hypertension awareness by year: WVBRFSS, 1984-2009



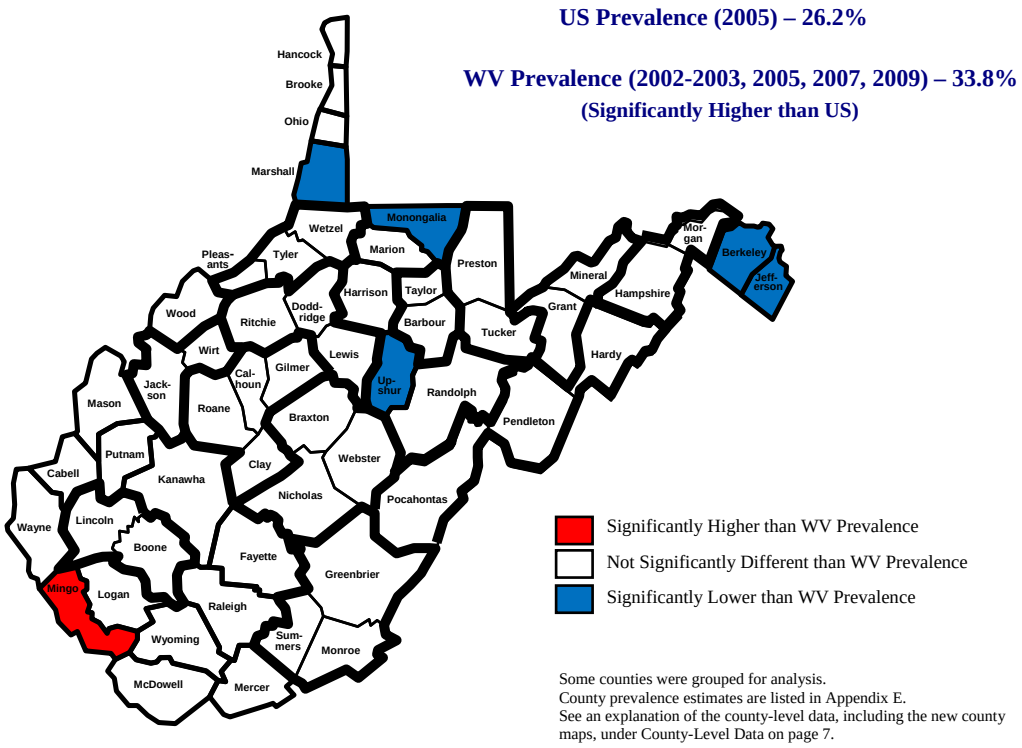
NOTE: Data not available for the years 1998, 2000, 2004, 2006, 2008, and 2010.

Table 7.1 Hypertension awareness by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,845	**39.0**	36.3-41.7	2,970	**36.3**	34.4-38.3	4,815	**37.6**	36.0-39.3
Age									
18-24	66	**16.8**	7.3-26.3	101	***9.9**	3.8-15.9	167	**13.5**	7.7-19.2
25-34	173	**20.1**	13.0-27.1	308	**15.0**	10.7-19.4	481	**17.6**	13.4-21.8
35-44	257	**27.2**	21.4-33.0	393	**19.9**	15.5-24.4	650	**23.5**	19.9-27.2
45-54	358	**49.8**	44.1-55.5	512	**37.7**	33.1-42.3	870	**43.6**	39.9-47.3
55-64	447	**49.7**	44.7-54.6	663	**48.3**	44.1-52.4	1,110	**49.0**	45.7-52.2
65+	541	**61.4**	56.9-65.8	972	**65.1**	61.9-68.4	1,513	**63.5**	60.9-66.2
Education									
Less than H.S.	266	**48.4**	41.0-55.9	424	**49.5**	43.6-55.4	690	**49.0**	44.2-53.7
H.S. or G.E.D.	758	**39.9**	35.7-44.1	1,177	**40.5**	37.2-43.7	1,935	**40.2**	37.5-42.9
Some Post-H.S.	385	**33.5**	28.0-38.9	760	**32.1**	28.3-35.9	1,145	**32.7**	29.5-35.9
College Graduate	433	**36.9**	31.8-42.0	605	**25.9**	22.2-29.6	1,038	**31.2**	28.1-34.3
Income									
Less than $15,000	160	**49.3**	39.5-59.0	396	**50.0**	43.7-56.3	556	**49.7**	44.4-55.1
$15,000- 24,999	304	**40.7**	33.8-47.5	535	**42.3**	37.4-47.3	839	**41.5**	37.4-45.7
$25,000- 34,999	304	**44.5**	37.2-51.7	483	**39.8**	34.6-45.1	787	**42.2**	37.7-46.6
$35,000- 49,999	317	**37.9**	31.9-43.9	475	**32.8**	28.2-37.5	792	**35.2**	31.4-38.9
$50,000- 74,999	269	**30.9**	24.9-36.9	332	**23.2**	18.5-27.9	601	**27.2**	23.4-31.1
$75,000+	317	**37.6**	31.5-43.7	373	**24.0**	19.4-28.7	690	**31.4**	27.4-35.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 7.2 Hypertension awareness by county: WVBRFSS, 2002- 2003, 2005, 2007, 2009



Some counties were grouped for analysis.
County prevalence estimates are listed in Appendix E.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 7.

CHAPTER 8: CHOLESTEROL

High Cholesterol Awareness

Definition

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

Prevalence

WV: 38.5% (95% CI: 36.7-40.2) in 2009.
US: 38.0% (95% CI: 37.7-38.4) in 2009.
West Virginia ranked 22nd highest among 54 BRFSS participants in 2009.

Time Trends

Between 1995 and 2009, the prevalence of high cholesterol among West Virginia adults generally increased.

Gender

Men: 37.2% (95% CI: 34.4-40.0) in 2009.
Women: 39.6% (95% CI: 37.4-41.8) in 2009.
There is no gender difference in the prevalence of high cholesterol.

Age

Generally, the prevalence of high cholesterol increased with increasing age.

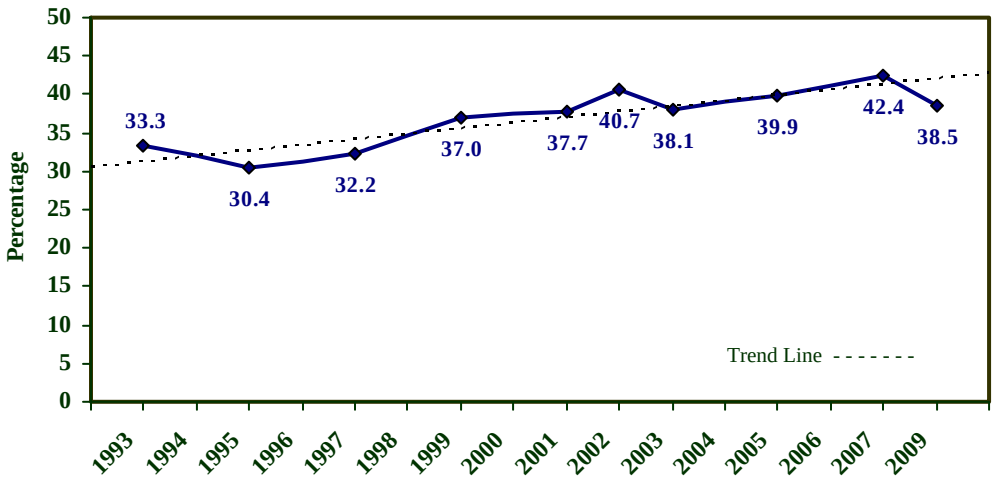
Education

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, 1993-2009



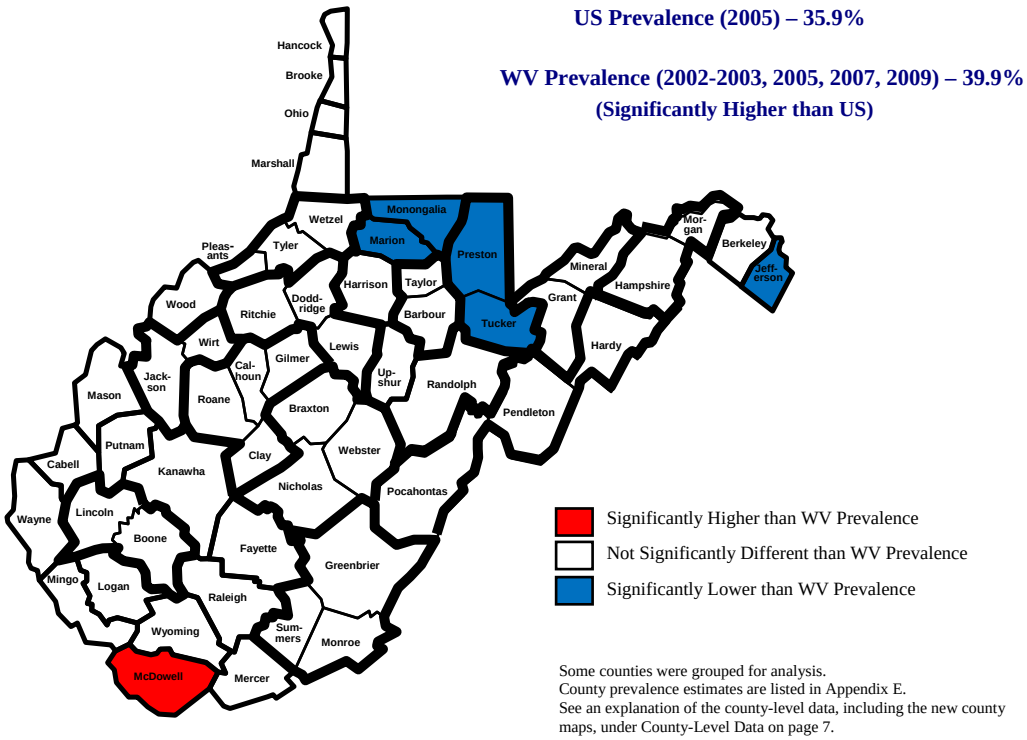
NOTES: Data not available for the years 1994, 1996, 1998, 2000, 2004, 2006, 2008 and 2010.

Table 8.1 Prevalence of high cholesterol among those who have ever had their blood cholesterol checked by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,556	**37.2**	34.4-40.0	2,587	**39.6**	37.4-41.8	4,143	**38.5**	36.7-40.2
Age									
18-24	33	**12.2**	1.5-22.9	49	**12.5**	2.0-22.9	82	**12.3**	4.8-19.8
25-34	95	**16.1**	8.6-23.7	188	**17.0**	11.2-22.8	283	**16.6**	11.8-21.3
35-44	199	**37.4**	30.0-44.8	329	**27.9**	22.6-33.2	528	**32.5**	27.9-37.0
45-54	309	**42.7**	36.7-48.8	462	**42.5**	37.6-47.5	771	**42.6**	38.7-46.5
55-64	410	**46.6**	41.5-51.7	623	**51.9**	47.7-56.2	1,033	**49.3**	46.0-52.6
65+	507	**43.3**	38.6-47.9	915	**51.9**	48.4-55.5	1,422	**48.3**	45.4-51.1
Education									
Less than H.S.	211	**50.5**	42.7-58.2	356	**50.8**	44.3-57.3	567	**50.6**	45.6-55.6
H.S. or G.E.D.	617	**38.4**	33.9-42.9	1,021	**42.5**	38.9-46.0	1,638	**40.5**	37.6-43.3
Some Post-H.S.	326	**34.8**	28.6-40.9	659	**33.7**	29.5-38.0	985	**34.2**	30.6-37.8
College Graduate	399	**30.7**	25.9-35.6	548	**34.7**	30.4-39.1	947	**32.8**	29.5-36.0
Income									
Less than $15,000	122	**58.2**	47.2-69.2	337	**47.9**	41.4-54.5	459	**51.6**	45.8-57.3
$15,000- 24,999	251	**37.8**	30.7-44.9	454	**40.6**	35.4-45.8	705	**39.3**	34.9-43.6
$25,000- 34,999	255	**38.0**	30.8-45.2	415	**43.4**	37.6-49.2	670	**40.8**	36.2-45.4
$35,000- 49,999	272	**39.3**	32.7-45.8	415	**42.3**	37.0-47.6	687	**40.9**	36.7-45.0
$50,000- 74,999	230	**28.6**	22.3-34.9	299	**35.9**	29.6-42.2	529	**32.3**	27.8-36.7
$75,000+	290	**32.8**	26.9-38.6	344	**28.6**	23.6-33.7	634	**30.8**	26.9-34.8

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 8.2 High cholesterol awareness by county: WVBRFSS, 2002-2003, 2005, 2007, 2009



Some counties were grouped for analysis.
County prevalence estimates are listed in Appendix E.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 7.

CHAPTER 9: ALCOHOL CONSUMPTION

Binge Drinking

Definition	Consumption of five or more alcoholic drinks for males, or four or more alcoholic drinks for females, on a single occasion during the past one month.
Prevalence	**WV: 9.2%** (95% CI: 7.9-10.4) in 2009; **9.0%** (95% CI: 7.6-10.4) in 2010. **US: 15.1%** (95% CI: 14.9-15.4) in 2009; **14.7%** (95% CI: 14.5-14.9) in 2010. West Virginia ranked 3rd lowest among 54 BRFSS participants in both 2009 and 2010.
Time Trends	Overall from 1984 through 2010, there was a decline in the prevalence of binge drinking.
Gender	**Men**: 14.5% (95% CI: 12.3-16.8) in 2009; 13.6% (95% CI: 11.2-16.1) in 2010. **Women**: 4.1% (95% CI: 3.2-5.1) in 2009; 4.7% (95% CI: 3.4-6.0) in 2010. Men had a significantly higher prevalence of binge drinking than women in both 2009 and 2010.
Age	Younger adults had higher rates of binge drinking than those aged 55 and older. The prevalence ranged from highs of 16%-18% among the 18-24 age group to lows of only 1%-2% among those aged 65 and older.
Education	There was no significant education difference in the prevalence of binge drinking.
Household Income	There was no consistent income difference in the prevalence of binge drinking; however, the highest income groups ($50,000 and above annually) had the highest prevalence in both 2009 and 2010.

Table 9.1 Binge drinking by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,817	**14.5**	12.3-16.8	2,953	**4.1**	3.2-5.1	4,770	**9.2**	7.9-10.4
Age									
18-24	65	**27.6**	16.1-39.1	100	***4.2**	0.4-7.9	165	**16.2**	9.7-22.7
25-34	171	**26.5**	19.2-33.8	306	**10.2**	6.6-13.9	477	**18.5**	14.3-22.7
35-44	252	**15.5**	10.9-20.0	391	**4.8**	2.6-7.0	643	**10.1**	7.6-12.6
45-54	352	**12.7**	8.9-16.5	509	**4.4**	2.4-6.3	861	**8.4**	6.3-10.6
55-64	438	**7.7**	4.9-10.4	662	***2.7**	1.1-4.2	1,100	**5.1**	3.6-6.7
65+	536	**2.2**	1.0-3.4	965	***0.5**	0.1-0.9	1,501	**1.2**	0.7-1.8
Education									
Less than H.S.	261	**10.4**	5.2-15.5	421	***3.8**	0.9-6.6	682	**7.0**	4.1-9.9
H.S. or G.E.D.	745	**14.8**	11.2-18.3	1,173	**2.7**	1.6-3.7	1,918	**8.8**	6.9-10.7
Some Post-H.S.	380	**17.9**	12.3-23.4	754	**5.8**	3.6-8.0	1,134	**11.1**	8.3-13.9
College Graduate	428	**13.3**	9.2-17.4	601	**5.0**	3.0-7.0	1,029	**9.0**	6.7-11.3
Income									
Less than $15,000	156	**15.8**	7.5-24.1	394	**5.0**	2.2-7.9	550	**9.1**	5.4-12.8
$15,000- 24,999	301	**10.1**	5.3-14.9	534	**4.6**	2.3-6.9	835	**7.2**	4.6-9.8
$25,000- 34,999	301	**10.9**	6.2-15.5	481	***2.4**	0.7-4.2	782	**6.7**	4.2-9.2
$35,000- 49,999	315	**11.6**	7.0-16.2	472	**4.0**	1.8-6.3	787	**7.6**	5.1-10.0
$50,000- 74,999	266	**18.4**	11.8-24.9	330	***2.6**	0.7-4.4	596	**10.8**	7.1-14.5
$75,000+	313	**19.2**	13.5-25.0	373	**6.7**	3.9-9.5	686	**13.4**	10.0-16.9

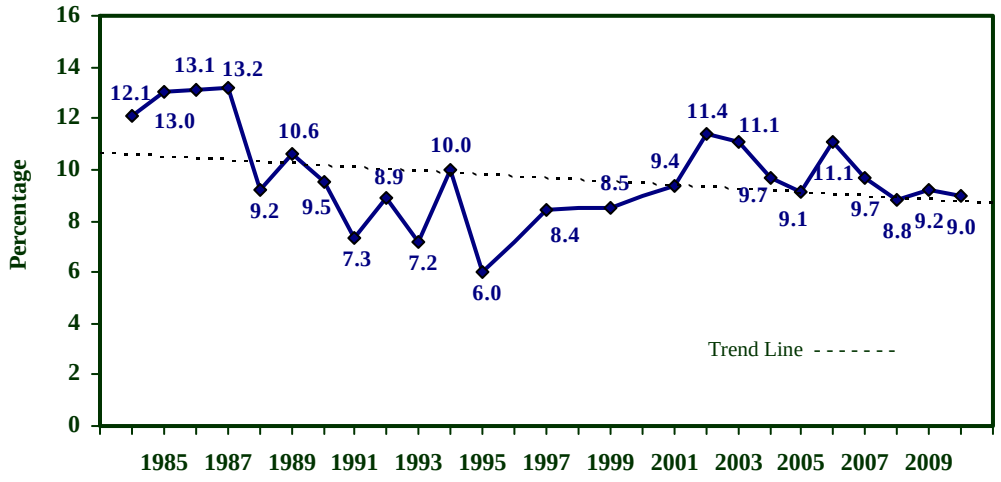
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 9.2 Binge drinking by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,648	**13.6**	11.2-16.1	2,719	**4.7**	3.4-6.0	4,367	**9.0**	7.6-10.4
Age									
18-24	58	**23.5**	11.1-36.0	58	***12.6**	3.3-21.9	116	**18.2**	10.3-26.2
25-34	123	**19.8**	12.4-27.2	222	**8.6**	4.6-12.6	345	**14.2**	9.9-18.4
35-44	222	**17.6**	12.2-23.0	336	**6.8**	3.7-9.9	558	**12.2**	9.0-15.3
45-54	300	**13.0**	8.9-17.1	493	**3.4**	1.7-5.1	793	**8.1**	5.9-10.3
55-64	409	**8.6**	5.2-12.0	602	***1.6**	0.6-2.6	1,011	**5.0**	3.2-6.8
65+	527	**3.2**	1.7-4.8	983	***0.4**	0.0-0.8	1,510	**1.6**	0.9-2.3
Education									
Less than H.S.	270	**13.3**	6.7-20.0	393	***0.8**	0.0-0.2	663	**7.3**	3.6-10.9
H.S. or G.E.D.	676	**14.4**	10.3-18.4	1,084	**5.9**	3.1-8.6	1,760	**10.1**	7.7-12.6
Some Post-H.S.	340	**14.0**	8.9-19.2	694	**4.6**	2.4-6.8	1,034	**8.6**	6.1-11.2
College Graduate	359	**12.1**	8.2-15.9	544	**5.1**	2.7-7.4	903	**8.5**	6.2-10.7
Income									
Less than $15,000	162	**11.1**	5.6-16.6	315	***4.9**	1.1-8.7	477	**7.9**	4.6-11.2
$15,000- 24,999	268	**13.1**	6.7-19.4	526	***3.2**	0.6-5.7	794	**7.2**	4.1-10.3
$25,000- 34,999	247	**10.7**	5.7-15.6	408	***4.8**	0.6-9.0	655	**7.5**	4.3-10.8
$35,000- 49,999	300	**8.8**	4.8-12.8	428	***6.1**	1.6-10.6	728	**7.4**	4.4-10.4
$50,000- 74,999	223	**19.5**	12.7-26.2	289	***6.3**	2.2-10.3	512	**13.1**	9.0-17.2
$75,000+	258	**14.9**	8.1-21.6	320	**6.1**	3.1-9.1	578	**10.8**	6.8-14.8

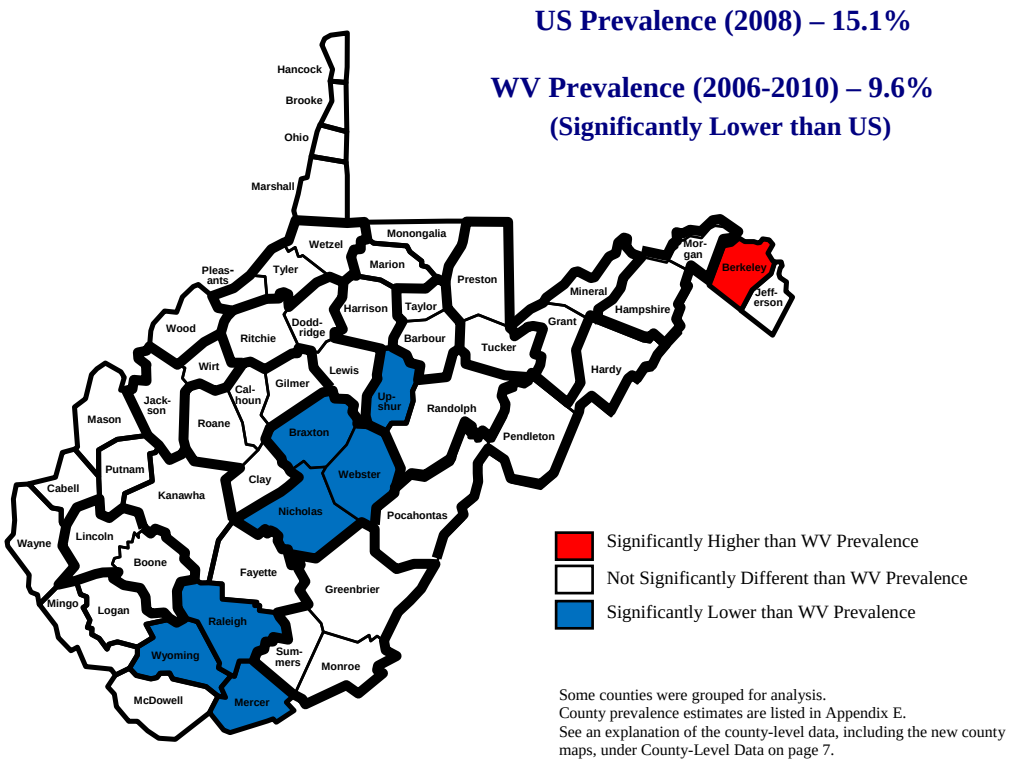
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 9.1 Binge drinking by year: WVBRFSS, 1984-2010



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

Figure 9.2 Binge drinking by county: WVBRFSS, 2006-2010



Heavy Drinking [1]

Definition

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

Prevalence

WV: 2.7% (95% CI: 2.1-3.3) in 2009; **2.8%** (95% CI: 2.1-3.5) in 2010.
US: 5.1% (95% CI: 5.0-5.3) in 2009; **4.9%** (95% CI: 4.7-5.0) in 2010.
West Virginia ranked 2nd lowest among 54 BRFSS participants in 2009 and 2010.

