## 2006 West Virginia Behavioral Risk Factor Survey Report









## February 2009



Bureau for Public Health Office of Epidemiology & Health Promotion HEALTH STATISTICS CENTER 350 Capitol Street, Room 165 Charleston, WV 25301

> Joe Manchin III, Governor Martha Yeager Walker, Secretary



# 2006 WEST VIRGINIA BEHAVIORAL RISK FACTOR SURVEY REPORT

Joe Manchin III Governor

Martha Yeager Walker Secretary Department of Health and Human Resources

February 2009

### West Virginia Bureau for Public Health

Chris Curtis, MPH Acting Commissioner

Catherine Slemp, MD, MPH Acting State Health Officer

Joe Barker, MPA
Director, Office of Epidemiology and Health Promotion

### **Health Statistics Center**

Daniel M. Christy, MPA, Director James C. Doria, Statistical Services Program Manager Fred King, Behavioral Risk Factor Surveillance System Manager

### **Report Prepared By**

Patricia G. Watson, Programmer/Analyst

### **Report Edited By**

Eugenia Thoenen, Editorial Consultant

### **Statistical Services Staff**

Thomas N. Leonard, MS, Programmer/Analyst
Tom Light, Programmer
Philip Simmons, MS, Programmer/Analyst

### **2006 BRFSS Interviewers**

Gale Ardman, Deborah Pack, Laura Elswick, Carolyn J. Hunter, Mima Chapman, Mandy Shirley, Joan Frederick, Claudia Hudson-Sims, Norma Anderson, Martin Kemmish, Newman Jackson, Sandra Johnson, Russell Hicks, Tiffany Sarver, Andrea Dickens

### **Suggested Citation**

All material appearing in this report is in the public domain and may be reproduced freely. Please acknowledge the source with the following citation:

2006 West Virginia
Behavioral Risk Factor Survey Report
WV Health Statistics Center, 2008

### **Additional Information Available**

To access additional Health Statistics Center publications, visit our website: <a href="https://www.wvdhhr.org/bph/oehp/hsc/vr/publicat.htm">www.wvdhhr.org/bph/oehp/hsc/vr/publicat.htm</a> or call (304) 558-9100.

The Health Statistics Center can customize reports and data analysis for grants, formal research, agency use, or specific community health planning activities. If you have questions about the data in this report, or wish additional information, please call (304) 558-9100 and ask for a Statistical Services staff member.

### **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 year 2006 and county data combined for 2002 through 2006.

The survey is conducted by telephone and represents a collaborative effort between the West Virginia Bureau for Public Health (WVBPH) 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 2<sup>nd</sup> highest nationally in 2006 in reporting the general health of adults as either "fair" or "poor."
- More than one-fifth of West Virginia adults (22.5% in 2006) considered their health to be either "fair" or "poor."
- "Fair" or "poor" health was most common among groups of adults who are the oldest, least educated, or lowest in household incomes.

### **Health Care Access**

- Almost one-fifth of West Virginia adults age 18 to 64 had no health care coverage (18.9% in 2006).
- Among adults of all ages, slightly under one-fifth needed medical care within the past 12 months and could not afford it (17.2% in 2006).
- One-fifth of all age adults also did not have a specific personal doctor or health care provider (20.3% in 2006).

### **Physical Inactivity**

- Approximately one-fourth of state adults (25.6% in 2006) did not participate in any leisure-time physical activity for exercise. A general downward trend occurred between 1994 and 2006.
- Women were significantly more likely than men to be physically inactive during leisure time.

### **Diabetes**

- West Virginia ranked highest nationally in 2006 for the prevalence of diabetes. More than one in ten of the state's adults identified themselves as having diabetes (12.1% in 2006).
- Among diabetic adults, 13.9% did not have an HbA1c test, 33.6% did not have a dilated eye exam, and 29.0% did not have a professional foot exam in the past one year.
- About one-third (33.5% in 2006) of diabetic adults checked their blood glucose at home less than once daily or never.

WV BRFSS 2006 Report page iii

### **Obesity and Overweight**

- The obese proportion of the adult population was 31.0% in 2006, 2<sup>nd</sup> highest nationally.
- Between 1993 and 2006, 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 2006, two-thirds of West Virginia adults were either obese or overweight.

### **Tobacco Use and Policies**

- Current cigarette smoking: More than one-fourth of adults (25.7% in 2006) smoked every day or some days. West Virginia ranked 2<sup>nd</sup> highest in 2006 in the prevalence of this risk factor among 51 national BRFSS participants (US States and DC).
- About half (49.3% in 2006) of every day smokers tried to quit and succeeded for at least one day in the past year.
- Most adults employed indoors reported that smoking is prohibited in either work areas, public areas, or both within their workplaces.
- A majority of West Virginia adults did not allow cigarette smoking inside their homes (65.3% in 2006).

### Asthma

- In 2006, 11.9% of adults had ever been diagnosed with asthma (39<sup>th</sup> highest nationally) while 8.6% had asthma currently (22<sup>nd</sup> highest nationally).
- Women had significantly higher rates of both lifetime and current asthma than men in 2006.

### **Alcohol Consumption**

- West Virginia alcohol consumption remains notably low in comparison with levels consumed elsewhere in the U.S.
- Binge drinking was 11.1% among adults in 2006 (a national rank of 46<sup>th</sup>).
- Heavy drinking among adults was a lower 3.2% in 2006 (a national rank of 49<sup>th</sup>).

### **Cardiovascular Disease**

- West Virginia ranked higher than any other state in 2006 in the prevalence of heart attack among adults. More than seven percent (7.5%) of the state's adults had a history of heart attack, compared with a national average of 4.4%.
- Men reported a significantly higher incidence of heart attack than women (9.2% vs. 5.9% in 2006)
- In the prevalence of stroke among adults, West Virginia ranked 2<sup>nd</sup> highest nationally in 2006. Four percent (4.2%) of the state's adults had had a stroke, compared with a national average of 2.7%.

WV BRFSS 2006 Report page iv

### 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, 2006

Risk Factor	Year	Percentage Estimated at Risk <sup>a</sup>	Number Estimated at Risk <sup>a</sup>
	• • • •		222 000
Self-rated general health is fair or poor	2006	22.5	323,000
No health care coverage, ages 18-64	2006	18.9	217,000
Unable to afford needed medical care	2006	17.2	247,000
No personal doctor or health care provider	2006	20.3	292,000
No leisure-time exercise	2006	25.6	368,000
Obesity (BMI 30.0+)	2006	31.0	433,000
Overweight (BMI 25.0-29.9)	2006	36.0	501,000
Current cigarette smoking	2006	25.7	370,000
Binge drinking	2006	11.1	158,000
Heavy drinking	2006	3.2	45,000
Diabetes	2006	12.1	174,000
Have had heart attack	2006	7.5	107,000
Have angina or coronary heart disease	2006	8.3	119,000
Have had stroke	2006	4.2	60,000
Lifetime asthma	2006	11.9	171,000
Current asthma	2006	8.6	123,000

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.

WV BRFSS 2006 Report page v

### **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 prevalences 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 is also referred to as 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 for additional discussion.

WV BRFSS 2006 Report page vi

### TABLE OF CONTENTS

Executive Summaryiii
Table of Contents
Introduction
Methodology
Chapter 1: Health Status
Chapter 2: Health Care Access
Chapter 3: Physical Inactivity
Chapter 4: Diabetes
Chapter 5: Obesity and Overweight
Chapter 6: Tobacco Use
Chapter 7: Asthma
Chapter 8: Alcohol Consumption
Chapter 9: Cardiovascular Disease
Appendix A: Selected Behavioral Risk Factor Prevalences by Year in West Virginia45
Appendix B-K: Behavioral Risk Factor Prevalences by State for Each Year 46
Appendix L: Groupings for County-Level Analysis
Appendix M: Behavioral Risk Factors and Health Conditions by County 57

### **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 state 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.

This report focuses on the 2006 risk factor prevalence rates, and compares them to the years 1993 through 2005. Table I.1 on the following page shows topics that have been included in the last 12 years of surveillance, many of which are examined in the present report.

WV BRFSS 2006 Report INTRODUCTION, page 2

Table I.1: Topics administered in the survey: WVBRFSS, 1995-2006

Topic	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Seatbelt nonuse	х	Х	X	X	Х			x				
Hypertension	х	Х	Х		x		х	x	x	<u>-</u>	x	
Cholesterol	X		Х		X		x	x	x		X	
Leisure-time physical activity		х		x		x	x	x	x	x	x	х
Obesity	X	x	х	x	x	x	x	x	x	x	X	x
Cigarette use	X	х	X	x	x	x	x	x	x	x	x	x
Smokeless tobacco use	х	х	X	x	x	x	х	x	x	x		
Alcohol consumption	x		x		x		x	x	x	x	x	x
Weight control		x		x		x			x			
Fruits & vegetables		x		x		x		x	x		x	
Diabetes	X	х	х	x	x	x	х	х	x	x	x	x
Routine checkup	X	х	X	x	x	x					x	x
Breast cancer screening	x	х	x	x	x	x		x	Ĭ	x		x
Cervical cancer screening	x	х	x	x	X	x		x		X		х
Prostate cancer screening							х	x		х		x
Excess sun exposure					x			x	x	x		
AIDS/HIV	x	x	x	x	x	x	x	x	x	x	x	x
Bicycle helmets, smoke alarms	X	х	X		X							
Immunization	X		X	x	x		x	x	x	x	x	x
Health insurance	X	х	X	x	x	x	х	x	x	x	x	x
Health status	x	x	x	x	x	x	x	x	x	x	x	x
Colorectal cancer screening	X		X		X		x	x		X		X
Oral health	X		X		x	x		x		x		x
Emotional support/Life satisfaction											X	X
Firearm ownership	x	x					х	x		x		
Asthma						x	x	x	x	x	x	x
Born / Years in WV	X	X	X								x	
Disability	X						X		x	X	X	X
Cardiovascular disease		Х			X	X	х	x	X	X	X	X
Veteran status										x	х	X
Osteoporosis			X	X	X					X		
Arthritis					X		х		X	x	x	
Intimate Partner Violence												X

WV BRFSS 2006 Report INTRODUCTION, page 3

### **METHODOLOGY**

The survey is conducted by the method known as Computer Assisted Telephone Interviewing (CATI) and represents a collaborative effort between the WVBPH and CDC. The Bureau 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 WVBPH for approximately a two- to three-week period each month. The monthly interview schedule reduces the possibility of bias because of seasonal variations in certain lifestyles. To assure maximum response rates, calls are made weekdays from noon to 9:00 p.m., Saturdays from 10:00 a.m. to 7:00 p.m., and Sundays from 2:00 p.m. to 6:00 p.m.

### SAMPLE SELECTION

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

CDC provides banks of telephone numbers that are presumed to contain either more household numbers (higher-density stratum) or fewer household numbers (lower-density stratum). The higherdensity stratum is sampled at a higher rate than the lower-density stratum. In 2006, the higher-density stratum consisted of banks of listed numbers while the lower-density stratum consisted of banks of unlisted numbers that contained at least one residential number. The higher-density stratum was sampled at a rate of 1.5 to 1 compared to the lower-density stratum. The data ultimately were weighted to account for differences in selection probability. 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. Table M.1 on the following page shows the results for all the telephone numbers attempted in obtaining 3,675 interviews in 2006.

Table M.1: Disposition of telephone numbers in the sample: WVBRFSS, 2006

Disposition	Number	Percent
	2.675	22.60
Completed interview.	3,675	23.69
Partially completed interview	119	0.77
Terminated within questionnaire <50% finished	97 701	0.63
Refusal after respondent selection	781	5.04
Selected respondent never reached or was reached but did not begin	211	1.26
interview during interviewing period.	211	1.36
Selected respondent away from residence during the entire interviewing	112	0.72
period	112	0.72
Language problem after respondent selection.	7	0.05
Selected respondent physically or mentally unable to complete an	120	0.00
interview during the entire interviewing period	139	0.90
Hang up or termination after number of adults recorded but before	12	0.00
respondent selection, explicit refusal	13	0.08
Household contact after number of adults recorded but before respondent	1	0.01
selection	1	0.01
Household members away from residence during entire interviewing	20	0.10
period	28	0.18
Hang up or termination, housing unit, unknown if eligible	515	2.22
respondent	515	3.32
Household contact, eligibility undetermined	43	0.28
Language problem before respondent selection.	10	0.06
Physical or mental impairment before respondent selection	15	0.10
Hang up or termination, unknown if private residence	1,168	7.53
Contacted, unknown if private residence	31	0.20
Telephone answering device, message confirms private residential	221	1.42
status	221	1.42
Telecommunication technological barrier (such as a call blocking message), message confirms private residence	13	0.08
Telephone answering device, not sure if private residence	237	1.53
Telecommunication technological barrier, not sure if private	237	1.33
residence	31	0.20
Telephone number changed status from household or possible	31	0.20
household to nonworking during the interviewing period	88	0.57
No answer	597	3.85
No answer	397 66	0.43
On never-call list	1	0.43
Out-of-state	2	0.01
Household, no eligible respondent.	8	0.05
Not a private residence	1,753	11.30
Dedicated fax/data/modem line with no human contact	405	2.61
Cell phone	45	0.29
Fast busy	41	0.26
Nonworking/disconnected number.	5,037	32.48
g disconnected number	2,037	32.10
Total	15,510	100.00
	10,010	100.00

### **QUALITY CONTROL**

The degree to which completed interviews are obtained from among the telephone numbers selected for the sample can be shown numerically by response rates. A higher response rate indicates a lower potential for bias in the data. A discussion of response rates and of various sources of statistical bias can be found in CDC's *Behavioral Risk Factor Surveillance System 2006 Year-to-Date Data Quality Handbook*. While there is no definitive formula for response rate, three primary estimates are most useful for the BRFSS:

CASRO Rate uses a response rate formula<sup>1</sup> developed by the Council of American Survey Research Organizations (CASRO). The resulting estimate reflects telephone sampling efficiency and the degree of cooperation among eligible persons who were contacted. The formula assumes that numbers that are never contacted contain the same percentage of eligible households as the records whose eligibility status is known. Quality control guidelines by CDC suggest a minimum acceptable value of 40%. West Virginia's monthly CASRO rate ranged from 58.62% to 61.44% in 2006.

Overall Response Rate is a conservative response rate<sup>2</sup> that includes a higher percentage of all households in the denominator. Quality control guidelines by CDC suggest a minimum acceptable value of 30%. West Virginia's monthly overall response rate ranged from 52.86% to 56.65% in 2006.

<u>Cooperation Rate</u> is a calculation<sup>3</sup> that is not affected by differences in telephone sampling efficiency. It is the proportion of all cases interviewed of all eligible units that were actually contacted. Non-contacts are excluded from the denominator. This rate is based on contacts with households containing an eligible respondent. The denominator of the rate includes completed interviews plus the number of non-interviews that involve the identification of and contact with an eligible respondent. Quality control guidelines by CDC suggest a minimum acceptable value of 65%. West Virginia's monthly cooperation rate ranged from 78.59% to 79.74% in 2006.

The survey results were edited daily to assure proper completion. For verification, call backs were completed randomly to confirm that interviews had been conducted as indicated. After all phone numbers received a final disposition each month, the data were edited to check for entries that were invalid or inconsistent with other entries. Data also were checked for answers that were outside the expected range of values, such as extreme values for height, weight, exercise times, or alcohol consumption. Once all of the data were corrected or verified as correct, the monthly datasets were submitted electronically to CDC. An annual analysis of the data is provided to the state by CDC.

### DEMOGRAPHIC CHARACTERISTICS OF SAMPLE AND POPULATION

The demographic characteristics of the sample in 2006, both unweighted and weighted to the population, are presented in Table 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.

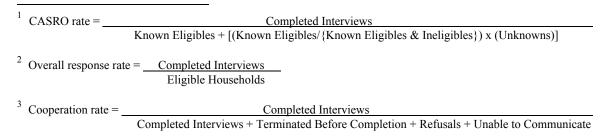


Table M.2: Demographic summary: WVBRFSS, 2006

Demographic characteristic	Number of Interviews	Percent of Unweighted Sample	Percent of Weighted Sample <sup>a</sup>
Total	3,794	100.00	100.00
Sex Male Female	1,495 2,299	39.40 60.60	48.29 51.71
Age 18-24 25-34 35-44 45-54 55-64 65+ Unknown	145 415 601 761 837 1,018	03.82 10.94 15.84 20.06 22.06 26.83 00.45	12.26 15.47 17.07 19.29 15.88 20.04 N/A
Education <12 Years 12 Years 13-15 Years 16+ Years Unknown	620 1,493 824 850 7	16.34 39.35 21.72 22.40 00.18	15.36 39.87 23.03 21.75 N/A
Household Income <\$15,000 \$15,000-\$24,999 \$25,000-\$34,999 \$35,000-\$49,999 \$50,000-\$74,999 \$75,000+ Unknown	583 729 496 524 498 509 455	15.37 19.21 13.07 13.81 13.13 13.42 11.99	13.73 20.36 14.34 17.46 16.64 17.47 N/A

a. Population weight provided by CDC. Weighted to 2006 age and sex postcensus estimates. Not weighted to education or income level. Unknown values for age were replaced by imputed ages for weighting purposes only. The "Percent of Weighted Sample" is the percent with a known value and excludes records with unknown values.

### **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 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% CI4)<sup>4</sup>. 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, when comparing estimates from surveys with a large number of respondents, such as the BRFSS, these statistical tests can indicate statistically significant differences even when there are only small variations in prevalence. This method would label most of the estimate comparisons in this report as significantly Therefore, 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. In other words, it can be stated with 95% certainty that the difference found between the two prevalence estimates is not a random occurrence. Although this is not the "classical" statistical test of differences, it is a better method of highlighting the BRFSS results important to the design of effective and efficient health promotion interventions. Identifying differences as significant by this method targets the characteristics most strongly associated with a particular health condition or risk behavior, and directs attention to the largest changes in prevalence over time. Adjectives such as slight, minor, and little are used in this report to describe notable differences that are not considered significant because the confidence intervals do 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 9." 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.
- 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.

\_

<sup>&</sup>lt;sup>4</sup> 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.

### **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 L).

In some prior reports, the county prevalence estimates were compared to a middle-year United States prevalence estimate. County maps were included that classified counties according to the degree of difference from the United States prevalence: significantly higher, higher, lower, or significantly lower. 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, not the United States prevalence.* County estimates, as well as county classifications compared to both West Virginia and the United States, can be found in Appendix M. Extensive county data also can be found in the WVBPH publication *West Virginia County Health Profiles*, 2004 available online at <a href="http://www.wvdhhr.org/bph/oehp/hsc/profiles2004/default.htm">http://www.wvdhhr.org/bph/oehp/hsc/profiles2004/default.htm</a>.

Unlike some previous reports, this report does not include county prevalence estimates of heavy drinking. Based on the reliability standards discussed above, a majority of the county estimates were determined to be unreliable, primarily attributable to the low statewide prevalence of this risk factor. Use caution when interpreting county estimates of heavy drinking published in earlier reports. It is likely that many of the estimates are unreliable.

### **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 were asked 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 include West Virginia's rank among the US States and DC. For example, if hypertension-related questions were administered by all 50 US States and DC, ranking 1<sup>st</sup> in

<sup>&</sup>lt;sup>5</sup> Significance can be affected by both prevalence level and county sample size.

hypertension would mean having the highest prevalence of hypertension while ranking 51<sup>st</sup> would mean having the lowest prevalence. Some questions are not asked by all US States and DC. 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 M.

### **CHAPTER 1: HEALTH STATUS**

### Fair or Poor General Health in 2006

**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: 22.5%** (95% CI: 21.1-24.0) in 2006.

**US:** 16.2% (95% CI:15.9-16.5) in 2006.

West Virginia ranked 2<sup>nd</sup> highest among 50 US States and DC in 2006.

**Gender Men**: 20.2% (95% CI: 18.0-22.3) in 2006.

Women: 24.6% (95% CI: 22.6-26.6) in 2006.

Women reported fair or poor health significantly more often than men.

Age Fair or poor health increased significantly with age. The prevalence ranged from

a low of 7.9% for 18-24-year-olds to a high of 36.1% among those 65 and older.

**Education** Adults with less than a high school education reported fair or poor health the

most frequently, at a prevalence of 46.1%. Significant improvements in general health were seen with each higher level of education. College graduates assigned

themselves a fair or poor health status at a rate of only 8.2%.

**Household Income** Fair or poor health was experienced by almost 1 of every 2 adults in the lowest

income group (less than \$15,000 annually). Among adults with annual household

incomes of \$50,000 or more, only about 1 in 10 had fair or poor health.

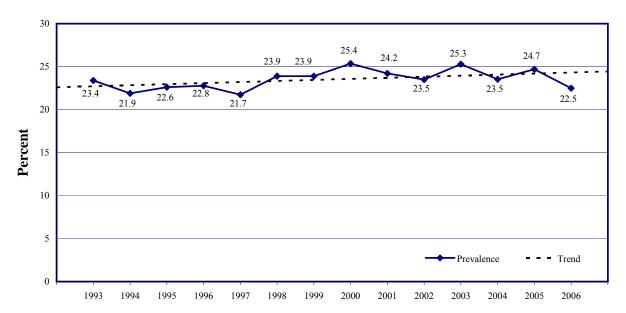
Table 1.1 Fair or poor health by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Women			Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,489	20.2	18.0-22.3	2,292	24.6	22.6-26.6	3,781	22.5	21.0-24.0		
Age											
18-24	67	* 3.9	0.0-8.3	78	*12.1	4.5-19.7	145	7.9	3.5-12.3		
25-34	150	* 3.9	0.8-6.9	265	12.9	8.4-17.4	415	8.4	5.6-11.1		
35-44	231	16.4	11.3-21.5	368	15.1	10.8-19.5	599	15.7	12.4-19.1		
45-54	331	25.6	20.5-30.8	430	26.6	22.2-31.1	761	26.1	22.7-29.6		
55-64	370	35.5	30.2-40.9	466	31.2	26.8-35.6	836	33.3	29.9-36.8		
65+	336	30.6	25.5-35.8	672	40.0	35.9-44.1	1,008	36.1	32.8-39.3		
Education											
Less than H.S.	257	40.6	33.7-47.5	360	52.0	46.0-58.1	617	46.1	41.4-50.8		
H.S. or G.E.D.	591	22.4	18.8-26.1	895	27.7	24.2-31.2	1,486	25.1	22.6-27.6		
Some Post-H.S.	280	12.3	8.7-15.9	541	17.6	14.0-21.3	821	15.4	12.8-18.0		
College Graduate	357	7.8	4.8-10.9	493	8.5	6.0-11.0	850	8.2	6.2-10.1		
Income											
Less than \$15,000	168	50.0	40.7-59.3	413	48.4	42.4-54.4	581	49.0	43.9-54.0		
\$15,000- 24,999	266	35.8	29.3-42.3	461	33.3	28.0-38.6	727	34.4	30.3-38.5		
\$25,000- 34,999	215	19.6	14.0-25.2	280	20.2	15.1-25.3	495	19.9	16.1-23.7		
\$35,000-49,999	237	12.3	7.9-16.8	287	13.7	9.4-18.0	524	13.0	9.9-16.1		
\$50,000- 74,999	225	10.9	6.8-14.9	272	9.4	6.0-12.9	497	10.2	7.5-12.8		
\$75,000+	246	6.8	3.6-10.0	262	5.8	2.5-9.1	508	6.4	4.1-8.7		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion about estimates in the Methodology section. Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

WV BRFSS 2006 Report CHAPTER 1: HEALTH STATUS, page 11

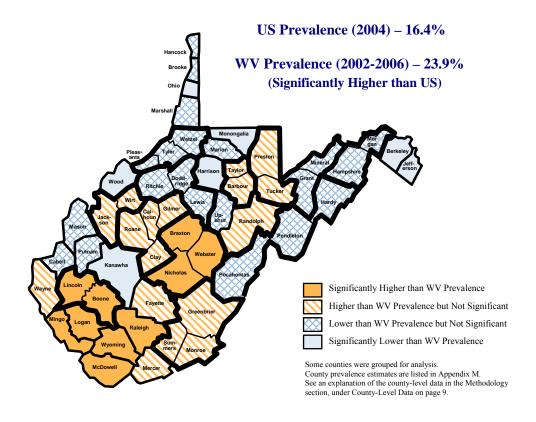
Figure 1.1 Fair or poor health by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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?"

Figure 1.2 Fair or poor health by county: WVBRFSS, 2002-2006



### **CHAPTER 2: HEALTH CARE ACCESS**

### No Health Care Coverage (among Adults 18 to 64) in 2006

**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: 18.9%** (95% CI: 17.0-20.8) in 2006.

**US: 18.6%** (95% CI: 18.2-19.0) in 2006.

West Virginia ranked 21st highest among 50 US States and DC in 2006.

Time Trends Health care access significantly increased for both men and women in West

Virginia between 2003 and 2006. There were 23.5% (95% CI: 21.5-25.5) of adults in the state without any health care coverage in 2003, compared with only

18.9% (95% CI: 17.0-20.8) in 2006.

**Gender Men**: 18.2% (95% CI: 15.3-21.1) in 2006.

Women: 19.6% (95% CI: 17.2-22.1) in 2006.

There were no significant differences in how frequently men and women

reported a lack of health care coverage.

Age No health care coverage was significantly more prevalent among young adults

aged 18-34 than among those aged 45 and older. This trend was slightly more

pronounced among men.

**Education** Adults with the least education were significantly more at risk for no health care

coverage than those with any level of education beyond high school. Approximately 32% of adults without a high school diploma lacked health care

coverage, while the rate for college graduates was less than 6%.

**Household Income** Lack of health care access was significantly more common among lower income

groups. About 40% of adults with household incomes from \$15,000 to less than \$25,000 had no health care coverage. In contrast, adults living in households with incomes of \$50,000 and above had a risk in the much lower 3% to 6%

range.

### WV HEALTHY PEOPLE 2010 OBJECTIVES

**Objective 1.1a** Increase the proportion of persons aged 18-64 with health insurance coverage to 90%. (Baseline:

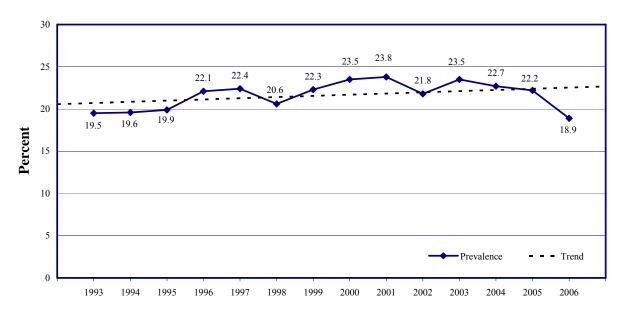
79.4% in 1998; Current: 81.1% in 2006)

Table 2.1 No health care coverage among adults aged 18-64 by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Woı	nen		Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,149	18.2	15.3-21.1	1,607	19.6	17.2-22.1	2,756	18.9	17.0-20.8		
Age											
18-24	67	*29.6	18.2-41.0	77	*26.4	15.5-37.3	144	28.0	20.1-36.0		
25-34	150	32.2	24.0-40.4	265	25.6	19.9-31.2	415	28.9	23.9-33.9		
35-44	231	16.5	11.0-21.9	369	21.8	17.0-26.6	600	19.2	15.5-22.8		
45-54	331	8.2	5.2-11.1	430	14.4	10.8-18.0	761	11.3	8.9-13.6		
55-64	370	9.1	5.9-12.3	466	13.1	9.7-16.4	836	11.1	8.8-13.5		
Education											
Less than H.S.	158	32.0	22.6-41.3	168	32.6	23.8-41.3	326	32.2	25.7-38.8		
H.S. or G.E.D.	461	25.2	20.0-30.4	599	25.7	21.3-30.2	1,060	25.5	22.0-28.9		
Some Post-H.S.	221	11.4	5.8-17.0	425	18.2	13.5-22.9	646	15.3	11.7-18.9		
College Graduate	308	4.6	1.8-7.3	414	6.4	3.3-9.5	722	5.5	3.4-7.5		
Income											
Less than \$15,000	118	*35.6	23.9-47.3	243	33.5	25.9-41.1	361	34.3	27.8-40.8		
\$15,000- 24,999	168	38.0	28.8-47.1	277	40.7	33.2-48.3	445	39.5	33.7-45.3		
\$25,000- 34,999	160	23.6	14.5-32.7	185	24.9	17.1-32.7	345	24.2	18.0-30.3		
\$35,000- 49,999	193	12.6	6.6-18.5	247	12.9	8.4-17.3	440	12.7	9.0-16.4		
\$50,000- 74,999	202	8.4	3.1-13.7	255	* 4.4	1.8-7.0	457	6.4	3.4-9.4		
\$75,000+	220	3.3	0.4-6.3	245	* 2.2	0.4-4.1	465	* 2.8	1.0-4.7		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion about estimates in the Methodology section. Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

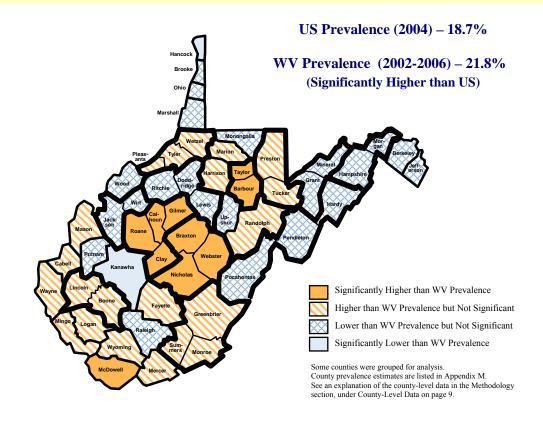
Figure 2.1 No health care coverage among adults aged 18-64 by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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.

Figure 2.2 No health care coverage among adults aged 18-64 by county: WVBRFSS, 2002-2006



### Needed Medical Care but Could Not Afford It in 2006

**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 2004 and 2005 unless stated otherwise.

**Prevalence WV: 17.2%** (95% CI: 15.7-18.7) in 2006.

**US:** 13.3% (95% CI: 13.0-13.6) in 2006.

West Virginia ranked 6<sup>th</sup> highest among 50 US States and DC in 2006.

**Time Trends** There was an insignificant down trend in this risk factor between 2004 and 2006.

**Gender Men**: 14.0% (95% CI: 11.8-16.1) in 2006. **Women**: 20.1% (95% CI: 18.0-22.2) in 2006.

Women had a significantly higher overall prevalence of this risk factor than men.

women had a significantly ingher overall prevalence of this risk factor than men.

Age, Education, Household Income The prevalence of this risk was similar among groups in the 18-54 age range. A significant decline occurred at age 55 and above, however, and those aged 65 and older were significantly less likely to forgo medical care than younger adults.

College graduates were significantly less likely to have problems affording

needed health care than those with any lower level of education.

