2003
West Virginia
Behavioral Risk Factor
Survey Report




September 2005

WEST VIRGINIA
Department of
Health & Human
Resources

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

Joe Manchin III, Governor
Martha Yeager Walker, Secretary

2003 WEST VIRGINIA BEHAVIORAL RISK FACTOR SURVEY REPORT

Joe Manchin III
Governor

Martha Yeager Walker
Secretary
Department of Health and Human Resources

Chris Curtis, MPH
Acting Commissioner
Bureau for Public Health

Catherine Slemp, MD, MPH
Acting State Health Officer
Bureau for Public Health

Joe Barker, MPA
Director
Office of Epidemiology and Health Promotion

September 2005

HEALTH STATISTICS CENTER

Daniel M. Christy, MPA, Director
James C. Doria, Acting Statistical Services Program Manager

Report Prepared By

Fred King, Coordinator
Behavioral Risk Factor Surveillance System

Amy B. Wenmoth, MA
Data Analyst

Report Edited By

Eugenia Thoenen, Editorial Consultant

Statistical Staff

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

2003 BRFSS Interviewers

Carolyn J. Hunter, Gale Ardman, Norma Anderson,
Laura Elswick, Mima Chapman, Amanda Fowler,
Deborah Pack, Russell Hicks, Claudia Hudson-Sims,
Mandy Ranson, Steve Ardman, Amy Handley, Martin Kemmish

COVER DESIGN AND PHOTOS BY

Dale A. Porter

SUPPORTED IN PART BY
The Centers for Disease Control and Prevention
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Or call (304) 558-9100

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 2003 as well as county data for the combined years 1999 through 2003.

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 three U.S. territories now participate in the system, known as the Behavioral Risk Factor Surveillance System (BRFSS).

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

HIGHLIGHTS OF FINDINGS

Health Status

- West Virginia ranked 2nd highest (of the 54 BRFSS participants) in the prevalence of persons reporting their general health as either "fair" or "poor" (25.3%).
- "Fair" or "poor" health was most common among adults without a high school diploma/GED (51.0%) and those with an annual income less than $15,000 (49.2%).

Health Care Access

- Nearly one-fourth (23.5%) of adults aged 18 to 64 had no health care coverage.
- Eighteen percent (17.8%) of adults needed medical care within the past 12 months but could not afford it.
- Twenty-two percent (21.6%) of adults did not have a specific source of ongoing health care (no personal doctor or health care provider).

Diabetes Awareness

- West Virginia ranked 4th highest (of the 54 BRFSS participants) in the prevalence of diabetes awareness (9.8%). In 2002, West Virginia ranked 2nd.
- Of all diabetic adults, 12.6% had not had an HbA1c test, 35.4% had not had a professional foot exam, and 33.8% had not had a dilated eye exam in the past one year.
- Well over half of all diabetic adults (59.8%) had not taken a class in the self-management of diabetes. More than one-third (38.3%) checked their blood glucose at home less than once daily or never.

Obesity and Overweight

- West Virginia ranked 3rd highest (of the 54 BRFSS participants) in the prevalence of obesity (27.7%) and 51st in the prevalence of overweight (34.0%). The prevalence of obesity has steadily increased since 1987.
- Men were significantly more likely to be overweight (39.0% versus 29.2%) and obese (30.5% versus 25.0%) than women.

Weight Control

- Thirty-nine percent (38.9%) of adults were currently trying to lose weight.
- The rate was significantly higher among women than men (44.7% versus 32.7%).
- Since 1991, the prevalence of attempting weight loss has increased among overweight and obese adults.

Physical Inactivity

- Recent data indicate a sharp decline in the prevalence of physical inactivity. The 2003 rate of 28.0% was significantly lower than the rates from the year 2000 and before. However, West Virginia still ranks high in this risk factor (11th highest among 54 BRFSS participants).
- The prevalence of physical inactivity was significantly higher among women than men (30.9% versus 24.9%) and was more common among older adults and those at the lowest levels of education and income.
- However, 61.8% of adults were being more physically active in order to lower their risk of heart disease or stroke.

Nutrition

- More than 8 out of every 10 adults (81.3%) consumed fewer than the recommended 5 servings of fruits and vegetables each day. West Virginia ranked 8th highest (of the 54 BRFSS participants) in the prevalence of this risk factor.
- In particular, males, young adults, those without a high school diploma/GED, and those with an annual household income less than $15,000 had high rates of this behavior.
- Nevertheless, more than two-thirds of adults were eating more fruits and vegetables and fewer high-fat or high-cholesterol foods in order to reduce their risk of heart disease and stroke.

Tobacco Use and Policies

- *Current cigarette smoking*: More than one-fourth (27.3%) of adults smoked every day or some days. West Virginia ranked 3rd highest (of the 54 BRFSS participants) in the prevalence of this risk factor.
- *Current smokeless tobacco use:* The rate of smokeless tobacco use among both men and women was 7.7%. Among men, the prevalence was 15.9%.
- Fewer than half (44.0%) of every day smokers reported trying to quit for at least one day in the past year. Among every day smokeless tobacco users, the rate of quit attempts was 34.5%.
- Twenty-eight percent (27.6%) of current smokers reported that they did not receive advice on smoking cessation from their health professional during a medical visit in the past 12 months.
- More than three-fourths (77.3%) of employed adults reported that smoking was not allowed in any indoor public or work areas at their workplace.
- A majority of adults (57.1%) reported that smoking was not allowed inside their home.

Alcohol Consumption

- West Virginia ranked considerably low in the prevalence of heavy drinking (3.1%, 49th) and binge drinking (11.1%, 49th).
- Men had a significantly higher rate of heavy (4.5% versus 1.9%) and binge (16.8% versus 5.9%) drinking than women.

Cholesterol

- Twenty percent (20.4%) of adults had never had their cholesterol checked. Of those who had, 38.1% reported that it was high (2nd highest among 54 BRFSS participants).
- Women were significantly more likely to have high cholesterol than men (41.7% versus 33.8%).

Hypertension

- West Virginia ranked 1st (of the 54 BRFSS participants) in the prevalence of hypertension. More than a third of adults (33.6%) had ever been diagnosed with high blood pressure.
- The prevalence of hypertension was highest among older adults, those without a high school diploma/GED, and those with an annual household income less than $15,000.

Cardiovascular Disease

- The prevalence rates of heart attack, angina, and stroke were 7.4%, 8.7%, and 4.2%, respectively. Almost half (49.0%) of adults who had ever had a heart attack had their first attack before the age of 55.
- More than three-fourths of adults who had experienced heart attack or stroke (76.2%) did not receive any outpatient rehabilitation after leaving the hospital.
- More than a third (38.2%) of all adults aged 35 and older reported that they were on daily or alternate-day aspirin therapy.

Asthma

- Twelve percent (11.8%) of adults had ever been diagnosed with asthma (22nd highest among 54 BRFSS participants) while 8.1% currently had asthma (17th highest among 54 BRFSS participants).
- Women had significantly higher rates of lifetime and current asthma than men. Asthma rates were also higher among adults with low levels of education and annual household income.

Arthritis

- West Virginia ranked 1st (of the 54 BRFSS participants) in the prevalence of arthritis (37.2%).
- Arthritis was most common among older adults, those without a high school diploma/GED, and those with an annual income less than $25,000.
- Approximately one-third of adults had an arthritis-related activity (36.3%) or work (31.6%) limitation.

Disability and Falls

- West Virginia had the highest disability rate (of the 54 BRFSS participants). More than one-fourth (26.4%) of adults were disabled because of a physical, mental, or emotional problem.
- Sixteen percent (16.0%) of adults aged 45 and older had experienced a fall and 37.4% of them were injured by a fall during the past three months.

Immunization

- Among adults aged 65 and older, 30.9% had not had a flu shot in the past 12 months and 36.2% had never had a pneumonia shot.

Sexually Transmitted Diseases

- The majority (91.3%) of adults aged 18 to 64 had not received any counseling about condom use from a health professional in the past one year.

Sunburn

- More than a third (38.1%) of adults had experienced sunburn with redness lasting at least 12 hours in the past 12 months.
- The prevalence of sunburn was higher among men, young adults, and those with higher levels of education and income.

ESTIMATED NUMBER OF PERSONS AT RISK

Table I below shows selected risk factor rates and the corresponding numbers of persons in West Virginia who are at risk. Table II shows the postcensal population estimates for 2003 that were obtained from the U.S. Census Bureau and used to derive the numbers of persons at risk. A more exhaustive examination of these and other topics can be found in the body of the report.

Table I: Percentage and estimated number of persons at risk due to selected factors (ages 18 and older unless otherwise specified): WVBRFSS, 2003

Risk factor	Estimated percentage at risk[a]	Estimated number at risk[a]
Self-rated general health is fair or poor	25.3	359,891
No health care coverage, ages 18-64	23.5	269,096
Diabetes	9.8	139,404
Obesity (BMI 30.0+)	27.7	394,031
Overweight (BMI 25.0-29.9)	34.0	483,649
Trying to lose weight	38.9	553,351
No leisure-time exercise	28.0	398,299
Less than 5 servings of fruits/vegetables per day	81.3	1,156,490
Current smoking	27.3	388,341
Current smokeless tobacco use	7.7	109,532
Heavy drinking	3.1	44,097
Binge drinking	11.1	157,897
High blood cholesterol (among those ever checked)	38.1	541,971
High blood pressure	33.6	477,959
Have had heart attack	7.4	105,264
Have angina or coronary heart disease	8.7	123,757
Have had stroke	4.2	59,744
Lifetime asthma	11.8	167,854
Current asthma	8.1	115,222
Arthritis	37.2	529,169
Disability	26.4	375,539
Experienced a fall in past three months, ages 45+	16.0	122,795
No flu shot in past 12 months, ages 65+	30.9	114,124
Never had pneumonia shot, ages 65+	36.2	133,698
Ever had HIV test that was not part of a blood donation, ages 18-64	38.2	437,425
Sunburn with redness lasting 12 or more hours in past 12 months	38.1	541,971

a. Prevalence rates and number of persons at risk are subject to sampling error. Please refer to the confidence intervals presented in the chapters of this report. Calculating the number at risk using the CDC's population weight provided in the data may result in different estimates.

Table II: West Virginia 2003 estimated population by age group used in calculating Table I figures.

Age	Both	Male	Female
All Ages	1,811,440	884,374	927,066
18+	1,422,498	685,186	737,312
18-64	1,145,092	569,429	575,663
45+	767,470	357,305	410,165
65+	369,334	160,202	209,132

Source: Population Division, U.S. Census Bureau. http://www.census.gov/popest/states/asrh/SC-est2004-02.html. Retrieved in March 2005.

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Introduction

Personal health practices have been shown to be important determinants of overall health. Unhealthy behaviors (risk factors) 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 health risk factors among their adult populations. The West Virginia Bureau for Public Health (WVBPH), one of the Bureau's of the West Virginia Department of Health and Human Resources, became 1 of 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 used, that of interviewing a random sample of state residents by telephone, is a faster and 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 advantage of permitting states to compare their data with estimates derived using the same methodologies in other states. 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.

Seventeen reports have been published by the WVBPH presenting survey results of the state's participation in the BRFSS since 1984. This report focuses on the 2003 risk factor prevalence rates and compares them to the years 1984 through 2002. Table I.1 on the following page shows topics that have been included in the last 11 years of surveillance, many of which are examined in the present report.

Table I.1: Topics administered in the survey: WVBRFSS, 1993-2003

Topic	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Seatbelt nonuse	x	x	x	x	x	x	x			x	
Hypertension	x	x	x	x	x		x		x	x	x
Cholesterol	x		x		x		x		x	x	x
Leisure-time physical activity		x		x		x		x	x	x	x
Obesity	x	x	x	x	x	x	x	x	x	x	x
Cigarette use	x	x	x	x	x	x	x	x	x	x	x
Smokeless tobacco use	x	x	x	x	x	x	x	x	x	x	x
Alcohol consumption	x	x	x		x		x		x	x	x
Weight control		x		x		x		x			x
Fruits & vegetables		x		x		x		x		x	x
Diabetes	x	x	x	x	x	x	x	x	x	x	x
Routine checkup	x	x	x	x	x	x	x	x			
Breast cancer screening	x	x	x	x	x	x	x	x		x	
Cervical cancer screening	x	x	x	x	x	x	x	x		x	
Prostate cancer screening									x	x	
Excess sun exposure							x			x	x
AIDS/HIV	x	x	x	x	x	x	x	x	x	x	x
Bicycle helmets, smoke alarms	x		x	x	x		x				
Immunization	x		x		x	x	x		x	x	x
Health insurance	x	x	x	x	x	x	x	x	x	x	x
Health status	x	x	x	x	x	x	x	x	x	x	x
Colorectal cancer screening	x		x		x		x		x	x	
Oral health	x	x	x		x		x	x		x	
COPD	x	x									
Firearm ownership			x	x					x	x	
Asthma								x	x	x	x
Born / years in WV			x	x	x						
Disability			x						x		x
Preventive health counseling				x							
Cardiovascular disease				x			x	x	x	x	x
Older adult health							x				
Osteoporosis					x	x	x				
Arthritis							x		x		x

Methodology

The survey is conducted by telephone 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, 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. Interviews require approximately 15-20 minutes to complete. In addition to behavioral risk factors, 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-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. and on Saturdays from 10:00 a.m. to 7:00 p.m.