Time Trends

From 1989 through 2010, the prevalence of heavy drinking among West Virginia adults has remained stable.

Gender

Men: 3.6% (95% CI: 2.5-4.8) in 2009; 3.7% (95% CI: 2.6-4.8) in 2010.
Women: 1.8% (95% CI: 1.2-2.4) in 2009; 2.0% (95% 1.2-2.9) in 2010.
The prevalence of heavy drinking was significantly higher among men than women in 2009 but not 2010.

Age

There were no consistent age differences in the prevalence of heavy drinking in 2009 but those aged 65 and older had the lowest prevalence. In 2010, the prevalence of heavy drinking was significantly lower among those aged 65 and older than among the 35-44 and 45-54 age groups.

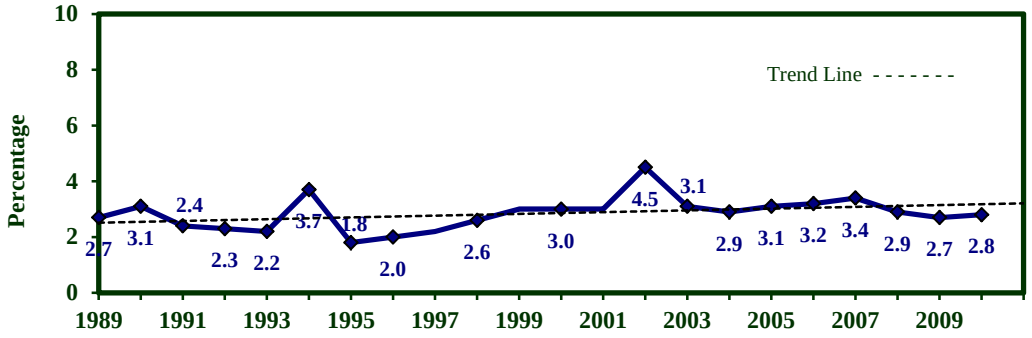
Education

There was no consistent education difference in the prevalence of heavy drinking in 2009 or 2010.

Household Income

There was no income difference in the prevalence of heavy drinking in 2009 or 2010.

Figure 9.3 Heavy drinking by year: WVBRFSS, 1989-2010



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

[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 9.3 Heavy drinking by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,807	**3.6**	2.5-4.8	2,945	**1.8**	1.2-2.4	4,752	**2.7**	2.1-3.3
Age									
18-24	63	***5.9**	0.2-11.7	100	***1.6**	0.0-4.0	163	***3.8**	0.7-6.9
25-34	170	***4.8**	1.2-8.4	304	***2.2**	0.5-3.8	474	**3.5**	1.5-5.5
35-44	251	***2.9**	0.5-5.3	391	***1.8**	0.4-3.2	642	***2.3**	0.9-3.7
45-54	347	**3.7**	1.6-5.7	505	***2.6**	1.0-4.2	852	**3.1**	1.8-4.4
55-64	437	**3.8**	1.7-5.9	661	***2.0**	0.6-3.3	1,098	**2.9**	1.6-4.1
65+	536	**1.6**	0.7-2.5	964	***1.0**	0.3-1.6	1,500	**1.2**	0.7-1.8
Education									
Less than H.S.	259	***4.0**	1.1-6.9	421	***0.3**	0.0-0.8	680	***2.1**	0.7-3.5
H.S. or G.E.D.	740	**3.7**	2.0-5.3	1,170	**1.4**	0.6-2.2	1,910	**2.5**	1.6-3.5
Some Post-H.S.	377	***5.1**	1.7-8.5	750	***2.4**	0.9-3.9	1,127	**3.6**	1.9-5.3
College Graduate	428	***1.8**	0.6-3.0	600	**2.8**	1.5-4.2	1,028	**2.3**	1.4-3.2
Income									
Less than $15,000	154	***2.3**	0.2-4.4	393	***1.8**	0.2-3.3	547	***2.0**	0.7-3.2
$15,000- 24,999	298	***5.0**	1.3-8.7	534	***1.6**	0.1-3.2	832	***3.2**	1.3-5.1
$25,000- 34,999	301	***3.2**	1.1-5.3	482	***1.3**	0.2-2.5	783	**2.3**	1.1-3.5
$35,000- 49,999	313	***2.1**	0.0-4.2	471	***2.1**	0.6-3.5	784	***2.1**	0.8-3.3
$50,000- 74,999	265	***3.3**	0.3-6.3	328	***1.7**	0.0-3.3	593	***2.5**	0.8-4.3
$75,000+	313	***3.8**	1.1-6.5	371	***3.3**	1.2-5.5	684	**3.6**	1.8-5.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 9.4 Heavy drinking by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,636	**3.7**	2.6-4.8	2,708	**2.0**	1.2-2.9	4,344	**2.8**	2.1-3.5
Age									
18-24	57	***1.6**	0.0-3.9	57	***4.1**	0.0-10.0	114	***2.8**	0.0-5.9
25-34	124	***3.8**	0.1-7.4	221	***1.8**	0.0-3.6	345	***2.8**	0.7-4.9
35-44	220	**6.5**	3.1-9.9	334	***1.7**	0.3-3.1	554	**4.1**	2.3-5.9
45-54	296	**4.3**	1.9-6.8	493	**3.1**	1.4-4.9	789	**3.7**	2.2-5.2
55-64	404	***4.2**	1.4-7.0	600	***1.5**	0.4-2.5	1,004	**2.8**	1.3-4.3
65+	525	***1.2**	0.4-2.1	978	***1.1**	0.2-1.9	1,503	**1.2**	0.5-1.8
Education									
Less than H.S.	268	***4.9**	1.5-8.4	391	***0.1**	0.0-0.3	659	***2.6**	0.8-4.4
H.S. or G.E.D.	674	**4.7**	2.7-6.7	1,079	***1.9**	0.3-3.6	1,753	**3.3**	2.0-4.7
Some Post-H.S.	336	***1.9**	0.3-3.5	691	**2.3**	1.0-3.6	1,027	**2.2**	1.1-3.2
College Graduate	355	***2.4**	0.7-4.1	543	**3.1**	1.4-4.8	898	**2.8**	1.6-4.0
Income									
Less than $15,000	160	***5.4**	1.5-9.3	314	***0.9**	0.1-1.7	474	***3.1**	1.1-5.0
$15,000- 24,999	266	***3.8**	0.8-6.9	525	***1.5**	0.0-3.1	791	***2.5**	0.9-4.0
$25,000- 34,999	247	***4.0**	1.3-6.7	407	***3.7**	0.0-7.8	654	***3.8**	1.3-6.4
$35,000- 49,999	296	***3.9**	1.0-6.7	425	***2.3**	0.6-4.0	721	**3.1**	1.4-4.7
$50,000- 74,999	221	***3.8**	1.1-6.5	289	***1.1**	0.2-2.1	510	**2.5**	1.1-4.0
$75,000+	258	***4.6**	0.9-8.3	320	***3.1**	1.0-5.2	578	**3.9**	1.7-6.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 10: ORAL HEALTH

No Teeth Cleaning in the Past Year

Definition

Responding with "Longer than a year ago" to the following question: "How long has it been since you had your teeth cleaned by a dentist or dental hygienist?" (The responses reported for this section were limited to those who had not had all their teeth extracted. The totals include those who reported never seeing a dentist.)

Prevalence

WV: 38.6% (95% CI: 36.4-40.7) in 2010.
US: 32.1% (95% CI: 31.8-32.4) in 2010.
West Virginia ranked 8th highest among 54 BRFSS participants in 2010.

Gender

Men: 42.5% (95% CI: 39.1-46.0) in 2010.
Women: 34.8% (95% CI: 32.2-37.5) in 2010.
The prevalence of lack of teeth cleaning in past year was significantly higher among men than women.

Age, Education, and Household Income

Only slight differences in the prevalence of this risk factor were observed with the different age groups. Higher levels of educational attainment and income were associated with better dental habits. The highest prevalence of this risk factor was among those with less than a high school education, in households with an annual income of less than $15,000, and in the 25-34 age group.

Table 10.1 No Teeth Cleaning by a Dentist or Dental Hygienist in the Past Year: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,349	**42.5**	39.1-46.0	2,196	**34.8**	32.2-37.5	3,545	**38.6**	36.4-40.7
Age									
18-24	55	**45.9**	31.4-60.4	57	**36.6**	23.3-50.0	112	**41.3**	31.4-51.2
25-34	123	**45.3**	35.8-54.7	221	**41.3**	34.2-48.4	344	**43.3**	37.4-49.2
35-44	216	**47.5**	40.2-54.8	326	**35.4**	29.7-41.2	542	**41.5**	36.8-46.2
45-54	273	**41.7**	35.2-48.2	451	**32.6**	27.8-37.5	724	**37.0**	33.0-41.1
55-64	341	**39.1**	33.2-44.9	489	**30.9**	26.4-35.5	830	**35.0**	31.2-38.7
65+	332	**34.0**	28.6-39.4	634	**33.1**	29.0-37.2	966	**33.5**	30.2-36.8
Education									
Less than H.S.	155	**67.6**	57.6-77.6	216	**58.7**	50.2-67.3	371	**63.5**	56.8-70.2
H.S. or G.E.D.	546	**49.1**	43.6-54.6	839	**41.8**	37.3-46.3	1,385	**45.5**	42.0-49.1
Some Post-H.S.	302	**36.8**	29.7-43.9	613	**32.6**	27.4-37.7	915	**34.3**	30.1-38.6
College Graduate	344	**22.4**	16.4-28.5	527	**15.3**	11.1-19.5	871	**18.8**	15.1-22.5
Income									
Less than $15,000	111	**73.8**	64.3-83.4	217	**69.8**	61.6-78.1	328	**71.8**	65.5-78.2
$15,000- 24,999	189	**55.4**	46.3-64.4	372	**57.6**	51.2-64.0	561	**56.7**	51.4-62.0
$25,000- 34,999	186	**48.8**	39.7-57.9	319	**37.0**	29.5-44.6	505	**42.5**	36.6-48.4
$35,000- 49,999	256	**34.8**	27.3-42.3	371	**28.2**	22.1-34.3	627	**31.5**	26.7-36.3
$50,000- 74,999	210	**37.3**	28.8-45.7	280	**19.2**	13.0-25.4	490	**28.4**	22.9-33.9
$75,000+	249	**22.9**	15.1-30.7	316	**9.2**	5.7-12.7	565	**16.6**	11.9-21.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Other Dental Issues

Table 10.2 No visit to a dentist or dental clinic in the past year for any reason by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,655	**42.5**	39.4-45.5	2,701	**36.6**	34.3-39.0	4,356	**39.5**	37.5-41.4
Age									
18-24	56	**35.0**	21.6-48.4	58	**27.0**	15.2-38.8	114	**31.0**	22.1-40.0
25-34	125	**39.0**	29.8-48.2	221	**35.2**	28.3-42.1	346	**37.1**	31.4-42.9
35-44	225	**44.6**	37.5-51.7	336	**31.0**	25.5-36.5	561	**37.8**	33.3-42.4
45-54	304	**40.7**	34.6-46.9	497	**33.8**	29.1-38.5	801	**37.2**	33.3-41.0
55-64	415	**42.5**	37.1-47.8	601	**36.7**	32.5-41.0	1,016	**39.6**	36.2-43.0
65+	520	**50.6**	45.9-55.2	965	**48.9**	45.5-52.4	1,485	**49.6**	46.8-52.4
Education									
Less than H.S.	266	**70.3**	62.6-78.1	385	**63.0**	56.5-69.4	651	**66.8**	61.7-71.9
H.S. or G.E.D.	683	**46.4**	41.6-51.3	1,076	**42.6**	38.7-46.5	1,759	**44.5**	41.4-47.7
Some Post-H.S.	341	**36.0**	29.5-42.5	691	**32.1**	27.4-36.8	1,032	**33.7**	29.9-37.6
College Graduate	362	**20.2**	14.5-25.9	545	**13.3**	10.1-16.5	907	**16.7**	13.4-20.0
Income									
Less than $15,000	162	**68.5**	59.7-77.2	313	**64.0**	56.9-71.2	475	**66.2**	60.5-71.8
$15,000- 24,999	264	**58.8**	51.2-66.3	517	**57.7**	52.2-63.2	781	**58.1**	53.7-62.6
$25,000- 34,999	251	**53.6**	45.8-61.4	404	**42.7**	36.1-49.4	655	**47.9**	42.8-53.0
$35,000- 49,999	297	**34.7**	27.8-41.5	428	**30.0**	24.4-35.6	725	**32.3**	27.9-36.7
$50,000- 74,999	225	**35.2**	27.1-43.3	289	**16.0**	10.7-21.4	514	**26.0**	20.8-31.2
$75,000+	262	**17.1**	11.5-22.6	322	**7.5**	4.5-10.6	584	**12.7**	9.4-16.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 10.3 Permanent natural teeth risks by demographic characteristics: WVBRFSS, 2010

Characteristic	No Teeth Missing (all ages)			6 or More Teeth Missing (all ages)			All Teeth Missing (aged 65 and over only)		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	4,346	**39.9**	37.9-42.0	4,346	**30.0**	28.4-31.5	1,486	**36.0**	33.3-38.8
Males	1,653	**41.1**	37.9-44.4	1,653	**28.8**	26.3-31.3	522	**36.9**	32.4-41.4
Females	2,693	**38.8**	36.2-41.4	2,693	**31.0**	29.0-33.1	964	**35.4**	32.0-38.7
Age									
18-24	116	**82.8**	75.4-90.1	116	***2.4**	0.0-5.1			
25-34	347	**63.9**	58.3-69.6	347	**6.1**	3.3-9.0			
35-44	561	**50.3**	45.7-54.9	561	**14.1**	10.8-17.5			
45-54	795	**33.7**	30.0-37.4	795	**29.5**	25.9-33.2			
55-64	1,009	**18.8**	16.1-21.4	1,009	**42.7**	39.2-46.1			
65+	1,486	**11.9**	10.0-13.7	1,486	**66.6**	63.9-69.2	1,486	**36.0**	33.3-38.8
Education									
Less than H.S.	659	**17.2**	12.1-22.3	659	**58.1**	52.8-63.4	348	**60.8**	55.2-66.5
H.S. or G.E.D.	1,755	**31.6**	28.3-34.9	1,755	**35.0**	32.2-37.7	620	**33.9**	29.7-38.1
Some Post-H.S.	1,028	**48.4**	44.2-52.6	1,028	**21.5**	18.8-24.3	302	**27.1**	21.4-32.7
College Graduate	897	**62.7**	58.9-66.4	897	**10.0**	8.1-12.0	211	**10.8**	6.0-15.7
Income									
Less than $15,000	476	**22.5**	16.3-28.6	476	**50.7**	44.6-56.7	196	**41.0**	33.3-48.8
$15,000- 24,999	790	**20.5**	16.4-24.6	790	**47.8**	43.4-52.2	388	**46.1**	40.5-51.8
$25,000- 34,999	652	**30.7**	25.2-36.2	652	**40.0**	35.3-44.7	274	**38.5**	32.0-45.0
$35,000- 49,999	721	**38.5**	33.5-43.6	721	**28.0**	24.2-31.7	214	**23.8**	17.6-30.1
$50,000- 74,999	509	**56.4**	51.1-61.8	509	**13.6**	10.3-17.0	64	***12.1**	2.7-21.5
$75,000+	584	**59.5**	54.6-64.3	584	**8.1**	6.0-10.3	66	***10.6**	2.8-18.5

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 11: IMMUNIZATION

Adults Aged 65 or Older Lacking a Flu or Pneumonia Immunization

Definition

No Flu Immunization: Responding "No" to both of the following questions: "A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot? During the past 12 months, have you had a flu vaccine that was sprayed in your nose? The flu vaccine that is sprayed in the nose is also called FluMist™."

No Pneumonia Immunization: Responding "No" to the following question: "Have you ever had a pneumonia shot? A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot."

The responses reported for this section were limited to those aged 65 or older.

Prevalence

No Flu Immunization

WV: 29.4% (95% CI: 26.9-31.9) in 2009; **33.5%** (95% CI: 30.9-36.1) in 2010.
US: 31.4% (95% CI: 31.0-31.9) in 2009; **33.4%** (95% CI: 33.0-33.8) in 2010.
West Virginia ranked 30th highest among 54 BRFSS participants 2009, and ranked 21st highest among 54 BRFSS participants in 2010.

No Pneumonia Immunization

WV: 31.2% (95% CI: 28.6-33.8) in 2009; **37.6%** (95% CI: 34.9-40.4) in 2010.
US: 33.6% (95% CI: 33.2-34.1) in 2009; **32.4%** (95% CI: 32.0-32.8) in 2010.
West Virginia ranked 30th highest among 54 BRFSS participants in 2009, and ranked 5th highest among 54 BRFSS participants in 2010.

Trends

The long-term trend has seen notable improvement in these risk factors between 1993 and 2010.

Gender

Flu Immunization

Men: 26.3% (95% CI: 22.3-30.3) in 2009; 31.9% (95% CI: 27.5-36.2) in 2010.
Women: 31.7% (95% CI: 28.5-34.9) in 2009; 34.7% (95% CI: 31.4-38.0) in 2010.
There were no gender differences in flu immunization in 2009 or 2010.

Pneumonia Immunization

Men: 29.4% (95% CI: 25.1-33.6) in 2009; 36.4% (95% CI: 31.9-40.9) in 2010.
Women: 32.6% (95% CI: 29.3-35.9) in 2009; 38.5% (95% CI: 35.1-41.9) in 2010.
There were no gender differences in pneumonia immunization in 2009 or 2010.

Education and Household Income

There were no education or income differences in flu immunization or pneumonia immunization in 2009 or 2010

Table 11.1 No immunizations among adults aged 65 and older by demographic characteristics: WVBRFSS, 2009

Characteristic	No Flu Immunization in Past 12 Months			Never Had Pneumonia Immunization		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,502	**29.4**	26.9-31.9	1,484	**31.2**	28.6-33.8
Males	537	**26.3**	22.3-30.3	525	**29.4**	25.1-33.6
Females	965	**31.7**	28.5-34.9	959	**32.6**	29.3-35.9
Age						
65+	1,502	**29.4**	26.9-31.9	1.484	**31.2**	28.6-33.8
Education						
Less than H.S.	331	**33.6**	27.9-39.2	327	**35.0**	29.2-40.7
H.S. or G.E.D.	628	**30.7**	26.8-34.6	622	**32.0**	28.0-36.0
Some Post-H.S.	302	**26.4**	21.0-31.7	299	**29.4**	23.8-35.1
College Graduate	238	**22.5**	16.6-28.3	233	**25.2**	19.1-31.2
Income						
Less than $15,000	228	**36.9**	30.0-43.7	226	**31.3**	24.7-38.0
$15,000- 24,999	366	**28.1**	23.0-33.3	361	**33.2**	27.7-38.7
$25,000- 34,999	280	**28.6**	22.8-34.4	279	**32.1**	26.0-38.2
$35,000-49,999	212	**28.4**	21.9-34.9	210	**31.7**	25.0-38.5
$50,000-74,000	82	**25.2**	15.4-35.1	82	**30.0**	19.2-40.8
$75,000+	77	**25.2**	14.5-35.9	75	**18.7**	9.3-28.1

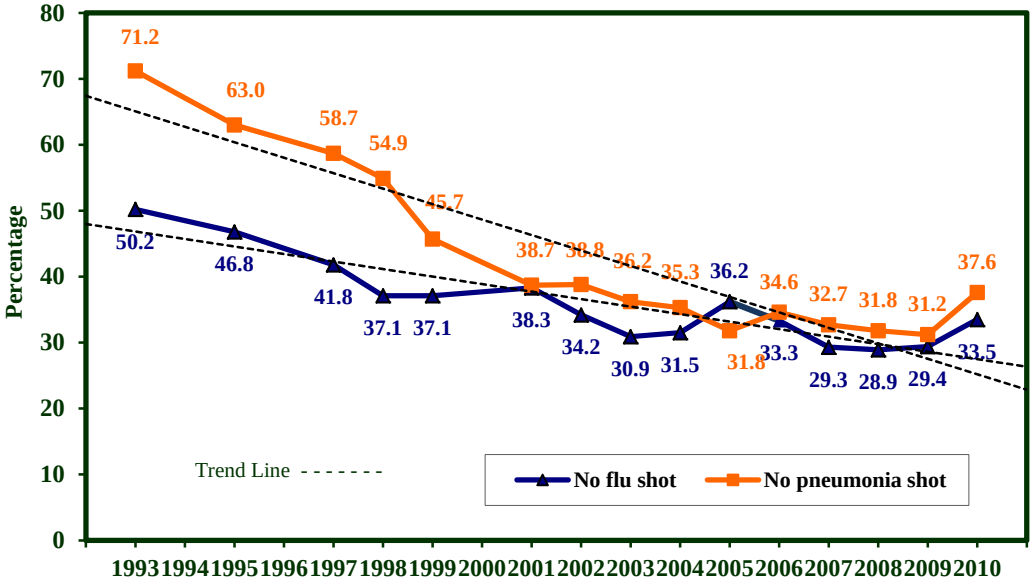
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 11.2 No immunizations among adults aged 65 and older by demographic characteristics: WVBRFSS, 2010

Characteristic	No Flu Immunization in Past 12 Months			Never Had Pneumonia Immunization		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,496	**33.5**	30.9-36.1	1,486	**37.6**	34.9-40.4
Males	523	**31.9**	27.5-36.2	515	**36.4**	31.9-40.9
Females	973	**34.7**	31.4-38.0	971	**38.5**	35.1-41.9
Age						
65+	1,496	**33.5**	30.9-36.1	1,486	**37.6**	34.9-40.4
Education						
Less than H.S.	342	**39.6**	33.8-45.4	346	**41.7**	35.9-47.6
H.S. or G.E.D.	628	**32.9**	28.8-36.9	617	**39.4**	35.1-43.7
Some Post-H.S.	306	**30.6**	25.0-36.1	305	**31.7**	26.0-37.3
College Graduate	215	**29.7**	23.1-36.3	213	**34.4**	27.4-41.4
Income						
Less than $15,000	193	**36.1**	28.2-43.9	192	**36.0**	28.3-43.7
$15,000- 24,999	390	**34.5**	29.1-39.8	386	**39.0**	33.5-44.5
$25,000- 34,999	280	**32.3**	26.4-38.3	278	**34.4**	28.2-40.6
$35,000-49,999	214	**30.6**	24.1-37.1	213	**38.9**	31.8-46.0
$50,000-74,000	64	**33.1**	20.8-45.4	63	**39.4**	26.2-52.6
$75,000+	66	**26.2**	14.9-37.5	66	**37.6**	25.1-50.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

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, 1993-2010



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

CHAPTER 12: COLORECTAL CANCER SCREENING

Home Stool Blood Testing and Sigmoidoscopy or Colonoscopy

Definition

No home stool blood testing
No home stool blood testing (or fecal occult blood testing, FOBT) in the past year among adults aged 50 and older.