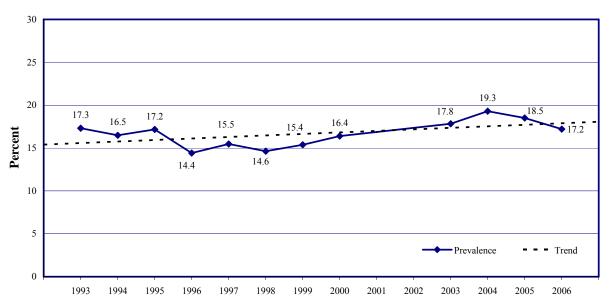
The prevalence of this risk factor generally increased as household incomes declined. From a high of 30.5% for the \$15,000 to \$24,999 income group, this risk dropped to only 3% among those with \$75,000 and higher annual incomes.

Table 2.2 Could not afford needed medical care in past 12 months by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Wor	men		Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,493	14.0	11.8-16.1	2,297	20.1	18.0-22.2	3,790	17.2	15.7-18.7		
Age											
18-24	67	14.1	5.8-22.3	78	*30.5	19.3-41.8	145	22.1	14.9-29.2		
25-34	150	21.9	14.7-29.0	265	29.4	23.6-35.3	415	25.6	21.0-30.3		
35-44	231	15.4	10.7-20.1	369	25.4	20.5-30.3	600	20.5	17.0-23.9		
45-54	331	15.1	11.0-19.3	430	23.2	18.9-27.5	761	19.2	16.2-22.2		
55-64	370	12.3	8.6-16.0	465	11.9	8.8-15.0	835	12.1	9.7-14.5		
65+	340	5.5	2.8-8.2	677	7.9	5.6-10.2	1,017	6.9	5.1-8.6		
Education											
Less than H.S.	256	23.3	16.7-29.9	361	22.0	16.8-27.2	617	22.7	18.5-26.9		
H.S. or G.E.D.	594	17.3	13.6-20.9	898	23.6	19.9-27.2	1,492	20.4	17.9-23.0		
Some Post-H.S.	282	7.4	4.0-10.8	542	21.7	17.2-26.2	824	15.6	12.6-18.7		
College Graduate	357	7.4	4.1-10.6	493	10.6	7.5-13.6	850	9.0	6.8-11.2		
Income											
Less than \$15,000	169	30.0	21.7-38.4	412	29.1	23.9-34.4	581	29.4	24.9-33.9		
\$15,000- 24,999	267	25.7	19.3-32.2	462	34.3	28.4-40.1	729	30.5	26.1-34.8		
\$25,000- 34,999	215	21.0	14.3-27.8	281	21.5	15.5-27.6	496	21.3	16.7-25.8		
\$35,000- 49,999	237	10.2	5.5-15.0	287	19.1	13.7-24.5	524	14.4	10.8-18.0		
\$50,000- 74,999	225	* 4.0	1.2-6.7	273	11.2	6.5-16.0	498	7.5	4.8-10.2		
\$75,000+	247	* 2.9	0.7-5.1	262	* 3.2	1.1-5.3	509	3.0	1.5-4.6		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Figure 2.3 Could not afford needed medical care in past 12 months by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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?"

### No Personal Doctor or Health Care Provider in 2006

**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: 20.3%** (95% CI: 18.6-22.0) in 2006.

**US:** 20.0% (95% CI: 19.7-20.4) in 2006.

West Virginia ranked 21st highest among 50 US States and DC in 2006.

**Time Trends** There was an insignificant down trend in this risk factor between 2004 and 2006.

**Gender Men**: 25.3% (95% CI: 22.5-28.2) in 2006.

Women: 15.6% (95% CI: 13.6-17.6) in 2006.

The risks of not having a personal doctor or health care provider were

significantly higher for men than for women.

Age Adults aged 18-44 had significantly higher rates of this risk factor than those in

any older age bracket. Among the oldest age group (65 and older), only 6.6%

lacked their own personal doctor or health care provider.

**Education** No overall significant differences were noted by educational achievement alone.

Among men, however, those with no more than a high school education were

significantly more at risk than men with some college education.

**Household Income** Household income was associated with few differences in this risk. In 2006,

even adults with \$75,000 and above in household income did not have a significantly lower rate than those from less than \$15,000 income households.

Table 2.3 No personal doctor or health care provider by demographic characteristics: WVBRFSS, 2006

Characteristic		Men			Won	nen		Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,492	25.3	22.5-28.2	2,293	15.6	13.6-17.6	3,785	20.3	18.6-22.0		
Age											
18-24	66	*38.4	25.7-51.2	78	*29.1	17.9-40.4	144	33.9	25.3-42.5		
25-34	150	48.3	39.8-56.8	265	27.9	22.1-33.7	415	38.2	32.9-43.4		
35-44	232	26.5	20.3-32.7	369	19.6	15.1-24.1	601	23.0	19.2-26.8		
45-54	330	20.2	15.8-24.6	429	12.8	9.4-16.3	759	16.5	13.7-19.3		
55-64	371	13.6	10.0-17.3	465	9.5	6.6-12.3	836	11.5	9.2-13.9		
65+	339	9.7	6.4-13.0	674	4.4	2.8-6.1	1,013	6.6	4.9-8.3		
Education											
Less than H.S.	257	31.0	23.8-38.3	360	14.0	8.9-19.1	617	22.8	18.2-27.3		
H.S. or G.E.D.	592	31.4	26.5-36.4	895	17.7	14.3-21.1	1,487	24.5	21.4-27.5		
Some Post-H.S.	282	18.1	12.9-23.3	542	14.9	10.9-18.9	824	16.2	13.0-19.4		
College Graduate	357	17.0	12.5-21.5	493	13.7	10.1-17.4	850	15.4	12.5-18.3		
Income							-				
Less than \$15,000	168	29.7	20.6-38.8	413	17.2	12.2-22.1	581	21.5	17.0-26.1		
\$15,000- 24,999	267	27.9	21.3-34.5	461	16.3	11.7-20.9	728	21.4	17.5-25.3		
\$25,000- 34,999	215	27.5	20.0-35.0	281	16.4	11.1-21.8	496	22.2	17.5-27.0		
\$35,000-49,999	237	28.8	21.7-35.8	287	11.5	6.9-16.1	524	20.6	16.2-25.0		
\$50,000- 74,999	225	17.5	11.8-23.1	273	14.5	9.1-19.9	498	16.0	12.1-19.9		
\$75,000+	246	16.4	11.4-21.5	262	12.9	8.5-17.3	508	14.9	11.5-18.3		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

### **CHAPTER 3: PHYSICAL INACTIVITY**

### No Leisure-Time Physical Activity for Exercise in 2006

**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: 25.6%** (95% CI: 23.9-27.3) in 2006.

**US: 24.0%** (95% CI: 23.6-24.3) in 2006.

West Virginia ranked 12<sup>th</sup> highest among 50 US States and DC in 2006.

**Time Trends** From 1994 through 2004, the prevalence of risk due to lack of exercise generally

declined. Between 2004 and 2005, however, the trend reversed direction, moving up significantly from 24.5% in 2004 to to 28.5% in 2005. The trend

edged down again slightly in 2006.

**Gender Men**: **21.0**% (95% CI: 18.6-23.4) in 2006.

Women: 29.9% (95% CI: 27.6-32.2) in 2006.

Women had a significantly higher overall risk than men. This difference was

particularly evident among the oldest adults, those aged 65 and older.

Differences among men and women in the youngest age group (aged 18-24) were large also, but were not significant, in part because of the lower survey

response rate among this group.

Age In general, the prevalence of physical inactivity increased with age. The rate

among persons aged 65 and older was significantly higher than among those in

any less than 45 age bracket.

**Education** The prevalence of physical inactivity decreased with increasing education in

2006. A pronounced difference existed between the less than high school

educated group (43.0%) and those with a college education (12.0%).

**Household Income** The prevalence of physical inactivity was significantly higher among adults with

incomes below \$15,000 in 2006, compared with adults living in households with

income levels of \$25,000 or more annually.

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 22.1 Reduce to 37% the proportion of people aged 18 and older who report no leisure-time physical

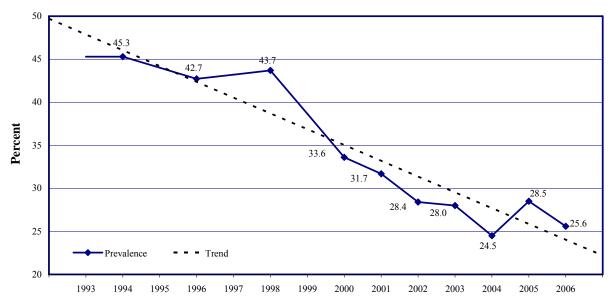
activity. (Baseline: 43.7% in 1998; Current: 25.6% in 2006)

Table 3.1 No leisure-time physical activity for exercise by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Women			Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,493	21.0	18.6-23.4	2,294	29.9	27.6-32.2	3,787	25.6	23.9-27.3		
Age											
18-24	67	*11.4	3.3-19.5	78	*25.6	13.8-37.5	145	18.3	11.0-25.6		
25-34	150	17.1	10.4-23.7	265	23.9	18.3-29.4	415	20.4	16.1-24.8		
35-44	232	22.4	16.6-28.2	368	25.9	21.0-30.8	600	24.2	20.4-28.0		
45-54	330	21.5	16.7-26.3	430	29.9	25.3-34.6	760	25.8	22.4-29.1		
55-64	370	27.1	22.2-32.1	463	30.1	25.7-34.5	833	28.6	25.3-32.0		
65+	340	24.0	19.2-28.7	677	39.0	35.0-43.1	1,017	32.7	29.5-35.9		
Education											
Less than H.S.	257	40.6	33.4-47.8	360	45.5	39.5-51.4	617	43.0	38.2-47.7		
H.S. or G.E.D.	593	22.3	18.4-26.2	897	32.0	28.4-35.5	1,490	27.2	24.5-29.8		
Some Post-H.S.	282	17.0	12.4-21.7	541	29.2	23.7-34.7	823	24.0	20.2-27.8		
College Graduate	357	7.9	4.9-10.9	493	16.2	12.5-19.9	850	12.0	9.6-14.4		
Income											
Less than \$15,000	168	36.8	27.7-46.0	414	41.0	35.3-46.7	582	39.6	34.7-44.4		
\$15,000- 24,999	266	31.1	24.6-37.6	461	35.4	30.0-40.7	727	33.5	29.3-37.6		
\$25,000- 34,999	215	26.4	19.3-33.4	281	28.7	22.7-34.7	496	27.5	22.8-32.1		
\$35,000-49,999	237	16.4	11.3-21.6	286	21.8	15.5-28.1	523	19.0	14.9-23.0		
\$50,000- 74,999	225	15.5	10.1-21.0	273	24.4	18.7-30.1	498	19.9	15.9-23.8		
\$75,000+	247	11.2	7.3-15.2	262	17.3	12.0-22.7	509	13.9	10.7-17.2		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Figure 3.1 No leisure-time physical activity for exercise by year: WVBRFSS, 1994-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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?"

Notes: Data are not available for the years 1993, 1995, 1997, and 1999. This Y axis does not begin with zero, in order to maintain a 30 percentage point Y axis range that facilitates comparability among a group of graphs presented together.

Figure 3.2 No leisure-time physical activity for exercise by county: WVBRFSS, 2002-2006

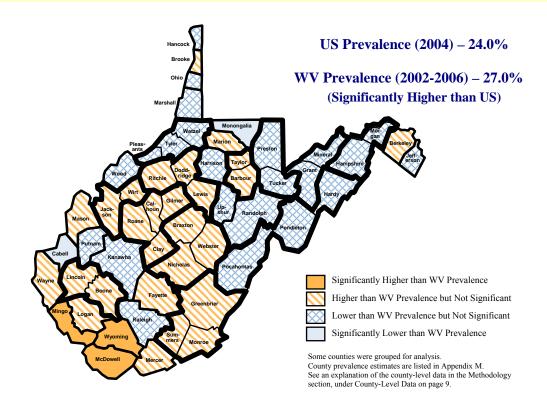
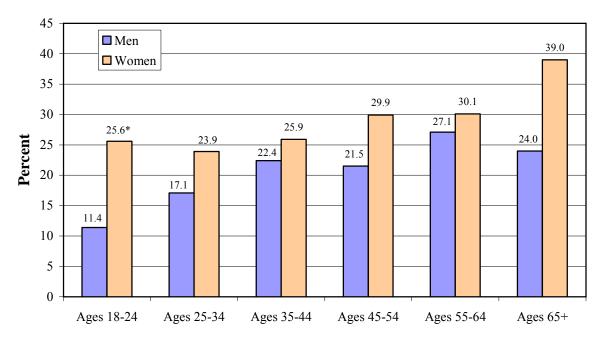


Figure 3.3 No leisure-time physical activity for exercise by age and sex: WVBRFSS, 2006



<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

### **CHAPTER 4: DIABETES**

### **Diabetes Prevalence in 2006**

**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: 12.1%** (95% CI: 11.0-13.2) in 2006.

**US: 8.0%** (95% CI: 7.8-8.2) in 2006.

West Virginia ranked 1st highest among 50 US States and DC in 2006.

**Time Trends** Diabetes prevalence among West Virginia adults doubled during the past 13

years. More recently, awareness of having diabetes increased steeply and

significantly between 2000 (7.6%) and 2006 (12.1%).

**Gender Men**: **12.8**% (95% CI: 11.0-14.6) in 2006.

Women: 11.5% (95% CI: 10.1-12.9) in 2006.

There were no significant differences in how frequently men and women

reported a diagnosis of diabetes in 2006.

Age The oldest adults (65 and older) had the highest diabetes prevalence among all

age groups in West Virginia, 23.5% in 2006. Adults aged 18-54 were

significantly less likely to be diabetic.

**Education** Adults with less than a high school education carried the greatest risk of diabetes,

with a prevalence of 20.3% in 2006. The risk for college graduates was significantly lower at 6.6% in 2006. Each increase in education was associated with a lower risk of diabetes, although the differences were not significant

between every group.

**Household Income** At the lowest income levels, less than \$15,000 annually, more than 20 people in

every 100 were diabetic. In contrast, adults living in households with annual incomes of \$35,000 and above generally experienced significantly lower risk

levels of fewer than 10 people in every 100.

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 5.6 Increase to 85% the proportion of persons with diabetes who have a glycosylated hemoglobin

measurement at least once a year. (Baseline: 80.1% in 2000; Current: 86.1% in 2006)

**Objective 5.7** Increase to 73% the proportion of persons with diabetes who have an annual dilated eye exam.

(Baseline: 65.5% in 1998; Current: 66.4% in 2006)

Objective 5.8 Increase to 55% the proportion of persons with diabetes who perform self blood-glucose monitoring

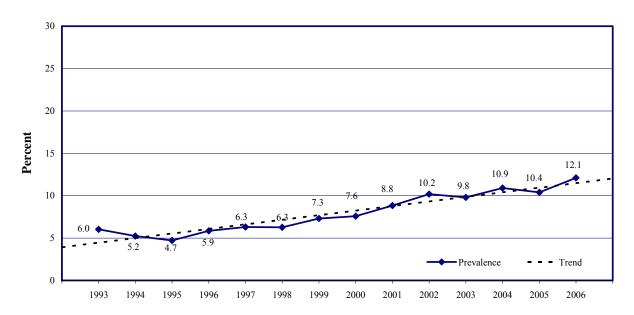
(SBGM) at least daily. (Baseline: 50.3% in 1998; Current: 66.5% in 2006)

Table 4.1 Diabetes prevalence by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Woı	nen		Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI		
TOTAL	1,491	12.8	11.0-14.6	2,297	11.5	10.1-12.9	3,788	12.1	11.0-13.2		
Age											
18-24	66	* 3.5	0.0-8.2	78	* 1.7	0.0-5.1	144	* 2.6	0.0-5.6		
25-34	150	* 2.3	0.0-4.5	265	* 3.5	1.1-5.9	415	2.9	1.2-4.5		
35-44	232	7.0	3.3-10.7	369	4.8	2.0-7.6	601	5.9	3.6-8.2		
45-54	331	12.8	8.8-16.8	430	11.4	8.1-14.6	761	12.1	9.5-14.6		
55-64	369	25.3	20.4-30.3	464	15.7	12.2-19.2	833	20.4	17.4-23.5		
65+	339	23.4	18.6-28.2	678	23.6	20.0-27.2	1,017	23.5	20.6-26.4		
Education											
Less than H.S.	258	17.7	12.7-22.8	362	23.0	18.5-27.6	620	20.3	16.9-23.7		
H.S. or G.E.D.	591	13.1	10.3-15.9	897	12.1	9.6-14.6	1,488	12.6	10.7-14.5		
Some Post-H.S.	282	12.7	8.4-16.9	542	8.9	6.4-11.4	824	10.5	8.2-12.8		
College Graduate	356	7.8	4.8-10.8	493	5.4	3.4-7.4	849	6.6	4.8-8.4		
Income											
Less than \$15,000	168	24.8	17.6-32.0	413	18.4	14.4-22.4	581	20.6	17.0-24.2		
\$15,000- 24,999	267	16.3	11.6-21.0	462	15.9	11.9-19.9	729	16.1	13.0-19.1		
\$25,000- 34,999	215	13.5	8.9-18.0	281	11.2	7.2-15.2	496	12.4	9.3-15.4		
\$35,000- 49,999	237	8.6	5.0-12.2	286	5.8	3.1-8.4	523	7.3	5.0-9.6		
\$50,000- 74,999	225	9.3	5.3-13.3	273	7.9	4.5-11.3	498	8.6	6.0-11.3		
\$75,000+	247	9.3	4.9-13.8	262	* 3.7	1.2-6.3	509	6.9	4.1-9.6		

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

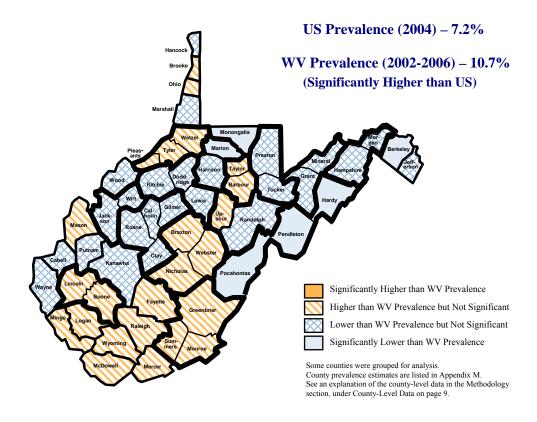
Figure 4.1 Diabetes prevalence by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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."

Figure 4.2 Diabetes prevalence by county: WVBRFSS, 2002-2006



### **Key Control Issues among Adults with Diabetes in 2006**

### **Definitions**

**No A1c test** - Responding "None" or "Never heard of 'A one C' test" to the following question: "A test for 'A one C' measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for hemoglobin 'A one C'?"

**No Eye exam -** Responding with "More than 12 months ago" to the following question: "When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light."

**No Foot exam -** Responding "None" to the following question: "About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?"

### **Prevalence**

No A1c test

**WV: 13.9%** (95% CI: 10.2-17.6) in 2006.

No eye exam

**WV:** 33.6% (95% CI: 28.8-38.3) in 2006.

No foot exam

**WV: 29.0%** (95% CI: 24.5-33.5) in 2006.

### **Time Trends**

Between 2005 and 2006, there were slight increases in the prevalence of the first two of these risk factors. The prevalence of "No foot exam" decreased slightly.

Table 4.2 No A1c test among adults with diabetes by demographic characteristics: WVBRFSS, 2006

Characteristic	2006						
	# Resp.	%	95% CI				
TOTAL	467	13.9	10.2-17.6				
Males	207	12.5	7.5-17.5				
Females	260	15.4	9.9-20.9				
Age							
18-44	43	*22.2	7.2-37.3				
45-54	83	* 5.6	0.7-10.5				
55-64	152	4.1-14.2					
65+	186	18.5	12.2-24.7				
Education							
Less than H.S.	119	17.2	10.0-24.4				
H.S. or G.E.D.	186	17.3	10.4-24.3				
Some Post-H.S.	99	* 5.3	0.6-10.1				
College Graduate	60	* 8.9	1.7-16.2				
Income							
Less than \$15,000	112	11.1	4.9-17.2				
\$15,000- 24,999	110	14.3	7.2-21.4				
\$25,000- 34,999	60	* 11.4	2.7-20.1				
\$35,000-49,999	45	* 10.5	0.5-20.5				
\$50,000+	76	* 12.9	3.7-22.1				

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Table 4.3 No eye exam prevalence among adults with diabetes by demographic characteristics: WVBRFSS, 2006

Characteristic	2006						
	# Resp. %		95% CI				
TOTAL	528	33.6	28.8-38.3				
Males	226	31.1	24.3-38.0				
Females	302	36.0	29.6-42.5				
Age							
18-44	45	* 46.6	29.2-64.0				
45-54	86	* 42.2	30.8-53.6				
55-64	163	33.9	25.7-42.0				
65+	231	24.2	17.9-30.5				
Education							
Less than H.S.	149	32.4	23.7-41.1				
H.S. or G.E.D.	211	35.7	28.0-43.5				
Some Post-H.S.	101	39.8	28.7-50.9				
College Graduate	63	* 15.6	5.7-25.5				
Income							
Less than \$15,000	130	36.4	26.9-45.9				
\$15,000- 24,999	125	30.4	20.7-40.2				
\$25,000- 34,999	69	27.6	16.2-39.0				
\$35,000-49,999	46	* 33.6	18.5-48.7				
\$50,000+	78	* 33.4	21.3-45.5				

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Table 4.4 No foot exam prevalence among adults with diabetes by demographic characteristics: WVBRFSS, 2006

Characteristic	2006						
	# Resp.	%	95% CI				
TOTAL	519	29.0	24.5-33.5				
Males	223	24.9	18.4-31.4				
Females	296	33.2	27.0-39.4				
Age							
18-44	47	* 33.0	16.9-49.1				
45-54	84	* 31.2	20.3-42.2				
55-64	165	17.6-31.8					
65+	220	28.6	22.1-35.1				
Education							
Less than H.S.	142	25.7	17.6-33.8				
H.S. or G.E.D.	207	30.9	23.6-38.2				
Some Post-H.S.	103	26.6	16.9-36.3				
College Graduate	63	* 32.7	18.7-46.7				
Income							
Less than \$15,000	133	26.5	18.0-35.1				
\$15,000- 24,999	119	23.4	15.2-31.6				
\$25,000- 34,999	69	33.2	20.6-45.7				
\$35,000-49,999	45	* 30.9	16.1-45.7				
\$50,000+	78	* 31.4	20.0-42.8				

Note. Excludes amputees.

### **Additional Diabetes Issues in 2006**

Table 4.5 Other health care issues among adults with diabetes: WVBRFSS, 2006

Diakatia wasa andanta mba	Men			Women			Total		
Diabetic respondents who	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Now take insulin	232	25.2	18.4-32.1	307	21.8	16.7-26.8	539	23.5	19.2-27.8
Now take diabetes pills	231	73.2	66.1-80.3	306	69.0	62.9-75.2	537	71.1	66.4-75.8
Never check blood glucose at home or check it less than once daily	224	35.8	28.7-42.8	295	31.2	25.1-37.3	519	33.5	28.8-38.2
Never self-check feet for sores or check them less than once daily	224	21.9	15.8-28.0	293	20.3	14.7-26.0	517	21.1	17.0-25.3
Have ever had a foot sore that took more than four weeks to heal	230	9.8	5.8-13.8	303	13.1	8.8-17.4	533	11.4	8.5-14.4
Did NOT visit a doctor, nurse, or other health professional even once in the past 12 months for their diabetes	230	3.6	1.2-6.1	300	6.6	2.8-10.4	530	5.1	2.8-7.3
Were told by a doctor that they have diabetic retinopathy	228	16.5	11.4-21.7	303	21.3	16.1-26.6	531	18.9	15.2-22.6
Have NEVER taken a class in self- management of diabetes	231	56.9	49.7-64.1	307	50.5	44.1-57.0	538	53.8	48.9-58.6

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

### **CHAPTER 5: OBESITY AND OVERWEIGHT**

### Obesity and Overweight in 2006

### **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<sup>2</sup>). Obesity is defined as a BMI of 30.0 or higher and overweight as a BMI of 25.0-29.9.

### **Prevalence**

### **Obesity**

**WV: 31.0%** (95% CI: 29.2-32.9) in 2006. **US: 25.1%** (95% CI: 24.7-25.4) in 2006.

West Virginia ranked 2<sup>nd</sup> highest among 50 US States and DC in 2006.

### **Overweight**

**WV: 36.0%** (95% CI: 34.1-37.8) in 2006. **US: 36.2%** (95% CI: 35.8-36.6) in 2006.

West Virginia ranked 33<sup>rd</sup> highest among 50 US States and DC in 2006.

### Time Trends

Obesity increased substantially among West Virginia adults between 1993 and 2005. Men and women from a wide range of age, education, and income categories contributed to this unhealthy trend. The prevalence of overweight adults, in contrast, had only slight year-to-year variations around a barely declining long-term trend line.

### Gender

### **Obesity**

**Men:** 33.3% (95% CI: 30.4-36.1) in 2006. **Women:** 28.9% (95% CI: 26.5-31.2) in 2006.

### **Overweight**

**Men:** 41.7% (95% CI: 38.8-44.7) in 2006. **Women:** 30.3% (95% CI: 28.1-32.6) in 2006.

Obesity rate differences by gender alone were small. However, men had a significantly higher risk than women from overweight in 2006.

### Age

The prevalence of being either obese or overweight steadily increased through the 18-44 age groups, although adjacent age groups were not significantly different. In the 45-54 age group, prevalence was slightly higher for obesity, but was slightly lower among the overweight group. For the oldest group (age 65+), the prevalence of being overweight remained similar to levels in the middle age groups. Obesity prevalence in the oldest age group (65+), however, dropped to significantly below that in the 45-54 and 55-64 age groups.

### **Education and Household Income**

Few differences were significant in the prevalence of obesity or overweight by either educational attainment or household income.

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 19.1b

Reduce to 20% the proportion of people who are obese as defined by having a body mass index of 30 or greater. (Baseline: 23.9% in 1998; Current: 31.0% in 2006)

Table 5.1 Obesity by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Woı	men	Total			
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,474	33.3	30.4-36.1	2,175	28.9	26.5-31.2	3,649	31.0	29.2-32.9	
Age										
18-24	66	*21.7	11.1-32.2	76	*18.6	7.2-30.0	142	20.2	12.5-27.9	
25-34	149	33.4	25.4-41.5	259	30.6	24.6-36.6	408	32.0	27.0-37.1	
35-44	227	35.9	29.0-42.8	357	31.0	25.6-36.3	584	33.4	29.0-37.8	
45-54	327	42.2	36.4-48.1	404	33.3	28.3-38.3	731	37.9	34.0-41.7	
55-64	367	35.4	30.0-40.8	435	33.8	29.0-38.7	802	34.6	31.0-38.2	
65+	336	27.1	22.0-32.3	641	24.7	21.0-28.3	977	25.7	22.7-28.8	
Education										
Less than H.S.	252	30.5	23.8-37.1	341	32.9	27.3-38.5	593	31.6	27.2-36.0	
H.S. or G.E.D.	587	34.4	29.9-39.0	848	30.5	26.7-34.2	1,435	32.5	29.5-35.4	
Some Post-H.S.	278	34.9	28.1-41.7	516	29.5	24.1-34.9	794	31.9	27.6-36.1	
College Graduate	354	31.7	26.0-37.5	468	22.6	18.4-26.8	822	27.3	23.6-30.9	
Income										
Less than \$15,000	163	29.5	21.7-37.4	404	30.9	25.7-36.1	567	30.4	26.1-34.8	
\$15,000- 24,999	267	34.3	27.6-41.0	444	36.1	30.3-41.9	711	35.3	30.9-39.7	
\$25,000- 34,999	213	37.0	29.3-44.8	265	28.2	21.8-34.6	478	32.9	27.8-38.1	
\$35,000- 49,999	235	32.5	25.6-39.4	272	29.9	23.8-36.1	507	31.3	26.6-36.0	
\$50,000- 74,999	223	30.8	24.1-37.6	255	26.9	21.0-32.8	478	29.0	24.4-33.5	
\$75,000+	246	39.0	32.0-46.0	254	20.1	14.7-25.5	500	30.7	26.0-35.5	

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

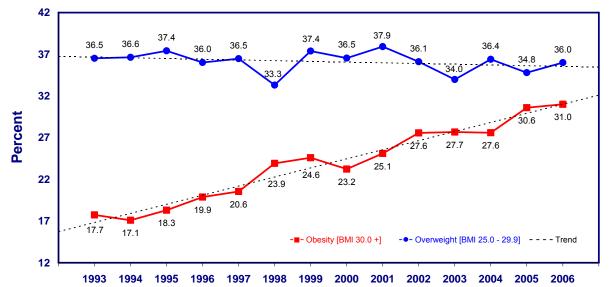
Table 5.2 Overweight (but not obese) by demographic characteristics: WVBRFSS, 2006

Characteristic	Men				Wor	nen	Total			
	# Resp.	%	95% CI	# Resp.	# Resp.		# Resp.	%	95% CI	
TOTAL	1,474	41.7	38.8-44.7	2,175	30.3	28.1-32.6	3,649	36.0	34.1-37.8	
Age										
18-24	66	*31.8	20.2-43.4	76	21.5	11.6-31.4	142	26.8	19.1-34.5	
25-34	149	40.0	31.6-48.4	259	28.5	22.6-34.4	408	34.4	29.2-39.6	
35-44	227	47.1	40.2-54.1	357	30.8	25.6-36.1	584	38.9	34.6-43.3	
45-54	327	37.9	32.2-43.6	404	27.1	22.5-31.7	731	32.6	28.9-36.4	
55-64	367	41.8	36.4-47.3	435	37.4	32.5-42.3	802	39.7	36.0-43.3	
65+	336	49.6	43.9-55.3	641	33.7	29.7-37.8	977	40.6	37.2-44.0	
Education										
Less than H.S.	252	39.2	32.0-46.3	341	28.9	23.3-34.5	593	34.3	29.7-38.9	
H.S. or G.E.D.	587	40.4	35.7-45.1	848	29.7	26.1-33.3	1,435	35.1	32.1-38.1	
Some Post-H.S.	278	40.7	33.8-47.7	516	31.3	26.3-36.2	794	35.4	31.2-39.5	
College Graduate	354	46.7	40.8-52.6	468	31.1	26.4-35.8	822	39.0	35.2-42.9	
Income										
Less than \$15,000	163	40.0	30.9-49.1	404	27.3	21.5-33.0	567	31.6	26.8-36.5	
\$15,000- 24,999	267	37.6	30.9-44.3	444	24.7	20.3-29.1	711	30.5	26.6-34.5	
\$25,000- 34,999	213	41.8	33.9-49.6	265	35.5	28.9-42.0	478	38.8	33.6-44.1	
\$35,000- 49,999	235	44.7	37.2-52.2	272	30.3	23.9-36.6	507	38.0	33.0-43.0	
\$50,000- 74,999	223	50.8	43.3-58.2	255	33.9	27.5-40.3	478	42.8	37.7-47.9	
\$75,000+	246	42.3	35.5-49.1	254	33.4	27.0-39.9	500	38.4	33.7-43.2	

<sup>\*</sup> Use caution when interpreting and reporting this estimate. See discussion of unstable estimates in Methodology.

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 in Methodology.