SAMPLE SELECTION

According to figures from the 2000 U.S. Census, 95.3% of West Virginia households have telephones, compared to 97.6% of households in the United States. The sample was selected by random digit dialing (RDD). Telephone directories are not used since they do not include unlisted or new numbers. From 1984 to 1998, sampling was conducted in a multistage cluster design based on the 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 higher-density stratum is sampled at a higher rate than the lower-density stratum. In 2003 the higher-density stratum consisted of banks of numbers that contained listed residential numbers while the lower-density stratum consisted of banks of numbers that contained unlisted residential numbers. 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 afternoon, evening, and weekend). 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 a total of 3,349 interviews during 2003.

Table M.1: Disposition of telephone numbers in the sample: WVBRFSS, 2003

Disposition	Number	Percent
Completed interview	3,310	30.65
Partially completed interview	39	0.36
Terminated within questionnaire <50% finished	72	0.67
Refusal after respondent selection	588	5.44
Selected respondent never reached or was reached but did not begin interview during interviewing period	194	1.80
Selected respondent away from residence during the entire interviewing period	152	1.41
Selected respondent physically or mentally unable to complete an interview during the entire interviewing period	93	0.86
Hang up or termination after number of adults recorded but before respondent selection, explicit refusal	16	0.15
Household members away from residence during entire interviewing period	33	0.31
Hang up or termination, housing unit, unknown if eligible respondent	337	3.12
Household contact, eligibility undetermined	55	0.51
Physical or mental impairment before respondent selection	9	0.08
Hang up or termination, unknown if private residence	745	6.90
Contacted, unknown if private residence	50	0.46
Telephone answering device, message confirms private residential status	100	0.93
Telecommunication technological barrier (such as a call blocking message), message confirms private residence	10	0.09
Telephone answering device, not sure if private residence	164	1.52
Telecommunication technological barrier, not sure if private residence	21	0.19
Telephone number changed status from household or possible household to nonworking during the interviewing period	83	0.77
No answer	547	5.06
Busy	53	0.49
On never-call list	1	0.01
Household, no eligible respondent	12	0.11
Not a private residence	1,078	9.98
Dedicated fax/data/modem line with no human contact	318	2.94
Fast busy	23	0.21
Nonworking/disconnected number	2,697	24.97
Total	10,800	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 as well as various sources of statistical bias can be found in CDC's *Behavioral Risk Factor Surveillance System 2003 Year-to-Date Data Quality Handbook*. While there is no definitive formula for response rate, three primary estimates are most useful for BRFSS:

CASRO is a response rate formula[1] developed by the Council of American Survey Research Organizations (CASRO). The resulting estimate reflects telephone sampling efficiency and the degree of cooperation among eligibles 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 CASRO rate for the year 2003 was 60%.

Overall Response Rate is a conservative response rate[2] 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 overall response rate for the year 2003 was 58%.

Cooperation Rate is a calculation[3] 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 cooperation rate for the year 2003 was 82%.

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 were also 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 results were sent to CDC via electronic mail. An annual analysis of the data is provided to the state by CDC.

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[1] CASRO rate = $\dfrac{\text{Completed Interviews}}{\text{Known Eligibles} + [(\text{Known Eligibles}/\{\text{Known Eligibles \& Ineligibles}\}) \times (\text{Unknowns})]}$

[2] Overall response rate = $\dfrac{\text{Completed Interviews}}{\text{Eligible Households}}$

[3] Cooperation rate = $\dfrac{\text{Completed Interviews}}{\text{Completed Interviews} + \text{Terminated Before Completion} + \text{Refusals} + \text{Unable to Communicate}}$

DEMOGRAPHIC CHARACTERISTICS OF SAMPLE AND POPULATION

The demographic characteristics of the 2003 sample, both unweighted and weighted to the population, are presented below.

Table M.2: Demographic Summary: WVBRFSS, 2003

Demographic characteristic	# Interviews	% Unweighted Sample	% Weighted Sample[a]
Total	**3,349**	**100.0**	**100.0**
Sex			
Male	1,323	39.5	47.9
Female	2,026	60.5	52.1
Age			
18-24	203	6.1	12.4
25-34	455	13.6	15.6
35-44	557	16.6	17.7
45-54	672	20.1	19.3
55-64	647	19.3	14.3
65+	803	24.0	20.5
Unknown	12	0.4	0.2
Education			
<12 Years	636	19.0	18.7
12 Years	1,321	39.4	40.0
13-15 Years	741	22.1	22.9
16+ Years	647	19.3	18.3
Unknown	4	0.1	0.2
Household Income			
<$15,000	526	15.7	13.1
$15,000-$24,999	724	21.6	20.5
$25,000-$34,999	463	13.8	13.7
$35,000-$49,999	478	14.3	14.8
$50,000-$74,999	393	11.7	12.7
$75,000+	329	9.8	11.1
Unknown	436	13.0	14.2

a. Population weight provided by CDC. Weighted to 2003 age and sex postcensual estimates. Not weighted to education or income level.

Compared to the 2003 census estimates, male respondents and persons aged 18 to 24 were under-represented in the sample, while females and the elderly (65 and older) were overrepresented, a frequent result of telephone surveys. Survey responses were therefore 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.

LIMITATIONS

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 less than 50 are considered statistically unreliable.

ESTIMATES AND CONFIDENCE INTERVALS

Because the prevalence rates shown in tables throughout the report are derived from surveying a sample of people rather than all adults in the population, the resultant rates are estimates. For this reason, the estimated rates are presented together with their associated confidence intervals. Confidence intervals reflect sampling error and represent the range of values among which the true value would be found. The prevalence tables show 95% confidence intervals, meaning the true value would be within the given interval 95% of the time. When confidence ranges do not overlap, the estimates they are based upon may be termed significantly different. Confidence intervals were derived from the surveymeans procedure in SAS, a common 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 weighting procedures were the same as those for state-level data, with the exception that the 2003 age and sex population distribution for the state was replaced by 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. Whenever a risk factor prevalence was calculated for a group of counties, each county within the group was considered to have the same prevalence. The 12 groups of counties plus the 24 stand-alone counties resulted in 36 geographical entities (see Appendix I). The county prevalence rates were then compared to the U.S. prevalence for 2001. Counties were classified according to the degree of difference from the U.S. prevalence: significantly higher, higher, lower, and

significantly lower.[4] Risk factor rates by county are shown in Appendix J. Extensive county data also can be found in the WVBPH publication *West Virginia County Health Profiles, 2004*.

PRESENTATION

In the sections that follow, the prevalence data are presented in a variety of ways, including by state rank, yearly state prevalence, and demographic variables. It should be stressed that the risk factor prevalence rates 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 rate (%), and the 95% confidence interval for the prevalence (95%CI).

Prevalence rates are calculated by excluding unknown responses from the denominators. Consequently, rates may be slightly higher than would have been the case had unknown responses been included. In prior publications, rates representing the years 1984 through 1996 were often calculated by including the unknown responses. In this report, all rates have been re-calculated with the unknown responses excluded. Therefore, discrepancies may exist between the time trends and appendixes in this report and prior publications.

The risk factor sections include West Virginia's rank among the 54 BRFSS participants, with 1st as highest in prevalence and 54th as lowest. For example, ranking 1st in hypertension would mean having the highest prevalence of hypertension of all BRFSS participants; conversely, ranking 54th would mean having the lowest prevalence. Some questions are not asked by all BRFSS participants. In these cases, the rankings should be interpreted with caution, as they may be different if information were available from all participants. In addition, readers should note that differences between states often are less than one percentage point and that statistical significance was not tested when determining rankings. The rates and rankings were calculated by Health Statistics Center staff. State and county prevalences and rankings for many risk factors are presented in Appendixes H and J.

[4] Statistical significance can be affected by both prevalence level and county sample size.

CHAPTER 1: HEALTH STATUS

Definition: Reported general health as "Fair" or "Poor" from possible response choices of "Excellent," "Very good," "Good," "Fair," and "Poor."

State Prevalence

25.3% (95% CI: 23.6-26.9); 2nd highest among 54 BRFSS participants.
National prevalence: 16.2% (95% CI: 15.9-16.5).

Time Trends

Overall, since 1993 there has been an increasing trend in the percentage of adults who report fair or poor general health. Following a two-year decline (2001-2002), the prevalence of fair or poor health status increased in 2003.

Gender

Men 24.8% (95% CI: 22.2-27.4); **Women 25.7%** (95% CI: 23.6-27.8).
There was no significant gender difference in the prevalence of fair or poor health status.

Age

Reports of fair or poor health increased significantly with age, ranging from a low of approximately 8% among adults aged 18 to 24 to more than 42% among the elderly.

Education

The prevalence of fair or poor health status decreased significantly at each higher level of educational attainment. In fact, adults without a high school diploma/GED were more than five times as likely as college graduates to report a fair/poor health status (51.0% versus 9.5%).

Household Income

The rate of fair or poor health status significantly decreased until household income reached $50,000. Nearly half of adults with an annual household income less than $15,000 had a fair or poor health status, compared with approximately 6% of those in the highest income category ($75,000+). The prevalence of fair or poor health status was especially evident among adults with an annual income less than $35,000.

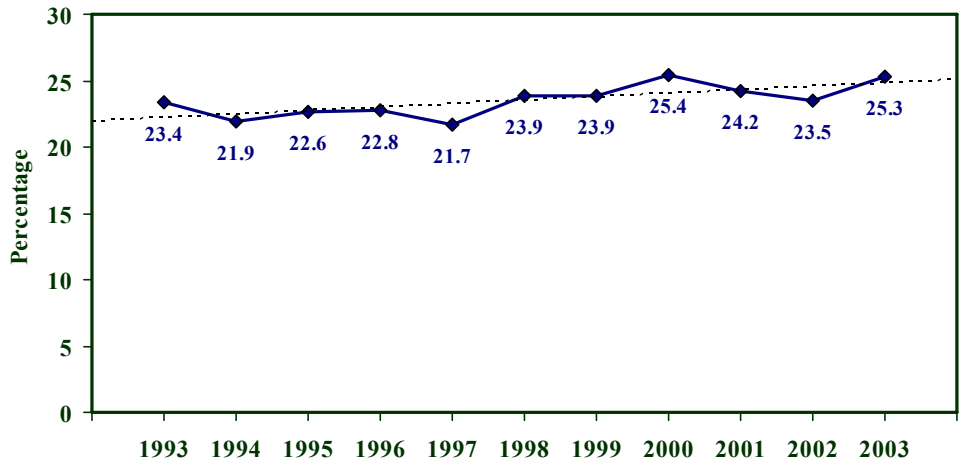
Quick Stats

- Approximately 45% of adults were in excellent or very good health (see Figure 1.2).
- Due to poor physical or mental health, 7% of adults were unable to perform their usual activities such as self-care, work, or recreation every day during the past 30 days.

Table 1.1: General health status of "fair" or "poor": WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,319	**24.8**	(22.2-27.4)	2,021	**25.7**	(23.6-27.8)	3,340	**25.3**	(23.6-26.9)
Age									
18-24	92	**9.6**	(0.8-18.3)	111	**6.8**	(1.9-11.7)	203	**8.3**	(3.1-13.4)
25-34	187	**8.5**	(4.4-12.7)	268	**12.7**	(8.1-17.3)	455	**10.6**	(7.5-13.8)
35-44	234	**19.5**	(13.8-25.3)	322	**24.5**	(19.3-29.8)	556	**22.1**	(18.2-26.0)
45-54	282	**31.6**	(25.8-37.4)	387	**22.3**	(17.8-26.7)	669	**26.9**	(23.3-30.6)
55-64	249	**30.8**	(24.5-37.0)	395	**37.0**	(31.8-42.3)	644	**34.0**	(29.9-38.0)
65+	274	**44.6**	(38.3-50.9)	527	**40.7**	(36.1-45.2)	801	**42.3**	(38.6-46.0)
Education									
Less than H.S.	244	**50.0**	(42.6-57.5)	388	**51.9**	(46.3-57.4)	632	**51.0**	(46.4-55.6)
H.S. or G.E.D.	526	**24.1**	(20.3-28.0)	790	**26.4**	(23.1-29.8)	1,316	**25.3**	(22.8-27.9)
Some Post-H.S.	265	**17.5**	(12.7-22.3)	476	**16.2**	(12.7-19.7)	741	**16.8**	(13.9-19.6)
College Graduate	281	**9.2**	(5.7-12.7)	366	**9.7**	(6.6-12.9)	647	**9.5**	(7.1-11.8)
Income									
Less than $15,000	171	**52.1**	(43.3-61.0)	353	**47.1**	(41.1-53.0)	524	**49.2**	(44.2-54.3)
$15,000- 24,999	263	**36.7**	(30.4-43.0)	461	**33.2**	(28.4-38.0)	724	**34.7**	(30.9-38.6)
$25,000- 34,999	194	**25.6**	(18.8-32.4)	269	**24.6**	(19.0-30.3)	463	**25.1**	(20.7-29.5)
$35,000- 49,999	211	**14.7**	(9.7-19.7)	266	**12.9**	(8.5-17.4)	477	**13.9**	(10.5-17.2)
$50,000- 74,999	167	**10.5**	(5.6-15.5)	225	**7.3**	(3.9-10.6)	392	**8.9**	(5.9-11.9)
$75,000+	181	**5.7**	(2.2-9.2)	146	**6.1**	(1.1-11.0)	327	**5.8**	(3.0-8.7)