No sigmoidoscopy or colonoscopy
Adults aged 50 and older who have never had a sigmoidoscopy or colonoscopy.

Prevalence

No home stool blood testing
WV: 86.4% (95% CI: 85.0-87.8) in 2010.
US: 87.9% (95% CI: 87.7-88.1) in 2010.
West Virginia ranked 46th highest among 54 BRFSS participants in 2010.

No sigmoidoscopy or colonoscopy
WV: 45.6% (95% CI: 43.6-47.7) in 2010.
US: 34.2% (95% CI: 33.9-34.5) in 2010.
West Virginia ranked 4th highest among 54 BRFSS participants in 2010.

Gender

No home stool blood testing
Men: 83.9% (95% CI: 81.5-86.4) in 2010.
Women: 88.6% (95% CI: 87.0-90.1) in 2010.
The prevalence of no FOBT use in past year was significantly higher among women than men.

No sigmoidoscopy or colonoscopy
Men: 47.2% (95% CI: 43.8-50.5) in 2010.
Women: 44.3% (95% CI: 41.8-46.8) in 2010.
There was no gender difference in the prevalence of never had a sigmoidoscopy or colonoscopy.

Age, Education, Household Income

No home stool blood testing
The prevalence of no FOBT use in past year was lowest among those 65 and older. No education or income differences were found for the prevalence of no FOBT use in the past year.

No sigmoidoscopy or colonoscopy
The prevalence of never having a sigmoidoscopy or colonoscopy was lowest among those 65 and older. The prevalence was highest among those with less than a high school education and earning less than $15,000 per year.

Table 12.1 No colorectal cancer screening among adults aged 50 and over by demographic characteristics: WVBRFSS, 2010

Characteristic	Adults who did not have a home stool blood test in the past year			Adults who have never had a sigmoidoscopy or colonoscopy		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,906	**86.4**	85.0-87.8	2,957	**45.6**	43.6-47.7
Males	1,082	**83.9**	81.5-86.4	1,104	**47.2**	43.8-50.5
Females	1,824	**88.6**	87.0-90.1	1,853	**44.3**	41.8-46.8
Age						
50-54	440	**93.0**	90.3-95.6	443	**60.9**	55.7-66.1
55-64	1,003	**85.9**	83.4-88.4	1,019	**45.8**	42.4-49.2
65+	1,463	**83.6**	81.5-85.8	1,495	**38.0**	35.3-40.7
Education						
Less than H.S.	510	**88.7**	85.2-92.2	512	**53.7**	48.8-58.7
H.S. or G.E.D.	1,201	**85.8**	83.6-88.0	1,224	**48.4**	45.2-51.5
Some Post-H.S.	655	**87.7**	84.9-90.5	664	**39.1**	34.8-43.3
College Graduate	535	**84.3**	80.9-87.7	552	**39.9**	35.2-44.6
Income						
Less than $15,000	331	**81.6**	76.5-86.8	339	**51.1**	44.8-57.4
$15,000- 24,999	605	**83.1**	79.7-86.5	610	**44.2**	39.7-48.6
$25,000- 34,999	486	**91.0**	88.2-93.7	494	**52.8**	47.8-57.8
$35,000-49,999	479	**86.8**	83.5-90.1	486	**50.3**	45.4-55.3
$50,000-74,000	250	**86.5**	81.9-91.1	255	**38.9**	32.2-45.7
$75,000+	313	**86.4**	82.0-90.8	319	**35.8**	29.8-41.8

CHAPTER 13: PROSTATE CANCER SCREENING

Digital Rectal Exam and PSA Test

Definition

No digital rectal exam
Men aged 50 years and older who have never had a digital rectal exam

No Prostate Specific Antigen (PSA) test
Men aged 50 years and older who have never had a PSA test (prostate specific antigen).

Prevalence

No digital rectal exam
WV: 31.0% (95% CI: 27.8-34.1) in 2010.
US: 16.1% (95% CI: 15.6-16.5) in 2010.
West Virginia ranked 3rd highest among 54 BRFSS participants in 2010.

No Prostate Specific Antigen (PSA) test
WV: 25.5% (95% CI: 22.4-28.5) in 2010.
US: 20.6% (95% CI: 20.1-21.0) in 2010.
West Virginia ranked 6th highest among 54 BRFSS participants in 2010.

Age, Education, Household Income

No digital rectal exam
The prevalence of never had a DRE was lowest among those 65 and older. The prevalence was highest among those with less than a high school education. No income differences were found for the prevalence of never had a DRE.

No Prostate Specific Antigen (PSA) test
The prevalence of never had a PSA was lowest among those 65 and older. The prevalence was highest among those with less than a high school education. No income differences were found for the prevalence of never had a DRE.

Table 15.1 No prostate cancer screening among males aged 50 and older by demographic characteristics: WVBRFSS, 2010

Characteristic	Adult males aged 50 and older who have never had a digital rectal exam			Adult males aged 50 and older who have never had a PSA test		
	# Resp.	%	95% CI	# Resp.	%	95% CI
Males	1,100	**31.0**	27.8-34.1	1,050	**25.5**	22.4-28.5
Age						
50-54	166	**46.8**	38.4-55.2	151	**44.1**	35.4-52.9
55-64	409	**32.4**	27.4-37.4	395	**25.5**	20.6-30.4
65+	525	**20.7**	17.0-24.4	504	**15.4**	12.2-18.6
Education						
Less than H.S.	202	**41.0**	33.3-48.7	191	**35.7**	27.7-43.8
H.S. or G.E.D.	439	**35.4**	30.3-40.4	415	**28.9**	23.9-34.0
Some Post-H.S.	213	**24.9**	18.3-31.5	202	**19.8**	13.4-26.2
College Graduate	244	**20.0**	13.9-26.1	240	**16.2**	11.0-21.5
Income						
Less than $15,000	103	**38.1**	27.3-49.0	98	**29.0**	18.2-39.9
$15,000- 24,999	209	**33.3**	26.2-40.4	199	**31.4**	24.2-38.6
$25,000- 34,999	187	**33.1**	25.4-40.8	177	**25.0**	17.3-32.8
$35,000-49,999	207	**29.1**	22.0-36.2	200	**23.3**	16.6-30.0
$50,000-74,000	118	**25.1**	16.5-33.7	114	**18.9**	11.1-26.8
$75,000+	160	**23.8**	16.2-31.5	154	**18.1**	10.7-25.6

CHAPTER 14: BREAST AND CERVICAL CANCER SCREENING

Clinical Breast Exam, Mammogram, or Pap Test

Definitions

No Clinical Breast Exam
Women aged 40 years and older who did not have a clinical breast exam (CBE) in the past year.

No Mammogram
Women aged 40 years and older who did not have a mammogram in the past two years.

No Pap Test in the Past Three Years
No Pap test in the past three years among women aged 18 and older.

Never Had a Pap Test
Women aged 18 and older who have never had a Pap test.

Prevalence

No Clinical Breast Exam
WV: 41.6% (95% CI: 39.2-43.9) in 2010.
US: 37.1% (95% CI: 36.7-37.5) in 2010.
West Virginia ranked 20th highest among 54 BRFSS participants in 2010.

No Mammogram
WV: 27.7% (95% CI: 25.5-29.9) in 2010.
US: 24.6% (95% CI: 24.3-25.0) in 2010.
West Virginia ranked 20th highest among 54 BRFSS participants in 2010.

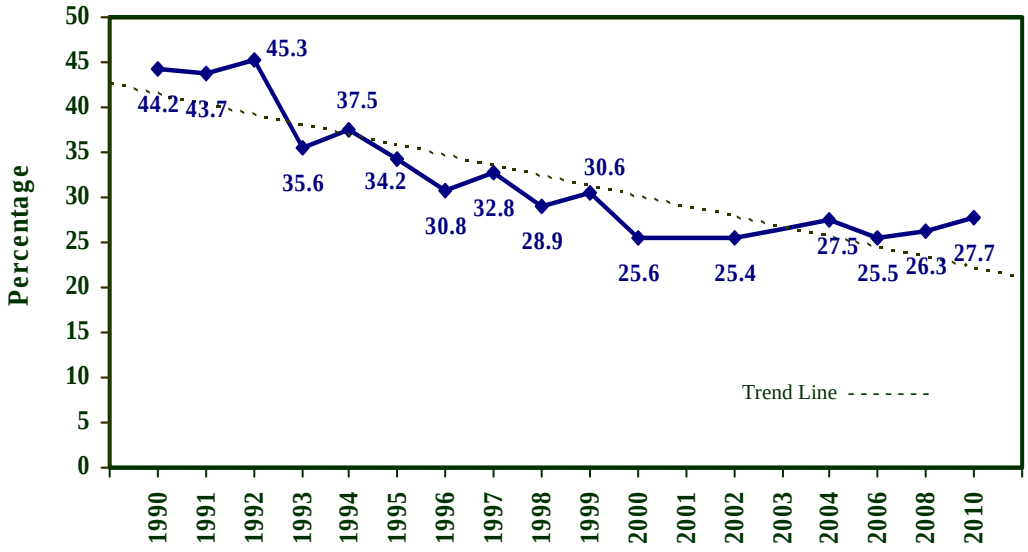
No Pap Test in the Past Three Years
WV: 21.0% (95% CI: 18.4-23.6) in 2010.
US: 18.1% (95% CI: 17.7-18.4) in 2010.
West Virginia ranked 12th highest among 54 BRFSS participants in 2010.

Never Had a Pap Test
WV: 7.3% (95% CI: 5.7-9.0) in 2010.
US: 6.2% (95% CI: 6.0-6.5) in 2010.
West Virginia ranked 11th highest among 54 BRFSS participants in 2010.

Table 14.1 No breast cancer screening among women aged 40 and older by demographic characteristics: WVBRFSS, 2010

Characteristic	Adult females aged 40 and older who have not had a clinical breast exam (CBE) in the past one year			Adult females aged 40 and older who have not had a mammogram in the past two years		
	# Resp.	%	95% CI	# Resp.	%	95% CI
Females	2,208	**41.6**	39.2-43.9	2,235	**27.7**	25.5-29.9
Age						
40-44	182	**44.2**	36.2-52.1	183	**40.2**	32.3-48.1
45-54	493	**34.8**	30.1-39.5	497	**26.3**	21.9-30.6
55-64	595	**37.5**	33.2-41.8	601	**24.2**	20.3-28.1
65+	938	**49.2**	45.6-52.7	954	**26.5**	23.4-29.7
Education						
Less than H.S.	338	**55.1**	49.1-61.2	341	**41.6**	35.4-47.7
H.S. or G.E.D.	906	**41.9**	38.2-45.5	920	**28.8**	25.3-32.2
Some Post-H.S.	544	**41.4**	36.7-46.2	552	**26.0**	21.7-30.3
College Graduate	417	**30.1**	25.3-34.9	419	**16.5**	12.7-20.4
Income						
Less than $15,000	269	**59.7**	52.8-66.7	272	**49.2**	42.1-56.3
$15,000- 24,999	445	**49.6**	44.2-55.1	457	**32.1**	27.0-37.1
$25,000- 34,999	335	**45.1**	39.1-51.2	339	**27.6**	21.8-33.3
$35,000-49,999	350	**36.1**	30.5-41.7	353	**21.9**	16.9-26.9
$50,000-74,000	204	**31.5**	24.0-39.0	205	**17.5**	11.4-23.6
$75,000+	248	**23.0**	17.3-28.6	248	**17.6**	12.2-23.0

Figure 14.1 No mammography in past two years among women aged 40 and older: WVBRFSS, 1990-2009



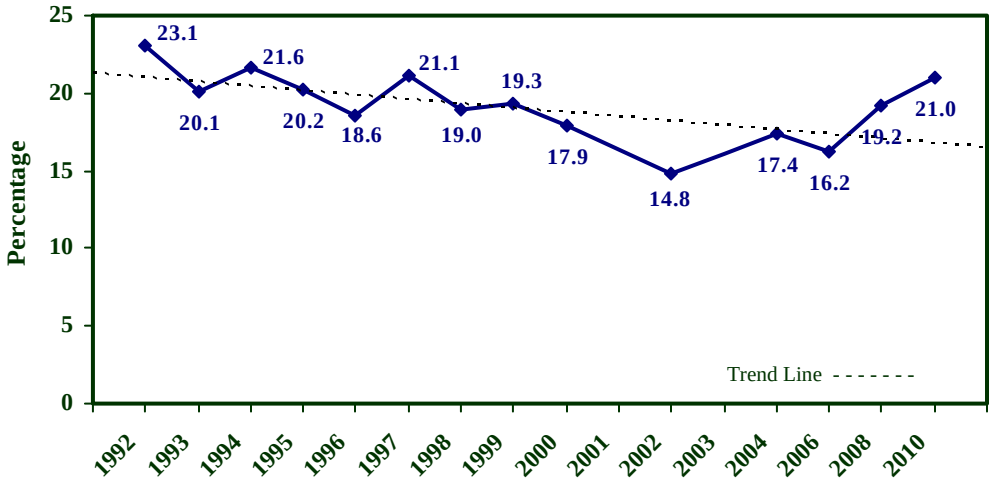
NOTE: Data are not available for the years 2001, 2003, 2005, 2007, and 2009.

Table 14.2 No cervical cancer screening by demographic characteristics: WVBRFSS, 2010

Characteristic	Adult females aged 18 and older who have not had a Pap test in the past three years			Adult females aged 18 and older who have never had a Pap test		
	# Resp.	%	95% CI	# Resp.	%	95% CI
Females	1,780	**21.0**	18.4-23.6	2,721	**7.3**	5.7-9.0
Age						
18-24	58	**25.8**	13.2-38.4	58	**20.9**	8.9-32.9
25-34	216	**10.3**	5.8-14.8	223	***1.2**	0.0-2.4
35-44	292	**17.4**	12.4-22.5	336	***3.6**	1.4-5.7
45-54	350	**15.9**	11.6-20.2	498	**2.8**	1.3-4.4
55-64	380	**23.7**	18.9-28.6	605	**6.2**	4.0-8.3
65+	484	**37.6**	32.8-42.4	976	**12.2**	9.8-14.5
Education						
Less than H.S.	229	**33.0**	25.2-40.7	393	**11.0**	7.1-14.9
H.S. or G.E.D.	675	**26.3**	21.8-30.9	1,083	**8.7**	6.0-11.4
Some Post-H.S.	464	**17.5**	12.0-22.9	694	**7.1**	3.3-10.9
College Graduate	410	**9.6**	6.7-12.6	547	**2.4**	1.1-3.6
Income						
Less than $15,000	186	**39.7**	30.4-49.0	318	**9.1**	4.4-13.7
$15,000- 24,999	314	**25.7**	19.7-31.8	527	**7.8**	5.3-10.3
$25,000- 34,999	272	**22.0**	15.6-28.4	407	**7.5**	3.9-11.0
$35,000-49,999	299	**13.7**	9.6-17.9	428	**4.6**	2.4-6.8
$50,000-74,000	219	**16.7**	7.8-25.7	289	***7.8**	0.6-15.1
$75,000+	250	**9.7**	4.7-14.6	322	***3.1**	0.0-6.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 14.2 No Pap test in past three years: WVBRFSS, 1992-2009



NOTE: Data are not available for the years 2001, 2003, 2005, 2007, and 2009.

CHAPTER 15: CARDIOVASCULAR DISEASE

Heart Attack, Angina, and Stroke

Definition

Responding "Yes" to the following: "Has a doctor, nurse, or other health professional ever told you that you had any of the following? For each, tell me 'yes,' 'no,' or 'not sure'." The follow-up questions were ". . . 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

Heart Attack

WV: **6.5%** (95% CI: 5.8-7.2) in 2009; **6.3%** (95% CI: 5.6-7.1) in 2010.
US: **4.0%** (95% CI: 3.9-4.0) in 2009; **4.3%** (95% CI: 4.2-4.4) in 2010.
West Virginia ranked highest among 54 BRFSS participants in 2009 and 2nd highest among 54 BRFSS participants in 2010.

Angina

WV: **7.1%** (95% CI: 6.4-7.8) in 2009; **6.0%** (95% CI: 5.3-6.7) in 2010.
US: **4.0%** (95% CI: 3.9-4.1) in 2009; **4.4%** (95% CI: 4.3-4.5) in 2010.
West Virginia ranked highest among 54 BRFSS participants in 2009 and 3rd highest among 54 BRFSS participants in 2010.

Stroke

WV: **3.7%** (95% CI: 3.2-4.3) in 2009; **3.5%** (95% CI: 3.0-4.1) in 2010.
US: **2.5%** (95% CI: 2.5-2.6) in 2009; **2.8%** (95% CI: 2.7-2.9) in 2010.
West Virginia ranked 4th highest among 54 BRFSS participants in 2009 and 11th highest among 54 BRFSS participants in 2010.

Gender

Heart Attack differences by gender

Men: 8.6% (95% CI: 7.4-9.9) in 2009; 8.0% (95% CI: 6.7-9.3) in 2010.
Women: 4.5% (95% CI: 3.8-5.2) in 2009; 4.7% (95% CI: 3.9-5.6) in 2010.
Men had a significantly higher prevalence of heart attack than women.

Angina differences by gender

Men: 7.8% (95% CI: 6.7-9.0) in 2009; 6.8% (95% CI: 5.7-8.0) in 2010.
Women: 6.5% (95% CI: 5.5-7.4) in 2009; 5.3% (95% CI: 4.5-6.2) in 2010.
There was no significant gender difference in the prevalence of angina.

Stroke differences by gender

Men: 2.9% (95% CI: 2.2-3.6) in 2009; 3.2% (95% CI: 2.4-4.1) in 2010.
Women: 4.5% (95% CI: 3.7-5.3) in 2009; 3.8% (95% CI: 3.1-4.4) in 2010.
There was a significant gender difference in stroke prevalence, with females having a higher stroke prevalence than males in 2009 but not 2010.

Age, Education, & Household Income

Those aged 65 and older had a higher prevalence of heart attack, angina, and stroke than most younger age groups. Adults with less than a high school education had the highest prevalence of heart attack, angina, and stroke than those with more education. Heart attack, angina, and stroke prevalence were also highest among the lowest income groups than among those with the highest household incomes.