Figure 5.1 Obesity and overweight by year: WVBRFSS, 1993-2006



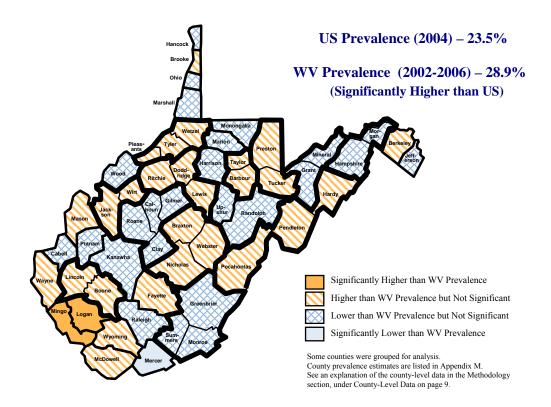
Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

Definitions: 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/m2).

Obesity is defined as a body mass index of 30.0 or higher. Overweight is defined as a body mass index of 25.0 - 29.9.

Note: This Y axis does not begin with zero, in order to maintain a 30 percentage point Y axis range that facilitates comparability among a group of graphs presented together.

Figure 5.2 Obesity (body mass index of 30.0 or higher) by county: WVBRFSS, 2002-2006



### **CHAPTER 6: TOBACCO USE**

### **Current Cigarette Smoking in 2006**

**Definition** Smoking at least 100 cigarettes in one's lifetime and currently smoking every day

or some days.

**Prevalence WV: 25.7%** (95% CI: 24.0-27.5) in 2006.

**US:** 19.7% (95% CI: 19.4-20.0) in 2006.

West Virginia ranked 2<sup>nd</sup> highest among 50 US States and DC in 2006.

Time Trends The proportion of current smokers has fluctuated between approximately 26%

and 28% along a flat 1993 through 2006 trend line. After 2002, however, an unbroken series of very slight declines have occurred in the prevalence of

smoking among West Virginia adults.

**Gender Men**: **25.4**% (95% CI: 22.7-28.1) in 2006.

Women: 26.1% (95% CI: 23.8-28.3) in 2006.

Men and women had no significant difference in their prevalence of current

cigarette smoking in 2006.

Age Adults under age 65 smoked cigarettes significantly less often than those aged 65

and older in 2006. Current smoking prevalence among the 65 and older group was 12.8%, well below the range of 22.1% through 36.2% for the other adult age

groups.

**Education** Current smoking was significantly less prevalence among college graduates than

among those with less education, without regard to whether they were men or women. Among the remaining education groups, however, men with less than a high school education were significantly more likely to be current cigarette smokers than men with any post high school education. For women, there was

no such significant difference.

Household Income The prevalence of current smoking in 2006 decreased steadily as household

income increased. Only 12.7% among the highest income group (\$75,000+ annual household income) were current smokers, compared with 38.7% among

the lowest income group (less than \$15,000 in annual household income).

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 27.1a Reduce the prevalence of cigarette smoking among adults aged 18+ to 20% or lower. (Baseline:

28% in 1998; Current: 25.7% in 2006)

Objective 27.1b Reduce the prevalence of cigarette smoking among adults aged 18+ in the lower socioeconomic

level (12 years or fewer of education and a household income of less than \$25,000) to 25% or lower.

(Baseline: 36% in 1998; Current: 35.8% in 2006)

Objective 27.1c Reduce the prevalence of cigarette smoking among women aged 18-44 (i.e., childbearing ages) to

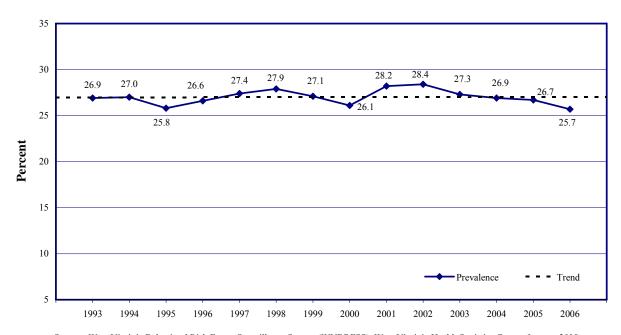
25% or lower. (Baseline: 36% in 1998; Current: 34.0% in 2006)

Table 6.1 Current cigarette smoking by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Woı	men		To	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,492	25.4	22.7-28.1	2,298	26.1	23.8-28.3	3,790	25.7	24.0-27.5	
Age										
18-24	67	*32.3	20.6-43.9	78	*40.3	28.2-52.4	145	36.2	27.7-44.6	
25-34	150	33.0	24.9-41.1	265	35.7	29.5-41.9	415	34.3	29.2-39.5	
35-44	232	27.5	21.4-33.6	369	28.2	23.1-33.4	601	27.9	23.9-31.8	
45-54	330	26.5	21.3-31.6	429	26.8	22.3-31.3	759	26.6	23.2-30.0	
55-64	370	22.6	18.0-27.3	466	21.5	17.6-25.4	836	22.1	19.0-25.1	
65+	339	12.2	8.5-15.9	678	13.2	10.4-15.9	1,017	12.8	10.6-15.0	
Education										
Less than H.S.	258	39.0	31.6-46.4	361	32.6	26.8-38.4	619	35.9	31.1-40.6	
H.S. or G.E.D.	593	28.4	23.9-32.9	899	29.0	25.3-32.7	1,492	28.7	25.8-31.6	
Some Post-H.S.	281	23.7	<b>23.7</b> 18.0-29.5		29.3	24.1-34.4	823	26.9	23.0-30.8	
College Graduate	356	11.4			12.1	8.8-15.5	849 <b>11.8</b>		9.2-14.3	
Income		7.0 13.2								
Less than \$15,000	169	41.2	31.7-50.7	414 37.4		31.7-43.2	583 <b>38.7</b>		33.7-43.8	
\$15,000- 24,999	267 <b>30.</b> 9		24.1-37.7	462 34.5		28.7-40.2	729 <b>32.9</b>		28.5-37.3	
\$25,000- 34,999	215	27.9	20.7-35.1	281	26.9	20.7-33.2	496	27.4	22.6-32.3	
\$35,000- 49,999	237	24.2	17.8-30.6	287	24.1	18.2-30.0	524	24.1	19.8-28.5	
\$50,000- 74,999	223	20.7	14.5-26.9	273	20.0	13.7-26.2	496	20.3	15.9-24.7	
\$75,000+	247	12.4	8.0-16.9	262	13.0	8.4-17.5	509	12.7	9.5-15.9	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Figure 6.1 Current cigarette smoking by year: WVBRFSS, 1993-2006

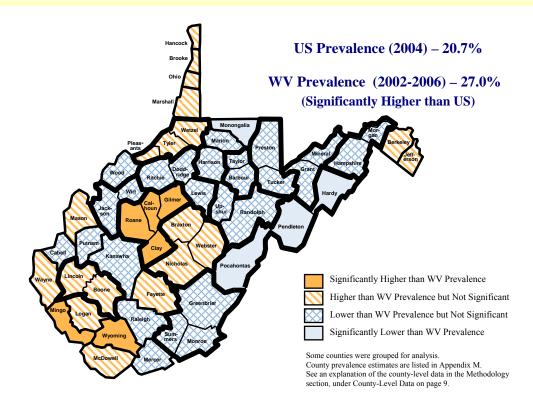


Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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

Note: This Y axis does not begin with zero, in order to maintain a 30 percentage point Y axis range that facilitates comparability among a group of graphs presented together.

Figure 6.2 Current cigarette smoking by county: WVBRFSS, 2002-2006



### "Quit smoking for a day" in 2006

**Definition** Responding "Yes" to the following question: "During the past 12 months, have

you stopped smoking for one day or longer because you were trying to quit

smoking?" (Restricted to every day smokers.)

**Prevalence WV: 49.3%** (95% CI: 44.9-53.8) in 2006.

**US: 50.9%** (95% CI: 49.9-51.9) in 2006.

West Virginia ranked 39th highest among 50 US States and DC in 2006.

**Time Trends** Between 2002 and 2006, an unbroken series of slight increases have occurred in

the prevalence of West Virginia adults who were trying to quit smoking. The

longer term (1993-2006) trend line has fluctuated up and down, however.

**Gender Men**: **47.9**% (95% CI: 41.1-54.7) in 2006.

Women: 50.6% (95% CI: 44.9-56.4) in 2006.

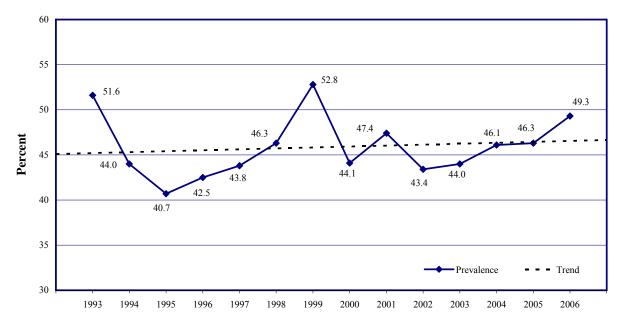
There was no significant difference in the prevalence between men and women.

Age, Education, and Household Income

Income Reports of attempts to quit smoking were similar among most age, education, and

household income groups in 2006.

Figure 6.3 "Quit smoking for a day" among every day current smokers by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

Definition: Responding "Yes" to the following question: "During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?" (The results reported for this section have been limited to every day current smokers.)

Note: This Y axis does not begin with zero, in order to maintain a 30 percentage point Y axis range that facilitates comparability among a group of graphs presented together.

Table 6.2 "Quit smoking for a day" among every day current smokers by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Woı	men		To	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	298	47.9	41.1-54.7	452	50.6	44.9-56.4	750	49.3	44.9-53.8	
Age										
18-24	21	*52.1	29.8-74.4	26	*52.2	30.9-73.6	47	*52.2	36.7-67.6	
25-34	30	*55.8	36.6-75.0	77	*60.8	49.2-72.5	107	*58.7	48.0-69.3	
35-44	57	*49.8	35.8-63.7	86	*52.4	40.4-64.3	143	51.1	41.8-60.3	
45-54	78	*47.6	35.6-59.6	102	*42.5	32.0-52.9	180	45.0	37.0-53.0	
55-64	76	*37.6	25.6-49.6	83	*46.6	34.9-58.3	159	41.8	33.3-50.3	
65+	35	*38.7	21.1-56.3	75	*46.9	34.4-59.4	110	*43.5	33.1-53.9	
Education										
Less than H.S.	78	*43.0	29.7-56.4	95	*51.7	39.8-63.6	173	46.9	37.8-56.0	
H.S. or G.E.D.	128	*49.0	38.4-59.5	201	48.6	39.8-57.3	329	48.8	42.0-55.5	
Some Post-H.S.	60	*46.2	<b>*46.2</b> 31.5-60.9		*57.4	46.0-68.9	174	53.1	44.0-62.2	
College Graduate	31	*58.6	39.3-77.9	41	*36.6	20.9-52.3	72 *48.5		35.0-62.1	
Income		39.3-77.9								
Less than \$15,000	54	*49.9	32.6-67.2	125	*48.9	38.5-59.3	179 <b>49.3</b>		40.0-58.5	
\$15,000- 24,999	54 <b>*49.9</b> 64 <b>*42.5</b>		28.1-56.9	111	*57.2	45.7-68.7	175	50.9	41.6-60.2	
\$25,000- 34,999	_		52.3-82.2	54 *39.4		24.9-53.8	100 *54.2		42.7-65.8	
\$35,000-49,999	48	*40.0	24.1-55.9	50	*57.8	42.0-73.6	98	*48.0	36.3-59.7	
\$50,000- 74,999	32	*37.1	17.4-56.7	38	*59.0	41.5-76.6	70	*47.3	33.5-61.2	
\$75,000+	23	*49.4	27.6-71.1	23	*33.0	11.1-55.0	46	*41.1	25.4-56.9	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

### Smoking Policies at Work in 2006\*\*

### **Definition**

### Indoor public and common areas

Answered "Not allowed in any public areas" to the question "Which of the following best describes your place of work's official smoking policy for indoor public or common areas, such as lobbies, rest rooms, and lunchrooms?"

### **Indoor work areas**

Answered "Not allowed in any work areas" to the question "Which of the following best describes your place of work's official smoking policy for work areas?" after having answered "yes" to the question "While working at your job, are you indoors most of the time?"

### Indoors anywhere at work

Answered "Not allowed" to both of the smoking policy questions above.

### **Prevalence**

### **Indoor public and common areas**

**WV**: **91.2**% (95% CI: 89.4-93.0) in 2006.

### **Indoor work areas**

**WV**: **91.8%** (95% CI: 90.1-93.6) in 2006.

### Indoors anywhere at work

**WV**: **89.6%** (95% CI: 87.6-91.5) in 2006.

### **Trends**

There were significant increases in the frequency of indoor worksite no-smoking policies between 2004 and 2006. Almost 90% of employed adults reported that smoking was prohibited in either work areas, public areas, or both within their indoor work facilities in 2006.

### Gender

Men reported a significantly lower frequency of no-smoking policies for indoor public/common areas than women in 2006. In the work areas, however, there were only minor differences by gender in the prevalence of policies forbidding smoking.

### Age

No significant differences by age were found in workplace smoking policies.

### Education

The highest rates of no-smoking policies were found in the workplaces of persons with four or more years of college education. At 96.2%, the prevalence for this group significantly surpassed the prevalence for any of the other groups with lower education levels.

### **Household Income**

There were no significant variations in the prevalence of no-smoking policies among clusters of adults from any household income level.

<sup>\*\*</sup> Among respondents who are either employed or self-employed AND who work indoors at their jobs most of the time.

Table 6.3 Workplace smoking policies by separate designated areas by demographic characteristics: WVBRFSS, 2006\*\*

Characteristic	indoor p	public or c place of	s, restrooms,			l in any indoor ce of work.
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,378	91.2	89.4-93.0	1,377	91.8	90.1-93.6
Males	472	88.5	85.1-91.9	472	88.2	84.8-91.6
Females	906	93.3	91.4-95.2	905	94.6	92.9-96.4
Age						
18-24	52	95.7	90.8-100	52	96.1	91.6-100
25-34	218	88.5	83.2-93.8	218	91.2	86.3-96.1
35-44	349	90.1	86.2-94.0	348	89.5	85.5-93.4
45-54	420	91.5	88.5-94.5	420	91.8	88.7-94.9
55-64	276	93.1	89.9-96.2	276	93.9	90.9-96.9
65+	55	91.2	83.2-99.2	55	91.2	83.2-99.2
Education						
Less than H.S.	61	* 77.0	64.3-89.7	61	* 79.3	67.1-91.4
H.S. or G.E.D.	441	87.0	83.1-90.8	441	88.5	84.9-92.2
Some Post-H.S.	347	91.0	87.4-94.7	347	90.4	86.6-94.2
College Graduate	528	97.0	95.4-98.5	527	97.5	95.8-99.1
Income						
Less than \$15,000	63	* 80.8	69.9-91.7	63	* 81.9	71.2-92.7
\$15,000-24,999	190	86.1	79.9-92.3	190	87.2	81.2-93.2
\$25,000-34,999	162	92.7	88.6-96.8	162	92.5	88.6-96.5
\$35,000-49,999	239	88.7	83.8-93.7	239	92.6	88.4-96.7
\$50,000-74,000	289	92.7	88.7-96.7	289	92.5	88.4-96.6
\$75,000+	343	93.8	90.9-96.8	342	94.6	91.8-97.4

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Table 6.4 No workplace smoking permitted by demographic characteristics: WVBRFSS, 2006\*\*

Characteristic		Me	en		Woı	nen		Tot	al	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	472	85.9	82.3-89.5	905	92.4	90.4-94.4	1,377	89.6	87.6-91.5	
Age										
18-24	22	*97.6	92.9-100	30	*92.0	82.9-100	52	94.5	89.1-99.9	
25-34	67	*82.6	72.3-92.9	151	92.6	88.1-97.1	218	88.1	82.8-93.5	
35-44	119	82.8	75.3-90.3	229	92.6	88.6-96.7	348	88.2	84.1-92.2	
45-54	153	85.6	79.1-92.1	267	90.8	86.9-94.7	420	88.6	85.0-92.1	
55-64	93	86.0	78.8-93.1	183	95.8	92.9-98.8	276	92.0	88.7-95.4	
65+	15	*96.5	89.7-100	40	*87.8	75.9-99.7	55	91.2	83.2-99.2	
Education										
Less than H.S.	30 *62.		42.5-82.8	31	*92.4	84.6-100	61	*75.0	62.0-88.0	
H.S. or G.E.D.	30 <b>*62</b> 146 <b>80</b>		72.9-87.4	295	88.1	83.6-92.7	441	84.6	80.5-88.7	
Some Post-H.S.	89	85.1	76.5-93.6	258	91.4	87.6-95.2	347	89.2	85.3-93.1	
College Graduate	206	94.8	91.4-98.2	321	97.3	95.4-99.3	527 <b>96.2</b>		94.3-98.1	
Income										
Less than \$15,000	8	*71.8	41.5-100	55	*83.2	71.5-94.8	63	*80.8	69.9-91.7	
\$15,000- 24,999	42 *74.6		59.6-89.5	148	89.6	83.8-95.4	190 <b>84.7</b>		78.4-91.1	
\$25,000- 34,999	51 <b>85.6</b>		76.2-95.0	111	93.4	88.9-98.0	162	90.0	85.3-94.8	
\$35,000- 49,999	80	*80.5	70.5-90.5	159	93.7	89.1-98.2	239	88.2	83.2-93.2	
\$50,000- 74,999	106	89.2	81.4-97.0	183	91.7	87.0-96.4	289	90.6	86.3-95.0	
\$75,000+	149	91.2	86.3-96.0	193	94.5	90.4-98.6	342	92.8	89.6-96.0	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

<sup>\*\*</sup>Among respondents who are either employed or self-employed AND who work indoors at their jobs most of the time.

<sup>\*\*</sup>Among respondents who are either employed or self-employed AND who work indoors at their jobs most of the time.

### No Smoking Allowed in the Home in 2006

**Definition** Stated that smoking was not allowed anywhere inside the home.

**Prevalence WV**: **65.3%** (95% CI: 63.4-67.2) in 2006.

**Gender** Men: 64.3% (95% CI: 61.3-67.2) in 2006.

Women: 66.3% (95% CI: 63.9-68.7) in 2006.

There were no significant differences in this risk factor between men and women.

Age A significantly higher prevalence of not allowing smoking in the home was

found among those 25-34 years old than among adults grouped into several older

age categories.

**Education** No-smoking policies were most common in the homes of persons with four or

more years of college education. At 82.9%, the prevalence for this group significantly surpassed the prevalence for any of the other lower education level

groups.

**Household Income** Rules forbidding smoking in the home increased with increasing incomes.

Adults with household incomes in the \$50,000 and above categories forbid smoking in their homes significantly more often than adults living in households

with incomes below \$35,000.

Table 6.4 No smoking allowed in the home by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Wor	men		Tot	al	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,474	64.3	61.3-67.2	2,271	66.3	63.9-68.7	3,745	65.3	63.4-67.2	
Age										
18-24	66	*67.9	55.0-80.8	78	*62.5	50.1-75.0	144	65.3	56.3-74.2	
25-34	146	75.3	67.9-82.8	261	72.3	66.5-78.1	407	73.8	69.1-78.5	
35-44	230	64.1	57.4-70.8	366	65.8	60.3-71.3	596	65.0	60.6-69.3	
45-54	325	57.7	51.8-63.5	425	65.0	60.1-69.9	750	61.4	57.6-65.2	
55-64	367	60.1	54.6-65.6	463	63.6	58.8-68.3	830	61.8	58.2-65.5	
65+	336	63.4	57.9-68.9	667	67.8	63.9-71.8	1,003	66.0	62.7-69.2	
Education										
Less than H.S.	251	48.1	40.7-55.6	358	52.2	46.2-58.2	609	50.1	45.3-54.9	
H.S. or G.E.D.	586	58.9	54.0-63.8	888	62.6	58.7-66.6	1,474	60.8	57.6-63.9	
Some Post-H.S.	280	68.5	62.1-74.9	536	65.7	60.3-71.0	816	66.9	62.7-71.0	
College Graduate	353	<b>82.1</b> 78.0-86.3		486	83.7	80.2-87.2	839	82.9	80.2-85.6	
Income		70.0 00.5								
Less than \$15,000	166 <b>49.</b> 1		39.8-58.4	412	55.3	49.3-61.2	578	53.1	48.1-58.2	
\$15,000- 24,999	264 57.0		49.9-64.0	457	60.3			58.8	54.4-63.3	
\$25,000- 34,999	213	65.2	58.2-72.3	277	62.1	55.8-68.5	490	63.8	59.0-68.6	
\$35,000- 49,999	234	61.5	54.1-68.9	286	71.1	65.2-77.0	520 66.0		61.2-70.9	
\$50,000- 74,999	222	72.9	66.4-79.4	271	74.5	68.3-80.6	493	73.7	69.2-78.2	
\$75,000+	246	81.6	76.7-86.5	259	85.6	81.0-90.1	505	83.3	79.9-86.7	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

### **CHAPTER 7: ASTHMA**

### Lifetime and Current Asthma among Adults in 2006

**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: 11.9%** (95% CI: 10.5-13.2) in 2006. **US: 12.7%** (95% CI: 12.5-13.0) in 2006.

West Virginia ranked 39<sup>th</sup> among 50 US States and DC in 2006.

Current Asthma

**WV: 8.6%** (95% CI: 7.4-9.7) in 2006. **US: 8.2%** (95% CI: 8.0-8.4) in 2006.

West Virginia ranked 22<sup>nd</sup> among 50 US States and DC in 2006.

**Time Trends** Between 2000 and 2006 the prevalence of lifetime asthma and the prevalence of

current asthma increased only slightly among West Virginia adults.

**Gender** Lifetime Asthma

**Men**: 9.5% (95% CI: 7.6-11.4) in 2006. **Women**: 14.1% (95% CI: 12.2-16.0) in 2006.

Women had a significantly higher prevalence of lifetime asthma than men in 2006.

Current Asthma

**Men**: 5.3% (95% CI: 3.9-6.6) in 2006. **Women**: 11.7% (95% CI: 9.9-13.5) in 2006.

In 2006, women were significantly more likely than men to have current asthma.

Current Asthma

**Age** The current asthma prevalence did not differ significantly by age.

Current Asthma

**Education** The prevalence of current asthma was significantly higher among adults without

a high school diploma.

Current Asthma

**Household Income** Current asthma was significantly more prevalent among adults with a household

income of less than \$15,000. In fact, the poorest adults were about four times

more likely to have asthma than the wealthiest adults.

WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 24.5 Reduce the prevalence of current asthma among adults aged 18 years and older to 7.7% or lower.

(Revised 2003) (Baseline: 8.5% in 2000; Current: 8.6% in 2006)

Table 7.1 Lifetime asthma by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Woı	men		To	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,491	9.5	7.6-11.4	2,287	14.1	12.2-16.0	3,778	11.9	10.5-13.2	
Age										
18-24	67	17.2	7.4-27.1	78	*17.6	6.9-28.3	145	17.4	10.1-24.7	
25-34	150	* 7.3	2.9-11.7	264	11.3	7.2-15.4	414	9.3	6.3-12.3	
35-44	232	6.4	3.2-9.6	366	14.0	10.0-18.0	598	10.2	7.6-12.8	
45-54	331	8.9	5.7-12.1	428	15.5	11.8-19.2	759	12.2	9.7-14.7	
55-64	369	10.2	6.6-13.7	464	14.2	10.7-17.6	833	12.2	9.7-14.7	
65+	338	9.2	6.0-12.4	674	13.0	10.3-15.8	1,012	11.4	9.3-13.5	
Education	256 13.5									
Less than H.S.	_		9.2-17.9	358	23.2	18.3-28.0	614	18.2	14.9-21.5	
H.S. or G.E.D.	256 <b>13.5</b> 594 <b>11.8</b>		8.4-15.2	895	12.7	10.3-15.1	1,489	12.3	10.2-14.4	
Some Post-H.S.	281	* 6.5	1.9-11.0	540	16.2	10.9-21.4	821	12.0	8.4-15.7	
College Graduate	356	5.4	2.9-7.8	491	8.0	5.5-10.5	847 <b>6.7</b>		4.9-8.4	
Income										
Less than \$15,000	168 <b>16.4</b>		10.6-22.2	412	19.5	14.8-24.2	580 <b>18.4</b>		14.7-22.1	
\$15,000- 24,999	267 13.9		8.3-19.6	462	17.8	13.3-22.2	729	16.1	12.5-19.6	
\$25,000- 34,999	214	* 9.6	3.8-15.5	278	10.0	6.4-13.7	492	9.8	6.3-13.4	
\$35,000- 49,999	237	* 8.8	3.3-14.4	285	10.6	5.9-15.2	522	9.6	6.0-13.3	
\$50,000- 74,999	225	6.6	2.9-10.4	272	12.7	8.0-17.5	497	9.6	6.6-12.6	
\$75,000+	247	6.0	2.7-9.3	261	5.4	2.6-8.1	508	5.7	3.5-7.9	

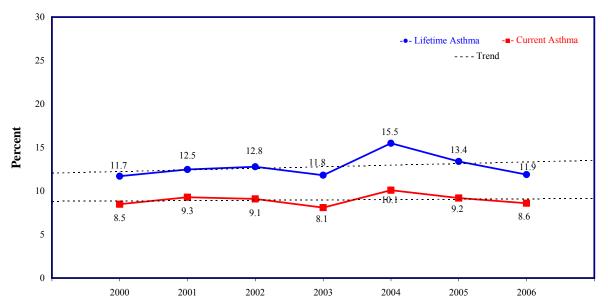
<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Table 7.2 Current asthma by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Wor	men		Tot	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,488	5.3	3.9-6.6	2,281	11.7	9.9-13.5	3,769	8.6	7.4-9.7	
Age										
18-24	67	* 4.9	0.0-11.0	78	*17.0	6.3-27.7	145	10.7	4.5-17.0	
25-34	150	* 4.4	1.2-7.6	264	8.0	4.5-11.6	414	6.2	3.8-8.6	
35-44	232	* 3.2	1.0-5.5	364	12.2	8.3-16.0	596	7.7	5.4-10.0	
45-54	330	6.0	3.3-8.7	428	12.0	8.7-15.2	758	9.0	6.9-11.1	
55-64	367	5.6	2.8-8.4	462	11.5	8.4-14.6	829	8.6	6.5-10.7	
65+	338	7.5	4.5-10.4	672	10.8	8.2-13.4	1,010	9.4	7.5-11.3	
Education										
Less than H.S.			6.2-13.8	357	20.8	16.2-25.5	612	15.3	12.2-18.3	
H.S. or G.E.D.	255 <b>10.0</b> 593 <b>5.7</b>		3.6-7.7	891	10.0	7.8-12.1	1,484	7.8	6.3-9.3	
Some Post-H.S.	280	3.3	0.0-7.0	540	13.9	8.7-19.0	820	9.3	5.9-12.8	
College Graduate	356	* 3.1	1.2-5.0	490	5.9	3.7-8.1	846 <b>4.5</b>		3.0-6.0	
Income										
Less than \$15,000	167	12.7	7.3-18.0	410	17.7	13.1-22.3	577 <b>15.9</b>		12.4-19.5	
\$15,000- 24,999	267 9.0		4.9-13.0	461	14.7	10.4-18.9	728	12.1	9.2-15.1	
\$25,000- 34,999	214	* 3.2	0.7-5.6	277	7.2	4.1-10.4	491	5.1	3.1-7.1	
\$35,000-49,999	237	* 5.0	0.2-9.8	285	8.3	3.9-12.6	522	6.5	3.3-9.8	
\$50,000- 74,999	224	* 1.7	0.1-3.3	271	8.5	4.4-12.5	495	5.0	2.8-7.1	
\$75,000+	247	3.2	1.1-5.3	261	4.4	1.9-6.9	508	3.7	2.1-5.3	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Figure 7.1 Lifetime and current asthma by year: WVBRFSS, 2000-2006

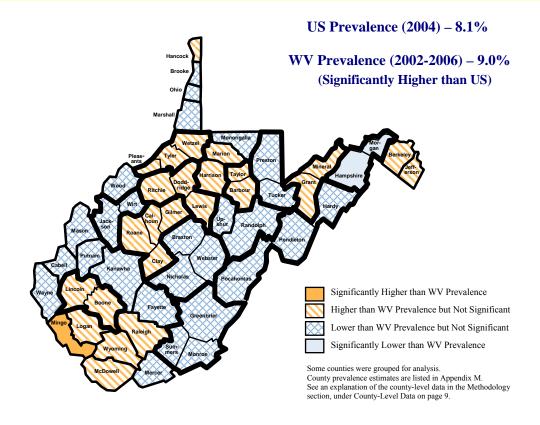


Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, January 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

Definition of 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?"

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

Figure 7.2 Current asthma by county: WVBRFSS, 2002-2006



### **CHAPTER 8: ALCOHOL CONSUMPTION**

### Binge Drinking in 2006 \*

**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: 11.1%** (95% CI: 9.7-12.6) in 2006.

**US: 15.0%** (95% CI: 14.7-15.3) in 2006.

West Virginia ranked 46<sup>th</sup> highest among 50 US States and DC in 2006.

**Time Trends** A change in the definition of binge drinking for the latest year of data, 2006, has

prevented preparation of a time trend analysis for this report. In 2005 and before, binge drinking was defined as the consumption of five or more alcoholic drinks on one occasion in the past month, regardless of gender. In 2006, the definition criteria changed to only four drinks on one occasion for women, and five drinks

on one occasion for men.

**Gender Men**: 16.0% (95% CI: 13.6-18.4) in 2006.

Women: 6.7% (95% CI: 5.1-8.2) in 2006.

Men had a significantly higher prevalence of binge drinking than women in

2006.

Age Younger adults had higher rates of binge drinking than those aged 55 and older.

The prevalence ranged from a high of 24% among the 18-24 age group, to lows

of only 2%-5% among those in the 55 and older age groups.

**Education** There was no significant relationship between binge drinking and educational

attainment.

Household Income There was no consistent relationship between binge drinking and household

income levels. The wealthiest income group (\$75,000 and above annually) had the highest 2006 prevalence at 14.7%, however, and this was significantly higher than the prevalence of binge drinking among those in the lowest income group

(less than \$15,000 annually in household income).

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 26.10 Reduce the rate of binge drinking reported among adults 18 and older (binge drinking defined as

five or more drinks on any one occasion in the past month) by 20%. (Baseline: 8.4% in 1997; 2006

data is not comparable, because it was collected using a different definition.)

<sup>\*</sup> Note: The definition of binge drinking changed in 2006 to males having five or more drinks on one occasion in the past month, and females having four or more drinks on one occasion in the past month. The previous definition was consumption of five or more drinks on at least one occasion in the past month, without regard to gender.