Figure 1.1: General health status of "fair" or "poor" by year: WVBRFSS, 1993-2003



------- Trend Line

Figure 1.2: Reported general health as "fair" or "poor" by county: WVBRFSS, 1999-2003

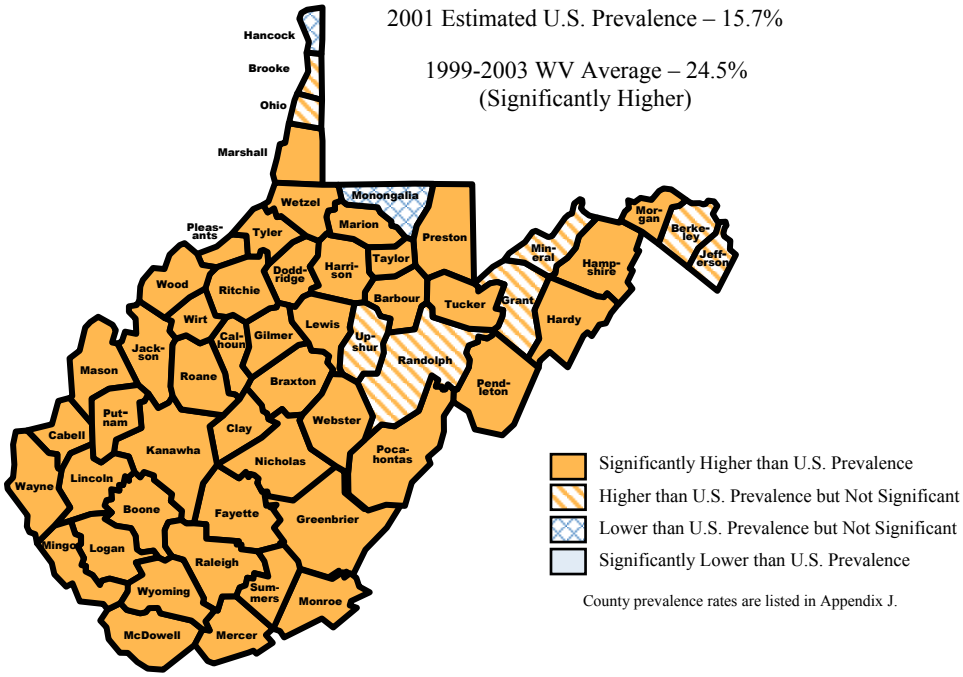
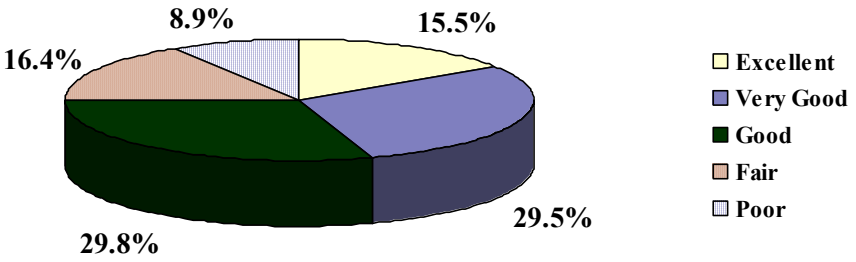


Figure 1.2: General health status: WVBRFSS 2003



CHAPTER 2: HEALTH CARE ACCESS

No Health Care Coverage: Adults aged 18 to 64 who have no health care coverage (including health insurance, prepaid plans such as HMOs, or government plans such as Medicare).

State Prevalence

23.5% (95% CI: 21.5-25.5); 7th highest among 54 BRFSS participants for adults aged 18 to 64. National prevalence: 18.2% (95% CI: 17.8-18.5).

Time Trends

The prevalence of no health care coverage increased slightly between 2002 and 2003. Overall, the percentage of uninsured adults has increased since 1993, from 19.5% to 23.5%. During this period, there were only two years in which the percentage of uninsured declined (1998 and 2002).

Gender

Men 24.6% (95% CI: 21.5-27.6); **Women 22.5%** (95% CI: 19.9-25.1).
There was no significant gender difference in the prevalence of no health care coverage.

Age

The prevalence of no health care coverage significantly decreased with age. Uninsured rates were highest among young adults aged 18 to 24 (39.1%) and lowest among older adults aged 55 to 64 (13.3%). This trend was especially evident among men.

Education

Uninsured rates significantly decreased as educational attainment increased. In fact, the prevalence of no health care coverage was more than three times higher among adults without a high school diploma than among those with four or more years of college (37.6% versus 10.3%). College graduates were significantly more likely to be insured than those at all lower levels of education.

Household Income

The prevalence of no health care coverage decreased as household income increased. Individuals with a household income of $35,000 or more were significantly more likely to have health care coverage than those with an income less than $35,000. Nearly 40% of adults in the poorest households were uninsured, compared with about 5% of those with an income of $75,000 or more. Men in the wealthiest households were significantly more likely to be uninsured than their female counterparts (7.2% versus 0.4%).

Quick Stats

- 19.1% of the total population had no health care coverage. Only 2.0% of adults aged 65 and older were uninsured.

West Virginia 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: 76.5% in 2003)

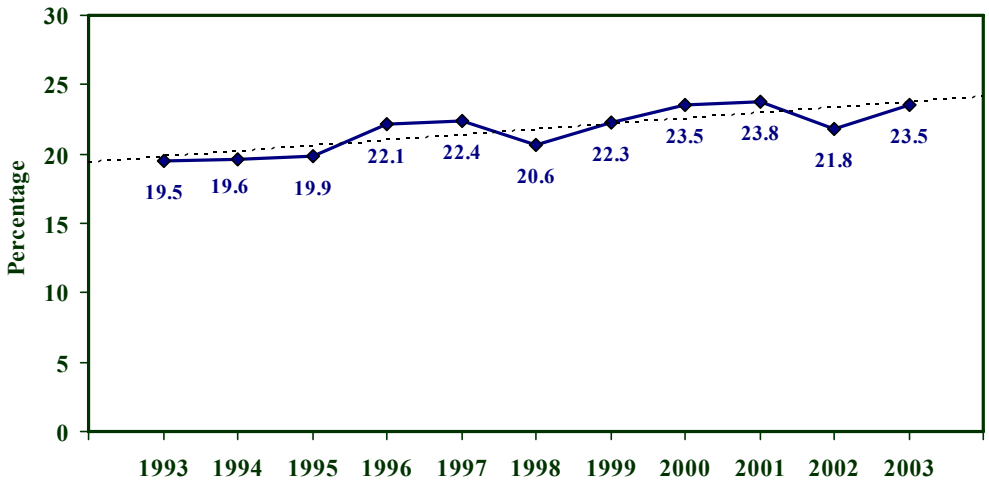
Objective 1.2

(Developmental) Increase the proportion of persons with a personal primary care provider. (Baseline: 78.0 in 2001; Current: 78.4% in 2002)

Table 2.1: No health care coverage among adults aged 18 to 64: WVBRFSS, 2003

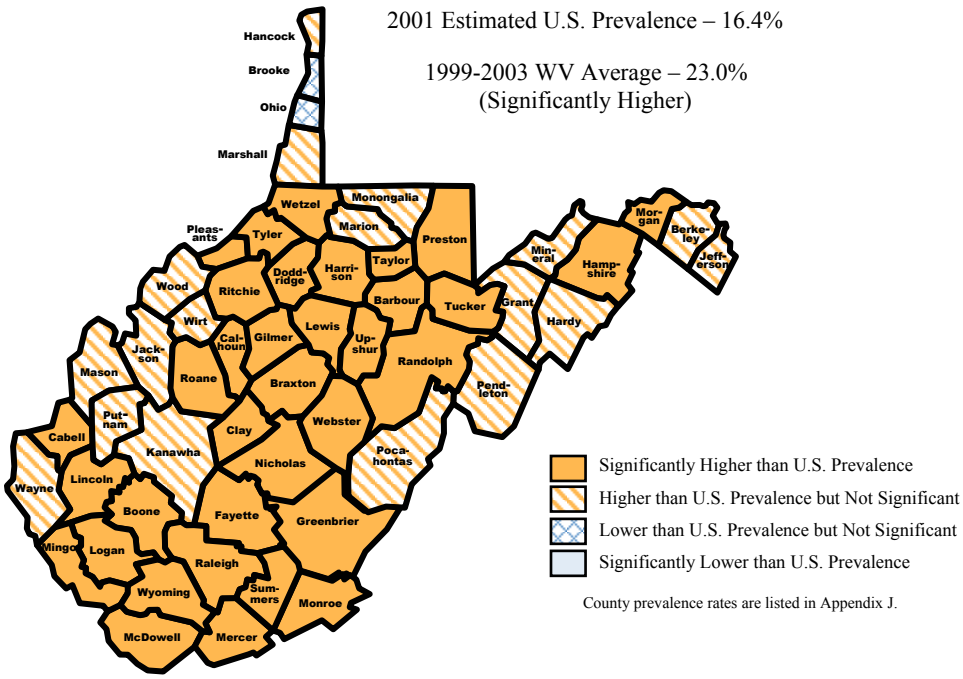
Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,043	**24.6**	(21.5-27.6)	1,484	**22.5**	(19.9-25.1)	2,527	**23.5**	(21.5-25.5)
Age									
18-24	87	**41.9**	(30.5-53.3)	111	**36.2**	(26.1-46.4)	198	**39.1**	(31.5-46.7)
25-34	187	**32.4**	(25.1-39.7)	268	**28.1**	(22.3-33.8)	455	**30.2**	(25.6-34.9)
35-44	235	**24.1**	(18.2-30.1)	322	**22.3**	(17.2-27.4)	557	**23.2**	(19.3-27.1)
45-54	284	**18.3**	(13.4-23.2)	387	**14.1**	(10.4-17.9)	671	**16.2**	(13.1-19.3)
55-64	250	**10.0**	(6.1-13.8)	396	**16.6**	(12.6-20.7)	646	**13.3**	(10.5-16.2)
Education									
Less than H.S.	149	**39.7**	(30.4-49.0)	208	**35.1**	(27.7-42.5)	357	**37.6**	(31.6-43.6)
H.S. or G.E.D.	428	**29.0**	(24.1-33.9)	590	**24.5**	(20.4-28.7)	1,018	**26.8**	(23.6-30.0)
Some Post-H.S.	224	**18.5**	(12.5-24.6)	369	**21.6**	(16.4-26.9)	593	**20.2**	(16.3-24.2)
College Graduate	240	**10.0**	(5.4-14.6)	317	**10.7**	(6.4-15.0)	557	**10.3**	(7.2-13.5)
Income									
Less than $15,000	131	**38.6**	(28.6-48.6)	213	**40.2**	(32.4-48.0)	344	**39.4**	(33.1-45.7)
$15,000- 24,999	180	**47.2**	(39.1-55.3)	313	**38.4**	(32.2-44.6)	493	**42.3**	(37.3-47.3)
$25,000- 34,999	144	**19.9**	(12.5-27.2)	207	**28.5**	(21.6-35.4)	351	**24.5**	(19.5-29.6)
$35,000- 49,999	174	**19.1**	(11.9-26.3)	234	**7.5**	(2.9-12.1)	408	**13.5**	(9.1-18.0)
$50,000- 74,999	152	**8.0**	(3.4-12.7)	209	**5.2**	(1.3-9.1)	361	**6.6**	(3.6-9.6)
$75,000+	173	**7.2**	(2.0-12.3)	144	**0.4**	(0.0-1.2)	317	**4.7**	(1.4-8.1)

Figure 2.1: No health care coverage among adults aged 18 to 64 by year: WVBRFSS, 1993-2003



------- Trend Line

Figure 2.2: No health care coverage among adults aged 18 to 64 by county: WVBRFSS, 1999-2003



Could Not Afford Medical Care: Needed to see a doctor in the past 12 months but could not because of the cost.

State Prevalence

17.8% (95% CI: 16.3-19.3); 6th highest among 54 BRFSS participants.
National prevalence: 12.9% (95% CI: 12.6-13.1).

Time Trends

Between 2000 and 2003 the percentage of adults who could not afford medical care increased slightly from 16.4% to 17.8%.

Gender

Men 15.9% (95% CI: 13.7-18.0); **Women 19.6%** (95% CI: 17.6-21.7).
There was no significant difference in the percentage of men and women who could not afford medical care.

Age

The prevalence of not being able to afford care significantly decreased after the age of 54. More than one-fourth of adults aged 25 to 34 could not afford care, compared with approximately 7% of the elderly. At ages 35 to 44, the rate was significantly higher among women than men (28.6% versus 16.5%)

Education

There was a significant inverse relationship between not being able to afford care and educational attainment. The rate was significantly higher among adults with less than a high school education than among those with more schooling. Women with a high school diploma/GED were significantly more likely to not be able to afford medical care than their male counterparts (21.8% versus 14.1%).