Table 15.1 Heart attack, angina, or stroke by demographic characteristics: WVBRFSS, 2009

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	4,803	**6.5**	5.8-7.2	4,784	**7.1**	6.4-7.8	4,802	**3.7**	3.2-4.3
Males	1,836	**8.6**	7.4-9.9	1,831	**7.8**	6.7-9.0	1,837	**2.9**	2.2-3.6
Females	2,967	**4.5**	3.8-5.2	2,953	**6.5**	5.5-7.4	2,965	**4.5**	3.7-5.3
Age									
25-34	481	***0.5**	0.0-1.0	481	***0.9**	0.1-1.6	481	***0.9**	0.1-1.7
35-44	650	***1.1**	0.4-1.9	648	**2.9**	1.4-4.4	648	***0.5**	0.0-1.1
45-54	866	**6.0**	4.1-7.9	864	**5.6**	4.0-7.3	869	**2.5**	1.3-3.7
55-64	1,106	**9.7**	7.7-11.7	1,102	**10.0**	8.0-12.0	1,106	**5.4**	3.9-6.9
65+	1,509	**17.3**	15.1-19.4	1,498	**18.3**	16.2-20.5	1,507	**10.1**	8.4-11.8
Education									
Less than H.S.	686	**13.9**	11.1-16.6	680	**12.9**	10.3-15.6	684	**8.7**	6.4-11.1
H.S. or G.E.D.	1,932	**6.5**	5.4-7.6	1,921	**7.1**	5.9-8.2	1,929	**3.8**	3.0-4.6
Some Post-H.S.	1,141	**4.7**	3.5-5.9	1,139	**6.3**	4.9-7.7	1,145	**2.3**	1.5-3.2
College Graduate	1,037	**3.8**	2.6-4.9	1,038	**4.4**	3.2-5.7	1,037	**1.8**	1.0-2.6
Income									
Less than $15,000	552	**12.5**	9.6-15.5	547	**13.6**	10.5-16.8	550	**5.7**	3.6-7.8
$15,000- 24,999	838	**8.4**	6.5-10.3	836	**10.4**	8.2-12.5	839	**6.4**	4.7-8.1
$25,000- 34,999	784	**7.5**	5.6-9.3	780	**8.1**	6.2-10.0	783	**4.0**	2.6-5.5
$35,000- 49,999	791	**7.4**	5.4-9.3	789	**6.4**	4.7-8.1	792	**3.4**	2.1-4.7
$50,000- 74,999	600	**2.8**	1.4-4.2	600	**4.1**	2.5-5.6	600	***1.2**	0.3-2.2
$75,000+	691	**2.1**	0.9-3.2	691	**2.7**	1.5-3.8	691	***0.7**	0.2-1.3

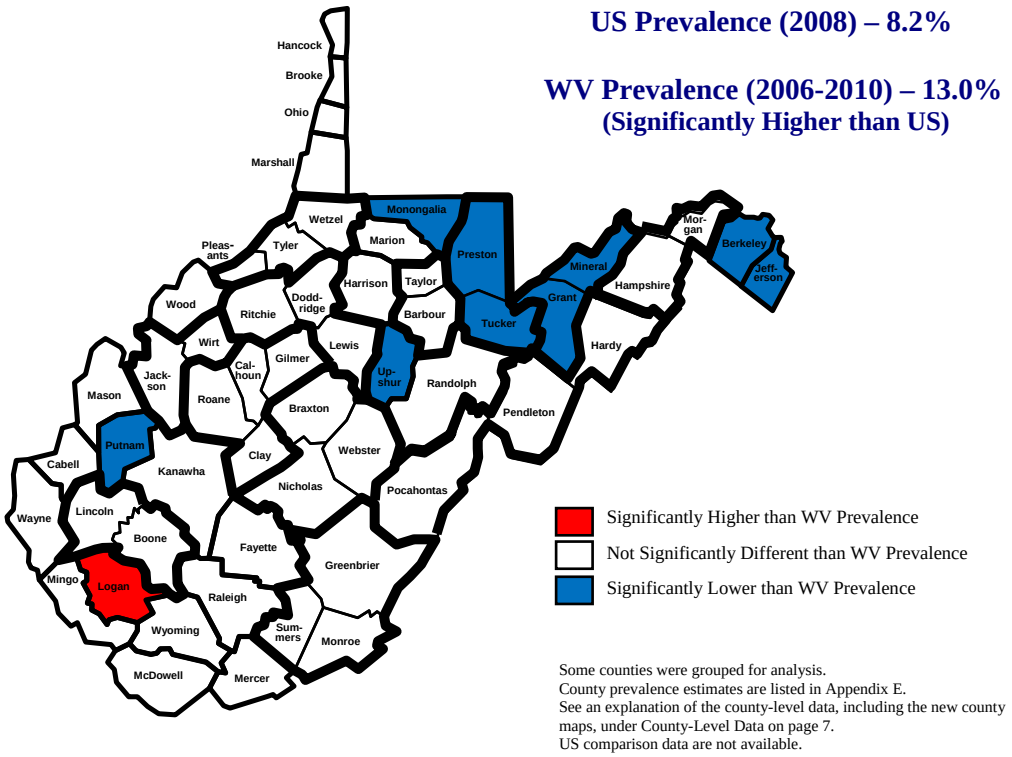
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 15.2 Heart attack, angina, or stroke by demographic characteristics: WVBRFSS, 2010

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	4,386	**6.3**	5.6-7.1	4,375	**6.0**	5.3-6.7	4,388	**3.5**	3.0-4.1
Males	1,661	**8.0**	6.7-9.3	1,658	**6.8**	5.7-8.0	1,664	**3.2**	2.4-4.1
Females	2,725	**4.7**	3.9-5.6	2,717	**5.3**	4.5-6.2	2,724	**3.8**	3.1-4.4
Age									
25-34	347	***1.3**	0.1-2.5	347	***0.6**	0.0-1.4	348	***0.7**	0.0-1.4
35-44	563	***2.0**	0.8-3.2	562	**2.1**	0.9-3.3	562	***1.2**	0.1-2.3
45-54	803	**5.0**	3.2-6.7	800	**5.4**	3.6-7.2	801	**3.3**	2.0-4.6
55-64	1,016	**8.9**	6.7-11.1	1,017	**9.7**	7.7-11.8	1,017	**4.5**	2.9-6.1
65+	1,507	**16.3**	14.2-18.5	1,498	**14.3**	12.3-16.3	1,509	**8.6**	7.1-10.1
Education									
Less than H.S.	662	**13.5**	10.6-16.5	656	**9.5**	7.3-11.8	663	**7.4**	5.1-9.8
H.S. or G.E.D.	1,771	**6.7**	5.4-7.9	1,768	**6.3**	5.2-7.4	1,774	**3.3**	2.5-4.1
Some Post-H.S.	1,036	**4.2**	3.0-5.3	1,035	**4.8**	3.5-6.0	1,037	**2.6**	1.8-3.4
College Graduate	910	**3.1**	1.9-4.2	909	**4.5**	3.1-5.9	907	**2.2**	1.4-3.0
Income									
Less than $15,000	479	**10.7**	7.7-13.7	477	**9.7**	6.9-12.6	479	**6.2**	4.2-8.3
$15,000- 24,999	797	**12.0**	9.5-14.5	793	**12.1**	9.6-14.5	798	**6.4**	4.5-8.3
$25,000- 34,999	655	**7.3**	5.2-9.4	653	**5.3**	3.6-7.1	656	**4.0**	2.5-5.6
$35,000- 49,999	729	**4.5**	3.1-5.9	728	**4.4**	3.0-5.9	727	**2.6**	1.6-3.6
$50,000- 74,999	513	**2.6**	1.2-3.9	514	**2.7**	1.4-3.9	511	***0.7**	0.1-1.4
$75,000+	584	**3.0**	1.3-4.8	583	**2.9**	1.5-4.3	584	***1.2**	0.0-2.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 15.1 Adults diagnosed with heart attack, angina, or stroke by county: WVBRFSS, 2006-2010



Some counties were grouped for analysis.
County prevalence estimates are listed in Appendix E.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 7.
US comparison data are not available.

CHAPTER 16: DIABETES

Diabetes Awareness

Definition

Responding "Yes" to the following question: "Have you ever been told by a doctor that you have diabetes?" Women told they had diabetes only during pregnancy are treated as an answer of "No." Those with pre-diabetes and borderline diabetes also are treated as an answer of "No."

Prevalence

WV: 12.4% (95% CI: 11.3-13.4) in 2009; **11.7%** (95% CI: 10.7-12.7) in 2010.
US: 9.1% (95% CI: 8.9-9.2) in 2009; **9.3%** (95% CI: 9.1-9.4) in 2010.
West Virginia ranked 2nd highest among 54 BRFSS participants in 2009 and 4th highest among 54 BRFSS participants in 2010.

Time Trends

The prevalence of diabetes among adults has increased steeply and significantly since 1995.

Gender

Men: 11.8% (95% CI: 10.3-13.4) in 2009; 11.8% (95% CI: 10.2-13.4) in 2010.
Women: 12.9% (95% CI: 11.5-14.2) in 2009; 11.5% (95% CI: 10.3-12.8) in 2010.
There was no significant gender difference in diabetes prevalence in either 2009 or 2010.

Age

The oldest adults (65 and older) had the highest diabetes prevalence among all age groups in West Virginia in both 2009 and 2010. The prevalence of diabetes generally increased as age increased.

Education

Adults with less than a high school education had the highest prevalence of diabetes while college graduates had the lowest prevalence of diabetes for both 2009 and 2010. Each increase in education was associated with a lower prevalence of diabetes, although the differences were not significant between every group.

Household Income

There was a significant income difference in the prevalence of diabetes. The prevalence generally decreased with increasing income.

Table 16.1 Diabetes awareness by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,845	**11.8**	10.3-13.4	2,970	**12.9**	11.5-14.2	4,815	**12.4**	11.3-13.4
Age									
18-24	66	***2.3**	0.0-6.7	101	***4.3**	0.0-9.1	167	***3.3**	0.0-6.5
25-34	173	***1.8**	0.0-4.0	308	**3.8**	1.5-6.0	481	**2.8**	1.2-4.3
35-44	257	**7.0**	3.4-10.7	392	**7.3**	4.3-10.3	649	**7.2**	4.8-9.5
45-54	358	**11.6**	8.0-15.2	512	**13.0**	9.8-16.2	870	**12.3**	9.9-14.7
55-64	447	**18.1**	14.3-22.0	664	**17.9**	14.8-21.0	1,111	**18.0**	15.6-20.5
65+	541	**26.5**	22.5-30.5	972	**23.1**	20.2-26.1	1,513	**24.6**	22.2-27.0
Education									
Less than H.S.	266	**19.2**	13.7-24.8	425	**22.3**	17.9-26.7	691	**20.8**	17.2-24.3
H.S. or G.E.D.	758	**12.1**	9.6-14.6	1,177	**13.7**	11.6-15.9	1,935	**12.9**	11.3-14.6
Some Post-H.S.	385	**8.5**	6.0-11.0	758	**11.0**	8.3-13.7	1,143	**9.9**	8.0-11.8
College Graduate	433	**9.6**	6.9-12.2	606	**7.7**	5.4-10.0	1,039	**8.6**	6.8-10.4
Income									
Less than $15,000	160	**20.8**	13.9-27.8	395	**21.3**	16.9-25.6	555	**21.1**	17.3-24.9
$15,000- 24,999	304	**16.9**	11.8-22.0	536	**17.6**	14.0-21.2	840	**17.3**	14.2-20.3
$25,000- 34,999	304	**12.5**	8.6-16.3	483	**16.3**	12.0-20.6	787	**14.4**	11.5-17.3
$35,000- 49,999	317	**11.9**	8.0-15.8	475	**8.6**	5.9-11.3	792	**10.2**	7.8-12.5
$50,000- 74,999	269	**7.8**	4.8-10.8	332	**5.9**	3.2-8.5	601	**6.9**	4.9-8.9
$75,000+	317	**7.3**	4.6-9.9	373	**6.2**	3.5-8.9	690	**6.8**	4.9-8.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 16.2 Diabetes awareness by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,668	**11.8**	10.2-13.4	2,729	**11.5**	10.3-12.8	4,397	**11.7**	10.7-12.7
Age									
18-24	58	***1.6**	0.0-4.7				116	***0.8**	0.0-2.4
25-34	125	***2.0**	0.0-4.9	223	***1.8**	0.1-3.5	348	***1.9**	0.3-3.6
35-44	225	**8.3**	4.5-12.0	338	**7.3**	4.3-10.3	563	**7.8**	5.4-10.2
45-54	305	**10.6**	6.8-14.3	497	**13.0**	9.7-16.3	802	**11.8**	9.3-14.3
55-64	416	**22.0**	17.8-26.3	604	**18.2**	14.8-21.6	1,020	**20.1**	17.4-22.8
65+	529	**22.7**	18.9-26.4	984	**20.3**	17.5-23.0	1,513	**21.3**	19.0-23.5
Education									
Less than H.S.	270	**19.1**	14.2-24.1	395	**17.3**	13.5-21.2	665	**18.3**	15.1-21.4
H.S. or G.E.D.	689	**11.5**	9.1-13.8	1,087	**14.8**	12.5-17.1	1,776	**13.1**	11.4-14.8
Some Post-H.S.	344	**10.5**	6.9-14.1	695	**7.9**	5.9-9.9	1,039	**9.0**	7.1-10.9
College Graduate	362	**8.7**	5.9-11.6	548	**6.2**	4.3-8.2	910	**7.4**	5.7-9.2
Income									
Less than $15,000	162	**19.7**	12.7-26.6	317	**19.0**	14.3-23.6	479	**19.3**	15.2-23.4
$15,000- 24,999	271	**13.6**	9.6-17.7	527	**17.4**	13.8-21.1	798	**15.9**	13.1-18.6
$25,000- 34,999	251	**12.5**	8.2-16.8	409	**12.4**	8.9-15.9	660	**12.5**	9.7-15.2
$35,000- 49,999	300	**13.4**	9.2-17.5	429	**9.7**	6.8-12.5	729	**11.5**	9.0-14.0
$50,000- 74,999	225	**10.8**	6.6-15.1	289	**5.9**	3.2-8.5	514	**8.4**	5.9-11.0
$75,000+	262	**7.5**	4.5-10.6	322	**6.1**	3.3-8.9	584	**6.9**	4.8-9.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 16.1 Diabetes awareness by year: WVBRFSS, 1990-2010

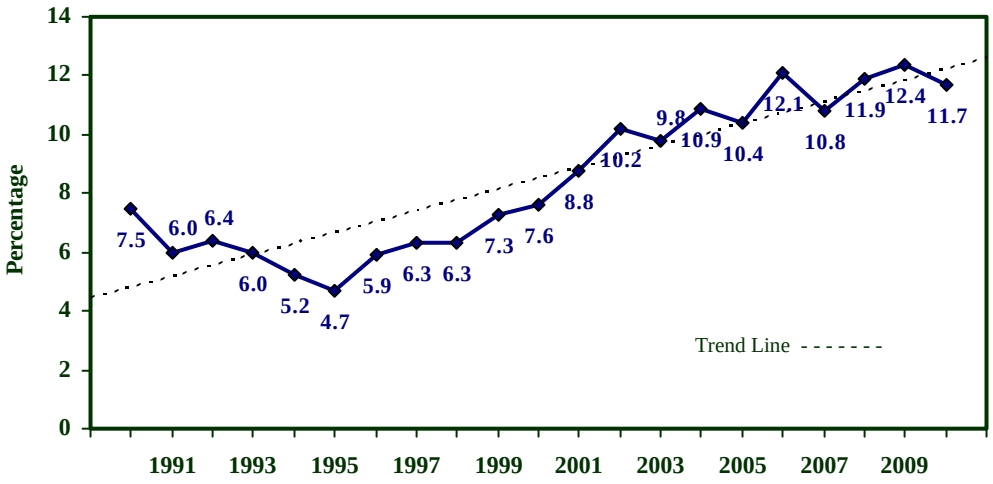
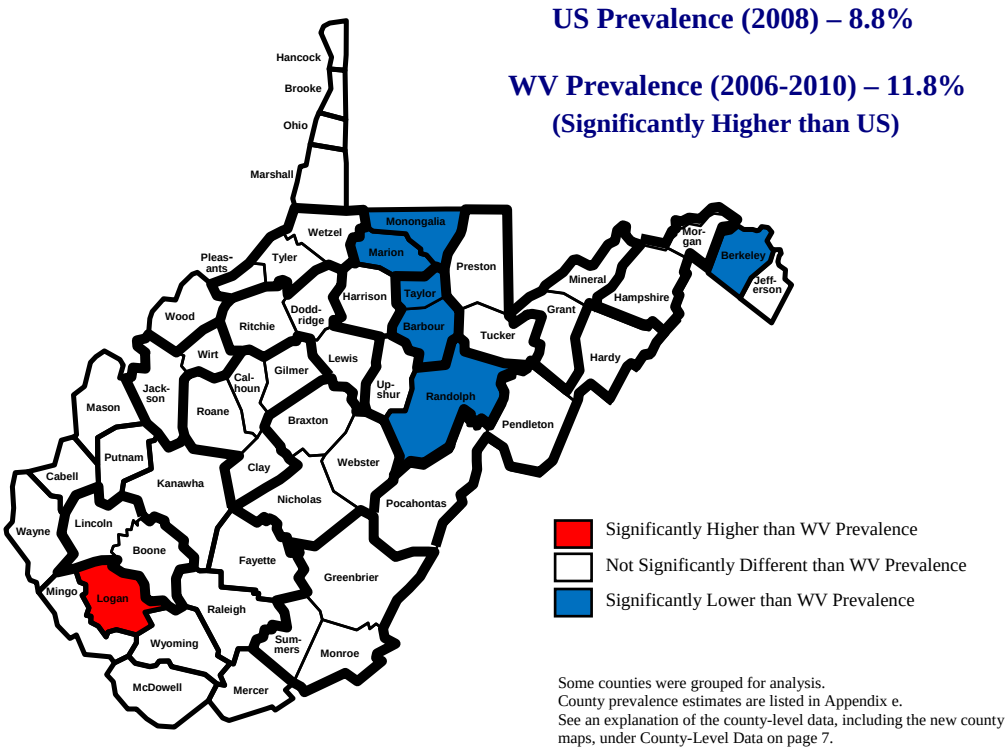


Figure 16.2 Diabetes awareness by county: WVBRFSS, 2006-2010



CHAPTER 17: CANCER

Cancer Prevalence

Definition

Responding "Yes" to the following question: "Have you ever been told by a doctor that you had cancer?"

Prevalence

WV: 10.4% (95% CI: 9.5-11.3) in 2009; **8.8%** (95% CI: 7.9-9.7) in 2010.
US: 9.6% (95% CI: 9.5-9.8) in 2009.
West Virginia ranked 15th highest among 54 BRFSS participants in 2009. This was a state added question in 2010, therefore no US prevalence is available for comparison.

Time Trends

Cancer prevalence data were first collected in 2009. Time trend data are not yet available.

Gender

Men: 9.0% (95% CI: 7.8-10.3) in 2009; 5.6% (95% CI: 4.4-6.8) in 2010.
Women: 11.7% (95% CI: 10.5-12.9) in 2009; 11.7% (95% CI: 10.4-13.1) in 2010.
There was a significant gender difference in cancer prevalence in 2009 and 2010 with females having higher cancer prevalence than males.

Age

The oldest adults (65 and older) had the highest cancer prevalence among all age groups in West Virginia in both 2009 and 2010. About one-fifth of WV adults 65 and older had cancer during their life. The prevalence of cancer generally increased as age increased.

Education

Adults with less than a high school education as well as college graduates had the highest cancer prevalence in 2009. Adults with less than a high school education had the highest cancer prevalence in 2010.

Household Income

In general, cancer prevalence was lower among those with higher incomes in both 2009 and 2010.

Table 17.1 Cancer Prevalence by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,824	**9.0**	7.8-10.3	2,949	**11.7**	10.5-12.9	4,773	**10.4**	9.5-11.3
Age									
18-24				100	***2.2**	0.0-5.2	166	***1.1**	0.0-2.5
25-34	172	***1.5**	0.0-3.1	306	**4.0**	1.8-6.2	478	**2.7**	1.4-4.1
35-44	254	***2.4**	0.4-4.3	391	**6.7**	3.9-9.5	645	**4.6**	2.8-6.3
45-54	353	**4.9**	2.3-7.5	507	**14.1**	10.8-17.4	860	**9.6**	7.5-11.7
55-64	444	**12.2**	9.0-15.4	661	**12.5**	9.9-15.2	1,105	**12.4**	10.3-14.5
65+	532	**30.1**	25.9-34.3	963	**22.1**	19.2-24.9	1,495	**25.5**	23.0-27.9
Education									
Less than H.S.	258	**10.7**	7.2-14.3	421	**14.7**	11.0-18.5	679	**12.8**	10.1-15.4
H.S. or G.E.D.	750	**7.5**	5.7-9.2	1,170	**11.0**	9.1-12.9	1,920	**9.2**	7.9-10.5
Some Post-H.S.	382	**5.9**	3.8-8.1	753	**11.2**	8.8-13.5	1,135	**8.9**	7.3-10.5
College Graduate	431	**14.4**	11.0-17.9	601	**11.6**	9.0-14.3	1,032	**13.0**	10.8-15.2
Income									
Less than $15,000	156	**7.6**	3.5-11.6	391	**13.1**	9.6-16.6	547	**11.0**	8.3-13.7
$15,000- 24,999	298	**12.5**	8.8-16.3	536	**14.1**	10.8-17.5	834	**13.4**	10.9-15.9
$25,000- 34,999	301	**7.7**	5.0-10.5	480	**12.6**	9.6-15.5	781	**10.1**	8.1-12.2
$35,000- 49,999	315	**10.2**	6.9-13.4	473	**10.7**	7.7-13.7	788	**10.5**	8.2-12.7
$50,000- 74,999	268	**6.9**	4.3-9.5	330	**8.8**	5.7-11.9	598	**7.8**	5.8-9.8
$75,000+	316	**10.4**	7.0-13.8	371	**8.8**	5.7-11.9	687	**9.7**	7.3-12.0

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 17.2 Cancer Prevalence by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,598	**5.6**	4.4-6.8	2,721	**11.7**	10.4-13.1	4,319	**8.8**	7.9-9.7
Age									
18-24	56	***2.2**	0.0-6.4	58	***3.1**	0.0-7.4	114	***2.6**	0.0-5.6
25-34	123	***1.0**	0.0-3.1	222	**7.7**	3.9-11.5	345	**4.4**	2.2-6.6
35-44	224	***2.7**	0.2-5.3	337	**5.0**	2.6-7.4	561	**3.9**	2.1-5.6
45-54	301	***2.7**	0.6-4.7	497	**10.7**	7.7-13.7	798	**6.8**	4.9-8.6
55-64	400	**7.2**	4.0-10.4	602	**13.4**	10.4-16.3	1,002	**10.4**	8.2-12.5
65+	484	**16.9**	13.4-20.4	981	**22.9**	20.1-25.8	1,465	**20.5**	18.3-22.7
Education									
Less than H.S.	252	**9.5**	5.5-13.5	394	**17.6**	12.8-22.4	646	**13.5**	10.3-16.7
H.S. or G.E.D.	659	**4.3**	2.8-5.7	1,084	**13.0**	10.8-15.1	1,743	**8.7**	7.3-10.0
Some Post-H.S.	328	**4.8**	2.4-7.3	693	**8.3**	5.9-10.6	1,021	**6.8**	5.1-8.5
College Graduate	357	**6.3**	3.2-9.4	546	**10.3**	7.8-12.7	903	**8.3**	6.4-10.3
Income									
Less than $15,000	151	***6.3**	2.1-10.4	316	**14.2**	10.3-18.2	467	**10.5**	7.6-13.4
$15,000- 24,999	259	**5.2**	2.9-7.6	526	**16.6**	12.5-20.6	785	**12.0**	9.3-14.7
$25,000- 34,999	240	**6.7**	3.8-9.6	409	**14.6**	10.9-18.4	649	**11.0**	8.5-13.4
$35,000- 49,999	286	**7.1**	3.0-11.1	428	**8.0**	5.3-10.7	714	**7.6**	5.2-10.0
$50,000- 74,999	219	***2.8**	0.7-4.8	289	**8.7**	5.4-12.1	508	**5.7**	3.7-7.6
$75,000+	256	**5.1**	2.1-8.1	320	**7.1**	4.3-9.8	576	**6.0**	4.0-8.1

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 18: ASTHMA

Lifetime and Current Asthma among Adults

Definitions

Lifetime Asthma: Responding "Yes" to the following question: "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?"