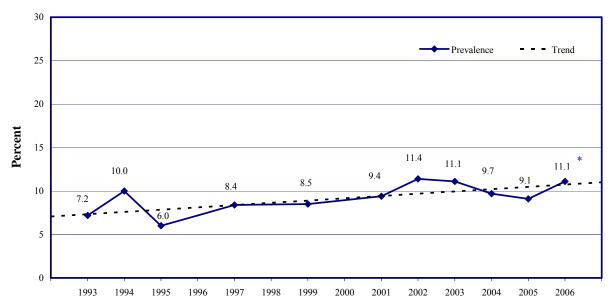
Table 8.1 Binge drinking by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Woı	men		To	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,455	16.0	13.6-18.4	2,280	6.7	5.1-8.2	3,735	11.1	9.7-12.6	
Age										
18-24	66	*28.7	17.5-40.0	77	*19.2	9.1-29.4	143	24.1	16.5-31.7	
25-34	149	22.5	15.2-29.8	262	9.9	6.2-13.6	411	16.3	12.1-20.5	
35-44	226	21.8	16.1-27.6	365	<b>7.</b> 8	4.8-10.8	591	14.7	11.4-17.9	
45-54	319	15.8	11.4-20.1	427	5.7	3.4-8.1	746	10.7	8.2-13.1	
55-64	360	6.6	4.0-9.2	465	* 2.9	1.2-4.6	825	4.7	3.1-6.2	
65+	331	3.5	1.6-5.5	671	* 0.9	0.2-1.5	1,002	2.0	1.1-2.9	
Education										
Less than H.S.	251 12.2		6.3-18.0	359	* 4.6	1.8-7.5	610	8.5	5.1-11.8	
H.S. or G.E.D.	251 <b>12.2</b> 574 <b>16.5</b>		12.6-20.4	893	5.3	3.4-7.3	1,467	10.8	8.6-13.0	
Some Post-H.S.	278	16.9	11.4-22.5	538	9.6	5.3-14.0	816	12.8	9.3-16.2	
College Graduate	348	17.2	12.5-21.8	487	7.0	4.2-9.7	835 <b>12.0</b>		9.3-14.7	
Income		17.2								
Less than \$15,000	166 * <b>9.8</b>		3.4-16.2	409	4.5	2.0-7.0	575 <b>6.4</b>		3.6-9.2	
\$15,000- 24,999	258 10.1		5.5-14.8	458	4.3	2.1-6.5	716	6.8	4.4-9.3	
\$25,000- 34,999	207	20.1	12.6-27.5	280	7.3	3.8-10.8	487	13.9	9.6-18.3	
\$35,000- 49,999	230	17.3	11.5-23.2	287	11.0	5.1-17.0	517 14.3		10.2-18.5	
\$50,000- 74,999	224	19.2	12.8-25.7	271	* 7.1	2.1-12.1	495	13.4	9.2-17.5	
\$75,000+	244	17.6	12.2-23.0	261	11.0	5.8-16.2	505	14.7	10.9-18.4	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion about estimates in the Methodology section. Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, February 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

Definition for males (change as of 2006): consumption of five or more alcoholic drinks on one or more occasions during the past one month. Definition for females (change as of 2006): consumption of four or more alcoholic drinks on one or more occasions during the past one month.

Figure 8.1 Binge drinking by year: WVBRFSS, 1993-2006 \*



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, February 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

<sup>\*</sup> Definition Change in 2006: Males having five or more drinks on one occasion, and females having four or more drinks on one occasion in the past one month. Definition in earlier years: Consumption of five or more alcoholic drinks on one or more occasions in the past one month. Note: Data are not available for the years 1996, 1998, and 2000.

### Heavy Drinking in 2006 \*\*

**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: 3.2%** (95% CI: 2.4-4.0) in 2006.

**US:** 5.0% (95% CI: 4.8-5.1) in 2006.

West Virginia ranked 49<sup>th</sup> highest among 50 US States and DC in 2006.

**Time Trends** From 1993 through 2006, the prevalence of heavy drinking among West Virginia

adults has ranged from a low of 1.8% in 1995 to a high of 4.5% in 2002.

**Gender Men:** 4.8% (95% CI: 3.3-6.2) in 2006.

**Women:** 1.7% (95% 1.0-2.4) in 2006.

Men had higher risks than women in 2006, and this difference was significant.

Age Heavy drinking was most prevalent among the youngest adults, and least

prevalent among the oldest.

**Education** There was no significant relationship between heavy drinking and educational

attainment.

**Household Income** No association was found between heavy drinking and household income.

### WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 26.9 Reduce the rate of heavy drinking reported among adults 18 and older by 20%. (Baseline: 2.2% in

1997 using a new definition; Current: 3.2% in 2006)

<sup>\*\*</sup> 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 data published prior to 2003.

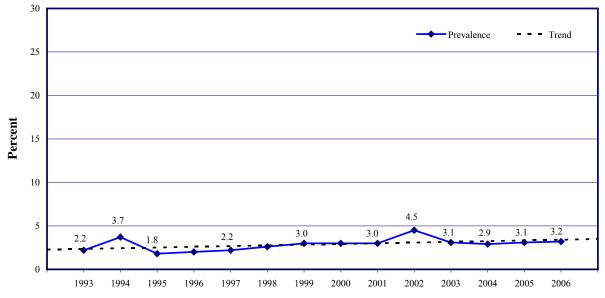
Table 8.2 Heavier drinking by demographic characteristics: WVBRFSS, 2006

Characteristic		Me	en		Wo	men		To	tal	
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	1,454	4.8	3.3-6.2	2,276	1.7	1.0-2.4	3,730	3.2	2.4-4.0	
Age										
18-24	65	*11.6	3.8-19.4	76	* 2.9	0.0-7.1	141	* 7.4	2.9-11.9	
25-34	149	* 5.5	1.7-9.4	260	* 1.4	0.1-2.6	409	* 3.5	1.4-5.5	
35-44	226	6.2	2.8-9.6	365	* 3.4	1.1-5.8	591	4.8	2.8-6.9	
45-54	316	* 3.4	1.3-5.6	426	* 1.7	0.5-2.9	742	2.6	1.3-3.8	
55-64	361	* 2.2	0.5-3.8	465	* 0.9	0.1-1.8	826	* 1.5	0.6-2.4	
65+	333	* 1.5	0.4-2.7	671	* 0.5	0.0-1.0	1,004	* 0.9	0.4-1.5	
Education	333 * 1.5									
Less than H.S.	250 * 4.8		1.3-8.4	359	* 0.9	0.0-2.0	609	* 2.9	1.0-4.8	
H.S. or G.E.D.	250 <b>* 4.8</b> 573 <b>5.5</b>		2.9-8.1	890	* 1.5	0.5-2.5	1,463	3.5	2.1-4.8	
Some Post-H.S.	279	* 4.8	1.8-7.7	538	* 2.3	0.3-4.2	817	3.3	1.6-5.0	
College Graduate	348	* 3.5	1.3-5.8	486	* 1.9	0.7-3.0	834	2.7	1.4-3.9	
Income	348 * 3.5									
Less than \$15,000	165 * 4.6		0.0-9.8	408	* 0.5	0.0-1.1	573	* 2.0	0.1-3.8	
\$15,000- 24,999			0.6-3.7	458	* 1.6	0.3-2.9	719	1.9	0.9-2.9	
\$25,000- 34,999			2.2-10.3	279	* 1.7	0.1-3.2	487	4.1	1.8-6.3	
\$35,000- 49,999	231	7.4	3.4-11.3	286	* 2.7	0.0-5.7	517			
\$50,000- 74,999	223	* 3.8	0.6-7.0	271	* 1.8	0.2-3.3	494	* <b>2.8</b> 1.0-4.6		
\$75,000+	241	* 3.0	0.6-5.4	261	* 3.3	0.3-6.3	502	* 3.1	1.2-5.0	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion about estimates in the Methodology section. Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, February 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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.

Figure 8.2 Heavier drinking by year: WVBRFSS, 1993-2006



Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, February 2008. Population: Non-institutionalized adults age 18 and older residing in West Virginia.

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. Notes: Data are not available for the years 1996, 1998, and 2000. This graph maintains a 30 percentage point Y axis range to facilitate comparability among a group of graphs presented together.

### **CHAPTER 9: CARDIOVASCULAR DISEASE**

### Heart Attack, Angina, and Stroke in 2006

### **Definition**

In 2006, 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 you're '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?" (In 2004 and earlier years, the questions were similar but not identical.)

### **Prevalence**

### **Heart Attack**

**WV**: **7.5%** (95% CI: 6.8-8.3) in 2006. **US**: **4.4%** (95% CI: 4.3-4.6) in 2006.

West Virginia ranked 1<sup>st</sup> highest among 50 US States and DC in 2006.

### **Angina**

**WV**: **8.3%** (95% CI: 7.4-9.2) in 2006. **US**: **4.6%** (95% CI: 4.5-4.7) in 2006.

West Virginia ranked 1<sup>st</sup> highest among 50 US States and DC in 2006.

### **Stroke**

**WV**: **4.2%** (95% CI: 3.5-4.8) in 2006. **US**: **2.7%** (95% CI: 2.6-2.8) in 2006.

West Virginia ranked 2<sup>nd</sup> highest among 50 US States and DC in 2006.

### Gender

### Heart attack differences by gender

**Men**: 9.2% (95% CI: 7.8-10.6) in 2006. **Women**: 5.9% (95% CI: 4.9-6.9) in 2006.

Men had a significantly higher incidence of heart attack than women.

### Angina differences by gender

**Men**: 8.8% (95% CI: 7.4-10.2) in 2006. **Women**: 7.9% (95% CI: 6.8-9.0) in 2006.

There were no significant differences in angina rates between men and women.

### Stroke differences by gender

**Men**: 3.9% (95% CI: 2.9-4.8) in 2006. **Women**: 4.5% (95% CI: 3.6-5.4) in 2006.

Women experienced stroke slightly more often than men.

## Age, Education, & Household Income

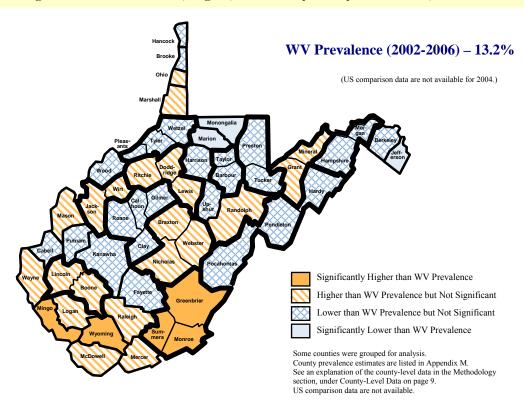
Those aged 65 and older experienced heart attack, angina, and stroke significantly more often than those in younger age groups. Adults with less than a high school education carried a significantly higher risk of heart attack, angina, and stroke than those with more education. Heart attack and angina or other coronary heart disease were significantly more common among those in the less than \$35,000 annually income groups than among those with household incomes of \$35,000 or more per year.

Table 9.1 Heart attack, angina, or stroke by demographic characteristics: WVBRFSS, 2006

Characteristic		cardial	tack or Infarction			eart Disease		Stro		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI	
TOTAL	3,782	7.5	6.6-8.3	3,768	8.3	7.4-9.2	3,784	4.2	3.5-4.8	
Sex										
Males	1,489	9.2	7.8-10.6	1,485	8.8	7.4-10.2	1,491	3.9	2.9-4.8	
Females	2,293	5.9	4.9-6.9	2,283	7.9	6.8-9.0	2,293	4.5	3.6-5.4	
Age										
18-44	na	na	na	na	na	na	na	na	na	
45-54	757	5.6	3.9-7.3	757	6.3	4.5-8.0	760	3.1	1.9-4.3	
55-64	832	12.3	9.8-14.8	830	15.0	12.4-17.6	831	5.2	3.6-6.8	
65+	1,016	19.2	16.5-21.9	1,006	20.7	17.9-23.5	1,016	12.0	9.7-14.3	
Education										
Less than H.S.	615	17.7	14.6-20.7	607	15.6	12.7-18.5	616	10.4	7.9-12.9	
H.S. or G.E.D.	1,488 <b>6.8</b> 5.5		5.5-8.2	1,485	8.4	7.0-9.8	1,490	4.0	3.0-5.1	
Some Post-H.S.	1,488 <b>6.8</b> 5.5-8.2		3.9-6.9	821	6.6	4.9-8.2	821	821 <b>2.8</b> 1.7-3		
College Graduate	850	3.3	2.0-4.6	848 <b>4.9</b> 3.4-6.4		850 <b>1.1</b> 0.5-1.8				
Income										
Less than \$15,000	578	13.8	10.9-16.8	578	15.6	12.5-18.7	580	10.3	7.7-13.0	
\$15,000- 24,999			724 <b>12.0</b>		9.5-14.5	728	6.3	4.5-8.1		
\$25,000- 34,999	494	9.2	6.5-11.8	493	10.6	7.8-13.4	495	3.9	2.1-5.7	
\$35,000- 49,999	524	3.9	2.2-5.7	524	5.4	3.4-7.4	524	* 1.3	0.4-2.3	
\$50,000- 74,999	498	2.7	1.2-4.2	497	5.1	3.2-6.9	497	* 1.9	0.7-3.0	
\$75,000+	509	2.5	1.3-3.8	509	3.6	2.1-5.2	509	* 0.9	0.2-1.7	

<sup>\*</sup> Use caution when interpreting and reporting this specific estimate. See the detailed discussion of estimates in the Methodology section.

Figure 9.1 Adults diagnosed with heart attack, angina, or stroke by county: WVBRFSS, 2002-2006



# Appendix A

# Behavioral Risk Factor Prevalences by Year West Virginia Behavioral Risk Factor Surveys 1997-2006

	1997	76	1998	86	1999	60	2000	0	2001	11	2002	12	2003	13	2004	7(	2005	95	2006	9(
Behavioral	(52 Partic.)	ırtic.)	(52 Partic.)	ırtic.)	(52 Partic.)	rtic.)	(52 Partic.)	·tic.)	(54 Partic.)	rtic.)	(54 Partic.)	rtic.)	(54 Partic.)	rtic.)	(52 Partic.)	rtic.)	(53 Pa	(53 Partic.)	(51 Participant	icipant
Risk																			States & DC)	& DC)
Factor	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Hypertension <sup>a</sup>	28.3	С	l	ŀ	31.0	8	ŀ	1	32.5	1	33.1	1	33.6	1	I	;	31.4	2	1	1
Obesity <sup>b</sup>	20.6	4	23.9	1	24.6	1	23.2	ĸ	25.1	2	27.6	1	27.7	3	27.6	ю	30.6	ю	31.0	2
Physical Inactivty	I	1	43.7	ю	ŀ	ŀ	33.6	9	31.7	7	28.4	10	28.0	111	24.5	18	28.5	11	25.6	12
Current Smoking	27.4	3	27.9	ю	27.1	9	26.1	9	28.2	4	28.4	4	27.3	8	26.9	2	26.7	4	25.7	2
Smokeless Tobacco <sup>c</sup>	8.7	1	8.4	1	8.6	1	8.8	-	8.2	1	8.4	2	7.7	1	8.1	2	:	ŀ	ŀ	ŀ
Heavy Drinking <sup>d</sup>	2.2	48	1	ŀ	3.0	46	ŀ	1	3.0	52	4.5	45	3.1	49	2.9	50	3.1	49	1	ı
Binge Drinking	8.4	49	ŀ	ŀ	8.5	50	ŀ	1	9.4	52	11.4	49	11.1	49	9.7	84	9.1	51	11.1	46
Seatbelt Nonuse <sup>e</sup>	29.3	30	29.8	4	29.7	-	-	-	-	:	25.6	18			-					

Source: Centers for Disease Control & Prevention - 1997-2006 Beahvioral Risk Factor Data; West Virginia Health Statistics Center, 2008.

NOTE: Figures in Appendix A may not agree with 2002 and earlier year BRFSS reports of 1997 and 1998 data. Rates have been re-calculated to exclude unknown responses.

<sup>--</sup> Prevalence / rank not available

<sup>&</sup>lt;sup>a</sup> Hypertension: Asked in 13 states/territories in 2002.

b Obesity: Defined as a Body Mass Index of 30.0 or more (BMI=weight in kg/height in meters squared). For the year 1997, publications before 2003 defined obesity as at least 20% more than the ideal weight for height (as calculated from the 1959 Metropolitan Life Insurance height and weight tables).

<sup>&</sup>lt;sup>c</sup> Smokeless Tobacco Use: Asked in 17 states/territories in 1997; 13-1998; 19-1999; 18-2000; 15-2001; 15-2002; 12-2003; 14-2004.

<sup>&</sup>lt;sup>d</sup> Heavy Drinking: 51 states in 1997 and 1999. Defined as consumption of more than two drinks per day for men and more than one drink per day for women. For the years 1997 and 1999, publications before 2003 defined heavy drinking as consumption of 60 or more drinks during the past month regardless of gender.

Seatbelt Nonuse: Defined as using a seatbelt almost always, sometimes, seldom, or never; 8 states/territories in 1998.

Appendix B

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 1997

State	No H Insur Ages	ance,	Dial Awar		Hyper Awar		Obe	sity <sup>b</sup>		rent king		keless co Use		nge iking		avy king <sup>c</sup>		ing & ving		rbelt nuse
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	17.3	16	7.0	2	28.9	2	18.2	15	24.6	14	5.4	5	11.4	37	4.0	19	1.5	36	33.7	21
Alaska	22.8	4	3.3	48	22.6	31	19.7	5	26.5	8	5.6	4	16.5	10	3.2	37	2.2	23	34.1	20
Arizona	17.9	13	3.1	49	16.3	52	12.4	51	21.1	42	1.4	17	8.8	46	3.7	26	1.4	39	19.5	45
Arkansas	21.6	9	5.1	17	26.3	8	18.1	16	28.4	3			9.2	43	2.8	43	1.6	33	34.3	19
California	22.7	5	5.6	12	21.2	42	16.0	32	18.4	50			15.2	19			2.5	18	12.7	52
Colorado	14.0	28	3.9	43	20.4	49	11.8	52	22.5	33			15.3	18	3.3	33	2.5	18	28.5	31
Connecticut	10.8	49	5.1	17	20.6	47	14.7	42	21.6	40			15.5	16	3.8	21	2.1	24	30.7	26
Delaware	13.0	35	6.4	4	25.5	10	18.8	12	26.6	7			11.9	36	3.6	29	2.0	25	30.1	28
D.C.	13.2	33	4.6	33	19.4	51	14.5	45	18.8	48			12.1	35	4.7	11	2.5	18	21.9	44
Florida	22.6	6	5.7	11	26.0	9	16.1	31	23.6	23			13.1	32	5.7	5	1.9	26	23.8	42
Georgia	13.7	31	4.1	38	21.4	40	14.4	46	22.4	35	4.0	8	9.4	41	2.8	43	1.0	43	24.6	39
Hawaii	7.4	52	5.0	20	23.9	18	13.6	50	18.7	49			17.1	9	5.8	4	2.4	21	12.8	51
Huwan	7	32	5.0	20	23.7	10	15.0	30	10.7	42			17.1		5.0	_	2.4		12.0	31
Idaho	20.1	11	4.0	41	24.1	16	16.3	29	19.9	47			14.9	22	3.8	21	1.3	40	40.4	10
Illinois	13.5	32	7.0	2	24.3	15	17.1	21	23.2	26			16.3	11	4.4	15	2.8	14	31.8	25
Indiana	14.6	25	5.2	15	25.2	12	21.2	3	26.4	9	3.3	12	12.6	34	3.6	29	1.9	26	38.1	13
Iowa	12.0	41	4.6	33	23.4	21	19.4	7	23.1	28			17.9	6	4.4	15	3.8	3	32.8	23
Vancas	11.5	45	3.0	51	20.9	44	14.7	42	22.6	32	5.0	7	13.3	31	2.4	32	2.7	15	46.1	4
Kansas Kentucky	16.8	45 19	5.3	14	20.9	6	14.7 21.8	2	30.7	32 1	6.2	3	9.4	41	3.4 2.4	32 47	0.6	15 52	46.1 34.5	18
Louisiana	24.4	3	5.5	13	25.1	13	19.6	6	24.5	16	3.7	11	15.2	19	5.1	9	3.2	9	25.6	37
Maine	14.3	27	4.9	22	22.8	28	16.2	30	22.7	31	3.7	11	13.2	30	3.7	26	0.9	46	30.4	27
Manie	14.3	21	4.9	22	22.0	20	10.2	30	22.7	31			13.6	30	3.7	20	0.9	40	30.4	21
Maryland	11.7	44	5.9	7	23.8	19	17.5	19	20.4	46			6.3	52	2.2	48	0.9	46	23.8	42
Massachusetts	11.0	48	4.7	28	19.8	50	14.8	41	20.5	44			17.9	6	6.0	3	1.8	29	37.0	15
Michigan	11.8	42	5.8	10	23.3	22	19.3	9	26.0	10			18.9	4	5.1	9	3.5	8	27.7	33
Minnesota	9.6	50	3.9	43	21.2	42	16.5	27	21.8	39			15.6	15	3.8	21	3.8	3	40.2	11
	10.2	10	6.1		24.4	1	22.0		22.1	20			0.5	40	2.0	40	1.0	41	12.1	_
Mississippi	18.3	12	6.1	6	34.4	1	22.0	1	23.1	28			9.5	40	3.0	40	1.2	41	43.4	5
Missouri Montana	15.0 17.9	24 13	4.8 3.1	26 49	27.3 22.9	5 27	19.1	10 44	28.6 20.5	2 44	5.3	6	15.0 14.0	21 29	3.1	39 45	3.0 2.6	12	38.1 42.4	13 7
Nebraska	9.5	51	4.2	36	22.9	35	14.6 17.0	22	20.5	37	5.5	0	16.3	11	2.6 3.3	33	3.8	16 3	42.4	8
Nebraska	9.3	31	4.2	30	22.4	33	17.0	22	22.1	31			10.3	11	3.3	33	3.0	3	42.2	0
Nevada	16.7	20	4.0	41	24.1	16	14.1	48	28.0	4			19.2	3	6.1	2	3.1	11	26.2	35
New Hampshire	12.3	40	3.9	43	22.6	31	14.2	47	24.7	13			16.1	13	3.8	21	1.9	26	41.6	9
New Jersey	14.0	28	5.2	15	23.6	20	16.0	32	21.4	41			13.1	32	2.9	41	1.5	36	27.6	34
New Mexico	25.7	2	4.9	22	21.3	41	14.9	40	22.1	37			14.6	24	4.7	11	1.7	30	16.5	48
N VI-	16.9	10	4.8	26	22.7	30	16.0	32	23.1	20			9.2	43	2.5	21	0.0	16	25.5	20
New York North Carolina	17.2	18 17	5.0	26 20	23.3	22	16.0	32 14	25.8	28 11			9.2		3.5	31 33	0.8	46	25.5	38 50
North Dakota	14.4	26	3.5	47	25.5	10	18.3 17.0	22	22.3	36			18.4	45 5	3.3	37	1.1 3.7	42	15.2 59.6	1
Ohio	12.7	39	4.7	28	22.0	37	17.0	17	25.1	12	2.4	16	8.7	48	2.6	45	1.0	43	30.0	29
Ollo	12.7	39	4.7	26	22.0	31	17.7	17	23.1	12	2.4	10	0.7	46	2.0	43	1.0	43	30.0	23
Oklahoma	20.9	10	5.9	7	21.7	38	15.1	38	24.6	14	3.8	9	8.8	46	2.9	41	1.5	36	36.9	16
Oregon	15.2	23	4.7	28	22.8	28	19.4	7	20.7	43			14.3	28	4.6	13	1.6	33	16.0	49
Pennsylvania	11.5	45	5.1	17	21.7	38	17.5	19	24.2	20	3.8	9	14.6	24	3.7	26	1.7	30	32.5	24
Puerto Rico	11.8	42	10.5	1	20.9	44	19.0	11	14.4	51			10.9	38	4.0	19	3.2	9	24.5	40
Rhode Island	13.1	34	4.9	22	22.5	33	13.8	49	24.3	18			14.9	22	5.4	8	1.6	33	43.1	6
South Carolina	17.6	34 15	4.9	22	26.8	33 7	15.8	25	23.4	24	2.8	14	9.7	39	3.8	21	0.9	33 46	19.5	45
South Carolina South Dakota	17.6	21	3.8	46	20.6	47	17.0	25	24.3	18	2.8	14	20.9	2	4.3	18	3.7	6	57.9	2
Tennessee	13.9	30	3.8 4.4	35	27.8	47	17.0	17	26.9	6			7.2	51	2.0	50	1.0	43	33.5	22
1 CHIICOSCC	13.9	50	+.+	دد	21.0	+	1/./	1/	20.9	U			1.2	J1	2.0	50	1.0	+3	د.دد	
Texas	28.2	1	5.9	7	23.1	25	18.7	13	22.5	33			17.4	8	5.5	6	4.0	2	18.6	47
Utah	12.8	37	4.1	38	22.5	33	15.2	36	13.8	52			7.7	50	1.9	51	0.8	50	35.0	17
Vermont	16.5	21	4.7	28	20.9	44	15.9	35	23.3	25			16.1	13	5.5	6	3.0	12	26.2	35
Virginia	12.8	37	4.2	36	24.5	14	16.4	28	24.4	17	3.0	13	14.5	26	4.4	15	2.4	21	28.3	32
Washir	12.0	25	A 1	20	22.2	24	15.0	26	22.0	22	2.0	1.4	14.5	26	4.5	1.4	1.7	20	24.1	41
Washington	13.0	35	4.1	38	23.2	24	15.2	36	23.8	22	2.8	14	14.5	26	4.5	14	1.7	30	24.1	41
West Virginia	22.4	7	6.3	5	28.3	3	20.6	4	27.4	5	8.7	1	8.4	49	2.2	48	0.8	50	29.3	30
Wisconsin	11.2	46 7	4.7	27	23.1	25	16.6	26 39	23.2	26	7.	2	23.3	1	6.2	1	5.2	1	38.7	12
Wyoming	22.4	/	3.0	51	22.1	36	15.0	39	24.0	21	7.6	2	15.4	17	3.3	33	2.6	16	49.8	3
1	16.9		5.2	ı	23.2		16.9		22.9	l	N/A	ı	13.4	ı	4.0	I	2.1	ı	26.7	1

Source: Centers for Disease Control & Prevention - 1997 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

NOTE: Figures in Appendix B may not agree with 1997 data in 2002 and earlier year BRFSS reports. Rates have been re-calculated to exclude unknown responses.

 $a.\ 52\ states/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

b. Obesity has been redefined to match the current definition: a BMI of 30 or higher.

c. Heavy drinking has been redefined to match the 2001 definition: more than two drinks per day for men and more than one drink per day for women.

Appendix C

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 1998

State	Fair o	r Poor alth		ealth ance, 18-64	Dial Awar		Obe	sity <sup>b</sup>		eisure rcise	Per	Than 5 Day s/Veg		rent oking		co Use	No Fla Past 1 Ages		Pneun	er had novax, s 65+
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
41.1	21.2		10.5	10	7.0	_	21.2	_	20.7	22	76.1	20	24.6	1.4						
Alabama	21.3	4	19.5	12 7	7.0	5	21.3	5	29.7	22	76.1	28	24.6	14	- A					
Alaska	11.0	46	21.8	22	3.0	51 52	21.4	4	23.5	41	76.8	23	26.1	7	5.4	4				
Arizona Arkansas	10.3 20.4	50 6	15.8 19.1	14	2.8 6.7	7	13.1 19.8	52 15	51.3 35.9	2 8	90.9 72.1	45	21.8 25.9	36 11						
Arkansas	20.4	O	19.1	14	0.7	,	19.6	13	33.9	0	72.1	43	23.9	11						
California	14.6	18	21.2	9	5.5	24	17.3	33	25.5	34	72.5	43	19.2	48						
Colorado	11.6	43	17.3	17	4.6	34	14.4	49	21.3	45	74.0	36	22.8	27						
Connecticut	11.7	41	10.6	45	4.5	35	15.5	42	27.2	28	72.0	47	20.9	43						
Delaware	12.8	26	9.7	51	4.4	37	17.2	34	35.4	10	73.3	40	24.5	16	1.1	13				
D.C.	12.4	30	13.0	33	7.1	4	20.2	11	38.5	6	82.3	7	21.6	38						
Florida	15.5	13	22.4	5	6.3	10	18.0	30	31.1	18	75.1	30	22.0	34						
Georgia	15.9	12	16.9	19	5.9	16	19.2	21	29.6	23	79.3	14	23.6	21			36.9	4	49.6	8
Hawaii	12.3	32	7.0	52	5.6	21	15.5	42	18.0	50	72.5	43	19.5	47			30.7	_	42.0	0
Hawan	12.3	32	7.0	32	3.0	21	13.3	72	10.0	30	12.5	43	17.5	77						
Idaho	12.2	35	18.3	16	4.3	42	16.4	36	20.4	47	76.2	26	20.3	45	3.6	7				l
Illinois	12.5	28	13.0	33	6.2	12	18.5	25	27.1	29	77.3	21	23.1	25			35.3	6	45.3	11
Indiana	13.3	25	15.9	21	6.0	13	19.9	14	27.1	29	76.5	24	26.0	9	2.6	12	33.7	8	53.2	4
Iowa	11.2	44	10.7	44	5.2	29	19.8	15	26.7	31	81.4	9	23.4	22						
Kansas	12.0	38	13.0	33	4.0	44	17.7	31	38.3	7	76.5	24	21.1	42						1
Kentucky	21.9	3	17.3	17	5.6	21	20.4	10	42.6	5	84.3	4	30.8	1						
Louisiana	16.1	10	25.9	2	6.4	8	21.8	3	32.2	17	82.7	6	25.5	12			40.3	1	60.4	1
Maine	12.5	28	15.7	25	3.6	48	17.4	32	27.7	26	73.6	39	22.4	31			40.3	•	00.4	1
TVIALITO	12.0	20	15.7	20	5.0	.0	17	52	27.7		75.0			31						
Maryland	13.9	20	15.7	25	5.4	26	20.5	8	20.3	48	69.9	50	22.4	31						
Massachusetts	10.9	47	10.5	46	3.9	45	14.3	50	25.4	36	69.0	51	20.9	43						
Michigan	14.5	19	11.9	41	7.0	5	21.2	6	21.4	44	72.6	42	27.4	4						
Minnesota	10.4	49	9.9	49	4.7	33	16.2	38	25.5	34	68.1	52	18.0	50			36.4	5	53.9	3
Mississippi	21.0	5	22.5	4	7.6	3	22.8	2	33.8	11	84.4	3	24.1	17						
Missouri	15.2	14	15.8	22	5.7	19	20.5	8	27.9	24	80.0	11	26.4	6						
Montana	12.0	38	21.3	8	3.6	48	15.0	47	25.2	37	76.2	26	21.4	39	6.8	3	27.1	13	44.1	12
Nebraska	12.3	32	9.8	50	5.2	29	18.3	26	26.1	32	82.3	7	22.0	34						
Nevada	12.4	30	19.2	13	4.4	37	14.0	51	24.1	40	77.9	19	30.3	2						
New Hampshire	9.9	52	13.7	32	3.9	45	15.6	41	24.8	38	72.1	45	23.3	24						_ ا
New Jersey	11.8	40	11.8	42	5.4	26	15.5	42	32.6	16	73.9	37	19.1	49			33.3	9	52.8	5
New Mexico	15.0	17	25.7	3	5.0	31	15.2	45	23.0	43	79.3	14	22.5	30						
New York	13.8	21	16.6	20	6.0	13	16.3	37	31.0	19	74.5	33	24.1	17						
North Carolina	16.6	9	15.2	27	6.4	8	19.4	18	27.7	26	78.6	17	24.6	14						
North Dakota	13.7	22	12.7	38	4.2	43	19.2	21	33.1	14	77.2	22	20.0	46	4.0	5				
Ohio	16.1	10	10.4	47	5.8	18	20.0	13	29.8	21	84.0	5	26.0	7	3.5	8	31.0	10	51.4	6
Oklahoma	12.6	27	22.3	_	7.8	2	19.5	17	42.9	4	79.7	12	23.9	19	20	_				İ
Oklahoma Oregon	12.6	24	15.8	6 22	7.8 5.3	28	19.5	26	42.9 18.9	49	75.1	13 30	23.9	41	3.8	6				l
Oregon Pennsylvania	15.1	24 16	15.8	36	5.3	28	18.3	18	32.7	15	75.1	30	23.8	20						l
Puerto Rico	32.4	1	12.6	39	9.6	1	19.3	20	57.4	1	91.9	1	15.3	51						
I dello Rico	32.4	1	12.0	37	7.0	1	17.5	20	37.4	1	71.7	1	13.3	31						
Rhode Island	13.5	23	11.7	43	6.0	13	16.8	35	29.9	20	75.4	29	22.6	29						l
South Carolina	15.2	14	18.7	15	5.7	19	20.6	7	33.7	12	78.2	18	24.7	13	3.1	9	37.5	2	49.3	9
South Dakota	11.7	41	15.2	27	3.1	50	15.8	40	33.3	13	80.0	11	27.2	5						1
Tennessee	18.2	8	14.8	29	5.9	16	19.2	21	35.8	9	70.3	49	26.1	9			30.4	11	48.9	10
Texas	18.6	7	27.5	1	5.5	24	20.2	11	27.9	24	77.5	20	21.9	36			35.3	6	50.1	7
Utah	10.8	48	13.8	30	4.4	37	15.9	39	17.1	52	73.8	38	14.2	52			55.5		50.1	,
Vermont	10.0	51	12.4	40	4.4	37	14.8	48	26.0	33	70.8	48	22.3	33						1
Virginia	12.3	32	13.8	30	4.5	35	18.7	24	24.8	38	73.0	41	22.9	26	3.0	10				1
_																				1
Washington	11.1	45	12.8	37	4.9	32	18.1	29	17.6	51	74.2	35	21.4	39	3.0	10				1
West Virginia	23.9	2	20.6	10	6.3	10	23.9	1	43.7	3	81.3	10	27.9	3	8.4	1	37.1	3	54.9	2
Wisconsin	12.1	36	10.0	48	4.4	37	18.3	26	23.4	42	74.3	34	23.4	22						
Wyoming	12.1	36	20.2	11	3.7	47	15.1	46	21.0	46	78.8	16	22.8	27	6.9	2	28.6	12	44.1	12
US Total	14.8		16.8		5.6		18.4		29.1		76.1		22.8		N/A		N/A		N/A	1
								<u> </u>						<u> </u>						

Source: Centers for Disease Control & Prevention - 1998 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

NOTE: Figures in Appendix C may not agree with 1998 data in 2002 and earlier year BRFSS reports. Rates have been re-calculated to exclude unknown responses.