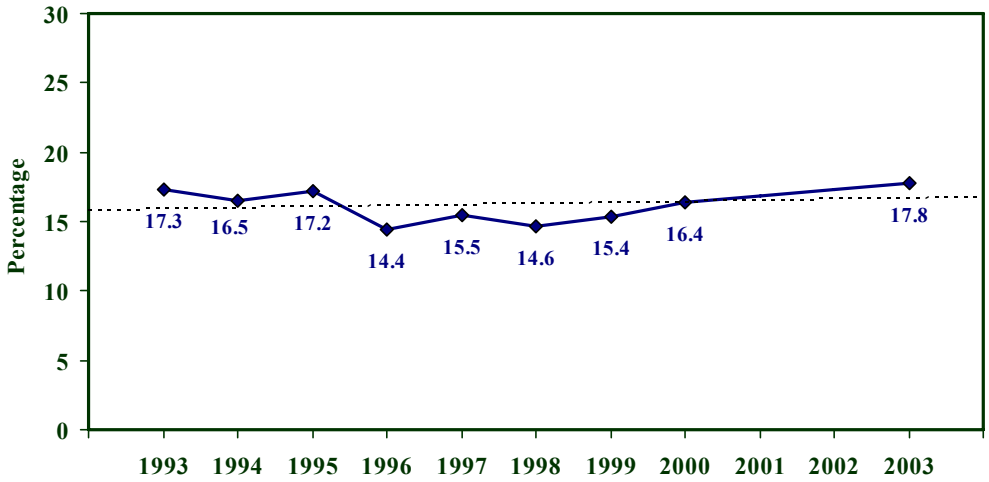
Household Income

The rate of not being able to afford care also significantly declined as household income increased. Nearly one-third of adults in the poorest households could not afford care, compared with approximately 3% of those with an income of $75,000 or more.

Table 2.2: Needed medical care in past 12 months but could not afford it: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,322	**15.9**	(13.7-18.0)	2,026	**19.6**	(17.6-21.7)	3,348	**17.8**	(16.3-19.3)
Age									
18-24	92	**15.8**	(8.2-23.3)	111	**26.9**	(17.5-36.3)	203	**21.1**	(15.0-27.2)
25-34	187	**22.3**	(15.9-28.7)	268	**32.0**	(25.9-38.0)	455	**27.1**	(22.7-31.6)
35-44	235	**16.5**	(11.5-21.5)	322	**28.6**	(23.1-34.1)	557	**22.7**	(18.9-26.5)
45-54	284	**21.4**	(16.2-26.6)	388	**16.8**	(12.9-20.8)	672	**19.1**	(15.9-22.4)
55-64	249	**12.1**	(7.6-16.5)	397	**13.7**	(10.0-17.4)	646	**12.9**	(10.0-15.8)
65+	274	**6.0**	(3.0-9.0)	529	**7.6**	(5.1-10.1)	803	**6.9**	(5.0-8.9)
Education									
Less than H.S.	245	**30.0**	(23.6-36.5)	391	**25.1**	(20.0-30.1)	636	**27.5**	(23.4-31.6)
H.S. or G.E.D.	528	**14.1**	(10.8-17.3)	792	**21.8**	(18.4-25.3)	1,320	**18.1**	(15.7-20.5)
Some Post-H.S.	265	**13.5**	(8.8-18.2)	476	**18.3**	(14.2-22.4)	741	**16.2**	(13.1-19.3)
College Graduate	281	**7.9**	(4.3-11.6)	366	**10.6**	(7.1-14.2)	647	**9.2**	(6.7-11.8)
Income									
Less than $15,000	170	**34.3**	(26.0-42.6)	355	**29.8**	(24.2-35.4)	525	**31.7**	(26.9-36.4)
$15,000- 24,999	263	**29.0**	(22.8-35.3)	461	**33.0**	(28.0-38.0)	724	**31.3**	(27.3-35.2)
$25,000- 34,999	194	**11.4**	(6.8-16.0)	269	**22.4**	(16.8-28.0)	463	**17.2**	(13.4-20.9)
$35,000- 49,999	211	**12.0**	(6.8-17.2)	267	**11.8**	(7.6-16.0)	478	**11.9**	(8.5-15.3)
$50,000- 74,999	168	**5.0**	(1.8-8.2)	225	**4.8**	(1.8-7.8)	393	**4.9**	(2.7-7.1)
$75,000+	183	**1.6**	(0.0-3.9)	146	**6.6**	(1.4-11.9)	329	**3.4**	(1.0-5.8)

Figure 2.3: Inability to afford needed medical care by year: WVBRFSS, 1993-2003



------- Trend Line

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

No Personal Doctor or Health Care Provider: Do not have one person they think of as their personal doctor or health provider.

State Prevalence

21.6% (95% CI: 19.9-23.4); 21st among 54 BRFSS participants.
National prevalence: 20.5% (95% CI: 20.2-20.8).

Time Trends

Between 2002 and 2003, the prevalence decreased from 22.2% to 21.6%.

Gender

Men 28.3% (95% CI: 25.4-31.2); **Women 15.5%** (95% CI: 13.5-17.5).
Men were significantly less likely to have a personal doctor than women.

Age

The prevalence significantly decreased with age. Nearly half of young adults aged 18 to 24 had no personal doctor, compared with approximately 7% of elderly adults aged 65 and older. Men had significantly higher rates than women in four of the six age categories (25-34, 35-44, 45-54, and 55-64).

Education

The prevalence of no personal doctor or health care provider did not significantly differ by educational attainment in the total population or within gender groups. However, men without a college degree were significantly less likely to have a personal doctor than their female counterparts.

Household Income

Again, there was no consistent relationship between household income and reports of having a personal doctor in the total population or within gender groups. Men continued to have a higher rate than women in all but two income categories ($25,000-34,999 and $75,000+).

Quick Stats

- Approximately 25% of veterans received some or all of their medical care from VA facilities in the past 12 months.

Table 2.3: No personal doctor or health care provider: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,322	**28.3**	(25.4-31.2)	2,024	**15.5**	(13.5-17.5)	3,346	**21.6**	(19.9-23.4)
Age									
18-24	92	**53.9**	(42.7-65.1)	111	**43.5**	(33.2-53.9)	203	**48.9**	(41.2-56.6)
25-34	187	**44.7**	(37.1-52.4)	268	**19.6**	(14.6-24.6)	455	**32.2**	(27.4-36.9)
35-44	235	**29.0**	(22.8-35.3)	322	**16.8**	(12.1-21.4)	557	**22.8**	(18.9-26.7)
45-54	284	**23.1**	(17.9-28.3)	388	**12.3**	(8.7-15.8)	672	**17.7**	(14.5-20.8)
55-64	250	**15.2**	(10.5-19.8)	397	**7.1**	(4.2-10.0)	647	**11.1**	(8.3-13.8)
65+	273	**9.4**	(5.8-12.9)	528	**5.6**	(3.6-7.5)	801	**7.1**	(5.2-9.0)
Education									
Less than H.S.	244	**28.6**	(21.2-36.0)	391	**14.8**	(10.6-19.0)	635	**21.5**	(17.2-25.9)
H.S. or G.E.D.	529	**32.3**	(27.7-36.9)	791	**16.9**	(13.5-20.3)	1,320	**24.3**	(21.5-27.2)
Some Post-H.S.	265	**26.9**	(20.6-33.2)	475	**14.7**	(10.7-18.6)	740	**20.0**	(16.4-23.6)
College Graduate	281	**21.1**	(15.8-26.4)	366	**14.1**	(9.5-18.8)	64	**17.7**	(14.2-21.3)
Income									
Less than $15,000	171	**31.9**	(23.3-40.5)	355	**15.2**	(10.3-20.0)	526	**22.2**	(17.5-26.9)
$15,000- 24,999	263	**33.8**	(27.2-40.3)	460	**20.6**	(16.1-25.1)	723	**26.4**	(22.5-30.2)
$25,000- 34,999	194	**22.5**	(16.2-28.7)	269	**14.0**	(9.3-18.7)	463	**18.0**	(14.1-21.9)
$35,000- 49,999	211	**28.8**	(21.7-35.8)	267	**12.3**	(7.4-17.1)	478	**21.0**	(16.5-25.5)
$50,000- 74,999	168	**22.4**	(15.4-29.4)	225	**8.8**	(4.7-13.0)	393	**15.6**	(11.4-19.8)
$75,000+	183	**20.8**	(14.2-27.5)	146	**11.6**	(5.8-17.4)	329	**17.6**	(12.8-22.4)

CHAPTER 3: DIABETES AWARENESS

Definition: Have ever been told by a doctor that they have diabetes. ***Women told they had diabetes only during pregnancy are treated as an answer of "no".***

State Prevalence

9.8% (95% CI: 8.7-10.9); 4th highest among 54 BRFSS participants.
National prevalence: 7.5% (95% CI: 7.3-7.7).

Time Trends

The prevalence of diabetes awareness steadily increased between 1995 and 2002. In 2003, it slightly decreased from the 2002 prevalence of 10.2%. West Virginia has ranked among the top five states nationwide for this risk factor every year since 1999.

Gender

Men 8.7% (95% CI: 7.2-10.3); **Women 10.8%** (95% CI: 9.3-12.3).
Although the gender gap widened between 2002 and 2003, there was no significant gender difference in the prevalence of diabetes.

Age

The prevalence of diabetes increased sharply with age, especially after age 54. In fact, adults aged 65 and older were more than twice as likely to have diabetes as those aged 45 to 54 (19.3% versus 9.1%). The rate of diabetes was significantly higher among adults aged 55 and older than among those in the four lower age groupings.

Education

There was a significant inverse relationship between diabetes awareness and educational attainment. Nearly 16% of adults without a high school diploma/GED were diabetic, compared with approximately 6% of college graduates. Women without a high school diploma/GED had a significantly higher rate of diabetes than their male counterparts (20.4% versus 11.1%).

Household Income

Diabetes awareness generally decreased as household income increased. The prevalence was highest among adults in the poorest households (14.3%). Adults with the highest level of income were significantly less likely to have diabetes than those with an income less than $35,000.

Quick Stats

- Between 1995 and 2003, the percentage of diabetic adults that check their blood sugar at least once daily significantly increased from 26.3% to 61.7%.
- Diabetic adults were significantly more likely to report a fair or poor health status than non-diabetic adults and were significantly less likely to be uninsured (see Figure 3.3).

West Virginia 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: 87.4% in 2003)

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: 66.2% in 2003)

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: 61.7% in 2003)

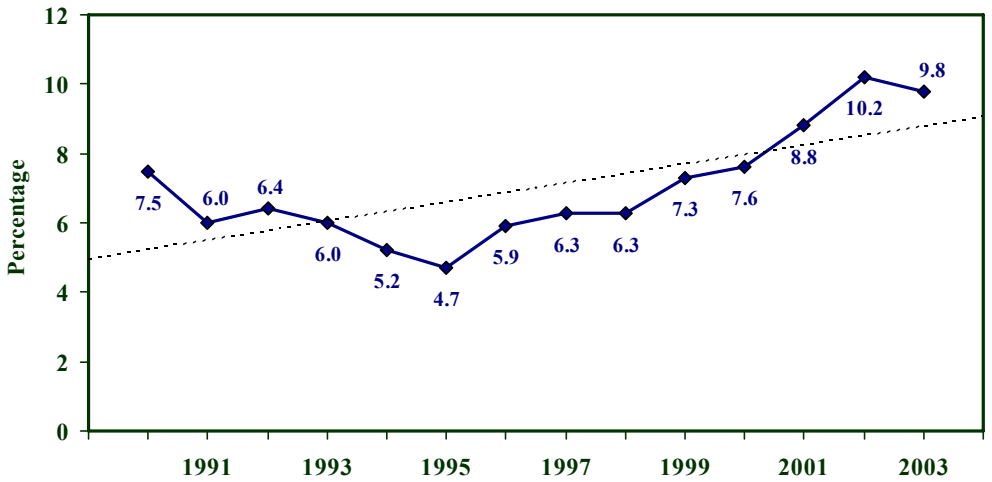
Objective 5.9

Increase to 52% the proportion of persons with diabetes who have received diabetes education in the past year from someone other than their physician, such as a registered dietician or certified diabetes educator. (Baseline: 29.5% in 1997; Current: 40.2% in 2003)

Table 3.1: Prevalence of diabetes awareness: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,322	**8.7**	(7.2-10.3)	2,024	**10.8**	(9.3-12.3)	3,346	**9.8**	(8.7-10.9)
Age									
18-24	92	**0.0**	--	111	**2.8**	(0.0-8.3)	203	**1.4**	(0.0-4.0)
25-34	187	**1.1**	(0.0-2.5)	268	**4.5**	(1.7-7.3)	455	**2.8**	(1.2-4.4)
35-44	235	**4.7**	(1.7-7.6)	322	**6.0**	(3.2-8.8)	557	**5.4**	(3.3-7.4)
45-54	284	**8.4**	(5.1-11.7)	388	**9.9**	(6.7-13.0)	672	**9.1**	(6.8-11.4)
55-64	250	**14.5**	(10.0-19.0)	396	**20.6**	(16.0-25.1)	646	**17.6**	(14.4-20.8)
65+	273	**22.4**	(17.0-27.7)	528	**17.2**	(13.8-20.6)	801	**19.3**	(16.3-22.3)
Education									
Less than H.S.	244	**11.1**	(7.0-15.1)	390	**20.4**	(16.2-24.7)	634	**15.9**	(12.9-18.9)
H.S. or G.E.D.	529	**8.6**	(6.3-11.0)	791	**10.1**	(8.0-12.3)	1,320	**9.4**	(7.8-11.0)
Some Post-H.S.	265	**7.7**	(4.6-10.8)	476	**9.0**	(5.7-12.4)	741	**8.5**	(6.1-10.8)
College Graduate	281	**8.0**	(4.7-11.2)	366	**4.1**	(2.1-6.2)	647	**6.1**	(4.2-8.0)
Income									
Less than $15,000	170	**12.9**	(8.0-17.7)	355	**15.4**	(11.5-19.3)	525	**14.3**	(11.3-17.4)
$15,000- 24,999	263	**11.3**	(7.4-15.2)	461	**14.1**	(10.8-17.5)	724	**12.9**	(10.4-15.4)
$25,000- 34,999	194	**10.1**	(5.5-14.8)	269	**10.2**	(6.3-14.0)	463	**10.1**	(7.1-13.1)
$35,000- 49,999	211	**6.5**	(3.0-10.0)	266	**4.1**	(1.7-6.6)	477	**5.4**	(3.2-7.6)
$50,000- 74,999	168	**6.9**	(3.2-10.6)	225	**6.0**	(3.0-9.1)	393	**6.5**	(4.1-8.8)
$75,000+	183	**5.2**	(2.3-8.1)	146	**2.2**	(0.2-4.3)	329	**4.2**	(2.2-6.2)