Current Asthma: Responding "Yes" to the lifetime asthma question and "Yes" to the following question: "Do you still have asthma?"

Prevalence

Lifetime Asthma

WV: 12.4% (95% CI: 11.2-13.6) in 2009; **10.7%** (95% CI: 9.4-12.0) in 2010.
US: 13.4% (95% CI: 13.2-13.6) in 2009; **13.5%** (95% CI: 13.3-13.7) in 2010.
West Virginia ranked 38th highest among 54 BRFSS participants in 2009 and 4th lowest among 54 BRFSS participants in 2010.

Current Asthma

WV: 8.8% (95% CI: 7.8-9.8) in 2009; **7.3%** (95% CI: 6.3-8.2) in 2010.
US: 8.4% (95% CI: 8.3-8.6) in 2009; **8.6%** (95% CI: 8.5-8.8) in 2010.
West Virginia ranked 27th highest among 54 BRFSS participants in 2009 and 6th lowest among 54 BRFSS participants in 2010.

Time Trends

Overall, there has been no change in the prevalence of lifetime asthma and current asthma over the past decade.

Gender

Lifetime Asthma

Men: 9.8% (95% CI: 8.0-11.6) in 2009; 8.6% (95% CI: 6.7-10.4) in 2010.
Women: 14.8% (95% CI: 13.2-16.4) in 2009; 12.7% (95% CI: 10.9-14.5) in 2010.
Women had a significantly higher prevalence of lifetime asthma than men in both 2009 and 2010.

Current Asthma

Men: 6.0% (95% CI: 4.6-7.4) in 2009; 5.1% (95% CI: 3.8-6.4) in 2010.
Women: 11.4% (95% CI: 10.0-12.8) in 2009; 9.3% (95% CI: 7.8-10.7) in 2010.
In both years, current asthma prevalence was significantly higher among women than men.

Current Asthma
Age

Generally the current asthma prevalence did not differ significantly by age in 2009 or 2010.

Current Asthma
Education and Household Income

In 2009 and 2010, the prevalence of current asthma was highest among adults without a high school diploma and among those with a household income of less than $15,000.

Table 18.1 Lifetime asthma by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,840	**9.8**	8.0-11.6	2,967	**14.8**	13.2-16.4	4,807	**12.4**	11.2-13.6
Age									
18-24	66	**15.3**	6.7-23.9	101	**17.6**	9.5-25.7	167	**16.4**	10.5-22.3
25-34	173	**16.3**	10.0-22.6	307	**18.2**	13.7-22.7	480	**17.2**	13.3-21.1
35-44	256	**6.6**	3.3-10.0	393	**15.8**	11.5-20.0	649	**11.2**	8.5-14.0
45-54	358	**10.2**	6.6-13.8	511	**13.5**	10.3-16.6	869	**11.9**	9.5-14.2
55-64	446	**6.3**	3.9-8.7	664	**14.5**	11.6-17.4	1,110	**10.4**	8.5-12.3
65+	538	**6.0**	3.9-8.0	971	**12.1**	9.9-14.3	1,509	**9.5**	8.0-11.1
Education									
Less than H.S.	265	**17.1**	10.8-23.4	423	**22.7**	17.8-27.7	688	**20.0**	16.0-24.0
H.S. or G.E.D.	755	**8.8**	6.2-11.5	1,176	**11.9**	9.7-14.1	1,931	**10.4**	8.6-12.1
Some Post-H.S.	385	**9.3**	5.3-13.4	760	**16.7**	13.2-20.3	1,145	**13.5**	10.8-16.2
College Graduate	432	**7.5**	4.4-10.6	604	**12.7**	9.6-15.9	1,036	**10.2**	8.0-12.4
Income									
Less than $15,000	160	**16.7**	10.1-23.3	394	**21.6**	16.5-26.7	554	**19.7**	15.7-23.8
$15,000- 24,999	301	**12.0**	6.8-17.2	536	**15.1**	11.3-18.8	837	**13.6**	10.5-16.8
$25,000- 34,999	304	**13.5**	7.7-19.4	483	**15.4**	10.7-20.2	787	**14.5**	10.7-18.3
$35,000- 49,999	317	**7.2**	3.4-11.0	475	**12.8**	9.4-16.2	792	**10.2**	7.6-12.7
$50,000- 74,999	268	**4.1**	1.3-6.9	332	**14.2**	9.9-18.5	600	**9.0**	6.4-11.5
$75,000+	317	**9.2**	5.1-13.2	374	**9.8**	6.3-13.4	691	**9.5**	6.8-12.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 18.2 Lifetime asthma by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,667	**8.6**	6.7-10.4	2,727	**12.7**	10.9-14.5	4,394	**10.7**	9.4-12.0
Age									
18-24	58	***10.2**	1.6-18.7	58	**24.2**	12.4-36.0	116	**17.0**	9.6-24.3
25-34	125	**11.6**	5.5-17.7	223	**12.1**	7.6-16.6	348	**11.9**	8.1-15.7
35-44	225	**11.5**	6.6-16.4	338	**10.6**	6.9-14.3	563	**11.1**	8.0-14.1
45-54	305	**5.5**	2.6-8.3	496	**12.1**	9.0-15.2	801	**8.8**	6.7-11.0
55-64	416	**6.1**	3.6-8.6	604	**13.3**	10.4-16.2	1,020	**9.7**	7.8-11.6
65+	528	**7.3**	5.0-9.7	983	**9.6**	7.6-11.6	1,511	**8.7**	7.1-10.2
Education									
Less than H.S.	270	**10.4**	5.4-15.4	394	**18.9**	13.2-24.7	664	**14.5**	10.7-18.4
H.S. or G.E.D.	690	**8.7**	5.6-11.8	1,086	**10.0**	7.6-12.4	1,776	**9.4**	7.4-11.3
Some Post-H.S.	342	**10.0**	5.7-14.2	694	**14.6**	10.5-18.6	1,036	**12.6**	9.6-15.6
College Graduate	362	**5.5**	2.9-8.0	549	**11.4**	7.8-15.0	911	**8.5**	6.3-10.7
Income									
Less than $15,000	162	**11.7**	5.1-18.3	318	**18.2**	12.3-24.1	480	**15.1**	10.6-19.5
$15,000- 24,999	271	**10.8**	6.2-15.5	527	**12.6**	8.8-16.4	798	**11.9**	8.9-14.8
$25,000- 34,999	251	**11.4**	6.2-16.7	408	**10.6**	6.8-14.4	659	**11.0**	7.8-14.2
$35,000- 49,999	300	***4.9**	2.0-7.8	429	**11.6**	7.8-15.3	729	**8.3**	5.8-10.7
$50,000- 74,999	225	**12.0**	6.2-17.8	289	**14.6**	7.5-21.7	514	**13.2**	8.7-17.8
$75,000+	262	***3.9**	0.9-6.8	321	**11.3**	7.2-15.5	583	**7.2**	4.7-9.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 18.3 Current asthma by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,837	**6.0**	4.6-7.4	2,959	**11.4**	10.0-12.8	4,796	**8.8**	7.8-9.8
Age									
18-24	66	***8.2**	1.7-14.6	101	**12.9**	5.4-20.4	167	**10.5**	5.5-15.4
25-34	173	**7.4**	3.3-11.5	305	**11.2**	7.6-14.9	478	**9.3**	6.5-12.1
35-44	255	***4.0**	1.3-6.7	393	**12.0**	8.3-15.7	648	**8.0**	5.7-10.4
45-54	358	**7.2**	3.9-10.4	510	**11.5**	8.6-14.5	868	**9.4**	7.2-11.6
55-64	446	**5.0**	2.8-7.1	661	**12.1**	9.4-14.8	1,107	**8.6**	6.8-10.3
65+	536	**5.0**	3.1-6.8	969	**10.0**	8.0-12.0	1,505	**7.9**	6.5-9.3
Education									
Less than H.S.	264	**11.4**	6.8-16.1	423	**19.9**	15.3-24.5	687	**15.7**	12.4-19.0
H.S. or G.E.D.	755	**5.9**	3.7-8.2	1,174	**9.1**	7.2-11.1	1,929	**7.5**	6.0-9.0
Some Post-H.S.	383	**4.8**	2.0-7.5	758	**12.2**	9.1-15.4	1,141	**9.0**	6.8-11.1
College Graduate	432	**4.0**	1.9-6.1	600	**9.3**	6.6-12.1	1,032	**6.7**	5.0-8.5
Income									
Less than $15,000	159	**11.3**	5.9-16.6	394	**18.5**	13.8-23.2	553	**15.8**	12.2-19.3
$15,000- 24,999	300	**9.2**	4.4-14.1	534	**10.8**	7.7-13.9	834	**10.1**	7.3-12.9
$25,000- 34,999	304	**7.3**	3.3-11.3	481	**13.3**	8.8-17.8	785	**10.3**	7.2-13.3
$35,000- 49,999	317	**3.2**	1.2-5.3	474	**8.7**	5.9-11.5	791	**6.1**	4.4-7.9
$50,000- 74,999	268	**1.5**	0.4-2.7	330	**10.4**	6.7-14.1	598	**5.8**	3.9-7.7
$75,000+	316	**5.2**	2.1-8.4	373	**7.1**	4.0-10.2	689	**6.1**	3.9-8.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 18.4 Current asthma by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,665	**5.1**	3.8-6.4	2,720	**9.3**	7.8-10.7	4,385	**7.3**	6.3-8.2
Age									
18-24				57	***14.7**	5.5-23.9	115	***7.1**	2.5-11.6
25-34	124	***6.9**	1.9-11.9	222	**8.1**	4.4-11.8	346	**7.5**	4.4-10.6
35-44	225	**6.8**	3.3-10.4	338	**8.3**	5.0-11.7	563	**7.6**	5.1-10.0
45-54	305	***3.7**	1.3-6.2	492	**8.3**	5.7-10.9	797	**6.0**	4.2-7.8
55-64	416	**4.9**	2.7-7.1	604	**11.6**	8.8-14.3	1,020	**8.3**	6.5-10.0
65+	527	**6.6**	4.3-8.8	982	**7.6**	5.8-9.4	1,509	**7.2**	5.8-8.6
Education									
Less than H.S.	270	**6.9**	3.4-10.3	393	**17.0**	11.3-22.7	663	**11.8**	8.4-15.1
H.S. or G.E.D.	689	**5.3**	3.1-7.5	1,085	**7.0**	5.2-8.8	1,774	**6.2**	4.7-7.6
Some Post-H.S.	341	**4.1**	1.8-6.5	690	**9.9**	6.9-12.9	1,031	**7.4**	5.4-9.4
College Graduate	362	**4.5**	2.1-6.8	548	**7.7**	4.9-10.6	910	**6.1**	4.3-8.0
Income									
Less than $15,000	162	***8.0**	2.9-13.0	317	**16.8**	10.9-22.6	479	**12.5**	8.5-16.5
$15,000- 24,999	271	**7.4**	4.4-10.4	525	**10.9**	7.2-14.5	796	**9.4**	6.9-11.9
$25,000- 34,999	251	***6.4**	2.6-10.2	408	**6.8**	4.0-9.6	659	**6.6**	4.3-8.9
$35,000- 49,999	298	***2.8**	0.8-4.8	429	**9.3**	5.7-12.9	727	**6.1**	4.0-8.2
$50,000- 74,999	225	**7.4**	3.4-11.4	289	**8.0**	3.8-12.3	514	**7.7**	4.8-10.6
$75,000+	262	***1.7**	0.0-3.7	320	**6.0**	3.4-8.7	582	**3.6**	2.0-5.3

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 18.1 Lifetime and current asthma by year: WVBRFSS, 2000-2010

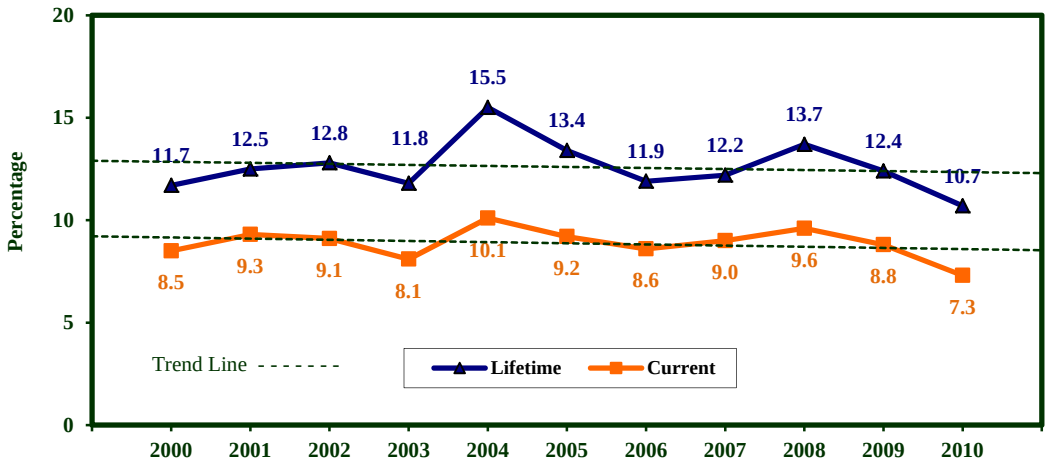
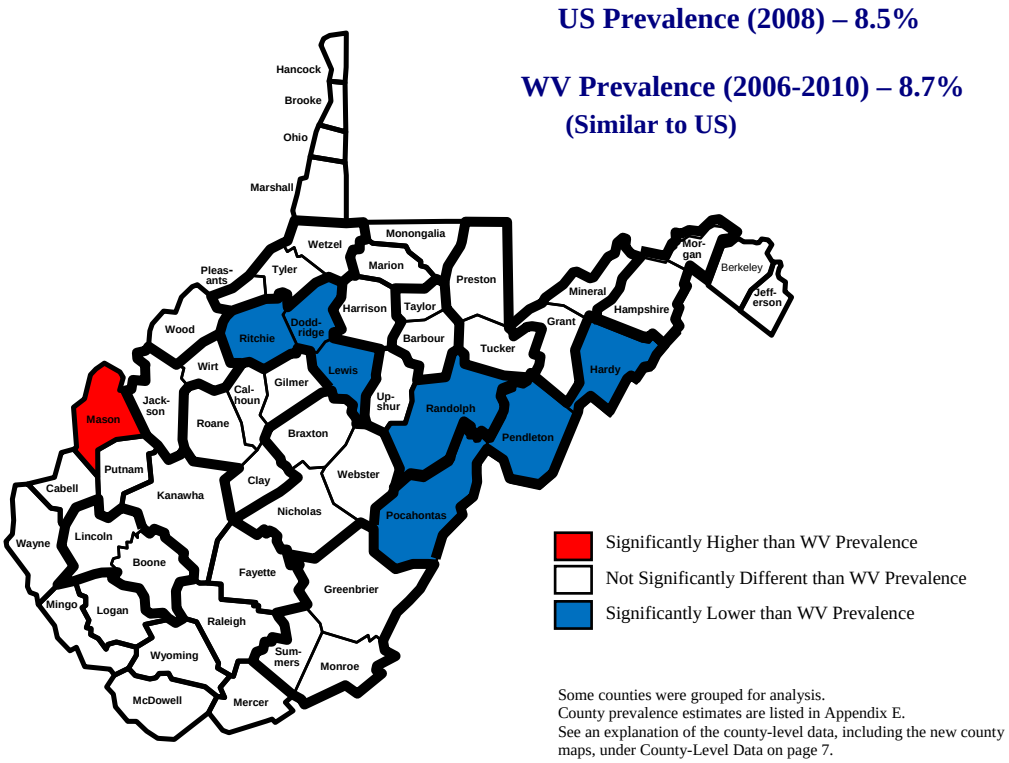


Figure 18.2 Current asthma by county: WVBRFSS, 2006-2010



CHAPTER 19: ARTHRITIS

Diagnosed with Some Form of Arthritis

Definition

Responding "Yes" to the following question: "Have you EVER been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?"

Prevalence

WV: 33.9% (95% CI: 32.3-35.4) in 2009; **36.0** (95% CI: 34.3-37.8) in 2010.
US: 25.9% (95% CI: 25.7-26.2) in 2009.
West Virginia ranked 3rd highest among 54 BRFSS participants in 2009. This was an optional module in 2010, therefore no US prevalence is available for comparison.

Gender

Men: 30.1% (95% CI: 27.7-32.5) in 2009; 33.6% (95% CI: 30.8-36.3) in 2010.
Women: 37.4% (95% CI: 35.4-39.4) in 2009; 38.3% (95% CI: 36.1-40.5)in 2010.
The prevalence of arthritis was significantly higher among women than men in 2009 but not 2010.

Age

The prevalence of arthritis significantly increased among adults at each higher age grouping in both 2009 and 2010. One in 10 adults aged 25-34 had ever been diagnosed with some form of arthritis, compared to 1 in 2 aged 65 and older.

Education

The prevalence of arthritis decreased as educational attainment increased in 2009 and 2010. Adults without a high school diploma had a significantly higher prevalence of arthritis than those at all higher levels of education.

Household Income

The prevalence of arthritis also decreased as household income increased in both 2009 and 2010. The prevalence of arthritis among adults in the poorest households was over two times higher than among those in the wealthiest households in both years.

Table 19.1 Arthritis by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,823	**30.1**	27.7-32.5	2,949	**37.4**	35.4-39.4	4,772	**33.9**	32.3-35.4
Age									
18-24	65	***2.3**	0.0-5.7	100	***4.0**	0.0-8.0	165	***3.1**	0.5-5.8
25-34	173	**15.2**	9.5-21.0	306	**14.3**	10.0-18.5	479	**14.7**	11.2-18.3
35-44	253	**23.9**	17.9-29.8	388	**25.4**	20.5-30.4	641	**24.7**	20.8-28.5
45-54	353	**34.8**	29.4-40.3	509	**41.0**	36.3-45.7	862	**38.0**	34.4-41.6
55-64	442	**46.4**	41.4-51.3	662	**52.0**	47.9-56.2	1,104	**49.2**	46.0-52.5
65+	534	**48.2**	43.6-52.7	963	**63.6**	60.2-66.9	1,497	**57.0**	54.3-59.8
Education									
Less than H.S.	259	**41.5**	34.4-48.7	421	**53.1**	47.0-59.1	680	**47.3**	42.6-52.0
H.S. or G.E.D.	749	**30.3**	26.5-34.1	1,167	**40.0**	36.7-43.3	1,916	**35.1**	32.5-37.6
Some Post-H.S.	381	**27.9**	22.9-32.8	753	**34.4**	30.5-38.4	1,134	**31.6**	28.4-34.7
College Graduate	431	**24.6**	20.3-29.0	604	**26.4**	22.6-30.1	1,035	**25.5**	22.7-28.4
Income									
Less than $15,000	154	**50.5**	40.5-60.5	391	**50.1**	43.7-56.4	545	**50.2**	44.7-55.7
$15,000- 24,999	299	**39.3**	32.6-46.0	535	**43.5**	38.5-48.5	834	**41.5**	37.4-45.6
$25,000- 34,999	303	**28.9**	22.9-34.9	480	**35.4**	30.4-40.4	783	**32.1**	28.1-36.0
$35,000- 49,999	315	**30.6**	25.0-36.2	474	**38.7**	33.8-43.7	789	**34.9**	31.2-38.7
$50,000- 74,999	268	**25.7**	20.0-31.5	329	**25.6**	20.3-30.8	597	**25.7**	21.8-29.6
$75,000+	315	**21.5**	16.8-26.1	374	**27.6**	22.7-32.6	689	**24.3**	20.9-27.7

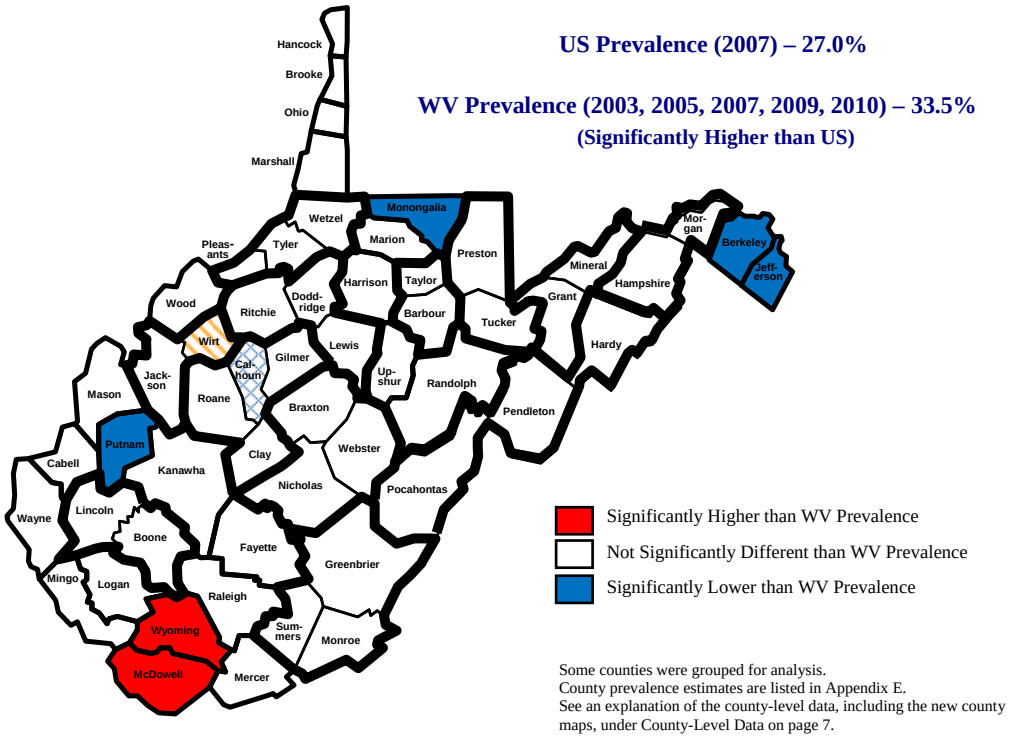
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Table 19.1 Arthritis by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,644	**33.6**	30.8-36.3	2,717	**38.3**	36.1-40.5	4,361	**36.0**	34.3-37.8
Age									
18-24	55	***8.0**	0.1-16.0	58	***1.8**	0.0-5.4	113	***5.0**	0.5-9.4
25-34	124	**12.3**	5.6-18.9	223	**12.5**	7.4-17.6	347	**12.4**	8.2-16.6
35-44	224	**26.7**	20.3-33.0	336	**28.7**	23.4-34.1	560	**27.7**	23.6-31.8
45-54	301	**38.0**	32.0-44.0	496	**40.8**	36.0-45.6	797	**39.5**	35.6-43.3
55-64	411	**52.1**	46.8-57.4	599	**56.8**	52.4-61.1	1,010	**54.5**	51.0-57.9
65+	519	**53.6**	49.0-58.2	980	**63.8**	60.5-67.1	1,499	**59.5**	56.7-62.3
Education									
Less than H.S.	266	**41.3**	34.0-48.7	394	**53.3**	47.0-59.7	660	**47.2**	42.3-52.2
H.S. or G.E.D.	679	**36.8**	32.3-41.3	1,083	**40.1**	36.5-43.7	1,762	**38.4**	35.5-41.3
Some Post-H.S.	338	**34.1**	28.1-40.1	689	**37.0**	32.4-41.6	1,027	**35.8**	32.1-39.5
College Graduate	359	**20.5**	16.2-24.7	547	**26.4**	22.5-30.2	906	**23.5**	20.6-26.4
Income									
Less than $15,000	159	**41.3**	32.0-50.5	318	**60.7**	53.5-68.0	477	**51.5**	45.5-57.6
$15,000- 24,999	268	**49.1**	41.5-56.6	524	**49.7**	44.3-55.2	792	**49.5**	45.0-53.9
$25,000- 34,999	247	**36.1**	29.2-43.0	406	**35.3**	29.6-40.9	653	**35.7**	31.3-40.1
$35,000- 49,999	296	**26.1**	20.6-31.6	426	**35.7**	30.4-40.9	722	**31.0**	27.1-34.9
$50,000- 74,999	224	**36.5**	29.1-43.8	287	**25.9**	20.3-31.5	511	**31.4**	26.6-36.1
$75,000+	260	**23.4**	17.8-29.0	321	**24.8**	19.9-29.8	581	**24.1**	20.2-27.9

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Figure 19.1 Arthritis by county: WVBRFSS, 2003, 2005, 2007, 2009, 2010



Some counties were grouped for analysis.
County prevalence estimates are listed in Appendix E.
See an explanation of the county-level data, including the new county maps, under County-Level Data on page 7.