 $a.\ 52\ states/territories\ conducted\ the\ survey.\ States/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

b. Obesity has been redefined to match the current definition: a BMI of  $30\ \mathrm{or}$  higher.

Appendix D

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>
United States, 1999

State		r Poor alth		lealth rance, 18-64	Diat Awar		Hypert Awar		Obe (BMI			rent oking		keless co Use		nge nking		avy king <sup>b</sup>		king & ving
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	18.4	8	18.0	17	7.4	3	31.2	2	22.4	5	23.5	19			11.7	43	4.0	35	1.9	36
Alaska	10.7	47	24.8	4	3.5	52	21.3	46	20.4	20	27.3	4	5.4	5	18.9	8	5.1	18	2.1	32
Arizona	8.4	52	16.7	20	4.3	45	14.2	52	12.3	52	20.1	46	0.8	18	8.8	49	7.7	2	1.8	38
Arkansas	19.7	6	19.8	14	6.6	7	28.4	6	22.7	4	27.2	5			10.3	46	3.3	44	1.5	44
California	15.8	13	22.2	6	6.1	15	23.0	33	18.7	31	18.7	49			15.5	24			2.3	29
Colorado	11.5	43	16.3	21	3.8	51	22.2	39	14.9	49	22.5	27	3.8	10	17.2	17	5.7	11	3.6	10
Connecticut	11.6	41	12.3	41	4.3	45	20.4	51	15.1	48	22.8	26	3.0	10	14.0	31	4.5	27	2.9	17
Delaware	12.4	34	11.3	45	6.0	21	25.5	17	17.5	38	25.5	9			18.9	8	5.5	14	3.2	13
D.C.	12.0	27	150	2.4			24.7	21	10.5	22	20.5	4.1			12.0	24		24		45
D.C. Florida	13.0	27 15	15.2 20.4	24 9	6.5 6.9	9	24.7	21 7	18.5	33 32	20.6 20.6	41 41			13.0 12.9	34 35	4.1	34	1.4	47 34
	15.3 15.0	16	15.6	23	5.6	5 27	27.8 26.3	12	18.6 21.1	32 14	23.8	16			12.9	37	5.1 3.9	18 36	2.0	34 44
Georgia Hawaii	14.3	18	10.3	49	5.2	35	20.3	37	15.7	46	18.5	50			14.0	31	5.6	13	2.3	29
Hawan	14.5	10	10.5	77	3.2	33	22.1	31	13.7	40	10.5	30			14.0	31	3.0	13	2.3	2)
Idaho	12.9	28	20.0	12	4.8	41	23.0	33	20.0	23	21.5	37			14.7	29	4.3	31	1.8	38
Illinois	14.7	17	13.6	32	6.4	10	26.7	10	20.9	17	24.2	14			19.7	4	6.1	8	4.4	3
Indiana	12.8	31	15.1	25	6.6	7	25.7	16	19.9	24	27.0	8			19.1	6	7.1	3	3.2	13
Iowa	12.1	37	10.9	48	5.2	35	24.2	24	21.5	11	23.5	19			18.3	10	5.9	9	3.9	7
Kansas	12.9	28	12.5	39	5.4	29	21.4	45	18.9	30	21.0	40			11.7	43	3.7	39	2.8	18
Kentucky	21.6	3	17.3	19	6.4	10	27.5	8	21.7	8	29.7	2			9.8	48	2.8	48	1.6	42
Louisiana	16.9	11	25.8	2	6.1	15	26.0	15	22.3	6	23.5	19	4.1	8	15.0	25	4.8	24	3.6	10
Maine	12.9	28	16.1	22	5.4	29	26.6	11	19.4	28	23.3	22			14.8	28	4.7	25	1.1	51
Maryland	14.2	19	11.1	47	6.8	6	24.5	23	18.2	34	20.3	44			15.9	21	5.1	18	2.4	24
Massachusetts	11.6	41	8.3	51	5.0	38	21.8	44	14.7	50	19.3	48			17.4	12	5.8	10	2.8	18
Michigan	11.5	43	11.4	44	5.4	29	25.2	18	22.8	3	25.1	11			19.0	7	7.0	4	3.1	15
Minnesota	10.0	49	6.8	52	4.8	41	22.0	41	15.5	47	19.5	47			16.3	20	5.4	15	4.1	5
Mississippi	20.9	4	20.3	11	7.9	2	33.5	1	23.2	2	22.9	25	6.1	4	12.1	40	4.3	31	2.7	21
Missouri	15.7	14	13.1	36	6.1	15	24.6	22	21.7	8	27.1	6	3.9	9	16.4	19	5.0	21	3.0	16
Montana	10.9	46	20.9	8	5.9	23	23.2	32	15.8	44	20.2	45	6.2	3	17.6	11	4.9	23	3.4	12
Nebraska	12.4	34	9.8	50	4.3	45	22.0	41	21.0	16	23.2	23	4.5	7	16.6	18	3.9	36	3.7	9
Nevada	13.8	21	21.2	7	5.8	24	29.1	4	15.8	44	31.5	1	3.2	13	21.0	2	9.3	1	5.5	1
New Hampshire	10.6	48	13.2	34	4.3	45	23.4	31	14.6	51	22.3	32	3.2	15	20.0	3	6.8	5	3.8	8
New Jersey	12.7	32	14.1	29	5.4	29	23.5	29	17.0	40	20.6	41			12.3	38	3.4	43	1.3	48
New Mexico	16.9	11	25.8	2	5.5	28	20.9	49	17.7	37	22.5	27			14.9	26	4.4	30	2.3	29
New York	13.7	22	17.4	18	5.7	26	22.9	35	17.4	39	21.8	35	0.8	18	13.9	33	4.5	27	1.6	42
North Carolina	17.9	9	13.6	32	6.1	15	24.0	26	21.5	11	25.1	11	0.0	10	12.0	42	2.9	47	1.7	40
North Dakota	12.2	36	13.8	31	5.0	38	26.1	14	21.9	7	22.1	34			19.7	4	4.2	33	4.4	3
Ohio	13.7	22	12.2	42	6.1	15	27.4	9	20.3	21	27.6	3	3.0	15	12.1	40	2.3	51	1.2	49
Oklahoma	17.4	10	20.4	9	50	24	20.9	49	21.1	1.4	25.2	10	5.0	6	8.1	51	2.5	49	2.5	22
Oregon	13.7	10 22	18.6	15	5.8 4.6	43	22.3	38	21.1 19.9	14 24	21.4	10 38	3.0	6	14.9	51 26	2.5 4.5	27	2.5 1.9	23 36
Pennsylvania Pennsylvania	13.7	22	12.5	39	6.4	10	23.9	27	20.3	21	23.1	24	3.4	11	15.9	21	4.7	25	2.4	24
Puerto Rico	33.0	1	13.2	34	9.6	1	26.2	13	21.3	13	13.7	52			10.6	45	3.6	40	2.0	34
		22		20	<i>c</i> 2	22		25			22.2	20			15.5	22		1.0	2.5	22
Rhode Island South Carolina	12.6 13.9	33 20	12.6 18.2	38 16	5.3 6.4	33 10	22.9 25.2	35 18	16.8 20.6	42 18	22.3	32 18			15.6 12.3	23 38	5.2 5.0	16 21	2.6 2.1	22 32
South Carolina South Dakota	13.9	26	13.0	37	4.9	40	23.8	28	19.6	18 27	23.6	27			17.4	12	3.6	40	4.1	5
Tennessee	19.9	5	14.2	27	6.0	21	28.6	5	20.5	19	24.8	13			7.7	52	2.5	49	1.5	44
Texas	19.2	7	26.3	1	6.2	14	24.2	24	21.6	10	22.4	30	3.2	13	17.3	15	5.7	11	2.8	18
Utah Vermont	10.0 9.9	49 51	14.2 14.8	27 26	4.2 4.3	50 45	21.3 21.0	46 48	16.7 18.0	43 36	14.0 21.7	51 36	1.8	17	10.2 17.4	47 12	3.1 6.5	45 6	1.2 2.4	49 24
Vermont Virginia	9.9	40	11.2	26 46	6.1	45 15	23.5	48 29	19.3	29	21.7	38	3.3	12	17.4	36	3.9	36	2.4	24
_																				
Washington	12.0	38	14.1	29	5.2	35	22.1	40	18.2	34	22.4	30	2.7	16	14.4	30	5.2	16	1.7	40
West Virginia	23.9	2	22.3	5	7.3	4	31.0	3	24.6	1	27.1	6	8.6	1	8.5	50	3.0	46	1.1	51
Wisconsin	11.9	39	12.1 19.9	43 13	5.3	33 43	25.0	20 41	19.9	24	23.7	17	0 1	_	27.0	1	6.4	7 40	4.9	2 24
Wyoming	11.3	45	19.9	15	4.6	45	22.0	41	16.9	41	23.9	15	8.1	2	17.3	15	3.6	40	2.4	24
US Total	14.9		18.6		5.9		24.4		19.4		22.5		N/A		14.7		4.8		2.4	

Source: Centers for Disease Control & Prevention - 1999 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

 $a.\ 52\ states/territories\ conducted\ the\ survey.\ States/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

b. Heavy drinking has been redefined to match the 2001 definition: more than two drinks per day for men and more than one drink per day for women.

Appendix E

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 2000

State	Fair of	r Poor alth	No H Insur Ages	ance,	Diat Awar		Obe (BMI	esity [ 30+)		eisure rcise	Per	Than 5 Day ts/Veg		rent oking		keless co Use		e had Attack		e had oke
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	19.3	6	19.4	13	7.4	4	23.9	2	31.6	9	77.3	23	25.2	10						
Alaska	10.2	50	19.1	14	3.8	52	21.0	23	20.0	48	76.3	34	25.0	12	5.7	5				
Arizona	14.8	21	20.7	9	5.9	33	19.2	33	34.2	5	63.1	52	18.6	49	0.,					
Arkansas	19.0	7	20.9	8	6.2	23	23.3	4	28.1	21	77.5	21	25.1	11						
California	16.7	11	21.3	7	6.8	11	19.9	29	26.5	29	73.3	41	17.2	50	4.4					
Colorado	12.7	37	15.8	22	5.1	44	14.2	52	19.8	49	76.6	30	20.0	43	4.1	8				
Connecticut Delaware	13.9 12.4	27 38	10.6 9.7	44 49	5.5 6.4	38 18	17.4	45 49	25.2 28.0	31 23	70.7 77.5	48 21	19.9 22.9	44 28			4.2	8	2.3	8
Delawale	12.4	30	9.7	49	0.4	10	16.6	49	26.0	23	11.3	21	22.9	20			4.2	0	2.3	0
D.C.	12.2	41	12.8	32	7.2	5	21.5	16	20.8	46	68.1	50	20.9	39			3.0	14	2.7	3
Florida	15.3	17	21.6	6	6.9	10	18.7	37	28.8	17	76.7	27	23.2	25						
Georgia	15.2	19	16.5	19	6.8	11	21.5	16	29.0	16	77.7	19	23.5	21			3.7	12	2.2	10
Hawaii	12.4	38	8.3	51	5.2	42	15.7	51	23.2	40	77.6	20	19.7	47						
Idaho	13.1	31	20.4	10	4.9	46	18.9	35	19.8	49	78.9	13	22.3	29	3.3	13				
Illinois	13.0	34	12.8	32	6.2	23	21.7	14	30.9	11	76.8	29	22.3	29						
Indiana	14.1	26	12.3	36	6.0	29	21.8	12	25.4	30	80.0	7	26.9	4			5.2	5	2.5	5
Iowa	10.9	49	10.9	43	6.1	27	21.5	16	27.3	25	81.9	3	23.2	25	3.0	16	4.1	10	1.9	12
W	12.4	20	12.0	20	5.0	22	20.0	24	20.4	12	76.6	20	21.0	27						
Kansas Kentucky	12.4 21.6	38 3	12.9 16.6	30 18	5.9 6.5	33 16	20.8 23.0	24 7	30.4 41.1	12 2	76.6 77.3	30 23	21.0 30.5	37 1			5.4	2	2.8	2
Louisiana	16.3	13	25.6	3	6.6	15	23.6	3	36.2	3	84.2	23	24.1	15	3.5	11	3.4		2.0	
Maine	14.7	23	16.3	20	6.0	29	20.0	27	27.2	26	75.5	36	23.8	18	3.3	11				
Wallie	1-1.7	23	10.5	20	0.0	27	20.0	27	27.2	20	75.5	30	23.0	10						
Maryland	12.8	35	11.1	40	6.4	18	20.2	26	24.2	38	72.6	43	20.5	42	1.4	18				
Massachusetts	13.5	29	9.9	48	5.8	35	16.8	48	24.6	35	70.0	49	19.9	44						
Michigan	13.7	28	10.1	46	7.0	9	22.4	9	22.9	43	76.9	26	24.1	15						
Minnesota	9.7	52	8.3	51	4.9	46	17.4	45	24.8	34	75.7	35	19.8	46						
Mississippi	20.2	4	22.7	5	7.6	2	25.0	1	33.3	7	81.4	5	23.5	21	7.3	3	5.3	4	2.6	4
Missouri	15.3	16	13.4	28	6.7	14	22.1	10	28.8	17	79.3	12	27.2	3						
Montana	11.3	46	18.0	16	4.9	46	15.9	50	23.3	39	77.2	25	18.8	48	6.3	4	3.4	13	2.3	8
Nebraska	11.3	46	11.1	40	4.9	46	21.1	22	29.6	14	79.4	10	21.2	36	3.9	10				
Nevada	15.8	14	16.0	21	6.8	11	17.9	43	24.9	32	78.7	14	29.0	2	2.6	17				
New Hampshire	10.1	51	10.3	45	4.4	50	18.1	41	26.7	27	73.8	40	25.3	9						
New Jersey	15.7	15	15.4	23	5.8	35	18.5	38	28.6	19	72.6	43	21.0	37						
New Mexico	17.1	9	27.7	1	6.5	16	19.3	32	24.4	36	79.5	9	23.6	20						
New York	14.7	23	15.3	24	6.3	22	17.7	44	29.4	15	72.5	45	21.6	33						
North Carolina	16.6	12	15.1	25	6.4	18	21.8	12	30.4	12	77.9	18	26.1	6	5.2	6				
North Dakota	11.5	44	14.2	26	5.2	42	20.4	25	24.3	37	76.8	27	23.2	25	3.2	0				
Ohio	13.3	30	12.3	36	6.4	18	21.5	16	31.3	10	78.6	15	26.2	5	3.4	12	5.4	2	2.5	5
Oklahoma	15.3	16	20.1	12	5.5	38	19.7	31	34.4	4	81.8	4	23.3	24	4.5	7	4.0	11	1.7	13
Oregon Pennsylvania	16.9 14.4	10 25	18.1 11.1	15 40	6.0 7.1	29 7	21.5 21.2	16 21	20.1	47 42	73.2 76.7	42 29	20.7 24.3	40 14			4.6	6	2.4	7
Pennsylvania Puerto Rico	32.8	25 1	10.1	46	7.1 8.5	1	21.2	14	54.1	1	92.8	1	13.1	51			4.0	0	2.4	_ ′
1 ucito Kico	22.0	1	10.1	40	0.5	1	21./	14	J4.1	1	12.0	1	13.1	31						
Rhode Island	14.8	21	13.6	27	6.0	29	17.1	47	27.5	24	70.8	47	23.4	23						
South Carolina	15.0	20	16.9	17	7.1	7	22.0	11	28.1	21	75.4	37	24.9	13			4.5	7	1.7	13
South Dakota	12.1	42	12.7	35	5.7	37	19.8	30	26.7	27	80.1	6	21.9	31						
Tennessee	18.3	8	13.2	29	7.2	5	22.9	8	32.7	8	65.9	51	25.7	8						
Texas	20.2	4	26.9	2	6.2	23	23.1	6	28.5	20	76.6	30	21.9	31	4.1	8				
Utah	11.5	44	12.8	34	5.4	41	19.1	34	15.5	52	79.4	10	12.9	52						
Vermont	11.2	48	11.7	38	4.4	50	18.2	39	23.2	40	71.3	46	21.5	34						
Virginia	13.1	31	12.9	30	6.2	23	18.2	39	25.0	32	74.4	39	21.4	35	3.1	14	4.2	8	2.1	11
Washington	11.9	43	11.5	39	5.5	38	18.8	36	16.9	51	75.3	38	20.7	40	3.1	14				
West Virginia	25.4	2	23.5	4	7.6	2	23.2	5	33.6	6	78.6	15	26.1	6	8.8	14	7.6	1	3.1	1
Wisconsin	12.8	35	8.9	50	6.1	27	20.0	27	22.1	45	78.3	17	24.1	15	0.0	•	7.0		5.1	
Wyoming	13.1	31	20.2	11	5.0	45	18.0	42	22.6	44	79.6	8	23.8	18	7.5	2				
																-				
US Total	15.5		16.3		6.4		20.4		27.8		75.8		22.2		N/A		N/A		N/A	

Source: Centers for Disease Control & Prevention - 2000 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

 $a.\ 52\ states/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

Appendix F

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 2001

Mathemate   Math	Heavy Drinking
Asilonal II-3   49   20.3   11   20.9   50.5   21.8   51.   21.1   21.1   21.1   41   21.2   81   21.5   2	% Rnk
Asabach 113	4.2 42
Arisams   15, 15, 15, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18	5.8 13
Astamska 195 8 8 199 14 7.8 9 297 5.5 24 37 36.5 24 37 35.5 25 13 6.5 3 1.3 6.5 15 15.5 25 20 1000000 13.2 34 170 199 4.6 28 28 23.3 14.9 25 24 28 28 28 28 28 28 28 28 28 28 28 28 28	6.1 9
Californian 140 140 140 140 140 140 140 140 140 140	4.6 37
Commonified   13.2   3.4   17.9   19.   4.6   5.0   21.6   3.2   1.49   5.4   1.90   2.0   3.0   3.0   3.0   4.0   5.0   1.5	6.2 8
Delaware   13.1   37	5.5 16
D.C.   13.2   34	5.2 24
	7.1 4
Common   150   181   150   170   170   181   150   170   181   1	6.1 9
Camelon   18.1	5.5 16
Hawaii	3.9 47
Islambor         13.0         38         17.9         19         5.4         4.5         24.6         23.4         20.5         32         21.0         45         20.6         2.5         24.8         33         21.0         28         26.5         21         23.7         24         L         17.3         9           Indiama         11.9         46         10.1         49         5.7         38         25.5         29         22.5         15         25.0         26         22.1         38         16.2         14         18.0         18         22.2         14         18.0         18         18.0         18         22.2         35         14         16.2         14         18.0         18         2.2         20         22.5         18         22.2         35         14.7         14.7         18.2         22.2         35         14.7         14.7         18.2         22.2         35         14.7         14.7         18.2         22.2         35         11.4         4.0         9.9         35.0         2         24.0         16         14.7         11.4         2.0         9.9         35.0         2         2.4         19.0         18.3	5.3 23
Infinisis   13.6   31   11.7   42   6.6   25   24.8   33   21.0   28   26.5   21   23.7   24   4.6   4.7   13.8   34     Indiana   14.0   28   16.2   26   6.5   28   25.5   29   22.5   15   25.9   26   22.1   38   4.7   16.2   14.7   18.0     Kanasa   12.6   41   12.1   40   5.8   37   23.9   42   21.6   24   26.7   18   22.2   33   4.9   7   8.7   73     Kentucky   21.7   4   18.0   18   6.7   21   30.1   42   21.6   24   26.7   18   22.2   33   4.9   7   8.7   73     Kentucky   21.7   4   18.0   18   6.7   21   30.1   27.6   11   24.0   9   35.6   2   24.6   16   16   16     Maine   13.2   34   15.3   28   6.7   21   25.2   31   19.5   41   23.2   36   23.9   20   15.4   23     Maine   13.8   31   15.3   28   6.7   21   25.2   31   19.5   41   23.2   36   23.9   20   15.4   23     Massukusetts   12.1   45   9.4   51   5.6   42   23.6   43   25.5   33   23.4   35   25.6   12   45   44   45   23     Miscouri   14.6   25   11.6   44   7.2   31   27.3   22.3   49   19.9   37   17.1   52   22.3   35   44   45   44   45   23   45     Missosiripi   22.9   3   22.0   7   9.3   4   31.3   3   26.5   1   33.4   4   25.3   14   4   4   4   4   4   4   4   4	5.1 28
Indiama	4.2 42
Bowa   11,9	5.5 16
Remicky   12.6	4.4 39
Remucky	4.7 36
Louisiana	4.8 33
Maine	2.7 53
Maryland   13.8   30   11.8   41   6.9   19   26.3   22   20.5   32   24.2   32   21.1   42	4.1 44
Massachusetts	5.5 16
Michigan   14.6   25   11.6   44   7.2   13   27.3   12   25.0   3   23.4   35   25.6   12     18.0   8	5.2 24
Minnesora 11.0 51 6.4 54 4.4 52 22.3 49 19.9 37 17.1 52 22.2 35	7.0 5
Mississippi	5.9 11
Missouri	5.8 13
Montana	4.5 38
Nebraska   13.0   38   16.5   25   5.2   47   22.6   47   20.7   31   31.4   9   20.2   48   3.5   11   14.6   30   Nevada   13.6   31   20.2   12   5.7   38   25.6   27   19.5   41   22.6   40   26.9   7   3   1.6   16.7   11   11   11   11   11   11   11	4.8 33
New Hampshire   9.4   54   13.4   33   5.4   45   22.8   46   19.4   43   19.5   49   24.1   19   15.8   17	4.4 39
New Hampshire	4.3 41
New Mexico	7.8 2
New Mexico   16.9   11   26.5   3   6.2   32   20.0   54   19.7   38   25.8   27   23.8   22     15.8   17     New York   16.3   14   19.5   15   6.6   25   26.0   24   20.3   35   28.7   12   23.2   27   14.4   31     North Carolina   16.4   13   16.7   23   6.7   21   27.2   13   22.9   12   26.4   22   25.7   11   9.8   50     North Dakota   12.6   41   14.2   30   5.1   48   24.1   37   20.4   34   23.2   36   22.1   38   5.6   6   22.3   2     Ohio   14.2   27   13.0   35   7.2   13   26.6   18   22.4   17   26.2   24   27.6   5   5     Oklahoma   19.6   7   25.1   5   7.7   10   28.5   9   22.6   14   32.8   6   28.7   3   4.9   7   11.0   48     Oregon   14.8   24   16.6   24   5.7   38   24.9   32   21.1   27   20.8   46   20.5   46     Pennsylvania   14.0   28   11.3   46   6.7   21   28.1   10   22.1   21   24.7   31   24.5   17   15.6   21     Puerto Rico   34.5   1   9.3   52   9.8   1   26.4   21   22.2   20   49.2   1   12.5   53   11.3   45     Rhode Island   15.6   19   19.2   17   8.1   8   28.8   8   22.5   15   26.4   22   26.0   9     South Dakota   12.6   41   12.4   38   6.1   34   24.1   37   21.2   25   25.4   29   22.3   33   5.7   5   18.5   4     Tennessee   19.9   6   12.4   38   6.1   34   24.1   37   21.2   25   25.4   29   22.3   33   5.7   5   18.5   4     Tennessee   19.9   6   12.4   38   6.1   34   24.1   37   21.2   25   25.4   29   22.3   33   5.7   5   18.5   4     Tennessee   19.9   6   12.4   38   6.1   34   24.1   37   21.2   25   25.4   29   22.3   33   5.7   5   18.5   4     Tennessee   19.9   6   12.4   38   6.1   34   24.1   37   21.2   25   25.4   29   22.3   33   5.7   5   18.5   4    Tennessee   19.3   9   26.6   2   7.1   16   25.6   27   24.6   5   27.1   17   22.4   30   3.9   10   15.1   24    Utah   10.0   53   14.6   29   4.3   53   22.3   49   19.1   45   16.5   54   13.2   52   28   3.0   12   14.3   32    Vermont   11.5   47   13.4   33   5.1   48   21.4   53   17.6   52   20.3   48   22.4   30   3.9   10   15.1   24    Washington   12.8   40   11.6   4	6.3 7
New York   16.3   14   19.5   15   6.6   25   26.0   24   20.3   35   28.7   12   23.2   27     14.4   31     North Carolina   16.4   13   16.7   23   6.7   21   27.2   13   22.9   12   26.4   22   25.7   11   9.8   50     North Dakota   12.6   41   14.2   30   5.1   48   24.1   37   20.4   34   23.2   36   22.1   38   5.6   6   22.3   2     Ohio   14.2   27   13.0   35   7.2   13   26.6   18   22.4   17   26.2   24   27.6   5   4.9   7   11.0   48     Oklahoma   19.6   7   25.1   5   7.7   10   28.5   9   22.6   14   32.8   6   28.7   3   4.9   7   11.0   48     Oregon   14.8   24   16.6   24   5.7   38   24.9   32   21.1   27   20.8   46   20.5   46   46   20.5   46     Puerto Rico   34.5   1   9.3   52   9.8   1   26.4   21   22.2   20   49.2   1   12.5   53   11.3   45     Rhode Island   15.3   23   10.5   48   6.4   30   25.4   30   17.7   51   24.9   30   23.9   20   15.1   24     South Carolina   15.6   19   19.2   17   8.1   8   28.8   8   22.5   15   26.4   22   26.0   9   22.3   33   5.7   5   18.5   4     Texas   19.3   9   26.6   2   7.1   16   25.6   27   24.6   5   27.1   17   22.4   30   3.9   10   15.1   24     Utah   10.0   53   14.6   29   4.3   53   22.3   49   19.1   45   16.5   54   13.2   52   25.7   19     Virgin Islands   16.6   12   31.8   1   7.2   13   26.5   19   24.7   4   29.2   11   9.6   54   11.1   47     Virginia   12.8   40   11.6   44   5.7   38   24.4   36   19.3   44   17.1   52   22.5   25.8   20.9   23.2   36   22.5   28   3.0   12   14.3   32     Washington   12.8   40   11.6   44   5.7   38   24.4   36   19.3   44   17.1   52   22.5   25.8   22.5   25.7   1   19     Virginia   24.2   2   23.8   6   8.8   5   32.5   1   25.1   2   31.7   7   28.2   4   8.2   1   9.4   52     Wisconsin   11.2   50   11.7   42   5.6   42   24.1   37   22.4   17   20.7   47   23.6   26     25.7   1	4.0 46
North Carolina   16.4   13   16.7   23   6.7   21   27.2   13   22.9   12   26.4   22   25.7   11	5.0 30
North Dakota   12.6	5.0 30
Ohio         14.2         27         13.0         35         7.2         13         26.6         18         22.4         17         26.2         24         27.6         5         4         16.2         14           Oklahoma         19.6         7         25.1         5         7.7         10         28.5         9         22.6         14         32.8         6         28.7         3         4.9         7         11.0         48           Oregon         14.8         24         16.6         24         5.7         38         24.9         32         21.1         27         20.8         46         20.5         46         14.7         28           Pennsylvania         14.0         28         11.3         46         6.7         21         28.1         10         22.1         21         24.7         31         24.5         17         15.6         21           Puerto Rico         34.5         1         9.3         52         9.8         1         26.4         21         22.7         2         20         49.2         1         12.5         53         11.3         45           Rhode Island         15.6         19	4.1 44
Oklahoma         19.6         7         25.1         5         7.7         10         28.5         9         22.6         14         32.8         6         28.7         3         4.9         7         11.0         48           Oregon         14.8         24         16.6         24         5.7         38         24.9         32         21.1         27         20.8         46         20.5         46         14.7         28           Pennsylvania         14.0         28         11.3         46         6.7         21         28.1         10         22.1         21         24.7         31         24.5         17         15.6         21           Puerto Rico         34.5         1         9.3         52         9.8         1         26.4         21         22.2         20         49.2         1         12.5         53         11.3         45           Rhode Island         15.3         23         10.5         48         6.4         30         25.4         30         17.7         51         24.9         30         23.9         20         15.1         24           South Carolina         15.6         19         19.2	4.8 33
Oregon         14.8         24         16.6         24         5.7         38         24.9         32         21.1         27         20.8         46         20.5         46         46         14.7         28           Pennsylvania         14.0         28         11.3         46         6.7         21         28.1         10         22.1         21         24.7         31         24.5         17         15.6         21           Puerto Rico         34.5         1         9.3         52         9.8         1         26.4         21         22.2         20         49.2         1         12.5         53         11.3         45           Rhode Island         15.3         23         10.5         48         6.4         30         25.4         30         17.7         51         24.9         30         23.9         20         15.1         24           South Carolina         15.6         19         19.2         17         8.1         8         28.8         8         22.5         15         26.4         22         26.0         9         12.3         39           South Dakota         12.6         41         12.4         3	5.4 21
Pennsylvania	3.5 50
Puerto Rico   34.5   1   9.3   52   9.8   1   26.4   21   22.2   20   49.2   1   12.5   53     11.3   45   15.1   24   24   24   24   25.6   25.8   25   20.9   29   23.2   36   22.5   28   30   12.1   43   32   Washington   12.8   40   11.6   44   5.7   38   24.4   37   22.4   17   22.7   27   47   23.6   26   11.2   50   11.7   42   5.6   42   24.1   37   22.4   17   22.7   27   27   47   23.6   26   11.3   25   25.7   1	5.9 11
Rhode Island	5.2 24
South Carolina         15.6         19         19.2         17         8.1         8         28.8         8         22.5         15         26.4         22         26.0         9         12.3         39           South Dakota         12.6         41         12.4         38         6.1         34         24.1         37         21.2         25         25.4         29         22.3         33         5.7         5         18.5         4           Tennessee         19.9         6         12.4         38         7.7         10         29.3         6         23.4         10         35.1         3         24.4         18         6.8         54           Texas         19.3         9         26.6         2         7.1         16         25.6         27         24.6         5         27.1         17         22.4         30         3.9         10         15.1         24           Utah         10.0         53         14.6         29         4.3         53         22.3         49         19.1         45         16.5         54         13.2         52         9.7         51           Vermont         11.5         47<	3.8 49 7.5 3
South Dakota         12.6         41         12.4         38         6.1         34         24.1         37         21.2         25         25.4         29         22.3         33         5.7         5         18.5         4           Tennessee         19.9         6         12.4         38         7.7         10         29.3         6         23.4         10         35.1         3         24.4         18         6.8         54           Texas         19.3         9         26.6         2         7.1         16         25.6         27         24.6         5         27.1         17         22.4         30         3.9         10         15.1         24           Utah         10.0         53         14.6         29         4.3         53         22.3         49         19.1         45         16.5         54         13.2         52         9.7         51           Vermont         11.5         47         13.4         33         5.1         48         21.4         53         17.6         52         20.3         48         22.4         30          15.7         19           Virgin Islands         1	
Tennessee 19.9 6 12.4 38 7.7 10 29.3 6 23.4 10 35.1 3 24.4 18 3 24.4 18 6.8 54  Texas 19.3 9 26.6 2 7.1 16 25.6 27 24.6 5 27.1 17 22.4 30 3.9 10 15.1 24  Utah 10.0 53 14.6 29 4.3 53 22.3 49 19.1 45 16.5 54 13.2 52 9.7 51  Vermont 11.5 47 13.4 33 5.1 48 21.4 53 17.6 52 20.3 48 22.4 30 15.7 19  Virgin Islands 16.6 12 31.8 1 7.2 13 26.5 19 24.7 4 29.2 11 9.6 54  Virginia 13.3 33 12.7 37 6.0 36 25.8 25 20.9 29 23.2 36 22.5 28 3.0 12 14.3 32  Washington 12.8 40 11.6 44 5.7 38 24.4 36 19.3 44 17.1 52 22.5 28  West Virginia 24.2 2 23.8 6 8.8 5 32.5 1 25.1 2 31.7 7 28.2 4 8.2 1 9.4 52  Wisconsin 11.2 50 11.7 42 5.6 42 24.1 37 22.4 17 20.7 47 23.6 26 1 25.7 1	
Texas         19.3         9         26.6         2         7.1         16         25.6         27         24.6         5         27.1         17         22.4         30         3.9         10         15.1         24           Utah         10.0         53         14.6         29         4.3         53         22.3         49         19.1         45         16.5         54         13.2         52         9.7         51           Vermont         11.5         47         13.4         33         5.1         48         21.4         53         17.6         52         20.3         48         22.4         30         15.7         19           Virgin Islands         16.6         12         31.8         1         7.2         13         26.5         19         24.7         4         29.2         11         9.6         54         11.1         47           Virginia         13.3         33         12.7         37         6.0         36         25.8         25         20.9         29         23.2         36         22.5         28         3.0         12         14.3         32           Washington         12.8	3.9 47 2.5 54
Utah         10.0         53         14.6         29         4.3         53         22.3         49         19.1         45         16.5         54         13.2         52         9.7         51           Vermont         11.5         47         13.4         33         5.1         48         21.4         53         17.6         52         20.3         48         22.4         30         15.7         19           Virgin Islands         16.6         12         31.8         1         7.2         13         26.5         19         24.7         4         29.2         11         9.6         54         11.1         47           Virginia         13.3         33         12.7         37         6.0         36         25.8         25         20.9         29         23.2         36         22.5         28         3.0         12         14.3         32           Washington         12.8         40         11.6         44         5.7         38         24.4         36         19.3         44         17.1         52         22.5         28         14.9         26           West Virginia         24.2         2         23.8	
Vermont         11.5         47         13.4         33         5.1         48         21.4         53         17.6         52         20.3         48         22.4         30         15.7         19           Virgin Islands         16.6         12         31.8         1         7.2         13         26.5         19         24.7         4         29.2         11         9.6         54         11.1         47           Virginia         13.3         33         12.7         37         6.0         36         25.8         25         20.9         29         23.2         36         22.5         28         3.0         12         14.3         32           Washington         12.8         40         11.6         44         5.7         38         24.4         36         19.3         44         17.1         52         22.5         28         14.9         26           West Virginia         24.2         2         23.8         6         8.8         5         32.5         1         25.1         2         31.7         7         28.2         4         8.2         1         9.4         52           Wisconsin         11.2	5.4 21 3.1 51
Virgin Islands         16.6         12         31.8         1         7.2         13         26.5         19         24.7         4         29.2         11         9.6         54         8         11.1         47           Virginia         13.3         33         12.7         37         6.0         36         25.8         25         20.9         29         23.2         36         22.5         28         3.0         12         14.3         32           Washington         12.8         40         11.6         44         5.7         38         24.4         36         19.3         44         17.1         52         22.5         28         14.9         26           West Virginia         24.2         2         23.8         6         8.8         5         32.5         1         25.1         2         31.7         7         28.2         4         8.2         1         9.4         52           Wisconsin         11.2         50         11.7         42         5.6         42         24.1         37         22.4         17         20.7         47         23.6         26         25.7         1	6.8 6
Virginia     13.3     33     12.7     37     6.0     36     25.8     25     20.9     29     23.2     36     22.5     28     3.0     12     14.3     32       Washington     12.8     40     11.6     44     5.7     38     24.4     36     19.3     44     17.1     52     22.5     28     3.0     12     14.3     32       West Virginia     24.2     2     23.8     6     8.8     5     32.5     1     25.1     2     31.7     7     28.2     4     8.2     1     9.4     52       Wisconsin     11.2     50     11.7     42     5.6     42     24.1     37     22.4     17     20.7     47     23.6     26     25.7     1	
Washington     12.8     40     11.6     44     5.7     38     24.4     36     19.3     44     17.1     52     22.5     28     22.5     28       West Virginia     24.2     2     23.8     6     8.8     5     32.5     1     25.1     2     31.7     7     28.2     4     8.2     1     9.4     52       Wisconsin     11.2     50     11.7     42     5.6     42     24.1     37     22.4     17     20.7     47     23.6     26     26     25.7     1	5.7 15
West Virginia     24.2     2     23.8     6     8.8     5     32.5     1     25.1     2     31.7     7     28.2     4     8.2     1     9.4     52       Wisconsin     11.2     50     11.7     42     5.6     42     24.1     37     22.4     17     20.7     47     23.6     26     26     25.7     1	5.1 28
Wisconsin 11.2 50 11.7 42 5.6 42 24.1 37 22.4 17 20.7 47 23.6 26 25.7 1	5.0 30
	3.0 52
	8.7 1 5.2 24
US Total 15.7 16.4 6.8 25.8 21.6 26.4 22.7 N/A 14.5	5.2