Figure 3.1: Prevalence of diabetes awareness by year: WVBRFSS, 1990-2003



------- Trend Line

Figure 3.2: Prevalence of diabetes awareness by county: WVBRFSS, 1999-2003

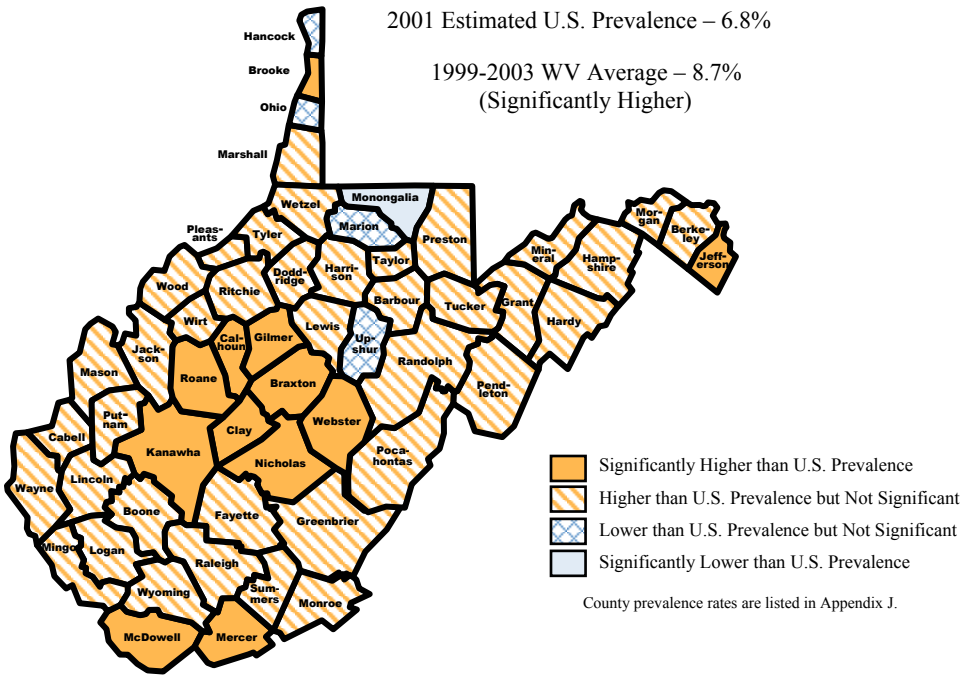


Table 3.2: Key health care issues among diabetic respondents: WVBRFSS, 2003

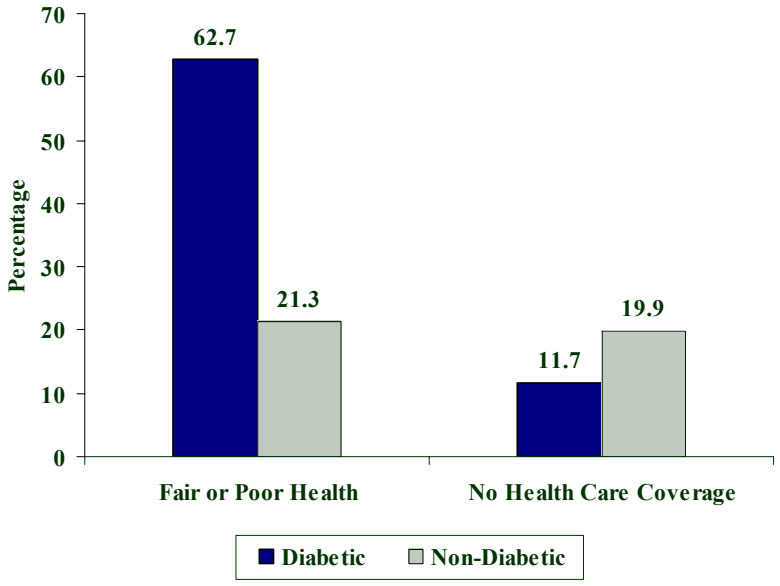
Characteristic	Did not have an HbA1c test even once in the last year or has never heard of it			Did not have a foot exam by a health professional even once in the past 12 months [a]			Did not have a dilated eye exam in the past one year		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	328	**12.6**	(8.4-16.7)	369	**35.4**	(29.9-40.9)	373	**33.8**	(28.4-39.3)
Sex									
Males	123	**14.1**	(6.9-21.3)	138	**33.8**	(25.0-42.6)	139	**33.3**	(24.6-42.0)
Females	205	**11.4**	(6.7-16.1)	231	**36.6**	(29.6-43.7)	234	**34.2**	(27.3-41.2)
Age									
18-44	38	**11.4**[b]	(1.7-21.2)	42	**48.3**[b]	(30.3-66.3)	38	**47.4**[b]	(28.4-66.4)
45-54	59	**8.3**	(0.0-17.6)	66	**31.6**	(19.5-43.8)	67	**43.9**	(30.8-57.0)
55-64	108	**9.6**	(3.2-16.0)	113	**32.4**	(22.9-41.9)	114	**36.0**	(26.3-45.8)
65+	122	**17.6**	(9.8-25.4)	147	**33.4**	(25.0-41.9)	153	**22.9**	(15.6-30.2)
Education									
Less than H.S.	92	**19.1**	(9.3-28.8)	107	**32.9**	(23.0-42.8)	109	**36.9**	(26.8-46.9)
H.S. or G.E.D.	129	**9.5**	(4.2-14.8)	149	**39.3**	(30.5-48.0)	146	**33.5**	(24.9-42.1)
Some Post-H.S.	65	**9.9**	(2.5-17.2)	69	**26.5**	(14.7-38.3)	73	**31.8**	(19.2-44.4)
College Graduate	41	**12.3**[b]	(0.0-25.1)	43	**44.5**[b]	(27.9-61.1)	44	**31.5**[b]	(16.3-46.6)
Income									
Less than $15,000	78	**15.9**	(7.6-24.1)	88	**37.0**	(25.6-48.4)	91	**31.4**	(21.1-41.7)
$15,000- 24,999	90	**19.5**	(10.0-29.0)	103	**37.3**	(26.8-47.9)	101	**34.4**	(23.7-45.0)
$25,000- 49,999	68	**8.1**	(0.0-16.3)	73	**31.8**	(20.2-43.4)	74	**31.2**	(19.6-42.9)
$50,000+	48	**3.6**[b]	(0.0-8.7)	49	**34.7**[b]	(20.1-49.3)	49	**41.2**[b]	(26.3-56.1)

a. Excludes amputees.
b. Use caution in interpreting percentages with N<50.

Table 3.3: Other health care issues among diabetic respondents: WVBRFSS, 2003

Diabetic respondents who…	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Now take insulin	142	**21.1**	(13.7-28.5)	242	**28.9**	(21.6-36.2)	384	**25.6**	(20.3-30.9)
Now take diabetes pills	142	**67.1**	(58.5-75.8)	240	**68.3**	(60.9-75.6)	382	**67.8**	(62.1-73.4)
Did NOT visit a doctor, nurse, or other health professional even once in the past 12 months for their diabetes	138	**6.7**	(1.3-12.1)	236	**4.9**	(2.1-7.7)	374	**5.7**	(2.8-8.5)
Were told by a doctor that they have diabetic retinopathy	142	**17.5**	(10.5-24.5)	238	**20.4**	(14.8-25.9)	380	**19.1**	(14.8-23.5)
Have ever had a foot sore that took more than four weeks to heal	142	**12.7**	(6.5-18.8)	242	**15.6**	(10.5-20.7)	384	**14.3**	(10.4-18.2)
Have NEVER taken a class in self-management of diabetes	142	**54.9**	(45.9-63.9)	242	**63.4**	(55.9-70.8)	384	**59.8**	(54.1-65.5)
Never check blood glucose at home or check it less than once daily	137	**41.2**	(32.1-50.3)	237	**36.2**	(29.2-43.1)	374	**38.3**	(32.7-43.8)
Never self-check feet for sores or check them less than once daily	138	**29.8**	(21.4-38.3)	235	**19.6**	(13.9-25.3)	373	**24.0**	(19.1-28.9)

Figure 3.3: General health status and health care coverage by diabetic status: WVBRFSS 2003



CHAPTER 4: OBESITY AND OVERWEIGHT

Obesity: Defined as a Body Mass Index (BMI) of 30.0 or higher.[5]
Overweight: Defined as a Body Mass Index (BMI) between 25.0 and 29.9.

State Prevalence

***Obesity:* 27.7%** (95% CI: 25.9-29.5); 3rd highest among 54 BRFSS participants. National prevalence: 22.8% (95% CI: 22.5-23.1).

***Overweight:* 34.0%** (95% CI: 32.1-35.8); 51st among 54 BRFSS participants. National prevalence: 36.6% (95% CI: 36.2-37.0).

Time Trends

Generally, the prevalence of obesity has shown a consistent upward trend since 1987. The prevalence of overweight has remained fairly stable during this period; 2003 marks the second consecutive year of decline in the rate of overweight.

Gender

Obesity:
Men 30.5% (95% CI: 27.6-33.3); **Women 25.0%** (95% CI: 22.9-27.2).

Overweight:
Men 39.0% (95% CI: 36.0-41.9); **Women 29.2%** (95% CI: 26.9-31.4).

Men had a significantly higher rate of both obesity and overweight than women.

Age

Obesity was most prevalent among adults aged 35 to 44, whereas overweight was most prevalent among those aged 55 to 64. Adults aged 35 to 44 were significantly more likely to be obese than the youngest and oldest adults. Men aged 25 to 34 and 55 to 64 were significantly more likely to be overweight than their female counterparts.

Education

Obesity declined significantly as educational attainment increased, especially among women. Among men, the prevalence of overweight significantly increased with education. Men with a college degree were significantly more likely to be overweight than female college graduates (47.1% versus 27.6%).

Household Income

Obesity was highest among adults in the middle income categories, whereas overweight was most prevalent among the wealthiest adults. Women with incomes of $75,000 or more were significantly less likely to be obese than all other women and all men. In addition, women with an income between $50,000 and $74,999 had a significantly lower rate of overweight than their male counterparts.

Quick Stats

- 61.7% of adults were overweight or obese (8th highest among 54 BRFSS participants).

West Virginia Healthy People 2010 Objectives

Objective 19.1a

Reduce to 37% the proportion of people who are obese as defined by the Metropolitan Life Insurance tables as being at least 20% over ideal body weight. (Baseline: 43.0% in 1998)

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: 27.7% in 2003)

[5] Body Mass Index equals body weight in kilograms divided by the height in meters squared (BMI=kg/m^2).