CHAPTER 20: DISABILITY

Physical, Mental or Emotional Disability

Definition

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

Prevalence

WV: 27.1% (95% CI: 25.6-28.6) in 2009; **28.2%** (95% CI: 26.6-29.9) in 2010.
US: 18.9% (95% CI: 18.7-19.2) in 2009; **20.8%** (95% CI: 20.6-21.0) in 2010.
West Virginia ranked highest among 54 BRFSS participants in both 2009 and 2010.

Time Trends

The prevalence of disability in West Virginia increased from 1995 to 2010.

Gender

Men: 27.8% (95% CI: 25.4-30.3) in 2009; 29.0% (95% CI: 26.4-31.7) in 2010.
Women: 26.4% (95% CI: 24.6-28.2) in 2009; 27.5% (95% CI: 25.4-29.6) in 2010.
There was no significant gender difference for the prevalence of disability in either 2009 or 2010.

Age

Disability prevalence generally increased with age in both 2009 and 2010.

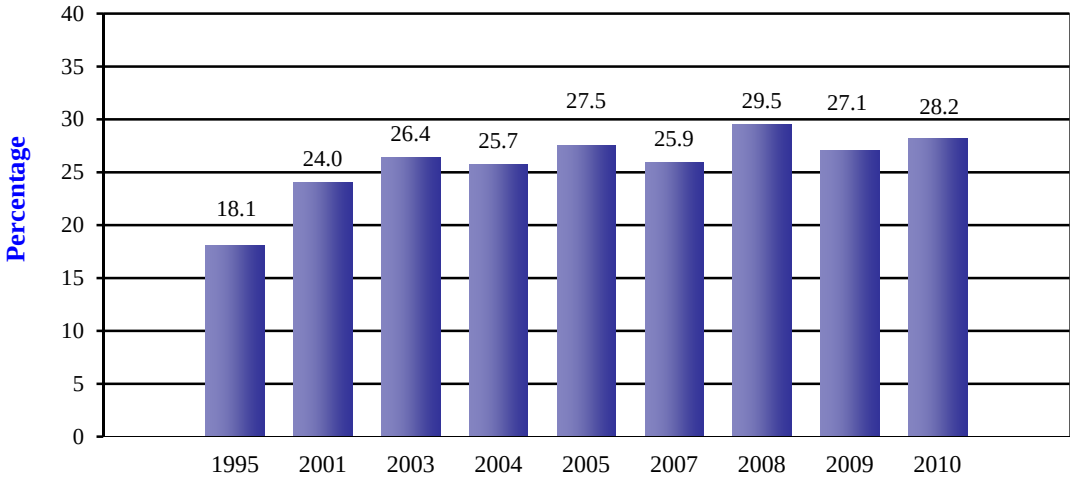
Education

The prevalence of disability was highest among those without a high school diploma in 2009 and 2010. In fact, the prevalence was two times higher among those with less than a high school education than among college graduates.

Household Income

Disability was also most prevalent among those with the lowest incomes. In both years, more than half of all adults in the poorest households were disabled, compared with less than 15% of those in the wealthiest homes.

Figure 20.1 Disability by year: WVBRFSS, 1995, 2001, 2003-2005, 2007-2010



NOTE: Data are not available for the years 1996, 1997, 1998, 1999, 2000, 2002, and 2006.

Table 20.1 Disability by demographic characteristics: WVBRFSS, 2009

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,837	**27.8**	25.4-30.3	2,964	**26.4**	24.6-28.2	4,801	**27.1**	25.6-28.6
Age									
18-24	66	***11.7**	3.3-20.1	101	**11.5**	5.2-17.8	167	**11.6**	6.3-16.9
25-34	173	**22.9**	15.7-30.0	308	**16.6**	12.1-21.1	481	**19.8**	15.5-24.0
35-44	255	**26.0**	20.1-31.9	393	**22.9**	18.2-27.6	648	**24.5**	20.7-28.2
45-54	358	**30.0**	24.8-35.2	511	**28.4**	24.1-32.7	869	**29.2**	25.8-32.5
55-64	446	**37.3**	32.6-42.1	662	**32.4**	28.6-36.2	1,108	**34.9**	31.8-37.9
65+	536	**33.7**	29.4-38.0	968	**36.4**	33.1-39.8	1,504	**35.3**	32.6-37.9
Education									
Less than H.S.	266	**44.4**	36.9-51.8	423	**40.1**	34.5-45.7	689	**42.2**	37.5-46.9
H.S. or G.E.D.	752	**30.3**	26.3-34.3	1,175	**28.4**	25.4-31.3	1,927	**29.3**	26.8-31.8
Some Post-H.S.	384	**23.6**	19.0-28.1	758	**23.1**	19.6-26.6	1,142	**23.3**	20.5-26.1
College Graduate	432	**16.2**	12.6-19.8	604	**18.2**	14.8-21.6	1,036	**17.2**	14.8-19.7
Income									
Less than $15,000	160	**55.1**	45.2-65.0	395	**51.6**	45.2-57.9	555	**52.9**	47.4-58.4
$15,000- 24,999	303	**43.9**	36.9-51.0	534	**33.4**	28.7-38.2	837	**38.4**	34.2-42.6
$25,000- 34,999	302	**32.7**	25.7-39.6	483	**24.8**	20.2-29.5	785	**28.8**	24.6-33.0
$35,000- 49,999	316	**23.9**	18.9-28.9	475	**23.0**	18.8-27.2	791	**23.4**	20.1-26.7
$50,000- 74,999	269	**13.7**	9.4-18.0	332	**15.2**	10.9-19.5	601	**14.4**	11.4-17.5
$75,000+	316	**8.9**	5.9-11.9	373	**15.5**	11.4-19.5	689	**11.9**	9.4-14.4

Table 20.2 Disability by demographic characteristics: WVBRFSS, 2010

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,664	**29.0**	26.4-31.7	2,727	**27.5**	25.4-29.6	4,391	**28.2**	26.6-29.9
Age									
18-24	58	***17.9**	7.3-28.5	58	**17.5**	7.4-27.5	116	**17.7**	10.4-25.0
25-34	125	**14.9**	8.2-21.6	222	**13.5**	8.8-18.2	347	**14.2**	10.1-18.3
35-44	224	**20.8**	15.0-26.6	337	**23.7**	18.7-28.8	561	**22.3**	18.4-26.1
45-54	305	**35.4**	29.4-41.3	498	**31.6**	27.0-36.1	803	**33.5**	29.7-37.2
55-64	414	**44.4**	39.0-49.7	605	**34.6**	30.5-38.7	1,019	**39.4**	36.0-42.8
65+	528	**36.1**	31.7-40.5	983	**35.8**	32.5-39.1	1,511	**36.0**	33.3-38.6
Education									
Less than H.S.	271	**40.2**	32.9-47.5	393	**42.8**	36.5-49.0	664	**41.4**	36.6-46.3
H.S. or G.E.D.	688	**31.0**	26.7-35.3	1,087	**27.6**	24.3-30.9	1,775	**29.3**	26.6-32.0
Some Post-H.S.	342	**25.5**	19.9-31.0	695	**25.0**	21.0-29.0	1,037	**25.2**	21.9-28.5
College Graduate	360	**20.6**	15.8-25.3	548	**20.6**	16.9-24.3	908	**20.6**	17.6-23.6
Income									
Less than $15,000	163	**50.8**	41.0-60.5	318	**51.0**	43.9-58.2	481	**50.9**	44.9-56.9
$15,000- 24,999	270	**45.2**	37.8-52.6	527	**39.1**	33.8-44.5	797	**41.6**	37.3-46.0
$25,000- 34,999	251	**34.0**	27.2-40.9	409	**28.6**	23.1-34.1	660	**31.1**	26.8-35.5
$35,000- 49,999	299	**18.5**	13.6-23.4	428	**21.1**	16.7-25.4	727	**19.8**	16.5-23.1
$50,000- 74,999	225	**18.8**	13.2-24.5	289	**15.0**	10.6-19.4	514	**17.0**	13.3-20.6
$75,000+	260	**15.0**	10.3-19.8	322	**15.5**	11.0-20.1	582	**15.3**	11.9-18.6

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

CHAPTER 21: EMOTIONAL SUPPORT AND LIFE SATISFACTION

Emotional and Social Support

Definition

Responding "Always" or "Usually" to the following question: "How often do you get the social and emotional support you need?" (The response options offered were "Always," "Usually," "Sometimes," "Rarely," and "Never.")

Prevalence

WV: 79.9% (95% CI: 78.4-81.3) in 2009; **82.3%** (95% CI: 80.9-83.8) in 2010.
US: 78.4% (95% CI: 78.1-78.6) in 2009; **80.5%** (95% CI: 80.2-80.7) in 2010.
West Virginia ranked 27th highest among 54 BRFSS participants in 2009 and 23rd highest among 54 BRFSS participants in 2010.

Gender

Men: 78.9% (95% CI: 76.6-81.2) in 2009; 82.0% (95% CI: 79.6-84.3) in 2010.
Women: 80.8% (95% CI: 79.0-82.5) in 2009; 82.7% (95% CI: 80.9-84.5) in 2010.
There was no significant gender difference in emotional and social support in either 2009 or 2010.

Age, Education, Household Income

The prevalence of emotional and social support did not vary by age during either year. The prevalence of emotional and social support was highest among adults with higher levels of education and income in both 2009 and 2010.

Table 21.1 Emotional support by demographic characteristics: WVBRFSS, 2009 and 2010

Characteristic	2009			2010		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	4,726	**79.9**	78.4-81.3	4,349	**82.3**	80.9-83.8
Sex						
Males	1,797	**78.9**	76.6-81.2	1,636	**82.0**	79.6-84.3
Females	2,929	**80.8**	79.0-82.5	2,713	**82.7**	80.9-84.5
Age						
18-24	165	**80.1**	73.5-86.7	115	**80.8**	73.6-88.1
25-34	475	**78.6**	74.4-82.8	345	**83.0**	78.5-87.6
35-44	643	**80.5**	77.1-83.9	560	**84.1**	80.8-87.3
45-54	855	**78.8**	75.8-81.8	796	**80.6**	77.5-83.6
55-64	1,095	**80.1**	77.5-82.7	1,009	**81.0**	78.3-83.7
65+	1,469	**80.9**	78.6-83.1	1,491	**83.7**	81.7-85.8
Education						
Less than H.S.	667	**67.5**	62.9-72.1	655	**69.7**	65.1-74.2
H.S. or G.E.D.	1,894	**77.6**	75.2-80.0	1,753	**81.1**	78.7-83.6
Some Post-H.S.	1,129	**83.5**	80.8-86.2	1,030	**84.6**	81.8-87.4
College Graduate	1,029	**87.8**	85.6-90.0	905	**90.9**	88.8-93.0
Income						
Less than $15,000	540	**63.0**	57.7-68.2	473	**68.5**	62.8-74.2
$15,000- 24,999	826	**71.7**	67.8-75.6	787	**72.4**	68.3-76.4
$25,000- 34,999	776	**78.0**	73.9-82.1	653	**82.2**	78.4-86.0
$35,000-49,999	784	**86.0**	83.1-88.8	725	**86.4**	83.5-89.3
$50,000-74,000	592	**87.5**	84.4-90.6	509	**88.6**	84.9-92.3
$75,000+	685	**88.6**	86.1-91.2	581	**91.5**	88.8-94.2

General Life Satisfaction

Definition

Responding "Very satisfied" or "Satisfied" to the following question: "In general, how satisfied are you with your life?" (The response options offered were "Very satisfied," "Satisfied," "Dissatisfied," or "Very dissatisfied.")

Prevalence

WV: **92.3%** (95% CI: 91.3-93.2) in 2009; **93.9%** (95% CI: 93.0-94.8) in 2010.
US: **94.1%** (95% CI: 94.0-94.3) in 2009; **94.6%** (95% CI: 94.5-94.7) in 2010.
West Virginia ranked lowest among 54 BRFSS participants in 2009 and 9th lowest among 54 BRFSS participants in 2010.

Gender

Men: **92.0%** (95% CI: 90.5-93.6) in 2009; **93.2%** (95% CI: 91.6-94.7) in 2010.
Women: **92.4%** (95% CI: 91.3-93.6) in 2009; **94.5%** (95% CI: 93.5-95.6) in 2010.
There was no significant gender difference in the prevalence of life satisfaction in either 2009 or 2010.

Age, Education, Household Income

Reports of general life satisfaction did not vary significantly by age groups in 2009 or 2010. Adults with a college degree had a significantly higher prevalence of life satisfaction than those with less than a high school education in both years. For both years, the prevalence of being satisfied with life was significantly higher among those earning $75,000 or more as compared to those earning less than $25,000.

Table 21.2 Very satisfied or satisfied with life by demographic characteristics: WVBRFSS, 2009 and 2010

Characteristic	2009			2010		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	4,758	**92.3**	91.3-93.2	4,369	**93.9**	93.0-94.8
Sex						
Males	1,819	**92.0**	90.5-93.6	1,655	**93.2**	91.6-94.7
Females	2,939	**92.4**	91.3-93.6	2,714	**94.5**	93.5-95.6
Age						
18-24	166	**93.7**	89.7-97.6	116	**95.2**	91.2-99.3
25-34	479	**91.7**	89.0-94.3	345	**95.0**	92.4-97.6
35-44	644	**92.0**	89.5-94.5	561	**94.0**	91.8-96.2
45-54	858	**89.4**	87.0-91.7	797	**91.2**	88.9-93.5
55-64	1,102	**91.3**	89.5-93.0	1,013	**92.4**	90.4-94.4
65+	1,486	**95.7**	94.6-96.8	1,502	**95.6**	94.5-96.7
Education						
Less than H.S.	675	**86.6**	83.3-89.8	661	**90.4**	87.5-93.3
H.S. or G.E.D.	1,912	**91.3**	89.6-92.9	1,759	**93.3**	91.7-94.9
Some Post-H.S.	1,131	**94.1**	92.4-95.7	1,034	**94.9**	93.2-96.6
College Graduate	1,033	**95.7**	94.3-97.1	909	**96.3**	94.7-97.8
Income						
Less than $15,000	543	**78.5**	73.8-83.2	477	**85.3**	81.3-89.3
$15,000- 24,999	831	**88.6**	85.8-91.4	791	**88.9**	86.1-91.8
$25,000- 34,999	777	**92.5**	90.2-94.7	654	**94.8**	92.8-96.8
$35,000-49,999	787	**95.7**	94.0-97.3	727	**96.6**	95.1-98.1
$50,000-74,000	599	**96.0**	94.3-97.8	513	**96.4**	94.1-98.6
$75,000+	688	**98.2**	97.1-99.3	582	**98.6**	97.6-99.7

CHAPTER 22: HIV TESTING

HIV Testing Prevalence

Definition

Persons aged 18-64 responding "Yes" to the following question: "Have you EVER been tested for HIV? Do not count tests you may have had as part of a blood donation. Include tests using fluid from your mouth."

Prevalence

WV: 31.9% (95% CI: 29.9-33.9) in 2009; **29.1%** (95% CI: 26.9-31.4) in 2010.
US: 42.4% (95% CI: 42.0-42.8) in 2009; **40.3%** (95% CI: 39.9-40.6) in 2010.
West Virginia ranked 6th lowest among 54 BRFSS participants in 2009 and 2010.

Age

In both 2009 and 2010, HIV testing prevalence was highest among those aged 25-34, followed by the 35-44 age group.

Education, Household Income

No consistent findings were found for HIV testing by education or income in 2009 or 2010.

Table 22.1 HIV testing among adults aged 18-64 by demographic characteristics: WVBRFSS, 2009 and 2010

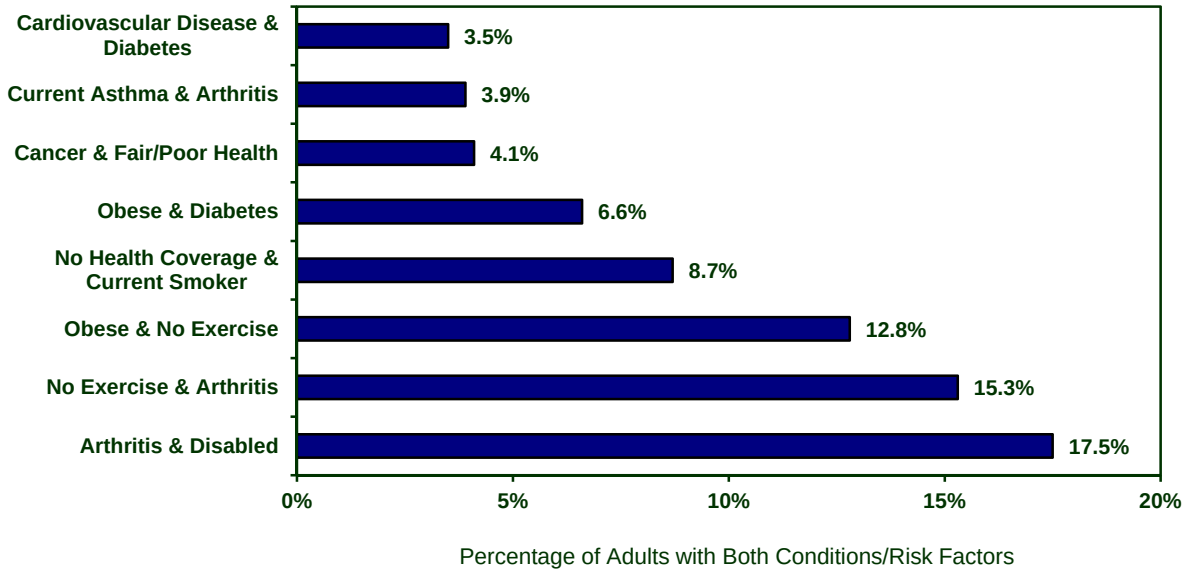
Characteristic	2009			2010		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,145	**31.9**	29.9-33.9	2,750	**29.1**	26.9-31.4
Sex						
Males	1,245	**28.3**	25.3-31.4	1,084	**26.3**	23.1-29.5
Females	1,900	**35.5**	32.9-38.2	1,666	**32.0**	28.9-35.0
Age						
18-24	164	**32.3**	24.5-40.0	113	**31.9**	22.8-41.0
25-34	470	**46.2**	41.2-51.3	337	**39.2**	33.5-45.0
35-44	624	**40.9**	36.6-45.1	544	**36.9**	32.4-41.4
45-54	825	**25.1**	21.9-28.2	774	**25.3**	21.8-28.8
55-64	1,062	**16.5**	14.1-18.9	982	**14.2**	11.7-16.7
Education						
Less than H.S.	333	**34.6**	28.0-41.3	304	**33.7**	26.8-40.6
H.S. or G.E.D.	1,238	**26.1**	23.0-29.2	1,090	**25.0**	21.6-28.5
Some Post-H.S.	809	**35.9**	31.8-40.1	694	**32.1**	27.5-36.6
College Graduate	764	**36.3**	32.5-40.2	661	**31.1**	26.7-35.5
Income						
Less than $15,000	308	**47.8**	40.6-55.1	278	**35.5**	28.2-42.8
$15,000- 24,999	452	**40.0**	34.1-45.9	389	**40.6**	34.3-47.0
$25,000- 34,999	482	**22.3**	17.6-27.1	365	**23.1**	17.1-29.1
$35,000-49,999	554	**26.0**	21.8-30.2	489	**19.0**	14.7-23.2
$50,000-74,000	496	**34.8**	29.7-40.0	432	**28.0**	22.9-33.2
$75,000+	589	**34.3**	30.0-38.7	494	**32.6**	27.5-37.6

CHAPTER 23: 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 2010 (see Figure 22.1 and Table 22.1).