Source: Centers for Disease Control & Prevention - 2001 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

 $a.\ 54\ states/territories\ conducted\ the\ survey.\ States/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

b. For 2001, heavy drinking was redefined as > two drinks per day for men and > one drink per day for women. It was defined as > = two drinks per day for all adults previously.

Appendix G

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 2002

State	Fair of		Insur	lealth rance, 18-64	Dial Awar			esity [ 30+)		eisure rcise	Per	Than 5 Day s/Veg		rent king		nge iking	Past 1	u Shot 2 Mo., s 65+		tbelt nuse
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	19.7	8	18.2	22	8.5	5	25.7	4	27.3	14	78.9	18	24.4	18	14.5	36	35.2	13	16.6	41
Alaska	13.0	38	20.1	15	3.5	54	23.4	18	22.4	36	77.2	30	29.3	3	18.2	11	30.5	33	29.4	13
Arizona	15.1	25	19.2	18	6.4	30	19.6	40	22.6	34	77.4	25	23.4	23	16.9	21	30.3	34	19.5	35
Arkansas	19.0	9	22.7	9	7.9	10	23.7	15	27.4	13	79.3	15	26.3	12	12.7	44	31.0	30	35.4	5
California	15.6	22	18.0	23	7.4	15	19.2	44	22.7	33	72.6	40	16.4	51	14.9	35	28.5	39	7.7	53
Colorado	12.5	42	18.6	20	4.4	52	16.5	54	19.3	46	76.1	34	20.4	46	18.6	7	26.7	45	21.1	32
Connecticut	12.2	44	12.7	44	5.9	41	18.0	50	22.0	37	69.7	52	19.4	48	16.3	26	28.6	38	17.7	38
Delaware	14.8	27	10.4	51	7.1	21	22.4	26	27.1	15	80.5	8	24.7	15	18.3	9	28.5	39	19.7	34
D.C.	10.8	53	12.2	46	7.6	13	20.7	34	20.9	41	66.2	53	20.4	46	17.0	20	41.3	6	12.1	50
Florida	15.3	23	22.3	10	7.6	13	19.4	42	27.9	11	72.6	40	22.0	36	13.7	40	43.0	4	16.6	41
Georgia	15.3	23	17.8	24	7.1	21	23.5	16	25.7	20	77.4	25	23.2	25	12.8	43	40.7	7	16.9	40
Guam	18.6	10	23.3	8	8.4	7	23.8	13	24.6	24	73.1	39	31.9	2	17.7	16	55.9	3	14.3	44
Hawaii	11.4	50	10.3	52	5.8	43	17.1	53	16.1	53	79.6	11	21.0	44	11.9	47	26.1	50	10.4	52
Idaho	13.6	34	19.8	17	6.1	38	20.2	38	19.3	46	78.4	20	20.6	45	15.8	30	34.9	15	34.8	6
Illinois	14.9	26	16.4	28	6.8	27	21.9	29	28.6	9	79.1	17	22.8	29	17.8	14	38.9	10	25.3	20
Indiana	16.4	17	17.2	26	7.4	15	24.1	11	27.5	12	78.3	21	27.6	6	15.9	28	33.7	20	23.1	27
Iowa	11.5	49	10.8	49	6.5	29	22.9	23	21.8	39	80.2	9	23.2	25	20.1	4	26.5	46	24.1	24
Kansas	12.4	43	13.1	42	6.4	30	22.8	25	22.5	35	81.8	5	22.1	35	15.8	30	31.4	28	33.3	8
Kentucky	23.8	2	21.1	12	7.0	24	24.4	10	26.6	16	79.8	10	32.6	1	7.9	54	34.3	17	25.5	19
Louisiana	17.9	11	27.1	3	7.1	21	25.5	5	33.5	3	82.8	3	23.9	20	13.6	41	42.7	5	20.7	33
Maine	14.7	28	16.9	27	7.3	17	20.7	34	25.8	19	70.6	49	23.6	22	15.4	33	26.2	49	27.4	16
Maryland	11.7	47	11.3	48	6.9	26	19.4	42	23.0	31	70.3	50	21.9	37	14.4	37	34.1	19	12.5	49
Massachusetts	13.3	37	10.8	49	5.8	43	18.3	49	20.8	42	70.3	50	18.9	50	18.3	9	27.4	43	27.8	15
Michigan	13.4	36	13.8	36	7.9	10	25.4	7	24.1	29	77.4	25	24.2	19	16.9	21	32.3	23	16.2	43
Minnesota	10.9	51	7.9	53	4.9	51	22.4	26	16.2	52	77.3	28	21.7	38	21.1	3	23.4	54	24.5	22
Mississippi	23.0	4	26.7	4	8.6	4	26.8	2	32.5	4	80.8	6	27.3	7	12.4	45	37.0	11	27.2	17
Missouri	17.1	15	15.8	29	7.3	17	23.2	20	26.5	17	80.8	6	26.5	11	17.2	19	31.4	28	33.2	9
Montana	12.8	40	21.1	12	5.5	49	18.7	47	19.2	48	77.3	28	21.2	41	19.8	5	32.3	23	31.5	10
Nebraska	13.7	30	13.8	36	5.8	43	23.2	20	22.0	37	82.0	4	22.7	30	17.6	18	31.7	27	31.3	12
Nevada	17.2	13	25.8	5	6.2	33	21.6	30	24.8	23	77.7	24	26.0	14	19.8	5	39.7	8	21.2	31
New Hampshire	11.6	48	13.6	39	6.2	33	17.9	51	19.9	45	71.5	46	23.2	25	16.6	24	27.7	42	36.2	4
New Jersey	14.7	28	15.7	30	6.1	38	19.0	45	26.0	18	71.8	44	19.0	49	13.9	39	30.9	31	17.4	39
New Mexico	17.0	16	25.0	6	6.2	33	19.7	39	23.0	31	78.1	22	21.2	41	14.4	37	33.4	21	13.2	47
New York	16.1	19	17.6	25	7.2	19	20.6	36	25.1	22	72.3	42	22.3	34	17.9	13	35.4	12	19.2	36
North Carolina North Dakota	21.0 13.6	5 34	19.2 11.4	18 47	7.2 6.1	19 38	23.5 23.4	16 18	29.5 21.7	7 40	76.4 79.6	32 11	26.3 21.5	12 39	10.9 22.0	50 2	31.8 26.1	26 50	12.7 47.6	48 1
Ohio	13.7	30	13.4	41	7.7	12	23.0	22	25.4	21	79.5	13	26.6	8	15.9	28	33.4	21	23.5	25
Oklahoma Oregon	17.7 16.1	12 19	23.7 20.5	7 14	6.7 6.2	28 33	22.9 20.3	23 37	30.6 17.9	6 51	85.6 73.7	1 38	26.6 22.4	8 32	13.3 16.3	42 26	27.3 32.0	43 25	22.4 12.1	29 50
Pennsylvania	15.9	21	12.6	45	8.1	9	23.9	12	24.4	27	74.6	37	24.5	17	16.9	21	29.5	35	31.4	11
Puerto Rico	33.0	1	7.8	54	10.5	1	22.0	28	46.8	1	85.5	2	13.2	52	10.9	51	64.6	2	7.4	54
Rhode Island	13.7	30	13.7	38	5.6	47	18.5	48	24.6	24	71.4	47	22.4	32	17.7	16	26.4	47	24.4	23
South Carolina	17.2	13	18.4	21	8.4	7	25.8	3	24.6	24	76.1	34	26.6	8	12.4	45	30.6	32	25.2	21
South Dakota	12.9	39	14.3	34	6.3	32	21.2	33	23.8	30	79.3	15	22.6	31	18.5	8	25.8	53	45.1	2
Tennessee	20.7	6	15.1	32	8.5	5	24.5	9	33.6	2	71.6	45	27.7	5	8.2	53	28.4	41	18.8	37
Texas	20.1	7	31.3	2	7.0	24	25.5	5	29.3	8	76.1	34	22.9	28	17.8	14	39.0	9	13.8	46
Utah	10.4	54	15.4	31	4.4	52	17.5	52	18.9	49	79.4	14	12.8	53	10.1	52	28.9	37	28.0	14
Vermont	10.9	51	13.6	39	5.9	41	18.9	46	18.3	50	70.9	48	21.1	43	16.5	25	26.4	47	23.5	25
Virgin Islands	16.2	18	34.5	1	9.1	3	24.9	8	30.7	5	64.3	54	9.4	54	11.7	48	67.8	1	22.6	28
Virginia	13.7	30	14.4	33	6.2	33	23.8	13	24.4	27	72.1	43	24.6	16	15.6	32	34.7	16	22.1	30
Washington	12.6	41	14.0	35	5.8	43	21.3	32	15.0	54	76.2	33	21.5	39	15.1	34	35.0	14	14.3	44
West Virginia	23.5	3	21.8	11	10.2	2	27.6	1	28.4	10	78.7	19	28.4	4	11.4	49	34.2	18	25.6	18
Wisconsin	12.0	46	13.0	43	5.1	50	21.6	30	20.0	44	76.5	31	23.3	24	24.9	1	26.0	52	33.7	7
Wyoming	12.2	44	20.1	15	5.6	47	19.5	41	20.4	43	77.9	23	23.7	21	18.1	12	29.4	36	41.8	3
US Total	16.0		17.8		7.1		21.9		25.3		75.6		22.6		15.7		33.6		19.4	

Source: Centers for Disease Control & Prevention - 2002 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

 $a.\ 54\ states/territories\ conducted\ the\ survey.\ States/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

Appendix H

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>
United States, 2003

State	Fair of		Hi Chole	gh esterol	Diab Awar		• •	tension	Obe (BMI	esity [ 30+)		eisure rcise	Per	Than 5 Day s/Veg		rent oking		nge iking	Past 1	u Shot 2 Mo., s 65+
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	20.3	5	36.0	4	8.7	9	33.1	3	28.4	1	29.9	7	77.4	27	25.3	13	12.1	47	29.8	29
Alaska	11.8	49	27.6	52	5.0	53	20.8	52	23.5	23	19.2	45	77.4	27	26.2	6	18.4	11	33.5	9
Arizona	15.6	23	34.6	13	6.3	37	22.7	46	20.1	43	21.2	38	77.1	30	20.8	38	16.6	26	31.1	19
Arkansas	19.7	7	34.8	11	7.4	22	30.5	4	25.2	6	29.1	9	79.2	16	24.8	17	12.5	46	29.0	33
California	15.1	26	32.7	31	7.2	26	23.4	40	23.2	24	22.3	32	73.1	43	16.8	51	15.9	31	27.5	36
Colorado	12.0	47	31.9	35	4.7	54	19.8	53	16.0	54	16.8	53	75.8	37	18.6	48	18.3	12	25.8	44
Connecticut	12.6	40	30.8	41	5.9	45	24.2	32	19.1	49	21.0	40	70.2	52	18.6	48	16.5	27	25.7	45
Delaware	14.2	30	34.7	12	7.7	20	27.7	14	24.0	15	26.5	16	78.0	20	21.9	31	18.6	9	30.0	28
D.C.	12.4	41	29.2	49	8.2	13	25.2	24	20.3	40	22.5	31	70.4	51	22.0	27	18.6	9	37.0	6
Florida	18.1	10	35.1	7	8.5	10	29.3	7	19.9	46	27.9	12	76.4	35	23.9	20	15.5	32	34.1	7
Georgia Guam	16.3 18.2	21 9	33.2 28.1	26 50	7.8 10.3	18 3	28.0 22.1	12 49	25.2 21.9	6 30	24.5 30.2	23 6	77.0 70.5	31 50	22.8 34.0	23	13.0 18.7	45 8	33.0 40.3	10
Hawaii	12.2	45	27.0	54	7.6	21	23.2	42	16.4	53	18.3	50	72.4	46	17.2	50	13.3	43	23.6	51
Idaho	13.6	34	31.1	39	6.3	37	23.1	43	21.8	32	18.6	49	79.6	14	19.0	47	15.5	32	29.7	30
Illinois	15.0	27	33.6	20	7.3	25	24.1	33	23.7	20	25.7	20	76.9	32	23.4	22	17.3	20	37.8	5
Indiana	16.7	19	35.1	7	7.8	18	27.0	17	26.0	4	26.2	18	78.0	20	26.1	7	15.1	37	33.9	8
Iowa Kansas	11.7 13.3	50 35	31.7 29.4	36 48	6.7 6.0	34 43	25.1 23.3	25 41	23.9 22.6	17 28	22.7 25.9	29 19	82.9 81.2	4 9	21.7 20.4	32 40	19.4 13.9	4 42	22.5 29.2	52 32
Kansas																				
Kentucky	22.8	4	35.5	5	8.5	10	29.8	6	25.6	5	30.6	2	81.8	7	30.8	2	9.3	52	30.9	21
Louisiana	17.3	15	30.8	41	8.5	10	29.0	8	24.8	11	30.5	3	83.6	3	26.5	5	16.4	28	31.7	16
Maine	14.7	29	33.6	20	7.4	22	26.0	21	19.9	46	20.6	42	73.0	44	23.7	21	16.8	24	25.2	46
Maryland	12.2	45	33.9	17	7.0	31	25.0	26	21.9	30	21.3	37	71.1	48	20.1	41	15.0	39	31.6	17
Massachusetts Michigan	12.4 15.2	41 24	32.4 38.2	33 1	6.2 7.9	41 17	23.1 26.8	43 18	16.8 25.2	52 6	21.6 21.8	36 34	71.0 79.9	49 12	19.1 26.1	46 7	18.3 19.1	12 5	25.1 32.5	48 12
Minnosoto	11.2	52	30.8	41	5.5	50	22.2	48	23.0	25	15.0	54	75.8	37	21.1	36	19.7	3	19.7	54
Minnesota Mississippi	23.1	3	33.1	27	11.0	1	33.4	2	28.1	2	30.3	5	82.1	6	25.6	9	11.4	48	31.0	20
Missouri	17.4	14	33.6	20	6.9	32	27.5	15	23.6	22	24.0	24	79.8	13	27.2	4	17.2	22	30.1	27
Montana	12.3	43	29.8	47	5.5	50	21.3	50	18.8	50	20.2	43	78.1	19	20.0	42	19.1	5	27.2	38
Nebraska	12.8	39	30.5	44	6.4	36	23.5	39	23.9	17	20.7	41	82.2	5	21.2	34	18.0	16	26.4	41
Nevada	17.5	13	36.8	3	6.3	37	23.6	38	21.2	36	24.7	22	79.6	14	25.2	14	17.9	18	40.0	4
New Hampshire	10.8	53	33.4	23	5.6	49	22.5	47	20.2	41	19.9	44	71.5	47	21.2	34	17.7	19	26.1	42
New Jersey	15.2	24	33.8	19	7.1	29	25.6	22	20.1	43	26.9	15	73.4	42	19.4	45	16.0	30	32.8	11
New Mexico	16.9	18	27.2	53	5.7	48	21.1	51	20.2	41	22.9	28	77.6	25	22.0	27	15.3	35	27.6	35
New York	17.2	17	34.9	9	7.4	22	25.3	23	20.9	37	27.1	14	74.2	40	21.6	33	16.9	23	32.0	14
North Carolina	18.9	8	34.0	16	8.1	14	28.6	11	24.0	15	25.0	21	76.9	32	24.8	17	8.6	53	31.2	18
North Dakota	13.2	36	32.6	32	6.2	41	24.0	34	23.7	20	23.7	25	78.5	17	20.5	39	21.4	2	27.0	39
Ohio	14.2	30	33.9	17	8.9	8	26.3	20	24.9	10	26.4	17	77.3	29	25.2	14	16.7	25	32.0	14
Oklahoma	17.8	12	32.0	34	7.2	26	28.0	12	24.4	14	30.4	4	84.6	2	25.1	16	13.3	43	24.2	49
Oregon	16.2	22	34.1	15	6.3	37	24.0	34	21.5	35	18.8	46	75.9	36	20.9	37	15.5	32	29.5	31
Pennsylvania	15.0	27	35.2	6	8.0	16	26.5	19	23.8	19	22.6	30	75.3	39	25.4	12	18.0	16	30.9	21
Puerto Rico Rhode Island	35.0 14.2	1 30	30.3 33.1	45 27	11.0 6.8	1 33	27.3 28.9	16 9	22.9 18.4	26 51	45.2 23.3	1 26	84.7 72.9	1 45	13.6 22.4	52 25	9.8 18.2	51 15	59.8 23.8	2 50
South Carolina South Dakota	16.7 13.0	19 37	33.4 31.2	23 38	9.3 7.1	7 29	28.8 24.8	10 27	24.5 22.9	13	23.3	26 35	77.7 81.0	24 10	25.5 22.7	11 24	14.4 19.0	40 7	30.7 22.1	25 53
Tennessee	13.0	10	30.1	38 46	7.1 9.4	6	30.3	5	25.0	26 9	29.8	35 8	77.8	23	25.6	9	6.6	54	30.9	21
Tennessee	20.2	6	34.3	14	8.1	14	24.6	29	24.6	12	29.8	13	77.5	26	22.1	26	16.3	29	32.3	13
Utah	11.3	51	27.8	51	5.5	50	18.8	54	20.8	39	17.3	52	80.5	11	11.9	53	10.3	50	25.2	46
Vermont	10.7	54	30.9	40	5.8	46	23.1	43	19.6	48	18.7	48	67.5	53	19.5	43	17.3	20	25.9	43
			31.5	37	9.8	4			22.0	29	28.6			54	10.0		14.2	41	65.1	
Virgin Islands	17.3 12.9	15 38	31.5	29	9.8 7.2	4 26	24.8	27 30	22.0	33	28.6	10 33	66.1 74.2	54 40	22.0	54 27	14.2	37	30.4	1 26
Virginia Washington	13.8	38	32.9	25	6.6	26 35	24.4 23.8	30 36	21.7	33	17.7	51	76.7	34	19.5	43	15.1	36	26.6	40
West Virginia	25.3	2	38.1	25	9.8	33 4	33.6	1	27.7	3	28.0	11	81.3	8	27.3	3	11.1	49	30.9	21
Wisconsin	12.0	47	32.8	30	6.0	43	24.3	31	20.9	37	18.8	46	78.5	17	22.0	27	24.2	1	27.9	34
Wyoming	12.3	43	34.9	9	5.8	46	23.8	36	20.1	43	21.1	39	77.9	22	24.6	19	18.3	12	27.4	37
US Total	16.2		33.6		7.5		25.8		22.8		24.6		76.5		22.2		15.8		30.8	
				tion 200													12.0		23.0	

Source: Centers for Disease Control & Prevention - 2003 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

 $a.\ 54\ states/territories\ conducted\ the\ survey.\ States/territories\ with\ the\ same\ prevalence\ share\ the\ same\ rank.$ 

Appendix I

Behavioral Risk Factor Prevalences in 49 States, District of Columbia, and Territories<sup>a</sup>

United States, 2004

State		r Poor alth	Insur	lealth rance, 18-64	No Lo			esity I 30+)		rent oking		co Use		nge iking	Dial	betes		Curi Asth		Past 1	Immun. 12 Mo., s 65+
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	9/	o	Rnk	%	Rnk
Alabama	20.2	6	19.7	17	29.6	6	28.8	2	24.9	8			12.7	41	8.1	10	8.	6	18	33.7	15
Alaska	12.3	40	17.7	22	20.6	38	23.7	22	24.8	9			16.4	17	4.2	52	9.		13	35.9	6
Arizona	14.9	27	21.6	13	24.2	21	21.2	41	18.5	45			15.5	24	6.6	30	7.		43	33.6	16
Arkansas	19.9	7	22.4	11	26.5	10	26.1	6	25.6	6	6.5	3	11.2	46	7.1	25	7.		38	30.8	32
		,																-			
California	17.5	15	20.1	16	22.7	27	22.2	34	14.8	49			14.7	28	7.1	25	7.		32	29.0	35
Colorado	11.7	48	17.9	21	18.7	45	16.8	52	20.0	36			17.3	11	4.3	51	8.		17	21.1	52
Connecticut	11.4	49	11.3	48	18.9	43	19.7	48	18.1	47			14.9	27	6.0	41	9.		4	26.7	41
Delaware	13.7	31	10.5	50	21.8	32	21.1	42	24.4	11			17.4	10	7.0	27	10	.0	3	30.5	33
D.C.	11.1	50	12.1	46	22.3	28	22.5	33	20.9	25			16.7	16	8.3	7	9.	2	10	44.7	3
Florida	16.5	19	24.7	7	23.6	24	22.9	31	20.2	34			12.5	43	7.8	12	7.	3	41	34.5	11
Georgia	15.4	26	19.3	19	25.8	12	24.7	15	20.0	38			12.1	45	7.3	21	7.	4	38	35.5	8
Idaho	12.5	38	18.5	20	19.1	41	20.8	45	17.4	48			12.7	42	6.1	40	8.	0	29	33.6	17
	1		1						20.0	1.0			1.5.5						2.		
Illinois	15.5	25	16.6	29	24.9	15	23.0	30	22.2	19			17.5	9	6.0	41	8.		24	34.5	12
Indiana	17.4	17	17.4	25	25.3	14	25.5	9	24.9	7	2.5	_	14.5	29	7.7	15	8.		24	35.6	7
Iowa Kansas	12.4	39	12.9	45	21.3	36 25	23.5	23	20.8	27	3.5	9	19.0	4	6.4	36	6.		49	25.8	44
Kansas	13.0	32	15.3	34	23.2	25	23.2	26	19.8	41			12.9	40	6.5	33	7.	+	38	31.7	27
Kentucky	21.9	4	17.3	26	29.8	3	25.8	7	27.5	1	5.0	4	9.6	49	7.5	18	8.	3	26	35.1	10
Louisiana	18.8	10	25.7	5	29.8	4	26.9	5	23.5	14	4.1	6	14.2	32	8.3	7	6.	2	50	31.2	30
Maine	15.9	21	15.2	35	21.5	34	23.4	24	21.0	24			14.9	26	7.5	18	9.	6	7	27.4	39
Maryland	11.8	47	13.3	44	21.8	31	23.9	20	19.5	42			12.9	39	7.2	23	7.	8	31	35.4	9
Massachusetts	12.0	45	11.0	49	20.0	40	18.4	51	18.5	46			17.0	14	5.6	47	9.	7	4	29.3	34
Michigan	14.2	30	14.3	40	22.1	29	25.4	10	23.3	15			16.1	20	7.7	15	8.		26	32.8	22
Minnesota	10.0	52	9.2	51	15.9	52	22.6	32	20.7	28			19.8	3	5.0	50	7.		36	21.6	51
Mississippi	23.0	3	23.8	8	31.3	2	29.5	1	24.5	10			10.4	47	9.6	3	7.		44	33.0	20
Mississippi	23.0	3	23.0		31.3	_	27.3		24.5	10			10.4	/	7.0	3	′	•		33.0	20
Missouri	15.8	22	15.7	32	24.8	16	24.9	13	24.1	13			16.2	18	7.3	21	9.	1	12	30.9	31
Montana	12.8	34	23.1	9	18.9	44	19.7	47	20.4	30			17.1	12	6.0	41	8.		18	27.6	38
Nebraska	12.2	41	15.2	36	21.6	33	23.2	27	20.3	33	4.5	5	17.6	7	6.3	39	6.		47	23.8	49
Nevada	18.1	12	25.4	6	24.2	20	21.1	43	23.2	16			18.0	6	6.4	36	7.	1	44	40.8	4
New Hampshire	11.1	51	14.1	41	18.5	46	21.6	38	21.7	22	2.0	12	16.1	22	6.5	33	10	.3	1	29.0	36
New Jersey	15.7	23	17.1	28	25.7	13	21.9	37	18.8	44	0.8	13	14.5	30	6.8	29	8.		18	32.0	25
New Mexico	18.6	11	25.9	4	21.2	37	21.5	39	20.3	32			13.0	37	6.5	33	9.		9	27.3	40
New York	17.5	16	17.2	27	26.5	9	22.1	36	19.9	39			15.3	25	7.5	18	8.	9	15	34.0	13
	400		***					4.0				_				_	_	_			
North Carolina	18.0	13	21.8	12	24.7	17	24.2	19	23.1	17	4.1	7	9.6	50	8.4	5	7.		36	32.8	23
North Dakota	12.2	43	16.0	30	21.3	35	24.6	16	19.9	40	2.7		20.5	2	5.9	45	7.		32	25.7	46
Ohio Oklahoma	14.6	29	15.4	33	23.0	26	25.3	11	25.9	5	2.7	11	16.9	15	7.8	12	8.		22	32.3	24
Okianoma	19.7	8	26.0	3	27.8	8	24.9	14	26.1	4			13.0	38	8.0	11	8.	3	26	24.8	47
Oregon	15.6	24	21.0	14	17.2	50	21.2	40	20.0	35			13.2	36	6.6	30	9.	7	4	29.0	37
Pennsylvania	15.9	20	14.5	38	24.4	19	24.3	18	22.7	18			17.6	8	7.8	12	8.	8	16	36.0	5
Puerto Rico	34.8	1	9.2	52	46.6	1	24.3	17	12.6	50			12.3	44	10.7	2	6.	2	50	64.4	1
Rhode Island	14.8	28	14.4	39	24.2	22	19.0	49	21.3	23			18.3	5	7.2	23	9.	6	7	26.5	42
South Carolina	17.7	14	19.7	18	23.8	23	25.1	12	24.3	12			13.5	35	8.3	7	7.	6	35	33.8	14
South Dakota	12.6	36	13.5	43	19.0	42	23.1	21	20.3	31			17.0	13	6.6	30	6.		48	23.0	50
Tennessee	19.4	9	13.7	43	29.7	5	27.2	4	26.2	3			8.3	52	8.4	5	9.		13	33.5	18
Texas	20.4	5	30.7	2	26.1	11	25.8	8	20.5	29	4.0	8	15.7	23	7.7	15	7.		44	32.8	21
Utah	12.6	37	17.7	23	16.9	51	20.4	46	10.5	51			9.3	51	5.1	49	8.		29	24.5	48
Vermont	12.0	44	14.6	37	18.1	48	18.7	50	20.0	37			16.1	21	5.3	48	8.		22	33.2	19
Virgin Islands	16.7	18	32.2	1	28.8	7	23.2	28	9.4	52	0.4	14	13.6	34	8.8	4	4.		52	60.6	2
Virginia	12.7	35	15.9	31	21.9	30	23.1	29	20.8	26	3.3	10	13.8	33	7.0	27	7.	3	41	31.3	29
Washington	13.0	33	17.5	24	17.3	49	22.2	35	19.2	43			14.2	31	6.4	36	9.	2	10	31.8	26
West Virginia	23.5	2	22.7	10	24.5	18	27.6	3	26.9	2	8.1	2	9.7	48	10.9	1	10		2	31.5	28
Wisconsin	11.9	46	11.9	47	18.5	47	23.2	25	21.9	20			21.8	1	5.7	46	8.		18	25.7	45
Wyoming	12.2	42	20.3	15	20.1	39	20.8	44	21.7	21	9.3	1	16.2	19	6.0	41	7.		32	26.0	43
	16.4		10.7		24.0		22.5		20.7		NI/A		140		7.3		6	,		22.2	1
US Total	16.4		18.7		24.0		23.5		20.7		N/A		14.8		7.2		8.	1		32.2	1

 $Source: Centers \ for \ Disease \ Control \ \& \ Prevention - 2004 \ Behavioral \ Risk \ Factor \ Data; \ West \ Virginia \ Health \ Statistics \ Center, \ 2006.$ 

a. 52 states/territories conducted the survey. No data available for Hawaii. States/territories with the same prevalence share the same rank.

b. Influenza immunization was measured by questions about either a flu shot or a flu vaccine sprayed in the nose. Before 2004, this measure included only the flu shot question.