Table 4.1: Prevalence of obesity: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,311	**30.5**	(27.6-33.3)	1,925	**25.0**	(22.9-27.2)	3,236	**27.7**	(25.9-29.5)
Age									
18-24	89	**23.7**	(12.8-34.6)	108	**16.4**	(8.9-23.8)	197	**20.2**	(13.4-27.0)
25-34	185	**27.3**	(20.5-34.1)	255	**25.0**	(19.2-30.8)	440	**26.2**	(21.7-30.7)
35-44	234	**40.3**	(33.5-47.1)	309	**29.5**	(23.9-35.1)	543	**34.9**	(30.4-39.3)
45-54	283	**35.1**	(29.1-41.2)	368	**28.4**	(23.5-33.4)	651	**31.9**	(27.9-35.8)
55-64	249	**30.7**	(24.5-36.8)	373	**32.4**	(27.2-37.6)	622	**31.5**	(27.5-35.5)
65+	270	**22.5**	(17.3-27.7)	506	**19.0**	(15.5-22.6)	776	**20.5**	(17.5-23.5)
Education									
Less than H.S.	239	**32.6**	(25.1-40.2)	371	**31.7**	(26.5-37.0)	610	**32.2**	(27.6-36.8)
H.S. or G.E.D.	525	**31.3**	(26.9-35.6)	752	**27.2**	(23.6-30.9)	1,277	**29.2**	(26.4-32.0)
Some Post-H.S.	265	**30.4**	(24.4-36.5)	449	**21.7**	(17.6-25.9)	714	**25.7**	(22.1-29.2)
College Graduate	279	**27.2**	(21.2-33.1)	352	**17.5**	(13.3-21.7)	631	**22.6**	(18.8-26.3)
Income									
Less than $15,000	168	**25.1**	(17.6-32.7)	341	**27.4**	(22.1-32.6)	509	**26.4**	(22.0-30.8)
$15,000- 24,999	261	**28.8**	(22.8-34.8)	442	**26.1**	(21.6-30.5)	703	**27.3**	(23.6-30.9)
$25,000- 34,999	193	**29.0**	(22.0-36.0)	252	**32.0**	(25.7-38.3)	445	**30.6**	(25.9-35.3)
$35,000- 49,999	211	**36.6**	(29.4-43.7)	259	**23.6**	(17.8-29.4)	470	**30.6**	(25.8-35.3)
$50,000- 74,999	167	**28.3**	(21.2-35.4)	217	**27.5**	(21.0-34.1)	384	**27.9**	(23.1-32.8)
$75,000+	182	**32.6**	(25.0-40.2)	140	**9.1**	(4.4-13.8)	322	**24.4**	(19.1-29.8)

Table 4.2: Prevalence of overweight: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,311	**39.0**	(36.0-41.9)	1,925	**29.2**	(26.9-31.4)	3,236	**34.0**	(32.1-35.8)
Age									
18-24	89	**27.1**	(17.2-37.0)	108	**15.8**	(8.6-23.0)	197	**21.7**	(15.5-28.0)
25-34	185	**42.9**	(35.3-50.5)	255	**28.2**	(22.2-34.1)	440	**35.7**	(30.8-40.6)
35-44	234	**33.2**	(26.9-39.6)	309	**28.9**	(23.3-34.4)	543	**31.0**	(26.8-35.2)
45-54	283	**39.5**	(33.3-45.6)	368	**29.6**	(24.6-34.6)	651	**34.7**	(30.7-38.7)
55-64	249	**50.7**	(44.0-57.3)	373	**31.9**	(26.7-37.1)	622	**41.4**	(37.1-45.7)
65+	270	**40.0**	(33.7-46.3)	506	**35.1**	(30.6-39.6)	776	**37.1**	(33.4-40.8)
Education									
Less than H.S.	239	**33.2**	(26.4-40.1)	371	**29.4**	(24.2-34.6)	610	**31.3**	(27.0-35.6)
H.S. or G.E.D.	525	**38.7**	(34.1-43.2)	752	**31.5**	(27.8-35.1)	1,277	**35.0**	(32.1-37.9)
Some Post-H.S.	265	**37.5**	(31.0-43.9)	449	**26.5**	(21.9-31.1)	714	**31.4**	(27.6-35.3)
College Graduate	279	**47.1**	(40.7-53.6)	352	**27.6**	(22.5-32.6)	631	**37.8**	(33.5-42.0)
Income									
Less than $15,000	168	**31.4**	(23.4-39.5)	341	**30.7**	(25.0-36.3)	509	**31.0**	(26.3-35.7)
$15,000- 24,999	261	**38.2**	(31.8-44.6)	442	**33.2**	(28.2-38.1)	703	**35.4**	(31.5-39.4)
$25,000- 34,999	193	**40.2**	(32.7-47.6)	252	**29.8**	(23.6-36.0)	445	**34.9**	(30.0-39.7)
$35,000- 49,999	211	**37.4**	(30.3-44.4)	259	**31.1**	(25.1-37.1)	470	**34.5**	(29.7-39.2)
$50,000- 74,999	167	**47.3**	(39.2-55.5)	217	**23.8**	(17.8-29.9)	384	**35.7**	(30.4-41.0)
$75,000+	182	**44.8**	(36.7-53.0)	140	**29.9**	(21.4-38.3)	322	**39.6**	(33.5-45.7)

Figure 4.1: Prevalence of obesity and overweight by year: WVBRFSS, 1987-2003

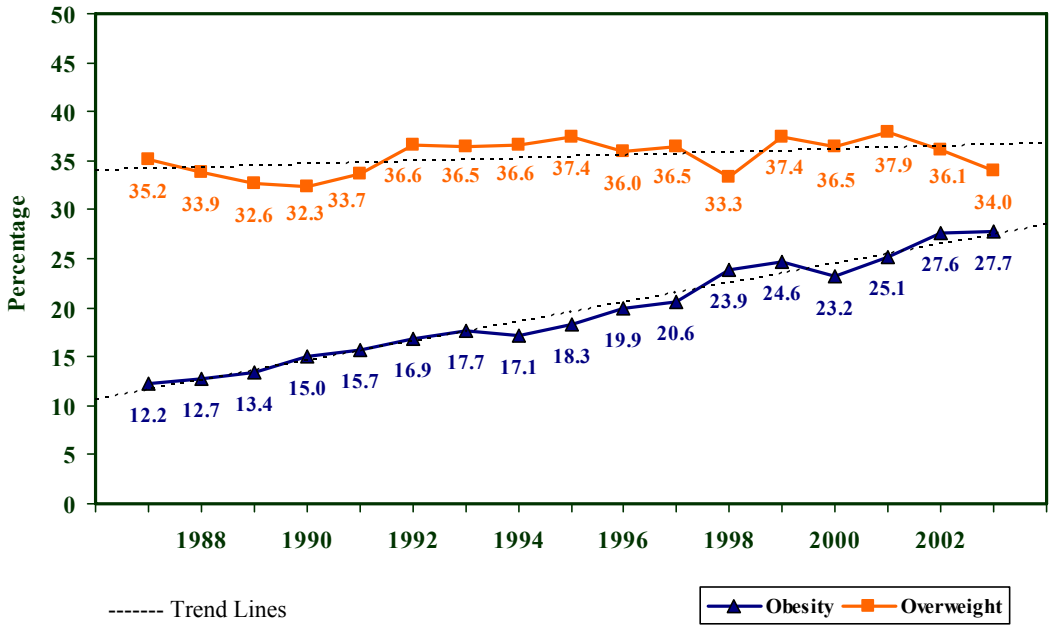
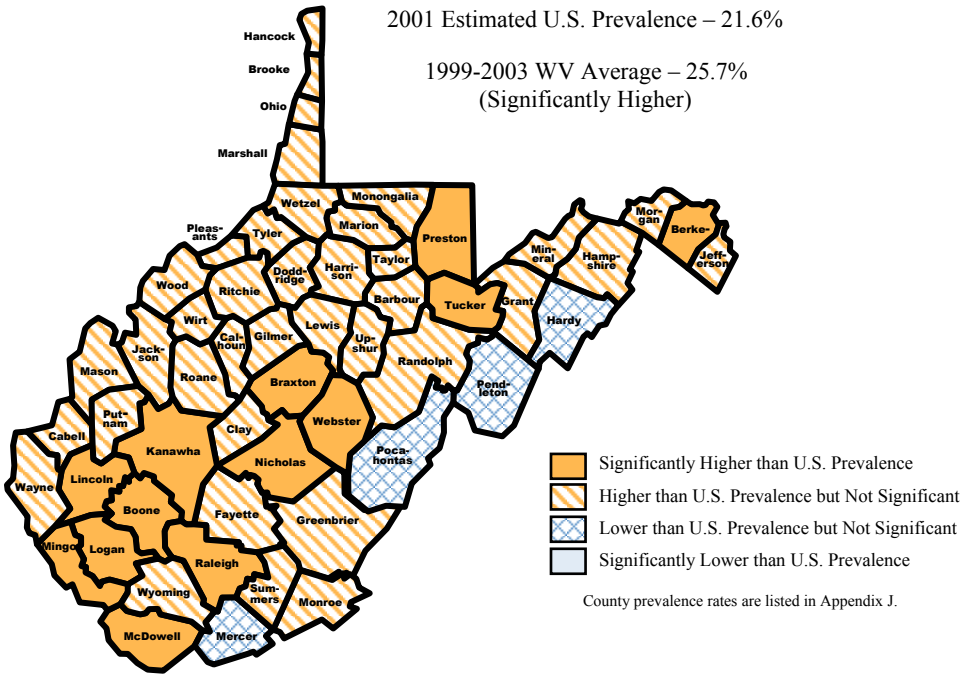


Figure 4.2: Prevalence of obesity by county: WVBRFSS, 1999-2003



CHAPTER 5: WEIGHT CONTROL

Trying to Lose Weight: Are currently trying to lose weight.

State Prevalence

38.9% (95% CI: 30.7-40.8); 33rd among 54 BRFSS participants.
National prevalence: 40.0% (95% CI: 39.7-40.4).

Time Trends

The prevalence of attempting weight loss has remained fairly stable since 1987. However, there is an increasing trend to try to lose weight among overweight and obese adults. Between 2000 and 2003, the percentage of non-overweight/obese adults trying to lose weight decreased from 20.4 to 17.1 percent.

Gender

Men 32.7% (95% CI: 29.8-35.5); **Women 44.7%** (95% CI: 42.2-47.1).
Women were significantly more likely to be trying to lose weight than men.

Age

The percentage of adults trying to lose weight increased until age 65. Adults aged 45 to 54 and 55 to 64 had a significantly higher prevalence than those aged 18 to 24 (45.1%, 46.5%, and 33.3%, respectively). The elderly were significantly less likely to be attempting weight loss than adults in all other age groups. At most ages, women had a significantly higher rate of trying to lose weight than men.

Education

The prevalence of trying to lose weight increased as educational attainment increased, although the trend was not significant. Nearly 42% of college graduates were trying to lose weight, compared with approximately 35% of adults without a high school diploma/GED. Again, women were significantly more likely to be trying to lose weight than men at most levels of education.

Household Income

Among the total population and men, attempting weight loss increased until household income reached $50,000, although the trend was not significant. Among women, the rate increased at every level of income. Women with incomes of $75,000 or more were significantly more likely to be trying to lose weight than those in the poorest households (53.3% versus 37.6%). In addition, women had a significantly higher rate than men at three levels of income ($25,000-34,999; $50,000-74,999; $75,000+).

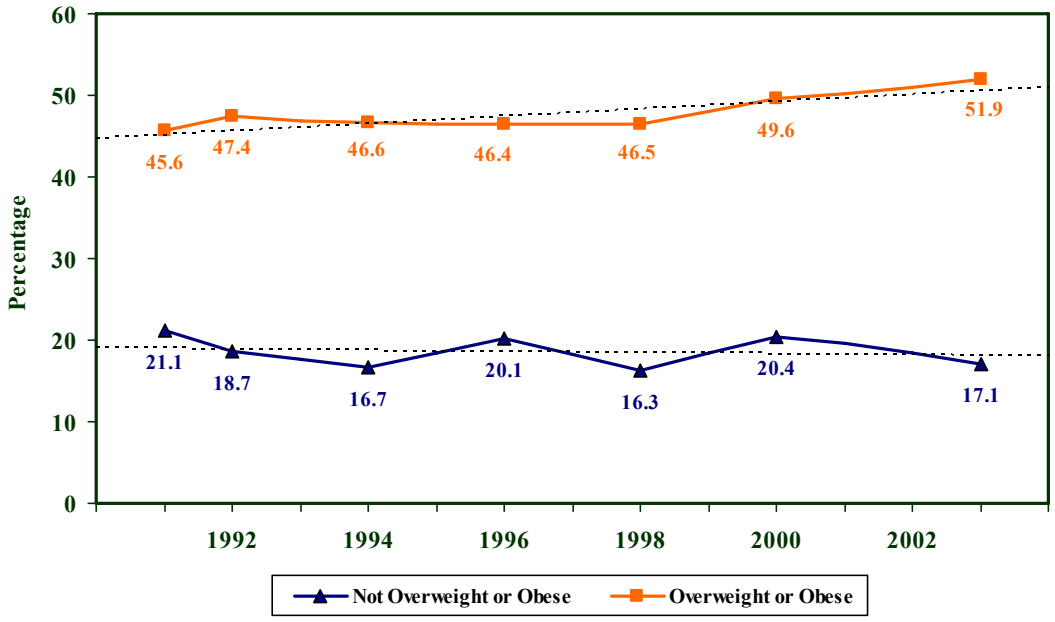
Quick Stats

- Among respondents who were trying to lose weight, 82.4% were eating fewer calories or less fat, and 70.7% were using physical activity or exercise to help them lose weight.
- Trying to lose weight significantly increased at each higher weight category (normal weight, overweight, obese) for both men and women. However, women were significantly more likely than men to be trying to lose weight at each weight level (see Figure 5.2).