Figure 23.1 Common comorbid conditions: WVBRFSS, 2010



DEFINITIONS OF HEALTH CONDITIONS AND RISK FACTORS

Fair or Poor Health: Reported health as fair or poor from choices of "excellent," "very good," "good," "fair," or "poor."

No Health Coverage: Adults aged 18 and older without current health care coverage.

No Exercise: Other than their regular job, did not participate in any physical activities or exercise in the past month.

Obese: Body Mass Index (BMI) of 30.0 or higher. BMI equals body weight in kilograms divided by height in meters squared.

Current Smoker: Have smoked 100 cigarettes in lifetime and now smoke every day or some days.

CVD: Ever been told by a doctor, nurse, or other health professional that they had a heart attack, angina or coronary heart disease, or stroke.

Diabetes: Ever been told by a doctor that they have diabetes.

Current Asthma: Ever been told by a doctor, nurse, or other health professional that they had asthma and still have asthma.

Disabled: Limited in any way in any activities because of physical, mental, or emotional problems.

Cancer: Ever been told by a doctor, nurse, or other health professional that they had cancer.

Arthritis: Ever been told by a doctor or other health professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

Table 23.1 Comorbidities: The prevalence of multiple risk behaviors and/or health conditions among adults: WVBRFSS, 2010

*Table interpretation: Each cell represents the percentage of WV adults with **both** of the conditions/risk factors. For example, 3.5% of WV adults have **both** cardiovascular disease and diabetes.*

% of Total Population	Fair or Poor Health	No Health Coverage	No Exercise	Obese	Current Smoker	CVD	Diabetes	Current Asthma	Disabled	Cancer	Arthritis
Fair or Poor Health	**23.4** (21.9-24.9)	**4.3** (3.4-5.2)	**12.6** (11.4-13.7)	**8.8** (7.8-9.7)	**7.9** (6.8-9.0)	**7.0** (6.3-7.8)	**6.2** (5.5-7.0)	**2.9** (2.3-3.5)	**15.3** (14.1-16.5)	**4.1** (3.4-4.7)	**14.6** (13.4-15.8)
No Health Coverage	**4.3** (3.4-5.2)	**17.5** (15.7-19.3)	**5.6** (4.6-6.6)	**5.9** (4.7-7.1)	**8.7** (7.4-10.1)	**1.1** (0.8-1.5)	**1.1** (0.8-1.5)	**1.2** (0.7-1.7)	**4.4** (3.5-5.2)	**1.0** (0.6-1.3)	**3.4** (2.8-4.1)
No Exercise	**12.6** (11.4-13.7)	**5.6** (4.6-6.6)	**32.9** (31.1-34.7)	**12.8** (11.5-14.1)	**10.7** (9.5-12.0)	**5.5** (4.8-6.1)	**5.5** (4.8-6.2)	**3.2** (2.6-3.9)	**13.5** (12.2-14.7)	**3.9** (3.2-4.5)	**15.3** (14.0-16.5)
Obese	**8.8** (7.8-9.7)	**5.9** (4.7-7.1)	**12.8** (11.5-14.1)	**32.9** (31.0-34.8)	**7.1** (6.0-8.3)	**3.9** (3.4-4.5)	**6.6** (5.8-7.4)	**2.9** (2.3-3.6)	**10.8** (9.7-12.0)	**3.0** (2.4-3.6)	**13.5** (12.3-14.7)
Current Smoker	**7.9** (6.8-9.0)	**8.7** (7.4-10.1)	**10.7** (9.5-12.0)	**7.1** (6.0-8.3)	**26.8** (25.0-28.6)	**3.3** (2.7-3.9)	**1.8** (1.4-2.2)	**2.1** (1.5-2.6)	**9.5** (8.4-10.7)	**2.3** (1.7-2.9)	**9.3** (8.3-10.4)
CVD	**7.0** (6.3-7.8)	**1.1** (0.8-1.5)	**5.5** (4.8-6.1)	**3.9** (3.4-4.5)	**3.3** (2.7-3.9)	**11.6** (10.6-12.6)	**3.5** (2.9-4.0)	**1.4** (1.1-1.7)	**6.7** (5.9-7.5)	**2.0** (1.6-2.4)	**7.4** (6.6-8.2)
Diabetes	**6.2** (5.5-7.0)	**1.1** (0.8-1.5)	**5.5** (4.8-6.2)	**6.6** (5.8-7.4)	**1.8** (1.4-2.2)	**3.5** (2.9-4.0)	**11.7** (10.7-12.7)	**1.4** (1.1-1.8)	**5.4** (4.8-6.1)	**1.9** (1.5-2.3)	**6.9** (6.2-7.7)
Current Asthma	**2.9** (2.3-3.5)	**1.2** (0.7-1.7)	**3.2** (2.6-3.9)	**2.9** (2.3-3.6)	**2.1** (1.5-2.6)	**1.4** (1.1-1.7)	**1.4** (1.1-1.8)	**7.3** (6.3-8.2)	**3.0** (2.4-3.6)	**1.1** (0.8-1.5)	**3.9** (3.2-4.6)
Disabled	**15.3** (14.1-16.5)	**4.4** (3.5-5.2)	**13.5** (12.2-14.7)	**10.8** (9.7-12.0)	**9.5** (8.4-10.7)	**6.7** (5.9-7.5)	**5.4** (4.8-6.1)	**3.0** (2.4-3.6)	**28.2** (26.6-29.9)	**3.7** (3.1-4.3)	**17.5** (16.2-18.8)
Cancer	**4.1** (3.4-4.7)	**1.0** (0.6-1.3)	**3.9** (3.2-4.5)	**3.0** (2.4-3.6)	**2.3** (1.7-2.9)	**2.0** (1.6-2.4)	**1.9** (1.5-2.3)	**1.1** (0.8-1.5)	**3.7** (3.1-4.3)	**8.8** (7.9-9.7)	**5.0** (4.4-5.7)
Arthritis	**14.6** (13.4-15.8)	**3.4** (2.8-4.1)	**15.3** (14.0-16.5)	**13.5** (12.3-14.7)	**9.3** (8.3-10.4)	**7.4** (6.6-8.2)	**6.9** (6.2-7.7)	**3.9** (3.2-4.6)	**17.5** (16.2-18.8)	**5.0** (4.4-5.7)	**36.0** (34.3-37.8)

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 7.

Appendix A

Behavioral Risk Factor Prevalences by Year
West Virginia Behavioral Risk Factor Surveillance System
2000-2010

Behavioral Risk Factor	2000 (52 Partic.)		2001 (54 Partic.)		2002 (54 Partic.)		2003 (54 Partic.)		2004 (52 Partic.)		2005 (53 Partic.)		2006 (51 Partic.)		2007 (54 Partic.)		2008 (54 Partic.)		2009 (# Partic.)		2010 (# Partic.)	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Hypertension	--	--	32.5	1	33.1	1	33.6	1	--	--	31.4	2	--	--	33.3	3	--	--	37.6	1	--	--
High Cholesterol	--	--	--	--	40.7	--	38.1	2	--	--	39.9	1	--	--	42.4	1	--	--	38.5	22	--	--
Obesity	23.2	5	25.1	2	27.6	1	27.7	3	27.6	3	30.6	3	31.0	2	30.3	5	31.9	3	31.7	6	32.9	3
Poor Nutrition	--	--	--	--	78.7	19	81.3	8	--	--	80.0	7	--	--	80.3	10	--	--	83.8	3	--	--
Physical Inactivty	33.6	6	31.7	7	28.4	10	28.0	11	24.5	18	28.5	11	25.6	12	28.2	11	31.1	5	33.2	2	32.9	3
Current Smoking	26.1	6	28.2	4	28.4	4	27.3	3	26.9	2	26.7	4	25.7	2	26.9	3	26.5	2	25.6	1	26.8	1
Smokeless Tobacco	8.8	1	8.2	1	8.4	2	7.7	1	8.1	2	--	--	--	--	--	--	--	--	8.5	2	7.7	2
Heavy Drinking	--	--	3.0	52	4.5	45	3.1	49	2.9	50	3.1	49	3.2	49	3.4	51	2.9	54	2.7	53	2.8	53
Binge Drinking	--	--	9.4	52	11.4	49	11.1	49	9.7	48	9.1	51	11.1	46	9.8	52	8.8	53	9.2	52	9.0	52

Source: Centers for Disease Control & Prevention, 2000-2010 Behavioral Risk Factor Survillance System data; West Virginia Health Statistics Center, 2012

-- Prevalence / rank not available

See report chapters for definitions of risk factors

Appendix B

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories [a]
United States, 2009

State	Fair or Poor Health		Disabled		No Leisure Exercise		Obesity (BMI 30+)		Current Smoking		History of Heart Attack, Angina,Stroke		Hypertension		Diabetes		Arthritis		Cancer	
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	21.6	4	23.5	5	31.0	6	31.6	7	22.5	8	10.7	3	37.2	3	12.3	3	33.9	2	11.4	5
Alaska	11.3	49	21.4	13	22.4	34	25.4	39	20.6	13	6.1	48	26.4	44	5.8	53	23.4	44	7.7	51
Arizona	14.5	28	18.6	29	19.0	50	25.9	35	16.1	41	8.1	20	26.6	43	8.4	27	24.3	39	11.1	8
Arkansas	19.7	9	22.8	6	29.7	8	31.5	8	21.5	12	10.3	5	34.4	6	10.1	11	31.3	4	10.7	12
California	19.6	10	17.2	40	22.1	36	25.5	38	12.9	51	6.4	46	25.6	50	9.1	19	20.3	51	7.9	50
Colorado	11.9	44	18.0	34	17.7	51	19.0	54	17.1	36	5.4	50	22.4	52	5.8	54	23.8	41	8.9	41
Connecticut	10.3	53	16.1	47	21.6	41	21.0	52	15.4	44	6.1	47	27.1	38	6.7	49	24.9	36	9.7	32
Delaware	12.9	37	18.3	32	21.9	39	27.6	25	18.3	24	8.4	16	30.8	17	8.1	33	27.5	18	10.3	18
D.C.	10.9	51	16.1	48	19.6	48	20.1	53	15.2	46	5.1	52	26.1	47	7.5	41	20.8	50	8.2	49
Florida	15.7	20	21.0	14	23.6	30	25.9	34	18.1	25	9.3	9	30.9	16	9.8	12	27.1	21	12.9	1
Georgia	15.4	21	16.0	50	24.2	26	27.7	24	17.7	31	7.2	32	31.3	15	9.5	14	23.7	43	8.9	39
Guam	19.9	8	11.0	53	25.4	21	26.8	29	24.1	4	4.6	53	22.2	53	9.1	20	10.7	54	3.0	54
Hawaii	13.8	32	14.9	52	19.6	47	22.9	50	15.4	45	6.0	49	30.2	19	8.5	26	21.2	48	8.7	43
Idaho	15.2	23	20.1	20	21.0	44	25.1	42	16.3	40	7.3	30	25.9	48	8.0	35	23.7	42	10.2	21
Illinois	15.2	22	16.0	49	23.6	29	27.4	27	18.6	23	7.0	38	28.9	26	8.1	32	26.5	24	8.2	48
Indiana	16.4	14	20.0	21	27.1	12	30.0	14	23.1	6	8.9	11	31.3	14	9.3	16	29.3	13	9.9	26
Iowa	11.3	48	16.4	46	24.2	27	28.5	20	17.2	34	7.5	27	28.0	32	7.6	40	25.3	34	9.7	33
Kansas	12.3	41	18.9	26	23.2	32	28.8	19	17.8	30	7.7	23	28.7	27	8.5	25	24.1	40	9.9	27
Kentucky	22.8	3	24.8	3	29.7	9	32.4	4	25.6	1	11.2	2	36.4	4	11.5	5	35.6	1	11.5	4
Louisiana	20.8	7	20.3	18	28.6	10	33.9	2	22.1	9	9.7	8	35.7	5	11.0	6	26.0	26	8.9	40
Maine	13.4	34	21.7	11	21.2	43	26.4	32	17.3	33	8.3	18	30.0	21	8.3	28	30.9	7	10.5	14
Maryland	12.9	38	17.2	39	23.8	28	26.8	30	15.2	47	6.8	39	29.4	24	9.3	18	25.9	27	9.2	36
Massachusetts	11.9	45	17.9	36	20.9	45	21.8	51	15.0	49	7.2	33	25.7	49	7.9	38	24.8	37	10.1	23
Michigan	14.7	26	19.9	22	23.6	31	30.3	10	19.6	19	8.3	17	29.8	23	9.3	15	30.8	8	9.9	28
Minnesota	10.1	54	17.1	42	15.7	54	25.4	40	16.8	38	6.5	44	21.6	54	6.4	50	20.9	49	8.3	47
Mississippi	21.4	5	24.1	4	32.3	3	35.4	1	23.3	5	9.8	7	37.4	2	11.6	4	30.8	10	9.3	35
Missouri	16.1	16	22.1	8	26.7	14	30.6	9	23.1	7	8.3	19	30.6	18	7.9	36	31.0	6	11.6	3
Montana	14.5	29	20.7	17	22.0	37	23.7	47	16.8	37	7.5	28	27.7	34	6.8	48	27.5	17	11.3	6
Nebraska	13.1	35	17.9	35	24.2	25	28.1	22	16.7	39	7.1	35	27.1	39	7.5	43	25.9	28	9.8	29
Nevada	15.9	19	18.9	25	24.4	24	26.4	31	22.0	10	8.0	21	27.5	35	7.9	37	24.3	38	10.6	13
New Hampshire	12.1	43	18.3	31	21.2	42	26.3	33	15.7	43	6.5	43	28.6	28	7.1	45	27.0	22	9.8	31
New Jersey	14.6	27	15.0	51	26.2	18	23.9	46	15.8	42	7.0	36	28.1	30	8.7	23	22.7	45	8.7	42
New Mexico	17.1	13	20.8	15	22.4	35	25.6	36	17.9	27	6.7	40	26.6	42	8.6	24	25.7	31	9.6	34
New York	14.8	24	18.5	30	26.4	15	24.6	44	18.0	26	7.2	34	28.5	29	8.9	22	25.6	32	9.8	30
North Carolina	18.1	12	20.2	19	26.4	16	30.1	12	20.3	16	8.7	13	31.5	12	9.6	13	27.6	16	10.3	20
North Dakota	11.6	47	17.2	41	26.8	13	28.4	21	18.6	22	7.5	29	26.8	41	7.5	42	27.4	19	9.0	37
Ohio	15.9	18	20.7	16	26.3	17	29.8	15	20.3	15	8.6	15	31.7	11	10.1	10	30.8	9	10.0	25
Oklahoma	19.5	11	25.0	2	31.4	5	32.0	5	25.5	3	10.0	6	34.4	7	11.0	7	30.4	12	10.4	16
Oregon	13.1	36	21.5	12	17.7	52	23.6	48	17.8	29	7.7	24	27.2	37	8.3	29	27.2	20	12.6	2
Pennsylvania	14.8	25	19.0	24	25.7	20	28.1	23	20.2	17	8.6	14	31.4	13	9.1	21	31.3	5	10.0	24
Puerto Rico	30.8	1	17.3	37	45.6	1	27.5	26	10.6	52	10.3	4	34.0	8	12.9	1	18.1	52	4.0	53
Rhode Island	12.7	39	17.2	38	24.9	22	24.9	43	15.1	48	7.8	22	30.2	20	7.0	46	29.3	14	10.7	11
South Carolina	16.3	15	21.7	10	26.2	19	30.0	13	20.4	14	8.7	12	32.7	9	10.4	8	30.7	11	11.1	7
South Dakota	12.2	42	17.1	43	24.5	23	30.3	11	17.5	32	7.7	25	29.9	22	7.3	44	25.6	33	10.3	19
Tennessee	21.3	6	21.8	9	31.0	7	32.9	3	22.0	11	8.9	10	32.6	10	10.3	9	25.9	30	8.4	46
Texas	16.0	17	17.1	44	27.3	11	29.5	17	17.9	28	6.5	42	29.1	25	9.3	17	22.5	46	8.4	45
Utah	10.8	52	18.7	28	17.7	53	24.0	45	9.8	53	5.4	51	23.1	51	6.1	52	21.4	47	8.5	44
Vermont	10.9	50	19.2	23	20.2	46	23.4	49	17.1	35	6.5	41	27.0	40	6.2	51	28.6	15	10.3	17
Virgin Islands	14.4	30	10.2	54	31.8	4	29.6	16	6.4	54	4.0	54	26.1	45	8.0	34	15.2	53	4.5	52
Virginia	14.2	31	16.8	45	21.9	40	25.5	37	19.0	20	7.0	37	27.5	36	8.2	31	25.9	29	9.0	38
Washington	13.6	33	22.5	7	19.5	49	26.9	28	14.9	50	6.4	45	28.0	31	7.7	39	26.4	25	10.8	10
West Virginia	23.7	2	27.1	1	33.2	2	31.7	6	25.6	2	12.6	1	37.6	1	12.4	2	33.9	3	10.4	15
Wisconsin	11.9	46	18.1	33	22.0	38	29.2	18	18.7	21	7.3	31	27.7	33	8.2	30	25.2	35	10.2	22
Wyoming	12.4	40	18.7	27	22.4	33	25.3	41	19.9	18	7.5	26	26.1	46	7.0	47	26.9	23	10.9	9
US Total	**16.1**		**18.7**		**24.6**		**27.4**		**18.0**		**7.7**		**29.3**		**9.1**		**25.9**		**9.6**	

Source: Centers for Disease Control & Prevention, 2009 Behavioral Risk Factor Surveillance System data; West Virginia Health Statistics Center, 2012

a. 54 states/territories conducted the survey.

Appendix C

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories [a]
United States, 2010