Appendix J

Behavioral Risk Factor Prevalences in 50 States, District of Columbia, and Territories<sup>a</sup>

United States, 2005

Alsakas   128   42   185   88   24   43   43   474   81   49   494   418	State	Fair o Hea	r Poor alth	Insur	ealth ance, 18-64	No Le		Obe (BMI	esity [ 30+)		rent king	Heart A	ory of Attack, "Stroke		nge iking	Dial	betes		Cur Astl	rent nma	Past 1	Immun. 12 Mo., s 65+
Alsola Lange Lang		%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	9	<b>6</b>	Rnk	%	Rnk
Assome 155 25 282 88 282 88 282 89 284 39 294 394 214 395 395 395 395 395 395 395 395 395 395	Alabama	21.0	7	20.0	19	29.7	9	28.9	5	24.8	7	10.1	6	10.4	47	9.8	4	7	.1	43	38.9	9
Asimanse 1, 16   1, 23, 1, 10   30, 6   6, 28, 8   7, 25, 5   10   9, 4   11   10, 0   47   81   10, 10   7, 5   22   34, 5   26   26   26   26   27   27   28   38   26   28   28   28   28   28   28   2	Alaska	12.8	42	18.5	8	21.4	43	27.4	8	24.9	6	5.4	51	17.5	7	4.4	53	7	.8	29	38.9	9
Comericient   17-6   44   99   20   329   329   329   329   329   329   329   329   329   320   330   300	Arizona	15.5	25	25.2	8	22.6	34	21.1	47	20.2	30	8.5	19	14.5	26	7.5	25	7	.4	35	37.4	18
Comerciscut 12.7   44   8.4.   9.   17.3   8.2   17.8   8.3   8.9.   8.0   8.0   8.0   8.0   16.2   16.2   14.8   8.0	Arkansas	21.6	4	23.1	10	30.6	6	28.0	7	23.5	10	9.4	11	10.4	47	8.1	16	7	.5	32	34.5	26
Comericism   122    46	California	17.6	14	19.9	20	23.9	27	22.7	38	15.2	50	7.1	39	14.0	31	7.1	31	7	.2	40	33.7	30
Delaware 130 989 92 51 83 49 29 14 1 233 29 253 49 18 24 25 16 18 36 18 48 25 18 18 14 28 20 18 18 18 18 18 18 18 18 18 18 18 18 18	Colorado	12.7	44	18.4	9	17.3	52	17.8	53	19.8	36	5.2	52	16.2	14	4.8	52	8	.2	22	25.3	51
Delaware 130 989 92 51 83 49 29 14 1 233 29 253 49 18 24 25 16 18 36 18 48 25 18 18 14 28 20 18 18 18 18 18 18 18 18 18 18 18 18 18	Connecticut	12.2	46	10.6	49	21.2	45	20.1	51	16.5	49	6.9	42	14.8	22	6.5	41	8	.0	25	28.7	44
Decimental 1,77 1, 13, 2,8 1,12 1,18 1,18 1,18 1,18 1,18 1,18	Delaware																					
Georgian   167   19   187   7   272   13   26.5   14   21.1   17   7.5   33   12.1   42   8.3   14   7.3   30   39   9   9   146   187   1	D.C.	12.5	45	11.2	48	22.5	35	21.7	42	20.0	32	6.5	48	16.8	9	7.1	31	9	.2	8	45.3	4
Henwaii 13.6   32   93   50   19.5   46   19.7   52   17.0   48   6.9   42   15.5   13   7.3   27   7.5   32   27.3   47   Idahoh   149   27   22.3   12   21.6   41   24.5   25   17.9   45   58.4   22   13.3   36   6.8   36   7.3   36   35.8   24   Illimiosi   15.7   24   16.9   28   25.6   21   25.1   21.9   35   58.1   25   15.8   39   7.3   36   6.8   36   7.3   36   35.8   24   Illimiosi   15.7   24   16.9   28   25.6   21   25.1   21.9   35   58.1   25   15.8   9.7   20   7.0   45   43.8   6.8   Indiana   16.7   19   18.2   10   26.9   15   27.2   10   27.3   2.8   7.1   16.8   9.7   36   36   7.2   40   22.0   20.0   Indiana   15.7   24   25   25   25   25   25   25   25	Florida	17.7	13	25.4	5	26.9	15	22.8	37	21.6	19	10.4	5	14.1	30	8.8	10	6	.8	47	44.2	5
Mathole	Georgia	16.7	19	18.7	7	27.2	13	26.5	14	22.1	17	7.5	33	12.1	42	8.3	14	7	.3	36	38.9	9
Himons   15,7   24   16,9   28   25,6   21   25,1   23,1   23,1   24,1   25,1	Hawaii	13.6	32	9.3	50	19.5	46	19.7	52	17.0	48	6.9	42	16.5	13	7.3	27	7	.5	32	27.3	47
Himons   15,7   24   16,9   28   25,6   21   25,1   23,1   23,1   24,1   25,1	Idaha	14.0	27	22.2	12	21.6	41	24.5	25	17.0	15	0.1	22	12.2	26	60	26	1 ,	2	26	25.0	24
Indiama   16.7   99   18.2   10.0   26.9   15.   27.2   10   27.3   2.0   27.3   2.0   27.5   28.6   27.5   28.6   28.6   4.0   28.6																						
Down   122																						
Kamss         13.1         38         15.6         32         24.4         26         23.9         30         17.8         46         79.0         29         12.4         40         6.9         34         6.9         34         6.9         16         33.8         29         22.6         13.3         10.0         3.0         10.4         47.0         3.0         9.2         6.0         5.9         5.2         37.4         1.8         13.0         22.6         13.3         10.0         3.0         9.2         6.0         5.9         5.2         37.4         1.8         18.8         18.0         3.3         2.2         37.4         4.1         1.0         4.0         3.1         7.2         4.0         1.8         4.0	Iowa		-																			
Kennicky 23.7	Kansas																					
Consisian   Cons	Kentucky																					
Maiscoland II-9	-																					
Maryland	Louisiana																					
Massachusetts         13.2         36         11.8         47         23.3         29         20.7         49         18.1         43         7.2         37         15.7         17         6.4         44         9.6         6         90.0         41           Michigan         11.3         25         18.1         52         21.5         22.5         35         23.7         32         20.0         32         61         49         18.7         3         5.8         49         8.4         20         21.9         33           Mississippi         23.6         4         21.8         15.5         32.4         4         30.9         1         23.6         8         10.7         4         9.8         50         9.8         4         7.2         40         38.2         13           Missouri         17.0         14         15.5         3         22.4         28         20.0         16         21.3         21         49.2         40         40.2         40         40.2         40         41.4         43         7.2         20.0         38.2         13         38.1         15.7         20.2         40.0         38.2         13																						
Michigam  15.1   26   14.7   36   22.5   35   26.2   15   22.0   18   9.0   13   16.6   12   8.1   16   9.1   12   32.7   33    Minnesouri   11.3   52   8.1   52   16.2   53   23.7   32   20.0   32   6.1   49   18.7   3   5.8   49   8.4   20   21.9   53    Mississippi   23.6   4   21.8   15   32.4   4   30.9   12   23.5   35   26.1   49   18.7   3   5.8   49   8.4   20   21.9   53    Mississippi   23.6   4   21.8   15   32.4   4   30.9   12   23.4   11   9.7   10   14.7   23   7.7   22   9.0   13   38.1   15    Montana   14.4   31   25.6   4   22.4   38   21.3   44   19.2   40   7.1   39   16.8   9   5.7   50   7.9   28   30.2   40    Nebraska   13.3   34   16.5   29   23.8   28   26.0   16   21.3   21   7.2   37   7.7   22   7.5   50   7.9   28   30.2   40    Newdaa   17.2   16   23.3   7   28   8   17   21.2   45   23.1   36   20.4   27   8.1   25   14.7   23   6.5   41   10.3   2   29.6   43    New Jersey   16.6   21   17.2   11   29.2   10   22.1   41   18.0   44   7.8   30   13.2   37   7.7   22   7.5   32   36.1   23    New York   16.9   18   16.0   31   27.1   14   22.2   40   20.4   27   7.7   32   14.7   23   8.5   12   6.5   51   34.4   23.1   36   20.4   27   7.7   32   31.4   32   31.4   32   32   32   32   32   32   32   3																						
Minnesota         11.3         52         8.1         52         16.2         53         23.7         32         20.0         32         61.         49         18.7         3         5.8         49         8.4         20         21.9         53           Mississippi         23.6         4         21.8         15.5         32.4         4         30.9         1         23.6         8         10.7         4         9.8         50         9.8         4         7.2         40         38.2         13           Missouri         17.6         14         13.5         3         25.4         22.4         28.9         10.0         11.1         9.7         10.1         14.7         23.7         7.2         20.9         13.3         30.2         40           Newbrasha         13.3         34         16.5         29         23.8         28.0         16.0         16.2         23.3         24         17.2         31         7.1         43         47.1         43         49.2         40         23.1         45         22.3         14.7         17.3         8.8         73.3         27         70.2         29.6         43           Mew Jer																						
Mississippi 23.6 4 21.8 15 32.4 4 30.9 1 23.6 8 10.7 4 9.8 50 9.8 4 7.2 40 38.2 13 Missouri 17.6 14 15.5 33 25.4 24 26.9 12 23.4 11 9.7 10 14.7 23 7.7 22 9.0 13 38.1 15 Missouri 17.6 14 15.5 33 25.4 24 26.9 12 23.4 11 9.7 10 14.7 23 7.7 22 9.0 13 38.1 15 Montana 14.4 31 25.6 4 22.4 38 21.3 44 19.2 40 7.1 39 16.8 9 5.7 5 0.7 9 28 30.2 40 18.0 Ebraska 13.3 34 16.5 29 23.8 28 26.0 16 21.3 21 7.2 37 17.3 8 7.3 27 6.7 49 27.1 48 Novada 17.2 16 25.3 7 26.8 17 21.2 45 23.1 12 8.3 24 17.6 6 7.1 31 71. 43 47.0 3 New Hampshire 11.1 53 12.4 45 21.6 41 23.1 36 20.4 27 8.1 25 14.7 23 6.5 41 10.3 2 29.6 43 14.0 13.8 14.0 13.1 15 14.1 15.1 15.0 13.1 15.0 14.1 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	_																					
Missouri	Willinesota	11.3	32	0.1	32	10.2	33	23.1	32	20.0	32	0.1	49	10.7	3	3.0	49	0	.4	20	21.9	33
Montana   14.4   31   25.6   4   22.4   38   21.3   44   19.2   40   7.1   39   16.8   9   5.7   5.0   7.9   28   30.2   40   Nebraska   13.3   34   16.5   29   23.8   28   26.0   16   21.3   21   7.2   37   17.3   8   7.3   27   67   49   27.1   48   Newada   17.2   16   25.3   7   26.8   17   21.2   45   23.1   36   20.4   27   8.1   25   14.7   23   6.5   41   10.3   2   29.6   43   New Hampshire   11.1   53   12.4   45   21.6   41   23.1   36   20.4   27   8.1   25   14.7   23   6.5   41   10.3   2   29.6   43   New Jersey   16.6   21   17.2   11   29.2   10   22.1   41   18.0   44   7.8   30   13.2   37   7.7   22   7.5   32   36.1   22   New Mexico   17.9   12   25.8   33   23.3   29   21.7   42   21.5   20   6.9   42   10.6   45   7.3   27   8.9   14   32.0   37   New York   16.9   18   16.0   31   27.1   41   22.2   40   20.4   27   7.7   32   47.7   32   8.1   16   9.3   7   371   20   North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27   North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42   Oklahoma   18.7   10   24.8   9   30.6   6   6.8   13   25.1   5   9.9   7   12.6   39   8.9   8   8.5   18   26.8   50   Oregon   16.1   22   20.9   17   18.6   49   23.8   31   18.5   42   7.4   34   13.9   34   6.7   38   10.1   4   31.0   38   Pennsylvania   14.6   30   12.8   42   25.8   20   25.3   22   23.6   8   8.8   14   16.0   15   8.1   16   8.1   24   40.5   7   Penter Kico   34.1   1   8.0   35.4   40   25.9   19   21.0   48   19.8   36   7.4   34   15.1   15.0   46   44   10.7   1   32.6   34   Pennsylvania   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   15   19   18.0   5   6.4   44   10.7   1   32.6   34   Pennsylvania   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   18.8   15   18.0   5   6.4   44   10.7   1   32.6   34   Pennsylvania   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   19   18.0   5   6.4   44	Mississippi	23.6	4	21.8	15	32.4	4	30.9	1	23.6	8	10.7	4	9.8	50	9.8	4	7	.2	40	38.2	13
Nebraska 13.3 34 16.5 29 23.8 28 26.0 16 21.3 21 7.2 37 17.3 8 7.3 27 6.7 49 27.1 48 Nevada 17.2 16 25.3 7 26.8 17 21.2 45 23.1 12 8.3 24 17.6 6 7.1 31 7.1 43 47.0 3 New Hampshire 11.1 53 12.4 45 21.6 41 23.1 36 20.4 27 8.1 25 14.7 23 6.5 41 10.3 2 29.6 43 New Hampshire 11.1 53 12.4 45 21.6 41 23.1 36 20.4 27 8.1 25 14.7 23 6.5 41 10.3 2 29.6 43 New Jersey 16.6 21 17.2 111 29.2 10 21.1 41 81.0 44 7.8 25 14.7 23 8.1 16 9.3 7.7 22 7.5 32 36.1 22 New Mexico 17.9 12 25.8 3 23.3 29 21.7 42 21.5 20 6.9 42 10.6 45 7.3 27 8.9 14 32.0 37 Now York 16.9 18 16.0 31 27.1 14 22.2 40 20.4 27 7.7 32 14.7 23 8.1 16 9.3 7 37.1 20 North Carolina 18.6 11 22.5 11 25.6 21 25.9 17 22.6 13 8.7 16 10.5 46 8.5 12 6.5 51 34.4 27 North Dakota 12.0 49 13.6 39 23.1 32 25.4 20 20.1 31 7.8 30 18.9 2 6.7 38 7.3 36 29.7 42 Ohio 14.8 28 15.1 34 25.6 21 24.3 28 22.3 16 8.1 25 15.2 19 7.7 22 8.0 25 35.2 25 Oklahoma 18.7 10 24.8 9 30.6 6 26.8 13 25.1 5 9.9 7 12.6 39 8.9 8 8 8.5 18 26.8 50 Oregon 16.1 22 20.9 17 18.6 49 23.8 31 18.5 42 7.4 43 13.9 34 6.7 38 10.1 4 31.0 38 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 23.6 8 8.8 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 36.8 8.8 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 35.0 16 8.8 81 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 35.0 16 8.8 81 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 35.0 8.8 8.8 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 32 22 35.0 15 8.8 14 16.0 15 8.1 16 8.1 24 40.5 7 Pennsylvania 14.6 30 12.8 42 25.8 20 25.3 35 22.5 19 19 18.0 5 6.4 44 10.7 1 32.6 34 35 31 32 34 35 35 35 35 35 35 35 35 35 35 35 35 35	Missouri	17.6												14.7								
New Adama	Montana																					
New Hampshire   11.1   53   12.4   45   21.6   41   23.1   36   20.4   27   8.1   25   14.7   23   6.5   41   10.3   2   29.6   43    New Jersey   16.6   21   17.2   11   29.2   10   22.1   41   18.0   44   7.8   30   13.2   37   7.7   22   7.5   32   36.1   22    New Mexico   17.9   12   25.8   3   23.3   29   21.7   42   21.5   20   6.9   42   10.6   45   7.3   27   8.9   14   32.0   37    New York   16.9   18   16.0   31   27.1   14   22.5   40   20.4   27   7.7   32   14.7   23   8.5   116   9.3   7   37.1   20    North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27    North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42    Ohio   14.8   28   15.1   34   25.6   21   24.3   28   22.3   16   8.1   25   15.2   19   7.7   22   8.0   25   35.2   25    Oklahoma   18.7   10   24.8   9   30.6   6   26.8   13   25.1   5   9.9   7   12.6   39   8.9   8   8.5   18   26.8   50    Oregon   16.1   22   20.9   17   18.6   49   23.8   31   18.5   42   7.4   34   13.9   34   6.7   38   10.1   4   31.0   38    Pennsylvania   14.6   30   12.8   42   25.8   20   25.3   22   23.6   8   8.8   14   16.0   15   8.1   16   8.1   24   40.5   7    Puerto Rico   34.1   1   8.0   53   49.0   1   23.7   32   13.1   51   11.5   2   15.2   19   12.5   1   8.8   15   67.8   1    South Dakota   12.8   42   14.0   38   22.5   35   25.5   19   19.8   36   7.4   34   15.1   21   6.4   44   7.3   36   23.7   32    Texas   19.8   8   32.7   2   27.4   12   27.0   11   20.0   32   8.5   19   18.0   5   6.4   44   7.3   36   23.7   32   32    Vermont   11.5   51   14.2   37   19.2   47   20.2   50   19.3   39   7.4   34   15.8   16   6.0   48   9.8   5   33.6   31    Virgin Islands   16.1   22   33.1   1   30.0   8   25.6   18   8.1   53   4.2   53   11.3   44   8.4   13   4.4   53   62.5   2    Virginia   13.3   34   12.8   42   21.3   44   25.1   23   30.6   30   20.7   24   6.9   42   21.1																						
New Jersey   16.6   21   17.2   11   29.2   10   22.1   41   18.0   44   7.8   30   13.2   37   7.7   22   7.5   32   36.1   22   37   New Mexico   17.9   12   25.8   3   23.3   29   21.7   42   21.5   20   6.9   42   10.6   45   7.3   27   8.9   14   32.0   37   New York   16.9   18   16.0   31   27.1   14   22.2   40   20.4   27   7.7   32   14.7   23   8.1   16   9.3   7   37.1   20   North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27   North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   78.   30   18.9   2   6.7   38   7.3   36   29.7   42   21.5   20   20.1   31   78.   30   18.9   2   6.7   38   7.3   36   69.7   42   21.5   20   20.1   31   78.   30   18.9   2   6.7   38   7.3   36   69.7   42   25.8   20   20.1   31   78.   30   18.9   2   6.7   38   7.3   36   69.7   42   25.8   20   25.3   22.3   16   8.1   25   15.2   19   7.7   22   8.0   25   35.2   25   25   25   25   25   25   25																						
New Mexico   17.9   12   25.8   3   23.3   29   21.7   42   21.5   20   6.9   42   10.6   45   7.3   27   8.9   14   32.0   37   Now York   16.9   18   16.0   31   27.1   14   22.2   40   20.4   27   7.7   32   32   14.7   23   8.1   16   9.3   7   37.1   20   North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27   North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42   Ohio   14.8   28   15.1   34   25.6   21   24.3   28   22.3   16   8.1   25   15.2   19   7.7   22   8.0   25   35.2   25   Oklahoma   18.7   10   24.8   9   30.6   6   26.8   13   25.1   5   9.9   7   12.6   39   8.9   8   8.5   18   26.8   50   Oregon   16.1   22   20.9   17   18.6   49   23.8   31   18.5   42   7.4   34   13.9   34   6.7   38   10.1   4   31.0   38   Pennsylvania   14.6   30   12.8   42   25.8   20   25.3   22   23.6   8   8.8   14   16.0   15   8.1   16   8.1   24   40.5   7   Puerto Rico   34.1   1   8.0   53   49.0   1   23.7   32   13.1   51   11.5   2   15.2   19   12.5   1   8.8   15   67.8   1   Rhode Island   13.2   36   13.4   40   25.9   19   21.0   48   19.8   36   7.4   34   15.1   21   6.4   44   10.7   1   32.6   34   South Carolina   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   8.8   14   12.8   38   10.3   3   6.6   50   38.7   12   South Dakota   12.8   42   14.0   38   22.5   35   25.5   19   19.8   36   8.5   19   18.0   5   6.4   44   10.7   1   32.6   34   South Carolina   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   8.8   14   12.8   38   10.3   3   6.6   50   38.7   12   Utah   13.0   39   17.1   26   18.5   50   21.2   45   11.5   52   5.6   50   8.3   5.5   51   8.0   25   30.3   39   Vermont   11.5   51   14.2   37   19.2   47   20.2   50   19.3   39   7.4   34   15.8   16   6.0   48   9.8   5   33.6   31   Virgin Islands   16.1   22   22.2   14   28.5   11   30.6   3   26.7   3   31.5   11.5   51   51.0   48   49   49.2	New Hampshire	11.1	53	12.4	45	21.6	41	23.1	36	20.4	27	8.1	25	14./	23	6.5	41	10	).3	2	29.6	43
New York   16.9   18   16.0   31   27.1   14   22.2   40   20.4   27   7.7   32   14.7   23   8.1   16   9.3   7   37.1   20   North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27   North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42   Olitical   14.8   28   15.1   34   25.6   21   24.3   28   22.3   16   8.1   25   15.2   19   7.7   22   8.0   25   35.2   25   Olklahoma   18.7   10   24.8   9   30.6   6   26.8   13   25.1   5   29.7   Oregon   16.1   22   20.9   17   18.6   49   23.8   31   18.5   42   7.4   34   13.9   34   6.7   38   10.1   4   41.0   38   Pennsylvania   14.6   30   12.8   42   25.8   20   25.3   22   23.6   8   8.8   14   16.0   15   8.1   16   8.1   24   40.5   7   Puerto Rico   34.1   1   8.0   53   49.0   1   23.7   32   13.1   51   11.5   2   15.2   19   12.5   1   8.8   15   67.8   1   Rhode Island   13.2   36   13.4   40   25.9   19   21.0   48   19.8   36   7.4   34   15.1   21   64   44   10.7   1   32.6   34   South Carolina   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   8.8   14   12.8   38   10.3   3   6.6   50   38.7   12   Texas   19.8   8   32.7   2   27.4   12   27.0   11   20.0   32   8.5   19   14.3   28   7.9   20   6.8   47   38.1   15   Utah   13.0   39   17.1   26   18.5   50   21.2   45   11.5   52   5.6   50   8.3   53   5.5   51   8.0   25   30.3   39   Vermont   11.5   51   14.2   37   19.2   47   20.2   50   19.3   39   7.4   6.9   42   21.1   48   8.4   13   4.4   53   62.5   2   West Virginia   24.7   2   22.2   14   28.5   11   30.6   3   26.7   3   31.7   1   9.1   51   10.4   2   9.2   8   36.2   21   Washington   13.4   48   12.2   46   18.7   48   24.4   26   20.7   24   6.9   42   21.1   1   6.6   40   9.2   8   28.1   46   Wyoning   13.0   39   21.0   16   22.0   40   24.2   29   21.3   21.0   21.6   21.0   21.6   21.0   21.0   21.0   21.0   21.0   21.0   21.0   21.0   21.0   21.0   21.0	New Jersey	16.6	21	17.2	11	29.2	10	22.1	41	18.0	44	7.8	30	13.2	37	7.7	22	7	.5	32	36.1	22
North Carolina   18.6   11   22.5   11   25.6   21   25.9   17   22.6   13   8.7   16   10.5   46   8.5   12   6.5   51   34.4   27   North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42   Ohio   14.8   28   15.1   34   25.6   21   24.3   28   22.3   16   8.1   25   15.2   19   7.7   22   8.0   25   35.2   25   Oklahoma   18.7   10   24.8   9   30.6   6   26.8   13   25.1   5   9.9   7   12.6   39   8.9   8   8.5   18   26.8   50   Oregon   16.1   22   20.9   17   18.6   49   23.8   31   18.5   42   7.4   34   13.9   34   6.7   38   10.1   4   31.0   38   Pennsylvania   14.6   30   12.8   42   25.8   20   25.3   22   23.6   8   8.8   14   16.0   15   8.1   16   8.1   24   40.5   7   Puerto Rico   34.1   1   8.0   53   49.0   1   23.7   32   13.1   51   11.5   2   15.2   19   12.5   1   8.8   15   67.8   1   Rhode Island   13.2   36   13.4   40   25.9   19   21.0   48   19.8   36   7.4   34   15.1   21   64.4   44   10.7   1   32.6   34   South Dakota   17.2   16   22.3   12   26.3   18   29.1   4   22.5   15   8.8   14   12.8   38   10.3   3   6.6   50   38.7   12   Temessee   19.5   9   16.1   30   33.1   3   27.4   8   26.7   3   9.9   7   8.6   52   9.1   7   7   7   7   31   38.2   13   Texas   19.8   8   32.7   2   27.4   12   27.0   11   20.0   32   8.5   19   14.3   28   7.9   20   68   47   38.1   15   Utah   13.0   39   17.1   26   18.5   50   21.2   45   11.5   52   5.6   50   8.3   53   5.5   51   8.0   25   30.3   39   Vermont   11.5   51   14.2   37   19.2   47   20.2   50   19.3   39   7.4   34   15.8   16   6.0   48   9.8   5   33.6   31   Virginia   13.3   34   12.8   42   21.4   44.5   23.3   35   17.6   47   6.9   42   13.8   35   6.3   47   92   8   32.1   36   West Virginia   24.7   2   22.2   14   28.5   11   30.6   3   26.7   3   13.7   1   9.1   51   10.4   2   9.2   8   32.1   36   West Virginia   13.0   39   21.0   16   22.0   40   24.2   29   21.3   21.6   6.9   42   22.1   1   6.6   40   9.2   8   32.1   36	New Mexico	17.9	12	25.8	3	23.3	29	21.7	42	21.5	20	6.9	42	10.6	45	7.3	27	8	.9	14	32.0	37
North Dakota   12.0   49   13.6   39   23.1   32   25.4   20   20.1   31   7.8   30   18.9   2   6.7   38   7.3   36   29.7   42   20.0	New York	16.9	18	16.0	31	27.1	14	22.2	40	20.4	27	7.7	32	14.7	23	8.1	16	9	.3	7	37.1	20
Ohio         14.8         28         15.1         34         25.6         21         24.3         28         22.3         16         8.1         25         15.2         19         7.7         22         8.0         25         35.2         25           Oklahoma         18.7         10         24.8         9         30.6         6         26.8         13         25.1         5         9.9         7         12.6         39         8.9         8         8.5         18         26.8         50           Oregon         16.1         22         20.9         17         18.6         49         23.8         31         18.5         42         7.4         34         13.9         34         6.7         38         10.1         4         31.0         38           Pennsylvania         14.6         30         12.8         42         25.8         20         25.3         22         23.6         8         8.8         14         16.0         15         8.1         16         8.1         24         40.5         7           Puerto Rico         34.1         1         8.0         25.3         42.0         1         23.7         32	North Carolina	18.6	11	22.5	11	25.6	21	25.9	17	22.6	13	8.7	16	10.5	46	8.5	12	6	.5	51	34.4	27
Oklahoma    18.7   10   24.8   9   30.6   6   26.8   13   25.1   5   9.9   7   12.6   39   8.9   8   8.5   18   26.8   50	North Dakota	12.0		13.6							31											
Oregon         16.1         22         20.9         17         18.6         49         23.8         31         18.5         42         7.4         34         13.9         34         6.7         38         10.1         4         31.0         38           Pennsylvania         14.6         30         12.8         42         25.8         20         25.3         22         23.6         8         8.8         14         16.0         15         8.1         16         8.1         24         40.5         7           Puerto Rico         34.1         1         8.0         53         49.0         1         23.7         32         13.1         51         11.5         2         15.2         19         12.5         1         8.8         15         67.8         1           Rhode Island         13.2         36         13.4         40         25.9         19         21.0         48         19.8         36         7.4         34         15.1         21         6.4         44         10.7         1         32.6         34           South Carolina         17.2         16         22.3         12         26.3         18         29.1	Ohio	14.8	28	15.1	34	25.6	21	24.3	28	22.3	16	8.1	25	15.2	19	7.7	22	8	.0	25	35.2	25
Oregon         16.1         22         20.9         17         18.6         49         23.8         31         18.5         42         7.4         34         13.9         34         6.7         38         10.1         4         31.0         38           Pennsylvania         14.6         30         12.8         42         25.8         20         25.3         22         23.6         8         8.8         14         16.0         15         8.1         16         8.1         24         40.5         7           Puerto Rico         34.1         1         8.0         53         49.0         1         23.7         32         13.1         51         11.5         2         15.2         19         12.5         1         8.8         15         67.8         1           Rhode Island         13.2         36         13.4         40         25.9         19         21.0         48         19.8         36         7.4         34         15.1         21         6.4         44         10.7         1         32.6         34           South Carolina         17.2         16         22.3         12         26.3         18         29.1	Oklahoma	18.7	10	24.8	9	30.6	6	26.8	13	25.1	5	9.9	7	12.6	39	8.9	8	8	.5	18	26.8	50
Pennsylvania         14.6         30         12.8         42         25.8         20         25.3         22         23.6         8         8.8         14         16.0         15         8.1         16         8.1         24         40.5         7           Puerto Rico         34.1         1         8.0         53         49.0         1         23.7         32         13.1         51         11.5         2         15.2         19         12.5         1         8.8         15         67.8         1           Rhode Island         13.2         36         13.4         40         25.9         19         21.0         48         19.8         36         7.4         34         15.1         21         6.4         44         10.7         1         32.6         34           South Carolina         17.2         16         22.3         12         26.3         18         29.1         4         22.5         15         8.8         14         12.8         38         10.0         3         6.6         50         38.7         12           South Dakota         12.8         42         14.0         38         22.5         35         25.5	Oregon		22		17						42	7.4			34	6.7	38					
Rhode Island   13.2   36   13.4   40   25.9   19   21.0   48   19.8   36   7.4   34   15.1   21   6.4   44   10.7   1   32.6   34   34   35   35   35   35   35   35	Pennsylvania	14.6	30	12.8	42	25.8	20	25.3	22	23.6	8	8.8	14	16.0	15	8.1	16	8	.1	24	40.5	7
South Carolina         17.2         16         22.3         12         26.3         18         29.1         4         22.5         15         8.8         14         12.8         38         10.3         3         6.6         50         38.7         12           South Dakota         12.8         42         14.0         38         22.5         35         25.5         19         19.8         36         8.5         19         18.0         5         6.4         44         7.3         36         23.7         52           Tennessee         19.5         9         16.1         30         33.1         3         27.4         8         26.7         3         9.9         7         8.6         52         9.1         7         7.7         31         38.2         13           Texas         19.8         8         32.7         2         27.4         11         20.0         32         8.5         19         14.3         28         7.9         20         6.8         47         38.1         15           Utah         13.0         39         17.1         26         18.5         50         21.2         45         11.5         52	Puerto Rico	34.1	1	8.0	53	49.0	1	23.7	32	13.1	51	11.5	2	15.2	19	12.5	1	8	.8	15	67.8	1
South Dakota 12.8	Rhode Island	13.2	36	13.4	40	25.9	19	21.0	48	19.8	36	7.4	34	15.1		6.4	44	10	).7	1	32.6	
Tennessee 19.5 9 16.1 30 33.1 3 27.4 8 26.7 3 9.9 7 8.6 52 9.1 7 7.7 31 38.2 13  Texas 19.8 8 32.7 2 27.4 12 27.0 11 20.0 32 8.5 19 14.3 28 7.9 20 6.8 47 38.1 15  Utah 13.0 39 17.1 26 18.5 50 21.2 45 11.5 52 5.6 50 8.3 53 5.5 51 8.0 25 30.3 39  Vermont 11.5 51 14.2 37 19.2 47 20.2 50 19.3 39 7.4 34 15.8 16 6.0 48 9.8 5 33.6 31  Virgin Islands 16.1 22 33.1 1 30.0 8 25.6 18 8.1 53 4.2 53 11.3 44 8.4 13 4.4 53 62.5 2  Virginia 13.3 34 12.8 42 21.3 44 25.1 23 20.6 25 8.1 25 12.2 41 6.9 34 8.7 17 32.9 32  Washington 13.4 33 17.1 26 17.4 51 23.3 35 17.6 47 6.9 42 13.8 35 6.3 47 9.2 8 32.1 36  West Virginia 24.7 2 22.2 14 28.5 11 30.6 3 26.7 3 13.7 1 9.1 51 10.4 2 9.2 8 36.2 21  Wisconsin 12.1 48 12.2 46 18.7 48 24.4 26 20.7 24 6.9 42 22.1 1 6.6 40 9.2 8 28.1 46  Wyoming 13.0 39 21.0 16 22.0 40 24.2 29 21.3 21 6.8 47 14.4 27 6.5 41 7.8 29 26.9 49	South Carolina	17.2	16	22.3	12	26.3	18	29.1	4	22.5	15	8.8	14	12.8	38	10.3	3	6	.6	50	38.7	12
Tennessee 19.5 9 16.1 30 33.1 3 27.4 8 26.7 3 9.9 7 8.6 52 9.1 7 7.7 31 38.2 13  Texas 19.8 8 32.7 2 27.4 12 27.0 11 20.0 32 8.5 19 14.3 28 7.9 20 6.8 47 38.1 15  Utah 13.0 39 17.1 26 18.5 50 21.2 45 11.5 52 5.6 50 8.3 53 5.5 51 8.0 25 30.3 39  Vermont 11.5 51 14.2 37 19.2 47 20.2 50 19.3 39 7.4 34 15.8 16 6.0 48 9.8 5 33.6 31  Virgin Islands 16.1 22 33.1 1 30.0 8 25.6 18 8.1 53 4.2 53 11.3 44 8.4 13 4.4 53 62.5 2  Virginia 13.3 34 12.8 42 21.3 44 25.1 23 20.6 25 8.1 25 12.2 41 6.9 34 8.7 17 32.9 32  Washington 13.4 33 17.1 26 17.4 51 23.3 35 17.6 47 6.9 42 13.8 35 6.3 47 9.2 8 32.1 36  West Virginia 24.7 2 22.2 14 28.5 11 30.6 3 26.7 3 13.7 1 9.1 51 10.4 2 9.2 8 36.2 21  Wisconsin 12.1 48 12.2 46 18.7 48 24.4 26 20.7 24 6.9 42 22.1 1 6.6 40 9.2 8 28.1 46  Wyoming 13.0 39 21.0 16 22.0 40 24.2 29 21.3 21 6.8 47 14.4 27 6.5 41 7.8 29 26.9 49	South Dakota	12.8	42	14.0	38	22.5	35	25.5	19	19.8	36	8.5	19	18.0	5	64	44	7	3	36	23.7	52
Texas	Tennessee																					
Utah       13.0       39       17.1       26       18.5       50       21.2       45       11.5       52       5.6       50       8.3       53       5.5       51       8.0       25       30.3       39         Vermont       11.5       51       14.2       37       19.2       47       20.2       50       19.3       39       7.4       34       15.8       16       6.0       48       9.8       5       33.6       31         Virginia Islands       16.1       22       33.1       1       30.0       8       25.6       18       8.1       53       4.2       53       11.3       44       8.4       13       4.4       53       62.5       2         Virginia       13.3       34       12.8       42       21.3       44       25.1       23       20.6       25       8.1       25       12.2       41       6.9       34       8.7       17       32.9       32         Washington       13.4       33       17.1       26       17.4       51       23.3       35       17.6       47       6.9       42       13.8       35       6.3       47       9.2	Texas																					
Vermont         11.5         51         14.2         37         19.2         47         20.2         50         19.3         39         7.4         34         15.8         16         6.0         48         9.8         5         33.6         31           Virginia         13.3         34         12.8         42         21.3         44         25.1         23         20.6         25         8.1         25         12.2         41         6.9         34         8.7         17         32.9         32           Washington         13.4         33         17.1         26         17.4         51         23.3         35         17.6         47         6.9         42         13.8         35         6.3         47         9.2         8         32.1         36           West Virginia         24.7         2         22.2         14         28.5         11         30.6         3         26.7         3         13.7         1         9.1         51         10.4         2         9.2         8         36.2         21           Wisconsin         12.1         48         12.2         46         18.7         48         24.4         2	Utah																					
Virginia         13.3         34         12.8         42         21.3         44         25.1         23         20.6         25         8.1         25         12.2         41         6.9         34         8.7         17         32.9         32           Washington         13.4         33         17.1         26         17.4         51         23.3         35         17.6         47         6.9         42         13.8         35         6.3         47         9.2         8         32.1         36           West Virginia         24.7         2         22.2         14         28.5         11         30.6         3         26.7         3         13.7         1         9.1         51         10.4         2         9.2         8         36.2         21           Wisconsin         12.1         48         12.2         46         18.7         48         24.4         26         20.7         24         6.9         42         22.1         1         6.6         40         9.2         8         28.1         46           Wyoming         13.0         39         21.0         16         22.0         40         24.2         29	Vermont																					
Washington       13.4       33       17.1       26       17.4       51       23.3       35       17.6       47       6.9       42       13.8       35       6.3       47       9.2       8       32.1       36         West Virginia       24.7       2       22.2       14       28.5       11       30.6       3       26.7       3       13.7       1       9.1       51       10.4       2       9.2       8       36.2       21         Wisconsin       12.1       48       12.2       46       18.7       48       24.4       26       20.7       24       6.9       42       22.1       1       6.6       40       9.2       8       38.2       21         Wyoming       13.0       39       21.0       16       22.0       40       24.2       29       21.3       21       6.8       47       14.4       27       6.5       41       7.8       29       26.9       49	Virgin Islands	16.1	22	33.1	1	30.0	8	25.6	18	8.1	53	4.2	53	11.3	44	8.4	13	4	.4	53	62.5	2
Washington       13.4       33       17.1       26       17.4       51       23.3       35       17.6       47       6.9       42       13.8       35       6.3       47       9.2       8       32.1       36         West Virginia       24.7       2       22.2       14       28.5       11       30.6       3       26.7       3       13.7       1       9.1       51       10.4       2       9.2       8       36.2       21         Wisconsin       12.1       48       12.2       46       18.7       48       24.4       26       20.7       24       6.9       42       22.1       1       6.6       40       9.2       8       38.2       21         Wyoming       13.0       39       21.0       16       22.0       40       24.2       29       21.3       21       6.8       47       14.4       27       6.5       41       7.8       29       26.9       49	Virginio	12.2	24	12.0	42	21.2	4.4	25 1	22	20.6	25	0 1	25	12.2	A1	60	24	٥	7	17	22.0	22
West Virginia       24.7       2       22.2       14       28.5       11       30.6       3       26.7       3       13.7       1       9.1       51       10.4       2       9.2       8       36.2       21         Wisconsin       12.1       48       12.2       46       18.7       48       24.4       26       20.7       24       6.9       42       22.1       1       6.6       40       9.2       8       28.1       46         Wyoming       13.0       39       21.0       16       22.0       40       24.2       29       21.3       21       6.8       47       14.4       27       6.5       41       7.8       29       26.9       49	-																					
Wisconsin   12.1   48   12.2   46   18.7   48   24.4   26   20.7   24   6.9   42   22.1   1   6.6   40   9.2   8   28.1   46   40   40   40   40   40   40   40	_																					
Wyoming   13.0   39   21.0   16   22.0   40   24.2   29   21.3   21   6.8   47   14.4   27   6.5   41   7.8   29   26.9   49																						
US Total   16.7     18.8     25.5     24.5     20.4     8.3     14.2     7.8     7.9     36.6					10								''				'-					.,
	US Total	16.7		18.8		25.5		24.5		20.4		8.3		14.2		7.8		7	.9	ļ	36.6	