Table 5.1: Prevalence of trying to lose weight: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,321	**32.7**	(29.8-35.5)	2,025	**44.7**	(42.2-47.1)	3,346	**38.9**	(37.0-40.8)
Age									
18-24	92	**31.9**	(20.6-43.2)	111	**34.7**	(24.6-44.8)	203	**33.3**	(25.7-40.8)
25-34	187	**28.2**	(21.4-34.9)	267	**51.7**	(45.4-58.1)	454	**39.9**	(35.1-44.8)
35-44	235	**33.5**	(27.1-39.9)	322	**55.1**	(49.1-61.0)	557	**44.5**	(40.0-49.0)
45-54	284	**34.7**	(28.8-40.6)	388	**55.4**	(50.1-60.8)	672	**45.1**	(41.0-49.2)
55-64	250	**40.3**	(33.7-46.9)	397	**52.5**	(47.2-57.8)	647	**46.5**	(42.3-50.8)
65+	272	**27.6**	(22.0-33.2)	529	**24.6**	(20.7-28.5)	801	**25.8**	(22.6-29.1)
Education									
Less than H.S.	244	**31.8**	(24.2-39.3)	391	**37.7**	(32.3-43.1)	635	**34.8**	(30.2-39.4)
H.S. or G.E.D.	528	**30.8**	(26.5-35.0)	791	**45.8**	(41.9-49.8)	1,319	**38.6**	(35.7-41.5)
Some Post-H.S.	265	**34.0**	(27.7-40.3)	476	**45.6**	(40.4-50.8)	741	**40.6**	(36.5-44.6)
College Graduate	281	**35.9**	(29.8-42.1)	366	**48.3**	(42.6-54.0)	647	**41.9**	(37.7-46.1)
Income									
Less than $15,000	170	**30.7**	(22.8-38.6)	355	**37.6**	(31.8-43.3)	525	**34.7**	(29.9-39.4)
$15,000- 24,999	262	**31.9**	(25.6-38.1)	461	**43.0**	(38.0-48.1)	723	**38.2**	(34.2-42.1)
$25,000- 34,999	194	**32.2**	(25.1-39.3)	268	**47.6**	(41.1-54.2)	462	**40.3**	(35.4-45.2)
$35,000- 49,999	211	**39.2**	(32.0-46.4)	267	**48.4**	(41.8-55.0)	478	**43.5**	(38.6-48.5)
$50,000- 74,999	168	**32.7**	(25.0-40.3)	225	**50.5**	(43.3-57.7)	393	**41.6**	(36.2-46.9)
$75,000+	183	**33.6**	(26.0-41.2)	146	**53.3**	(44.5-62.1)	329	**40.6**	(34.6-46.5)

Figure 5.1: Trying to lose weight by overweight/obese status and year: WVBRFSS, 1991-2003



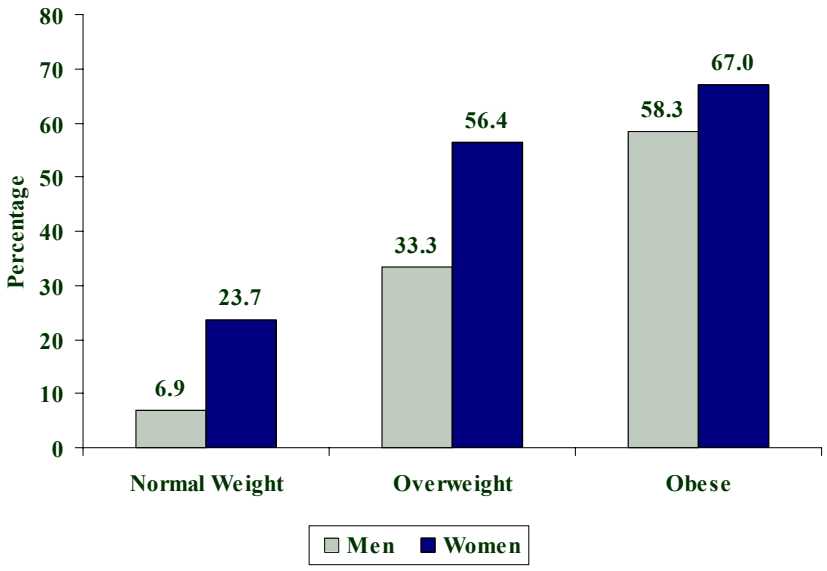
------- Trend Lines NOTE: Data not available for the years 1993, 1995, 1997, 1999, and 2001-02.

Table 5.2: Advice from health professional on losing weight; trying to lose weight among overweight or obese adults: WVBRFSS, 2003

Overweight or obese adults who…	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
In the past year, have been advised by a doctor, nurse, or other health professional to lose weight	923	**18.6**	(15.7-21.5)	1,072	**23.5**	(20.7-26.3)	1,995	**20.8**	(18.7-22.8)
Are currently trying to lose weight	921	**44.3**	(40.7-47.9)	1,072	**61.3**	(58.0-64.6)	1,993	**51.9**	(49.4-54.4)
Are eating fewer calories or less fat to lose weight[a]	407	**79.4**	(74.5-84.4)	656	**85.5**	(82.6-88.5)	1,063	**82.7**	(79.8-85.5)
Are using physical activity or exercise to lose weight[a]	411	**71.3**	(66.6-75.9)	661	**66.0**	(62.0-69.9)	1,072	**68.5**	(65.4-71.5)

a. Among overweight or obese adults who are trying to lose weight.

Figure 5.2: Trying to lose weight by weight status and gender: WVBRFSS 2003



Note: Weight status determined by body mass index (BMI). See page 21 for definitions of overweight and obese.

CHAPTER 6: PHYSICAL INACTIVITY

Physically Inactive: During the past month, other than their regular job, did not participate in any physical activities or exercise such as running, calisthenics, golf, gardening, or walking for exercise.

State Prevalence

28.0% (95% CI: 26.3-29.7); 11th highest among 54 BRFSS participants.
National prevalence: 24.6% (95% CI: 24.3 -24.9).

Time Trends

Historically, West Virginia has ranked high in physical inactivity. However, inactivity dropped sharply after 1998 and has continued to decline for the past four years. Between 2001 and 2003, the prevalence significantly declined from 31.7% to 28.0%.

Gender

Men 24.9% (95% CI: 22.3-27.4); **Women 30.9%** (95% CI: 28.7-33.2).
Since 1984 women have had higher rates of physical inactivity than men. In 2003, the gender difference was statistically significant. Between 2000 and 2003, the prevalence of inactivity significantly declined among men (32.0% versus 24.9%) but not women (35.0% versus 30.9%).

Age

Physical inactivity significantly increased with age, ranging from a low of 13.6% of 18 to 24-year-olds to 34.3% of those aged 65 and older. Women had a significantly higher rate of inactivity than men at ages 55 to 64 (39.5% versus 25.5%) and 65 and older (39.2% versus 27.2%).

Education

The prevalence of physical inactivity significantly decreased as education increased. Adults without a high school diploma/GED were significantly more likely to be inactive that those at all higher levels of educational attainment. More than 44% of adults with fewer than 12 years of school were participating in no leisure-time physical activities, compared with 14% of college graduates.

Household Income

There was also an inverse relationship between physical inactivity and household income. Adults in the poorest households had the highest prevalence of inactivity (43.8% - more than four times higher than those with the highest income). Significant declines in physical inactivity occurred when income reached $25,000-34,999 and $75,000 or more. Adults living in the wealthiest households were significantly less likely to be inactive than those at all other income levels.

Quick Stats

- 57.3% of adults did not meet the CDC's Healthy People-2010 objective for moderate or physical activity.
  Moderate activity: small increases in heart rate - 30+ min., 5+ days/wk.
  Vigorous activity: large increases in heart rate - 20+ min., 3+ days/wk.

West Virginia Healthy People 2010 Objectives

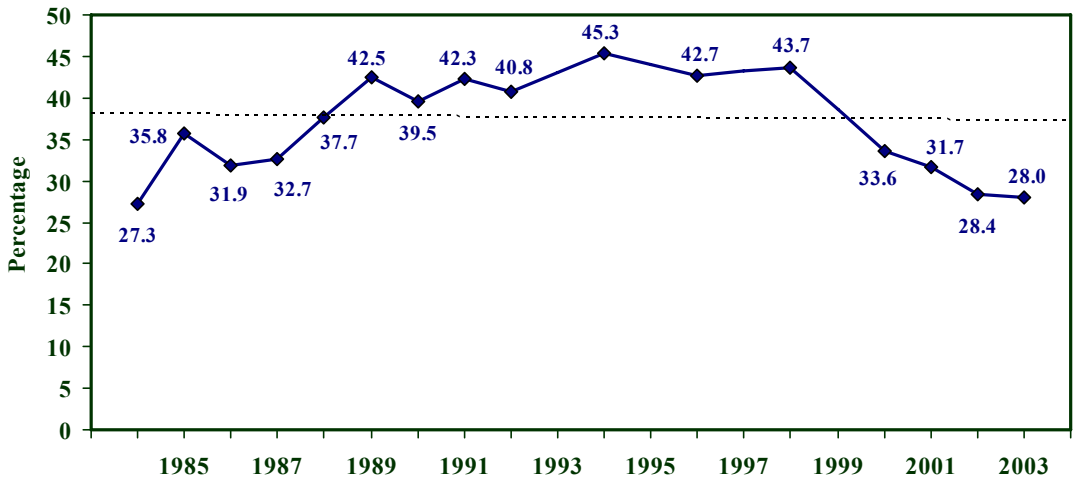
Objective 22.1

Reduce to 37% the proportion of people aged 18 and older who report no leisure-time physical activity. (Baseline: 43.7% in 1998; Current: 28.0% in 2003)

Table 6.1: No leisure-time physical activity: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,323	**24.9**	(22.3-27.4)	2,026	**30.9**	(28.7-33.2)	3,349	**28.0**	(26.3-29.7)
Age									
18-24	92	**13.2**	(5.8-20.6)	111	**14.0**	(6.4-21.7)	203	**13.6**	(8.3-18.9)
25-34	187	**24.7**	(18.2-31.2)	268	**21.0**	(15.7-26.3)	455	**22.8**	(18.7-27.0)
35-44	235	**25.3**	(19.1-31.5)	322	**31.5**	(25.9-37.1)	557	**28.4**	(24.3-32.6)
45-54	284	**29.9**	(24.2-35.7)	388	**32.0**	(27.0-37.0)	672	**31.0**	(27.1-34.8)
55-64	250	**25.5**	(19.7-31.3)	397	**39.5**	(34.3-44.7)	647	**32.6**	(28.7-36.6)
65+	274	**27.2**	(21.5-33.0)	529	**39.2**	(34.7-43.7)	803	**34.3**	(30.8-37.9)
Education									
Less than H.S.	245	**42.2**	(35.1-49.4)	391	**46.7**	(41.2-52.2)	636	**44.5**	(40.0-49.0)
H.S. or G.E.D.	529	**27.6**	(23.5-31.8)	792	**35.3**	(31.6-39.1)	1,321	**31.6**	(28.8-34.4)
Some Post-H.S.	265	**14.3**	(9.7-18.9)	476	**22.4**	(18.2-26.6)	741	**18.9**	(15.8-22.0)
College Graduate	281	**12.4**	(8.3-16.5)	366	**15.8**	(11.8-19.8)	647	**14.0**	(11.2-16.9)
Income									
Less than $15,000	171	**47.7**	(38.9-56.5)	355	**41.0**	(35.3-46.8)	526	**43.8**	(38.8-48.8)
$15,000- 24,999	263	**35.6**	(29.2-42.0)	461	**37.5**	(32.6-42.4)	724	**36.7**	(32.7-40.6)
$25,000- 34,999	194	**17.7**	(12.0-23.4)	269	**28.3**	(22.3-34.3)	463	**23.3**	(19.0-27.5)
$35,000- 49,999	211	**22.6**	(16.6-28.5)	267	**20.8**	(15.7-26.0)	478	**21.8**	(17.8-25.7)
$50,000- 74,999	168	**14.1**	(8.5-19.7)	225	**23.6**	(17.4-29.7)	393	**18.8**	(14.6-23.0)
$75,000+	183	**9.7**	(5.1-14.4)	146	**12.7**	(6.5-18.9)	329	**10.8**	(7.1-14.5)

Figure 6.1: No leisure-time physical activity by year: WVBRFSS, 1984-2003



------- Trend Line

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

Figure 6.2: No leisure-time physical activity by county: WVBRFSS, 2000-2003

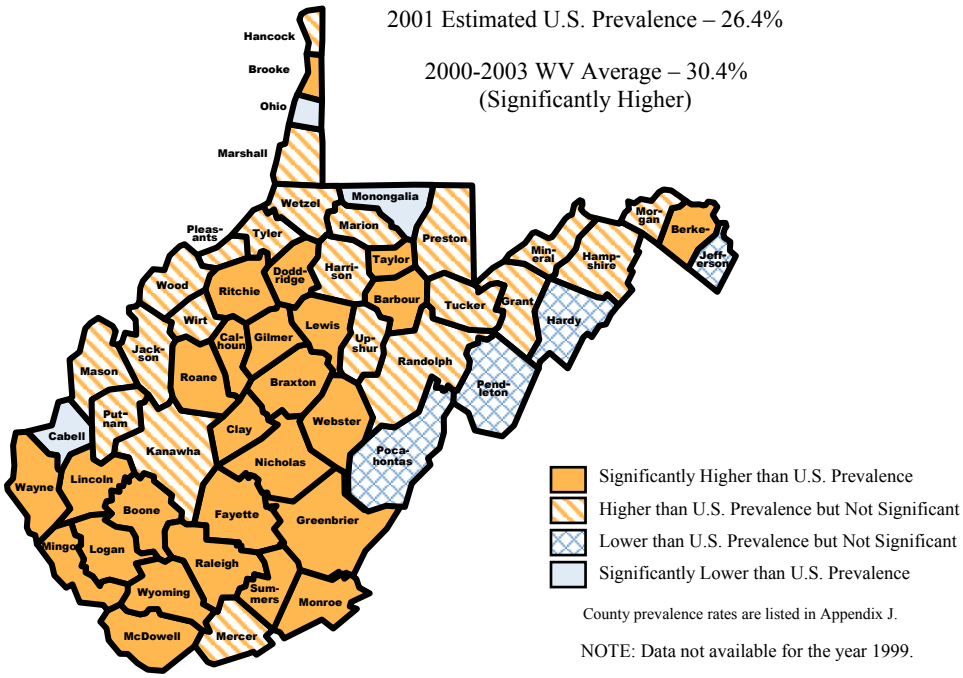


Table 6.2: Adults who are being more physically active (in order to lower their risk of heart disease or stroke) and health professional advice on the same: WVBRFSS, 2003