State	Fair or Poor Health		No Health Insurance, Ages 18-64		No Leisure Exercise		Obesity (BMI 30+)		Current Smoking		History of Heart Attack, Angina,Stroke		Binge Drinking		Diabetes		Current Asthma		No Flu Immun. Past 12 Mo., Ages 65+	
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	21.2	5	20.1	18	31.1	5	33.0	2	21.9	9	11.8	2	10.1	49	13.2	1	8.0	37	36.6	9
Alaska	10.7	54	19.5	22	21.9	39	25.2	41	20.3	14	5.4	53	20.6	2	5.3	54	10.0	10	36.3	10
Arizona	17.7	14	15.6	31	22.0	38	24.6	44	13.5	49	13.0	1	11.6	46	11.4	5	10.0	7	32.6	27
Arkansas	19.1	9	26.2	3	29.8	9	30.8	12	22.9	6	10.1	10	9.7	51	9.6	21	7.8	40	30.4	40
California	18.1	11	20.9	16	20.4	45	24.7	43	12.1	51	6.8	45	15.8	20	8.6	31	7.7	42	36.9	8
Colorado	12.3	44	19.0	23	18.2	51	21.4	54	16.0	34	5.9	50	15.4	23	6.0	53	9.2	23	26.5	54
Connecticut	11.0	51	11.6	48	20.7	43	23.0	51	13.2	50	5.9	49	17.4	11	7.3	44	9.2	24	27.6	51
Delaware	13.7	36	12.0	47	23.9	29	28.7	20	17.3	27	8.7	21	18.8	4	8.7	28	10.0	8	33.1	24
D.C.	14.0	34	7.9	53	21.4	42	22.7	53	14.8	45	8.9	19	12.5	41	10.9	8	9.9	11	37.8	7
Florida	17.1	17	21.5	14	24.0	27	27.2	31	17.1	29	10.3	9	13.7	36	10.4	11	8.3	35	34.3	17
Georgia	16.0	22	18.7	24	25.1	20	30.4	13	17.6	25	8.0	26	12.4	42	9.7	20	7.7	41	37.9	6
Guam	18.1	12	24.2	6	24.8	21	27.6	26	25.8	2	5.4	52	17.7	9	11.0	7	5.2	54	41.3	3
Hawaii	14.2	33	8.2	52	19.2	48	23.1	49	14.5	46	6.0	48	17.9	6	8.3	35	9.4	21	26.8	53
Idaho	15.4	26	22.9	10	20.0	46	26.9	33	15.7	37	7.0	42	13.2	38	7.9	36	8.8	29	39.2	5
Illinois	15.5	25	15.3	33	25.7	19	28.7	21	16.9	31	7.8	30	17.8	7	8.7	27	9.2	25	34.5	15
Indiana	16.5	19	17.9	27	26.5	15	30.2	14	21.2	11	9.1	16	13.5	37	9.8	17	9.5	20	33.5	20
Iowa	11.5	50	12.6	46	24.8	22	29.1	19	16.1	33	7.8	31	16.9	17	7.5	41	7.8	39	29.5	42
Kansas	13.4	39	15.1	34	24.0	28	30.1	15	17.0	30	7.9	27	15.1	27	8.4	34	8.6	31	31.2	35
Kentucky	21.5	4	20.3	17	29.3	10	31.8	5	24.8	3	10.9	5	11.9	45	10.0	16	10.4	4	32.2	30
Louisiana	21.1	6	24.5	5	30.1	6	31.7	7	22.1	8	10.5	8	15.0	29	10.3	12	6.7	51	35.4	11
Maine	14.7	30	14.5	36	22.4	36	27.4	30	18.2	24	9.1	15	14.4	33	8.7	30	10.0	9	27.9	49
Maryland	13.0	41	12.9	44	23.1	33	27.9	24	15.2	41	7.2	39	14.6	32	9.3	23	8.4	33	31.1	36
Massachusetts	11.5	48	5.0	54	20.6	44	23.6	47	14.1	48	7.3	37	17.7	8	7.4	43	10.4	5	27.2	52
Michigan	14.2	32	16.6	29	23.6	31	31.7	8	18.9	19	9.6	12	15.0	28	10.1	14	10.4	3	32.5	29
Minnesota	10.9	52	10.5	49	19.1	49	25.4	40	14.9	44	6.6	46	17.2	14	6.7	51	7.6	43	27.8	50
Mississippi	23.7	2	25.8	4	33.0	2	34.5	1	22.9	5	10.6	7	9.9	50	12.3	3	7.2	50	33.7	19
Missouri	16.4	20	18.2	25	27.2	12	31.4	10	21.1	12	9.3	14	15.6	21	9.4	22	8.8	28	32.6	26
Montana	15.0	28	22.6	12	21.6	40	23.5	48	18.8	20	8.2	25	17.0	16	7.0	48	9.1	26	34.3	16
Nebraska	12.0	45	16.5	30	24.7	24	27.5	28	17.2	28	7.3	36	19.4	3	7.6	39	7.8	38	28.7	46
Nevada	17.0	18	23.1	8	23.0	34	23.1	50	21.3	10	8.5	22	17.2	13	8.5	32	9.2	22	40.7	4
New Hampshire	11.6	47	13.4	41	19.9	47	25.5	39	16.8	32	7.2	41	15.1	26	7.9	37	10.4	6	28.7	45
New Jersey	14.7	31	13.7	39	26.6	14	24.8	42	14.4	47	7.3	38	13.8	35	9.2	24	8.7	30	34.2	18
New Mexico	18.3	10	22.9	9	21.6	41	25.6	38	18.4	22	7.9	28	11.1	47	8.5	33	9.7	15	30.5	39
New York	14.7	29	13.5	40	23.8	30	24.5	45	15.4	38	7.7	32	15.4	22	8.8	26	9.8	13	31.3	34
North Carolina	18.0	13	22.7	11	25.7	18	28.6	22	19.8	16	9.0	18	11.0	48	9.8	18	7.5	45	30.0	41
North Dakota	13.1	40	13.3	42	24.8	23	27.9	23	17.4	26	7.9	29	18.7	5	7.4	42	7.4	47	33.3	22
Ohio	16.1	21	15.3	32	26.1	16	29.7	17	22.5	7	8.7	20	17.2	12	10.1	15	9.6	17	35.0	12
Oklahoma	20.5	7	23.3	7	29.9	8	31.3	11	23.6	4	10.7	6	13.0	39	10.4	10	9.5	18	29.1	44
Oregon	15.8	23	20.0	19	17.5	54	27.6	27	15.1	43	7.2	40	14.3	34	7.1	46	9.5	19	35.0	13
Pennsylvania	15.7	24	13.8	38	25.8	17	29.2	18	18.4	23	9.1	17	15.2	25	10.3	13	9.9	12	32.0	31
Puerto Rico	32.1	1	9.2	51	42.3	1	27.5	29	11.9	52	11.3	4	12.1	44	12.8	2	7.5	46	73.0	1
Rhode Island	12.8	42	14.6	35	24.1	26	26.0	36	15.7	36	7.4	34	16.2	19	7.8	38	10.9	2	29.5	43
South Carolina	17.6	15	22.5	13	27.8	11	32.0	4	20.9	13	9.4	13	12.3	43	10.7	9	8.3	34	32.6	28
South Dakota	11.5	49	13.0	43	24.7	25	27.7	25	15.4	39	8.2	24	17.7	10	6.9	49	7.5	44	28.0	48
Tennessee	19.5	8	19.7	20	29.9	7	31.7	9	20.1	15	10.1	11	6.6	54	11.3	6	6.0	52	33.3	23
Texas	17.4	16	26.8	2	26.6	13	31.7	6	15.8	35	8.3	23	14.6	30	9.7	19	7.4	48	32.7	25
Utah	11.7	46	18.2	26	17.9	52	23.0	52	9.1	53	5.9	51	8.7	53	6.5	52	9.1	27	31.5	33
Vermont	10.8	53	10.1	50	17.9	53	23.9	46	15.4	40	7.0	43	17.1	15	6.8	50	11.1	1	28.4	47
Virgin Islands	15.0	27	34.1	1	31.8	4	30.0	16	5.8	54	4.1	54	13.0	40	9.1	25	5.9	53	58.3	2
Virginia	14.0	35	14.4	37	23.3	32	26.4	34	18.5	21	7.6	33	16.9	18	8.7	29	8.4	32	30.8	37
Washington	13.5	38	17.8	28	18.3	50	26.2	35	15.2	42	6.5	47	15.4	24	7.6	40	9.6	16	30.7	38
West Virginia	23.4	3	21.4	15	32.9	3	32.9	3	26.8	1	11.6	3	9.0	52	11.7	4	7.3	49	33.5	21
Wisconsin	13.5	37	12.8	45	22.8	35	26.9	32	19.0	18	6.8	44	21.6	1	7.1	47	8.3	36	31.6	32
Wyoming	12.4	43	19.6	21	22.1	37	25.7	37	19.5	17	7.3	35	14.6	31	7.2	45	9.8	14	34.8	14
US Total	**16.3**		**18.1**		**24.4**		**27.8**		**17.1**		**8.4**		**14.7**		**9.3**		**8.6**		**33.4**	

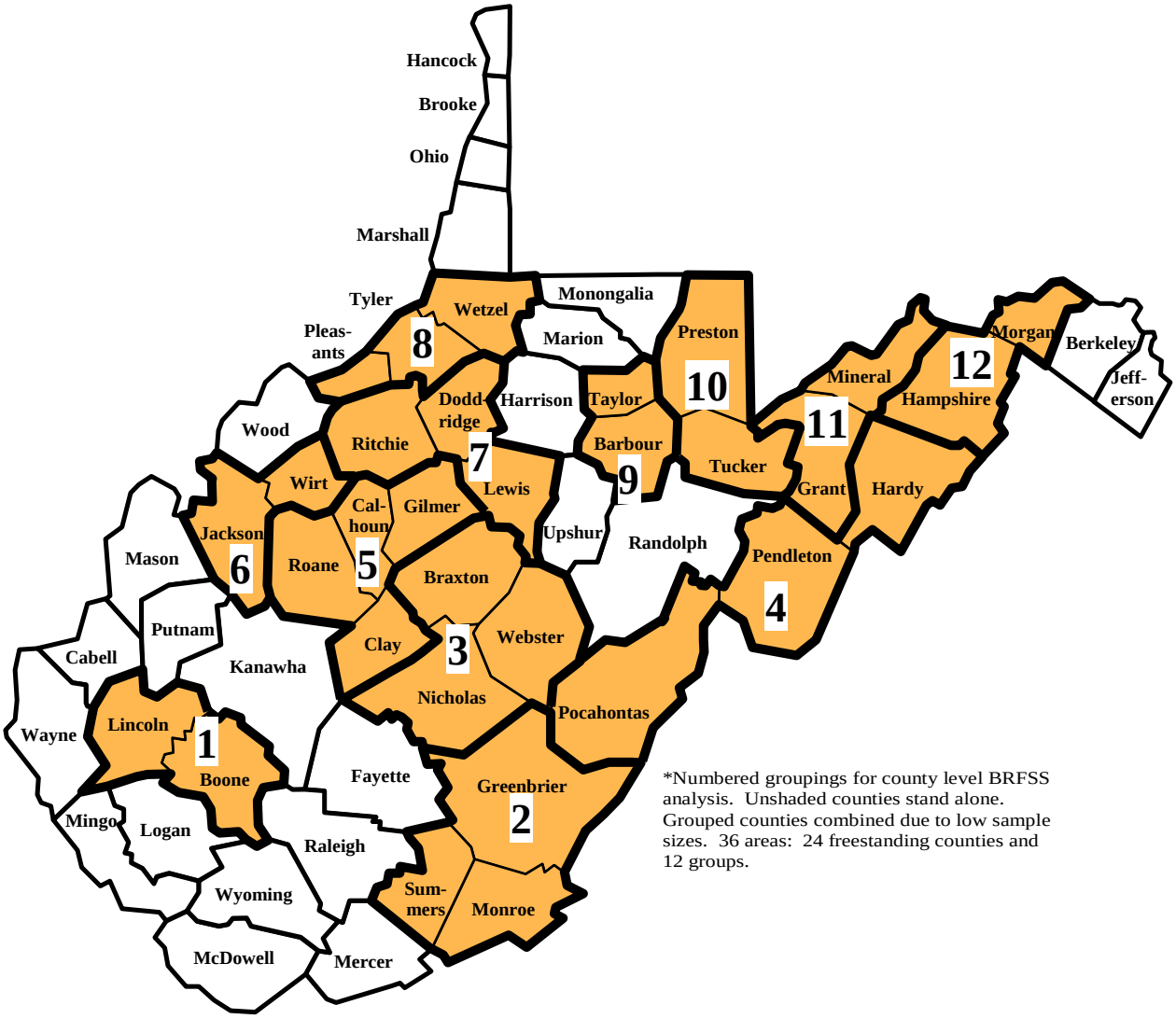
Source: Centers for Disease Control & Prevention, 2010 Behavioral Risk Factor Surveillance System data; West Virginia Health Statistics Center, 2012

a. 54 states/territories conducted the survey.

Appendix D

Groupings for County Level Analysis for Years 2006-2010

West Virginia Behavioral Risk Factor Surveillance System



*Numbered groupings for county level BRFSS analysis. Unshaded counties stand alone. Grouped counties combined due to low sample sizes. 36 areas: 24 freestanding counties and 12 groups.

Group	Counties
1	Boone and Lincoln
2	Greenbrier, Summers, and Monroe
3	Braxton, Nicholas, and Webster
4	Hardy, Pendleton, and Pocahontas
5	Calhoun, Clay, Gilmer, and Roane
6	Jackson and Wirt
7	Doddridge, Lewis, and Ritchie
8	Pleasants, Tyler, and Wetzel
9	Barbour and Taylor
10	Preston and Tucker
11	Grant and Mineral
12	Hampshire and Morgan

Appendix E
2006-2010 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.*
Individual Counties																		
Berkeley	15.1	35	L	17.7	29	ns	26.4	30	ns	32.4	14	ns	28.8	14	ns	13.6	3	H
Brooke	18.4	30	ns	19.1	26	ns	34.9	6	ns	36.2	6	ns	26.5	20	ns	15.4	2	ns
Cabell	22.3	14	ns	17.0	30	ns	27.3	28	ns	30.9	21	ns	25.2	23	ns	10.1	17	ns
Fayette	22.0	15	ns	28.6	4	ns	31.7	10	ns	33.5	10	ns	26.6	19	ns	11.9	9	ns
Hancock	18.8	28	ns	8.8	36	L	29.2	23	ns	30.5	23	ns	22.6	31	ns	13.1	4	ns
Harrison	20.8	21	ns	17.9	28	ns	28.1	26	ns	31.6	17	ns	22.1	32	ns	7.4	26	ns
Jefferson	16.8	32	L	9.6	35	L	27.4	27	ns	28.9	29	ns	24.4	27	ns	12.3	7	ns
Kanawha	21.9	17	ns	16.5	31	L	28.3	25	ns	30.7	22	ns	24.1	28	ns	11.2	11	ns
Logan	33.6	4	H	24.0	10	ns	39.5	4	H	37.9	3	H	35.1	2	H	9.8	19	ns
Marion	18.8	27	L	21.8	18	ns	30.3	16	ns	27.0	33	ns	21.6	33	ns	10.1	18	ns
Marshall	17.9	31	L	21.2	19	ns	30.7	14	ns	31.4	18	ns	24.8	26	ns	12.9	5	ns
Mason	25.1	12	ns	23.6	13	ns	32.1	9	ns	36.9	5	ns	33.7	5	H	7.2	28	ns
McDowell	36.7	3	H	30.5	2	ns	47.9	1	H	32.6	12	ns	35.8	1	H	10.6	15	ns
Mercer	25.1	11	ns	18.5	27	ns	31.1	13	ns	31.0	20	ns	29.0	13	ns	5.9	33	L
Mingo	36.8	2	H	19.5	25	ns	39.7	3	H	32.1	15	ns	34.6	3	H	7.3	27	ns
Monongalia	11.5	36	L	21.9	17	ns	17.9	36	L	25.2	35	ns	20.5	34	ns	15.6	1	ns
Ohio	15.2	34	L	22.8	14	ns	24.9	33	L	25.5	34	L	27.5	17	ns	11.2	13	ns
Putnam	16.2	33	L	14.1	34	L	23.9	35	L	27.7	32	ns	20.2	35	L	7.9	25	ns
Raleigh	29.1	7	H	16.3	32	ns	30.2	17	ns	29.3	28	ns	23.6	29	ns	5.7	34	L
Randolph	21.4	18	ns	22.2	16	ns	31.2	12	ns	24.8	36	ns	29.1	12	ns	10.2	16	ns
Upshur	21.3	19	ns	20.8	21	ns	27.0	29	ns	29.6	27	ns	25.4	22	ns	3.7	36	L
Wayne	29.9	6	H	23.6	12	ns	32.3	8	ns	37.8	4	H	33.0	6	H	11.2	12	ns
Wood	20.3	23	ns	19.5	23	ns	29.2	22	ns	29.7	26	ns	29.1	11	ns	10.7	14	ns
Wyoming	37.0	1	H	27.2	7	ns	47.4	2	H	38.0	2	ns	34.1	4	ns	4.9	35	L
Grouped Counties[b]																		
Barbour,Taylor	27.6	8	ns	28.6	5	ns	31.3	11	ns	28.4	31	ns	26.6	18	ns	6.9	30	ns
Boone,Lincoln	30.8	5	H	20.0	22	ns	35.1	5	ns	35.8	7	ns	29.8	9	ns	8.9	24	ns
Braxton,Nicholas,Webster	26.7	9	ns	29.7	3	H	30.7	15	ns	34.4	9	ns	28.6	15	ns	6.4	32	L
Calhoun,Clay,Gilmer,Roane	26.1	10	ns	33.2	1	H	33.1	7	ns	39.5	1	H	32.1	7	ns	9.5	20	ns
Doddridge,Lewis,Ritchie	20.3	22	ns	28.5	6	H	30.0	18	ns	31.3	19	ns	29.8	10	ns	7.0	29	ns
Grant,Mineral	18.7	29	ns	19.5	24	ns	25.3	32	ns	32.7	11	ns	17.4	36	L	9.0	21	ns
Greenbrier,Summers,Monroe	23.5	13	ns	21.0	20	ns	29.4	21	ns	28.7	30	ns	25.1	24	ns	8.9	23	ns
Hampshire,Morgan	20.9	20	ns	22.6	15	ns	29.8	20	ns	32.6	13	ns	28.4	16	ns	11.9	10	ns
Hardy,Pendleton,Pocahontas	19.4	26	ns	23.7	11	ns	24.0	34	L	30.1	24	ns	22.7	30	ns	12.5	6	ns
Jackson,Wirt	22.0	16	ns	15.8	33	ns	28.7	24	ns	35.5	8	ns	24.9	25	ns	12.2	8	ns
Pleasants,Tyler,Wetzel	20.3	24	ns	26.2	8	ns	26.0	31	ns	32.1	16	ns	31.0	8	ns	8.9	22	ns
Preston,Tucker	20.3	25	ns	24.8	9	ns	30.0	19	ns	30.1	25	ns	26.3	21	ns	6.7	31	ns
WV / US 2008 / WV vs US	**23.0**	**16.3**	**H**	**20.5**	**17.9**	**H**	**30.2**	**25.5**	**H**	**31.6**	**26.7**	**H**	**26.3**	**18.4**	**H**	**9.6**	**15.1**	**L**

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

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

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

b. Some counties were grouped to obtain an adequate sample size for analysis. For these counties, the prevalence, rank, and significance are representive of the combined counties. Individual county estimates are not available for these grouped counties.

Appendix E, continued
2006-2010 WV Behavioral Risk Factors and Health Conditions by County

County	Diabetes			Hypertension[c]			High Cholesterol[c]			Heart Attack, Angina or Stroke			Current Asthma			Arthritis[c]		
	%	Rank	Sig.*	%	Rank	Sig.*	%	Rank	Sig.*	%	Rank	Sig.*	%	Rank	Sig.*	%	Rank	Sig.*
Individual Counties																		
Berkeley	8.3	34	L	26.8	32	L	36.9	30	ns	9.4	32	L	8.2	19	ns	27.2	35	L
Brooke	13.1	7	ns	37.4	5	ns	38.7	22	ns	13.2	13	ns	7.4	26	ns	35.4	18	ns
Cabell	13.2	6	ns	31.7	28	ns	40.9	15	ns	12.7	18	ns	7.9	24	ns	33.0	28	ns
Fayette	12.8	10	ns	33.6	20	ns	37.7	27	ns	12.2	22	ns	11.0	9	ns	38.2	7	ns
Hancock	12.0	15	ns	28.4	31	ns	37.6	28	ns	13.2	12	ns	7.9	25	ns	35.1	21	ns
Harrison	12.8	11	ns	31.4	29	ns	36.6	31	ns	11.7	25	ns	8.6	18	ns	33.4	25	ns
Jefferson	9.0	31	ns	25.9	35	L	29.9	36	L	8.8	34	L	10.2	10	ns	29.5	33	L
Kanawha	10.7	21	ns	33.8	17	ns	39.9	17	ns	12.0	24	ns	7.4	27	ns	32.8	29	ns
Logan	17.7	1	H	39.9	3	ns	44.6	4	ns	17.5	1	H	11.5	4	ns	41.6	4	ns
Marion	8.9	32	L	32.8	22	ns	33.1	33	L	12.5	21	ns	8.1	22	ns	31.1	32	ns
Marshall	9.2	28	ns	26.6	33	L	44.8	2	ns	13.0	16	ns	7.0	31	ns	37.3	9	ns
Mason	12.1	14	ns	33.7	18	ns	37.0	29	ns	14.0	10	ns	13.3	1	H	35.3	19	ns
McDowell	16.7	2	ns	42.2	2	ns	51.5	1	H	16.3	2	ns	12.4	3	ns	49.9	1	H
Mercer	12.7	12	ns	35.2	9	ns	39.4	18	ns	14.1	9	ns	11.1	8	ns	38.0	8	ns
Mingo	10.9	19	ns	42.7	1	H	44.6	5	ns	15.7	4	ns	11.2	7	ns	42.0	3	ns
Monongalia	7.5	36	L	23.0	36	L	30.0	35	L	6.8	36	L	7.0	30	ns	21.3	36	L
Ohio	10.1	25	ns	29.6	30	ns	38.6	24	ns	12.1	23	ns	9.6	14	ns	33.2	26	ns
Putnam	9.3	27	ns	32.3	24	ns	40.5	16	ns	9.0	33	L	6.2	32	ns	29.1	34	L
Raleigh	12.2	13	ns	34.4	13	ns	38.6	23	ns	15.0	6	ns	8.2	20	ns	36.3	12	ns
Randolph	7.9	35	L	35.2	10	ns	32.5	34	ns	11.0	26	ns	5.1	36	L	36.4	11	ns
Upshur	12.8	9	ns	26.0	34	L	41.7	12	ns	8.4	35	L	7.3	29	ns	32.0	31	ns
Wayne	11.0	18	ns	35.4	8	ns	41.7	13	ns	15.9	3	ns	9.7	11	ns	41.4	5	ns
Wood	11.5	17	ns	33.6	19	ns	39.0	21	ns	12.6	20	ns	8.1	21	ns	35.6	17	ns
Wyoming	16.4	3	ns	36.6	7	ns	43.8	6	ns	15.2	5	ns	7.4	28	ns	44.7	2	H
Grouped Counties[b]																		
Barbour,Taylor	8.4	33	L	34.7	12	ns	40.9	14	ns	13.3	11	ns	9.6	13	ns	35.7	16	ns
Boone,Lincoln	14.0	4	ns	38.9	4	ns	39.1	19	ns	14.4	8	ns	11.2	6	ns	40.5	6	ns
Braxton,Nicholas,Webster	10.6	23	ns	33.1	21	ns	38.2	25	ns	13.0	17	ns	9.2	15	ns	36.8	10	ns
Calhoun,Clay,Gilmer,Roane	10.5	24	ns	35.1	11	ns	43.5	8	ns	12.6	19	ns	13.3	2	ns	35.8	15	ns
Doddridge,Lewis,Ritchie	13.5	5	ns	32.2	25	ns	44.7	3	ns	13.1	14	ns	5.6	34	L	34.5	23	ns
Grant,Mineral	9.5	26	ns	33.9	16	ns	42.7	11	ns	9.8	30	L	11.5	5	ns	35.8	14	ns
Greenbrier,Summers,Monroe	12.0	16	ns	37.3	6	ns	43.2	9	ns	14.8	7	ns	9.7	12	ns	36.0	13	ns
Hampshire,Morgan	9.1	29	ns	31.7	27	ns	39.0	20	ns	10.8	28	ns	9.2	16	ns	32.4	30	ns
Hardy,Pendleton,Pocahontas	9.0	30	ns	34.2	15	ns	42.9	10	ns	9.9	29	ns	5.4	35	L	33.2	27	ns
Jackson,Wirt	13.0	8	ns	34.4	14	ns	43.5	7	ns	13.1	15	ns	9.1	17	ns	35.2	20	ns
Pleasants,Tyler,Wetzel	10.8	20	ns	32.4	23	ns	38.1	26	ns	10.9	27	ns	6.1	33	ns	34.6	22	ns
Preston,Tucker	10.7	22	ns	31.7	26	ns	33.3	32	L	9.6	31	L	7.9	23	ns	34.1	24	ns
WV / US 2008[d] / WV vs US	**11.8**	**8.8**	**H**	**33.8**	**26.2**	**H**	**39.9**	**35.9**	**H**	**13.0**	**8.2**	**H**	**8.7**	**8.5**	**ns**	**33.5**	**27.0**	**H**

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

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

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

b. Some counties were grouped to obtain an adequate sample size for analysis. For these counties, the prevalence, rank, and significance are representive of the combined counties. Individual county estimates are not available for these grouped counties.

c. Data only available for limited years: Hypertension, High Cholesterol (2002-2003, 2005, 2007, 2009); Arthritis (2003, 2005, 2007, 2009, 2010).

d. US prevalence for Hypertension and High Cholesterol is 2005,. US prevalence for Arthritis is 2007.