Source: Centers for Disease Control & Prevention - 2005 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2006.

a. 53 states/territories conducted the survey. States/territories with the same prevalence share the same rank.

b. Influenza immunization was measured by questions about either a flu shot or a flu vaccine sprayed in the nose. Before 2004, this measure included only the flu shot question.

 ${\bf Appendix~K} \\ {\bf Behavioral~Risk~Factor~Prevalences~in~50~States~and~District~of~Columbia~}^{a~b} \\ {\bf United~States,~2006} \\$ 

State	Fair of		Insur	lealth rance, 18-64		eisure rcise		esity [ 30+)		rrent oking	Att	of Heart ack, ,Stroke		nge iking	Dial	oetes	Current	t Asthma
	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk	%	Rnk
Alabama	21.3	4	19.1	19	29.2	5	30.5	3	23.2	9	12.5	2	10.9	47	10.0	4	8.9	14
Alaska	12.5	41	19.0	20	21.4	36	26.2	18	24.0	6	6.5	48	16.7	13	5.9	47	9.5	10
Arizona	16.3	19	23.3	9	22.3	29	22.9	38	18.2	37	8.7	19	15.2	28	8.5	12	8.9	14
Arkansas	19.6	6	25.1	6	28.7	7	26.9	14	23.7	7	10.3	5	12.4	43	8.1	17	7.6	41
California	19.0	7	20.4	13	23.0	22	23.3	34	14.9	50	7.5	34	15.4	26	8.2	15	7.6	41
Colorado	11.6	45	19.6	16	17.4	48	18.2	51	17.9	41	5.3	51	16.3	18	5.3	51	7.9	36
Connecticut	11.5	47	12.1	43	19.8	41	20.6	48	17.0	48	6.9	44	14.4	32	6.4	42	9.3	11
Delaware	12.9	44	11.4	46	21.6	35	26.0	20	21.7	17	8.6	20	19.0	5	8.1	17	9.6	8
D.C.	12.1	37	9.8	50	22.1	31	22.5	42	17.9	41	6.4	49	15.8	22	8.1	17	10.0	2
Florida	16.8	15	25.5	5	25.1	14	23.1	36	21.0	21	9.9	9	13.7	37	8.5	12	7.2	46
Georgia	14.8	23	17.9	23	24.7	15	27.1	12	19.9	28	8.1	24	12.0	44	9.1	9	8.0	35
Hawaii	14.7	24	10.0	48	19.3	45	20.6	48	17.5	46	7.1	42	17.5	11	8.2	15	8.1	34
Idaho	13.9	30	22.2	10	20.8	40	24.1	32	16.8	49	6.8	45	14.6	30	6.8	37	9.2	13
Illinois	16.1	21	17.6	24	22.4	28	25.1	25	20.5	24	7.7	30	19.2	4	8.1	17	8.3	30
Indiana	16.5	18	18.4	22	25.3	13	27.8	10	24.1	5	9.0	15	15.9	21	8.1	17	8.4	27
Iowa	13.0	36	12.7	40	22.3	29	25.7	22	21.4	20	8.8	17	20.5	3	7.3	32	6.5	50
Kansas Kentucky	14.3 23.1	27 1	15.6 20.0	32 14	22.6 30.4	26 3	25.9 28.0	21 9	20.0 28.5	27 1	7.9 11.8	27 3	15.3 8.6	27 50	7.3 9.9	32 6	8.3 8.2	30 33
,	18.4	10	26.5	2	31.0	2	27.1	12	23.4	8	9.5	10	13.1	41	9.2	8	5.9	51
Louisiana	13.7	32	12.4	42	20.9	39	23.1	36	20.9	22	7.9	27	16.2	19	6.9	36	9.7	6
Maine Maryland	12.6	40	11.8	45	23.0	22	24.9	28	17.7	45	8.2	23	13.8	36	7.9	23	8.9	14
Massachusetts	12.4	42	10.0	48	21.1	37	20.3	50	17.7	44	7.2	41	17.7	8	6.4	42	9.9	3
	15.2	22	15.3	34	22.8	25	28.8	5	22.4	12	9.4	12	17.7	11	9.0	11	9.9	8
Michigan Minnesota	10.8	51	9.7	51	14.2	51	24.7	30	18.3	36	6.7	47	17.5	10	5.7	49	7.8	37
Mississippi	22.5	2	24.8	8	31.1	1	31.4	1	25.1	3	10.2	7	9.3	48	10.9	2	6.9	48
Missouri	16.8	15	15.7	31	23.2	21	27.2	11	23.1	9	10.2	7	16.4	17	7.4	27	8.6	22
Montana	13.2	34	20.0	14	19.4	43	21.2	46	18.9	32	7.5	34	15.8	22	6.4	42	8.3	30
Nebraska	12.9	37	17.0	26	21.0	38	26.9	14	18.7	33	8.0	26	17.9	7	7.4	27	7.5	44
Nevada	18.5	9	25.9	3	27.1	9	25.0	27	22.2	15	8.9	16	15.5	25	7.5	25	7.7	38
New Hampshire	11.1	49	13.3	38	19.6	42	22.4	43	18.7	33	7.5	34	15.0	29	7.4	27	9.7	6
New Jersey	16.2	20	16.8	28	27.0	10	22.6	41	18.0	39	8.1	24	14.2	33	7.5	25	7.6	41
New Mexico	17.8	12	25.6	4	22.6	26	22.9	38	20.1	26	7.3	39	13.0	42	7.3	32	8.5	24
New York	16.6	17	15.9	30	26.0	11	22.9	38	18.2	37	7.6	33	15.7	24	7.6	24	8.5	24
North Carolina	18.1	11	20.9	12	23.8	20	26.6	16	22.1	16	9.3	14	11.2	45	9.1	9	6.8	49
North Dakota	11.5	47	13.9	36	22.0	32	25.4	23	19.5	29	7.0	43	21.0	2	6.7	38	7.1	47
Ohio	14.7	24	14.6	35	24.5	17	28.4	8	22.4	12	9.5	10	16.2	19	6.7	38	9.8	4
Oklahoma	20.2	5	25.0	7	29.8	4	28.8	5	25.1	3	11.3	4	13.4	38	10.0	4	8.9	14
Oregon	14.2	28	19.5	18	16.4	50	24.8	29	18.5	35	7.4	37	14.0	35	6.7	38	9.8	4
Pennsylvania	14.7	24	12.7	40	22.9	24	24.0	33	21.5	19	9.4	12	16.6	15	8.5	12	8.8	19
Puerto Rico	1/1	20	12.4	27	247	15	21.4	15	10.2	21	7.0	20	17.7	0	7.4	27	10.5	1
Rhode Island South Carolina	14.1 17.0	29 14	13.4 19.6	37 16	24.7 24.3	15 18	21.4 29.4	45 4	19.2 22.3	31 14	7.8 8.8	29 17	17.7 13.4	8 38	7.4 9.6	27 7	10.5 7.7	1 38
South Dakota		45	16.4	29	24.0	19	25.4	23	20.3	25	8.5	21	18.1	6	6.5	41	7.7	38
Tennessee	11.6 18.8	45 8	15.5	33	28.8	6	28.8	5	20.3	11	10.3	5	8.5	51	10.7	3	8.5	24
Tennessee	17.4	8 13	29.0	33 1	28.4	8	26.1	19	17.9	41	8.3	22	8.5 14.6	30	8.0	22	7.3	45
Utah	17.4	37	17.1	25	28.4 19.4	43	21.9	44	9.8	51	5.7	50	9.1	49	5.7	49	8.4	27
Vermont	10.9	50	13.3	38	17.9	43 47	21.9	44	18.0	39	7.4	37	16.7	13	5.9	49	9.3	11
Virgin Islands	10.7	50	1.J.J	30	11.7	7/	21.2	70	10.0	37	7.4	31	10.7	1.0	3.7	1 +/	7.3	11
Virginia	13.1	35	12.0	44	21.7	34	25.1	25	19.3	30	7.7	30	13.4	38	7.4	27	8.4	27
Washington	13.5	33	16.9	27	17.3	49	24.2	31	17.1	47	6.8	45	14.2	33	7.1	35	8.9	14
West Virginia	22.5	2	18.9	21	25.6	12	31.0	2	25.7	2	14.0	1	11.1	46	12.1	1	8.6	22
Wisconsin	12.2	43	11.3	47	19.3	45	26.6	16	20.8	23	7.3	39	24.2	1	6.2	46	8.8	19
Wyoming	13.9	30	21.0	11	21.9	33	23.3	34	21.6	18	7.7	30	16.6	15	6.4	42	8.7	21
US Total	16.2		18.6		24.0		25.1		19.7		na		15.0		8.0		8.2	

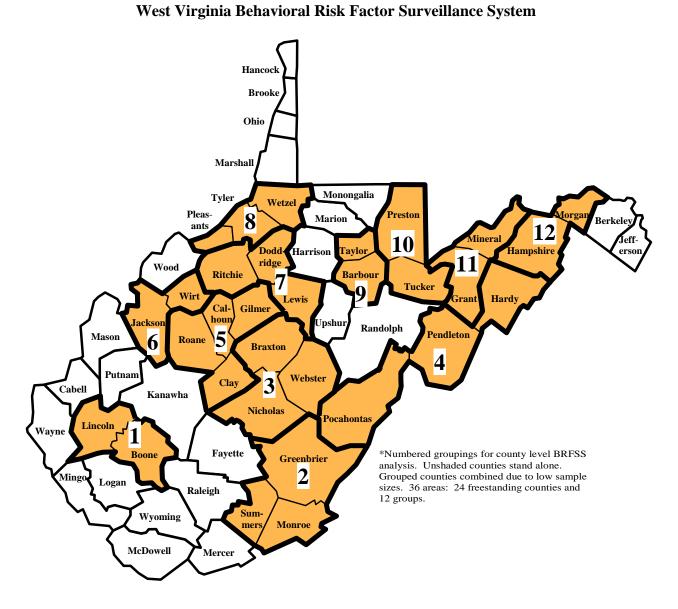
Source: Centers for Disease Control & Prevention - 2006 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2008.

a. The methodology for reporting this data changed slightly in 2006. Data for 50 states and the District of Columbia (DC) were included in the table. Other participants were excluded.

 $b. \ \ States/territories \ with the same prevalence \ share \ the \ same \ rank.$ 

Appendix L

# Groupings for County Level Analysis for Years 2002-2006



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

# 2002-2006 WV Behavioral Risk Factors and Health Conditions by County $^{\rm a}$

	Fair	Fair or Poor Health	fealth	No He	No Health Insurance	rance	No Lei	No Leisure Exercise	cise	D O	Diabetes		O O	Obesity	<u>ਹ</u>	Cigarette Smoking	moking	Č	Current Asthma	sthma	He	Heart Attack,	ck,
County	q %	Rank <sup>c</sup>	Sio. d	q %	Rank C	Sio d	q %	Rank c	ρ g	q %	Rank C S	Sio d 0	% b Ra	Rank C Sio.	p	b Rank c	Sio	9 %	Rank	Sio. d	q %	Rank c	Sio. d
Individual Counties			- 11			jo	1		0	╫		╁	1				Ш			╫			
Berkeley	17.5	33	Ľ,	21.1	32	M 4	29.2	5 5	h/H	8.1	33	L/h	30.7	13 h/H	30.7	ر و 5	h/H	4. 8 4. 0	4 K	h/h	9.01	34 28	l/na
Di Ooke Caball	20.1	27	H/I	22.1	19	11/4 14/4	20.4	35	11/11	9.6							H 41	8. 8.	21	17	12.5	21	1/na
Fayette	28.4	6	h/H	27.0	∞	h/H	31.2	9	h/H	11.3							h/H	8.9	19	I, W	13.2	18	l/na
Hancock	18.9	30	1/h	13.1	36	1.7	25.5	25	4	2.6		1/4	27.7	1/4	27.1		h/h	9.2	19	ų,	11.5	25	l/na
Harrison	18.7	31	: 5	24.2	13	H/H	25.2	27	: 4	9.8	22			25 J/h		24	1/H	9.3	15	h/d	10.5	29	I/na
Jefferson	16.2	35	Z	18.2	29	1/1	22.3	34	И	9.3		1/h 2	28.4 2		29.4		h/H	9.6	13	h/h	7.9	36	L/na
Kanawha	19.4	28	ГЛ	17.3	33	Ľ	25.8	24	l/h	10.5			27.8 2		24.9		I/H	7.6	28	И	12.1	22	l/na
Logan	35.6	4	Н/Н	27.8	9	h/H	30.2	=	h/H	14.1		h/H 4	45.0	1 H/H	32.4		h/H	13.2	3	h/H	17.5	3	h/na
McDowell	42.7	1	H/H	33.9	2	H/H	38.1	2	H/H	15.8		h/H 3		11 h/H			h/H	13.5		h/H	17.0	4	h/na
Marion	21.7	22	I/H	23.5	14	h/h	27.3	17	h/h	6.5	36			23 I/h		1 28	1/h	10.3	∞	h/h	6.6	32	L/na
Marshall	21.6	23	I/h	20.8	22	l/h	26.0	23	l/h	10.3		1/h 2	25.3	33 I/h	31.9		h/H	7.0	31	M	14.1	12	h/na
Mason	23.2	17	I/H	22.5	16	h/h	27.9	14	h/h	10.9		h/h 3		3 h/H			h/H	7.8	27	N	14.6	10	h/na
Mercer	27.5	10	h/H	25.5	10	h/H	27.7	16	h/h	12.2	ν ·			36 L/I		5 22		9.0	17	l/h	16.8	9 (	h/na
Mingo	39.8	ر ع	Н/Н	27.5	, %	h/H	2.24	1 36	H/H	15.4		6 H/H	30.7		195		H/H	13.7	17	H/H	18.8	7 58	H/na
Monongalia	2	2	5	1:07	2	I/I		S	LL	0.								?	ì	u/I	7:5	S	L/na
Ohio	17.2	34	Γľ	19.5	28	I/h	23.7	31	N	11.2	12			30 I/h		7 12	h/H	7.9	24	N	14.4	= :	h/na
Putnam	20.5	26	l/h	16.5	35	N.	23.9	29	N	9.8							I/h	7.3	30	M ;	10.5	29	l/na
Raleigh	30.9	0	Н/Н	20.4	52	l'h	7.07	77	Z,	0.11							I/H	11.1	9	h/h	5.51	× 0	h/na
Randolph	24.3	c	h/H	22.3	81	h/h	70.0	07	l/h	o. O.			24.3	J.h	70°8		ľ	c.c	çç	M	14./	6	h/na
Upshur	22.4	20	I/H	20.7	24	I/h	26.7	19	Νh	11.9	9						I/h	9.9	34	N	10.4	31	l/na
Wayne	27.1	11	h/H	22.7	15	h/h	30.6	6 8	h/H	10.4				7 h/H		14 :	h/H	7.9	24	N	14.1	17	h/na
Wood	18.5	32 2	Z :	20.1	97	l'h	23.3	37	Z	10.0	2 2	7 H/I	27.0	q	20.8		H/I	0.0		Ξ :	13.1	P -	l/na
Wyoming	40.7	۷	Н/Н	0.16	1	h/H	0./6	n	Н/Н	11.1							Н/Н	10.0		h/h	51.3	-	H/na
Grouped Counties																							
1 Boone, Lincoln	33.7	5	H/H	25.8	6	h/H	30.5	10	h/H	13.3	4		34.5	4 h/H			_	11.6		h/h	16.0	7	h/na
2 Greenbrier, Summers, Monroe	28.6	∞ 1	h/H	25.4		h/H	30.7	∞ 1	h/H	11.8								8.3		l/h	17.0	4 ;	H/na
3 Braxton, Nicholas, Webster A Hardy Dandleton December	21.8	21	H/H	20.8	22	H/H	23.0	33	h/H	7.0	35	h/H 3		12 h/H 14 h/H	20.5	35	h/H	7.6	28 28	N N	11.1	27	h/na 1/na
7 Hardy, 1 Charlottas	2 0	5	H/4		,	н/н		,	1/4 H/H											; 4	-	,	1/103
S Camoun, Cidy, Gillier, Roane	26.5	c1 71	H/H	0.25	n 7		27.0	ر <u>«</u>	4	4.0			20.3	77 YH	0.40 C. 70 C. 70			10.7		5	11.2	70	h/no
6 Jackson, Wirt 7 Doddridge I ewic Ritchie	22.8	7 81	H/I	17.9	30	1 1	29.5	9 21	II 14	9.7	54 29					18		0.9	5 5	I 4	14.0	10	n/na h/na
8 Pleasants, Tyler, Wetzel	20.6	25	l/h	22.5	16	h/h	25.4	26	I'l	10.8		h/h 3		9 h/H				10.2		n/u p/h	11.7	24	II/IIa I/na
9 Barbour, Taylor	26.5	13	h/H	34.2	-	Н/Н	32.4	4	h/h	11.5			34.2	5 h/H	21.3			6.6	12	h/h	13.1	19	l/na
10 Preston Tucker	24.0	16	h/H	24.9	12	h/h	26.1	22	ľh	9.6		1/h 3		10 h/H			I/h	7.9	24	Z	8.6	33	l/na
11 Grant, Mineral	22.5	19	H/I	17.9	30	Z	23.9	29	N	8.9	30					30		10.0	10	h/h	13.7	17	h/na
12 Hampshire, Morgan	21.4	24	ИH	21.2	20	I/h	24.6	28	l/h	6.6		1/h 2		31 J/h	24.8		I/h	5.5		2	12.1	22	I/na
WV / US 2004 / WV vs US	23.9	16.4	Н	21.8	18.7	Н	27.0	24.0	Н	10.7	7.2	Н 2	28.9	23.5 Н	27.0	20.7	н ,	9.6	8.1	н	13.2	na	ua
Source - West Virninia Rehavioral Rick Bartor Survaillance Soctem (WVRRESS) West Virninia Health Statistics Conter	Pactor Surv	Peillance S	vetem (W	'VRRESS)	West Vir	oinia Hea	1th Statisti	rs Center.	. March 2008	, N.S.				Sign	Î	eu je ino	County estimate vs WV / County estimate vs TS 2004	' / Counts	octimot	)C 311 50x 0	10		

Source: West Virginia Behavioral Risk Factor Surveillance System (WVBRFSS), West Virginia Health Statistics Center, March 2008.

Sig = County estimate vs WV / County estimate vs US 2004.
H - Significantly Higher County Prevalence.
L - Significantly Lower County Prevalence.
h - Higher but not significant.
l - Lower but not significant.
na - No available data for comparison. Ę.

page 57

a. 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 counties.

See a detailed discussion about the prevalence estimates (shown as %) in the Methodology section.

Counties with the same prevalence share the same rank. ن <u>ن</u>