Characteristic	Adults who are being more physically active			Adults advised by a health professional in the past 12 months to be more physically active		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,307	**61.8**	(60.0-63.7)	3,308	**28.2**	(26.5-30.0)
Sex						
Males	1,305	**60.6**	(57.6-63.6)	1,304	**26.8**	(24.1-29.5)
Females	2,002	**63.0**	(60.6-65.4)	2,004	**29.5**	(27.3-31.8)
Age						
18-24	198	**71.0**	(63.9-78.2)	196	**14.6**	(8.6-20.7)
25-34	446	**67.3**	(62.6-72.0)	447	**21.4**	(17.4-25.5)
35-44	548	**63.9**	(59.4-68.3)	549	**31.3**	(27.0-35.5)
45-54	668	**64.0**	(60.0-68.0)	667	**34.8**	(30.8-38.8)
55-64	641	**60.0**	(55.9-64.2)	641	**36.5**	(32.4-40.6)
65+	794	**49.8**	(46.0-53.6)	796	**27.0**	(23.7-30.3)
Education						
Less than H.S.	627	**54.5**	(49.9-59.0)	627	**31.2**	(26.8-35.5)
H.S. or G.E.D.	1,295	**60.3**	(57.3-63.3)	1,296	**27.3**	(24.6-29.9)
Some Post-H.S.	739	**65.2**	(61.2-69.2)	739	**27.3**	(23.8-30.9)
College Graduate	642	**68.8**	(64.8-72.8)	642	**28.4**	(24.5-32.3)
Income						
Less than $15,000	519	**49.2**	(44.1-54.3)	520	**33.5**	(28.8-38.2)
$15,000- 24,999	714	**60.3**	(56.3-64.4)	713	**26.0**	(22.5-29.6)
$25,000- 34,999	461	**64.9**	(60.1-69.6)	461	**32.6**	(27.9-37.4)
$35,000-49,999	475	**67.6**	(62.9-72.3)	475	**29.5**	(25.1-34.0)
$50,000-74,000	390	**69.1**	(64.0-74.2)	390	**26.9**	(22.1-31.7)
$75,000+	326	**71.4**	(65.8-77.0)	325	**29.3**	(24.0-34.7)

CHAPTER 7: NUTRITION

Fruit and Vegetable Consumption: Consume FEWER than five servings of fruits/vegetables daily.

State Prevalence

81.3% (95% CI: 79.8-82.7); 8th highest among 54 BRFSS participants.
National prevalence: 76.5% (95% CI: 76.2-76.8).

Time Trends

The percentage of adults consuming fewer than five servings of fruits and vegetables per day increased slightly from the 2002 prevalence of 78.7%. Overall, the trend has remained stable since 1990.

Gender

Men 84.9% (95% CI: 82.8-87.1); **Women 77.9%** (95% CI: 75.9-79.9).
Women were significantly more likely than men to eat five or more servings of fruits and vegetables per day. However, between 2002 and 2003 the prevalence of consuming fewer than five servings a day significantly increased among women (from 73.6% to 77.9%), but not men (from 84.3% to 84.9%).

Age

The risk of not eating five servings of fruits/vegetables daily was significantly higher among younger age groups. More than 85% of adults aged 18 to 24 ate fewer than five servings per day, compared with approximately 76% of those aged 65 and older. Elderly adults were significantly more likely to eat at least five servings of fruits and vegetables per day than those in the three youngest age groupings (18-24, 25-34, and 35-44). Men aged 35 to 44 and 45 to 54 had a significantly higher prevalence of this risk factor than their female counterparts.

Education

The prevalence also significantly decreased as education increased, although the risk remained high at all levels of educational attainment. More than 87% of adults without a high school diploma/GED ate fewer than five servings of fruits and vegetables daily, compared with nearly 71% of college graduates. Women experienced a greater decline in risk with educational attainment than men.

Household Income

The prevalence of this risk factor decreased steadily as household income increased. Adults with an annual income of $50,000 or more were significantly more likely to eat at least five servings of fruits and vegetables per day than those in the two lowest income categories (<$15,000 and $15,000-24,999). Men had a significantly higher prevalence of low consumption than women at many levels of household income.

Quick Stats

- 44% of adults consumed fewer than three servings of fruits and vegetables daily (see Figure 7.2).
- The percentage of adults advised in the past 12 months by a health professional to eat more fruits and vegetables or fewer high-fat or high-cholesterol foods decreased significantly between 2002 and 2003.
  More fruits and vegetables: from 33.9% to 28.5%
  Fewer high-fat/cholesterol foods: from 29.5% to 24.9%

West Virginia Healthy People 2010 Objectives

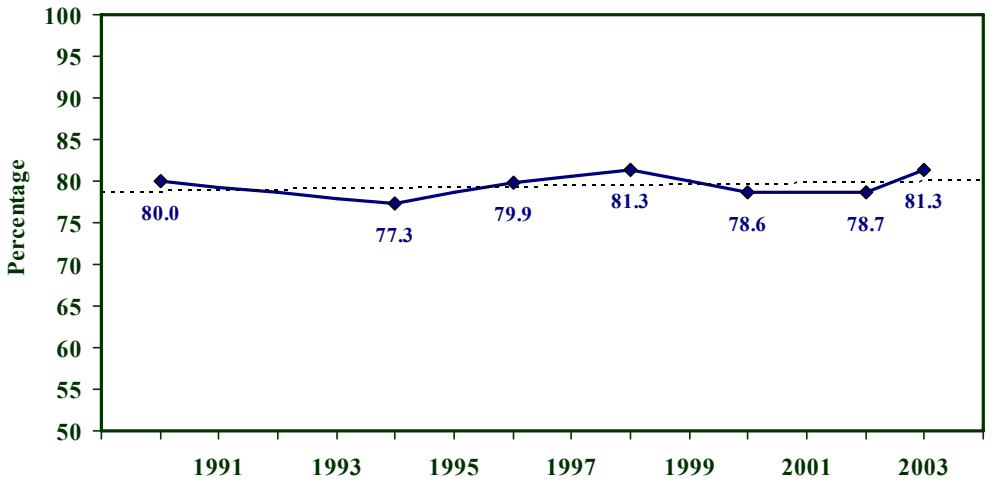
Objective 19.2

Increase to 35% the proportion of people aged 18 and older who consume at least five servings of vegetables and fruits per day. (Baseline: 18.7% in 1998; Current: 18.7% in 2003)

Table 7.1: Prevalence of consumption of fewer than five servings of fruits and vegetables daily: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,323	**84.9**	(82.8-87.1)	2,026	**77.9**	(75.9-79.9)	3,349	**81.3**	(79.8-82.7)
Age									
18-24	92	**82.0**	(73.7-90.3)	111	**88.4**	(82.4-94.5)	203	**85.1**	(79.9-90.3)
25-34	187	**86.0**	(80.6-91.3)	268	**81.6**	(76.7-86.5)	455	**83.8**	(80.2-87.4)
35-44	235	**88.6**	(84.3-92.8)	322	**78.9**	(74.0-83.9)	557	**83.6**	(80.3-87.0)
45-54	284	**88.2**	(84.0-92.3)	388	**72.7**	(67.9-77.4)	672	**80.4**	(77.2-83.6)
55-64	250	**81.8**	(76.6-87.0)	397	**79.0**	(74.7-83.3)	647	**80.4**	(77.0-83.7)
65+	274	**81.1**	(76.2-86.1)	529	**73.2**	(69.1-77.2)	803	**76.4**	(73.3-79.6)
Education									
Less than H.S.	245	**87.9**	(83.4-92.4)	391	**87.0**	(83.4-90.7)	636	**87.5**	(84.6-90.4)
H.S. or G.E.D.	529	**88.6**	(85.6-91.6)	792	**82.7**	(79.9-85.5)	1,321	**85.5**	(83.5-87.6)
Some Post-H.S.	265	**80.5**	(75.1-85.9)	476	**74.5**	(70.2-78.8)	741	**77.1**	(73.7-80.5)
College Graduate	281	**78.9**	(73.6-84.2)	366	**62.2**	(56.6-67.8)	647	**70.8**	(66.9-74.7)
Income									
Less than $15,000	171	**85.6**	(79.2-92.0)	355	**85.0**	(81.1-88.9)	526	**85.3**	(81.8-88.8)
$15,000- 24,999	263	**88.8**	(84.7-92.9)	461	**80.8**	(76.7-84.8)	724	**84.3**	(81.4-87.2)
$25,000- 34,999	194	**88.4**	(83.8-93.1)	269	**73.7**	(68.1-79.3)	463	**80.7**	(77.0-84.5)
$35,000- 49,999	211	**87.5**	(82.7-92.2)	267	**74.0**	(68.3-79.7)	478	**81.1**	(77.4-84.9)
$50,000- 74,999	168	**84.0**	(78.1-89.9)	225	**68.9**	(62.4-75.4)	393	**76.5**	(72.0-80.9)
$75,000+	183	**77.5**	(70.7-84.4)	146	**70.1**	(62.3-78.0)	329	**74.9**	(69.7-80.1)

Figure 7.1: Prevalence of consumption of fewer than five servings of fruits and vegetables daily by year: WVBRFSS, 1990-2003

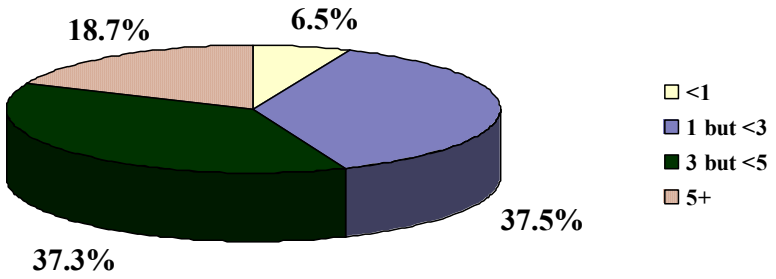


------- Trend Line NOTE: Data not available for the years 1991-93, 1995, 1997, 1999, and 2001.

Table 7.2: Other dietary and nutrition issues: WVBRFSS, 2003

Adults who……	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Are eating more fruits and vegetables in order to lower their risk of heart disease and stroke	1,303	**62.4**	(59.5-65.4)	1,993	**75.9**	(73.7-78.1)	3,296	**69.5**	(67.6-71.3)
Are eating fewer high-fat or high-cholesterol foods in order to lower their risk of heart disease and stroke	1,277	**62.3**	(59.3-65.3)	1,972	**74.9**	(72.6-77.2)	3,249	**68.9**	(67.0-70.8)
Were advised in the past 12 months by a health professional (doctor, nurse, or other) to eat more fruits and vegetables	1,302	**26.8**	(24.1-29.5)	1,994	**30.1**	(27.9-32.4)	3,296	**28.5**	(26.8-30.3)
Were advised in the past 12 months by a health professional (doctor, nurse, or other) to eat fewer high-fat or high-cholesterol foods	1,306	**24.1**	(21.5-26.8)	2,004	**25.6**	(23.5-27.6)	3,310	**24.9**	(23.2-26.5)

Figure 7.2: Number of daily fruit and vegetable servings: WVBRFSS 2003



CHAPTER 8: CURRENT CIGARETTE SMOKING

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

State Prevalence

27.3% (95% CI: 25.6-29.1); 3rd highest among 54 BRFSS participants. National prevalence: 22.2% (95% CI: 21.9-22.5).

Time Trends

The prevalence of cigarette smoking decreased slightly between 2002 and 2003 (from 28.4% to 27.3%). Overall, the trend has remained stable since 1986.

Gender

Men 27.6% (95% CI: 24.8-30.4); **Women 27.1%** (95% CI: 24.8-29.4). There was no significant gender difference in the prevalence of cigarette smoking. However, women were significantly more likely to have never smoked (53.3% versus 39.8%; see Figure 8.3) while men were significantly more likely to have ever quit smoking (54.2% versus 41.9% of those who have ever smoked 100 cigarettes).

Age

The prevalence of smoking significantly decreased after age 54. More than one-third of adults in the three youngest age categories (18-24, 25-34, and 35-44) were current smokers, compared with 10.8% of elderly adults (significantly less than all other age groupings).

Education

Cigarette smoking was significantly less prevalent among college graduates than adults of all other levels of educational attainment. In fact, adults without a college degree were more than twice as likely to smoke as college graduates.

Household Income

The prevalence of smoking decreased as household income increased. The rate of smoking ranged from a high of 35.7% among adults in the poorest households to a low of 15.5% of the wealthiest adults. Adults with an income less than $15,000 were significantly more likely to smoke than those with an income of $35,000 or more.

Quick Stats

Of those who reported smoking at least 100 cigarettes….

- 46.4% smoked their first cigarette before the age of 15.
- 6.3% did not become regular smokers.
- 45.8% became regular smokers before the age of 18.

West Virginia 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: 27.3% in 2003)

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: 34.1% in 2003)

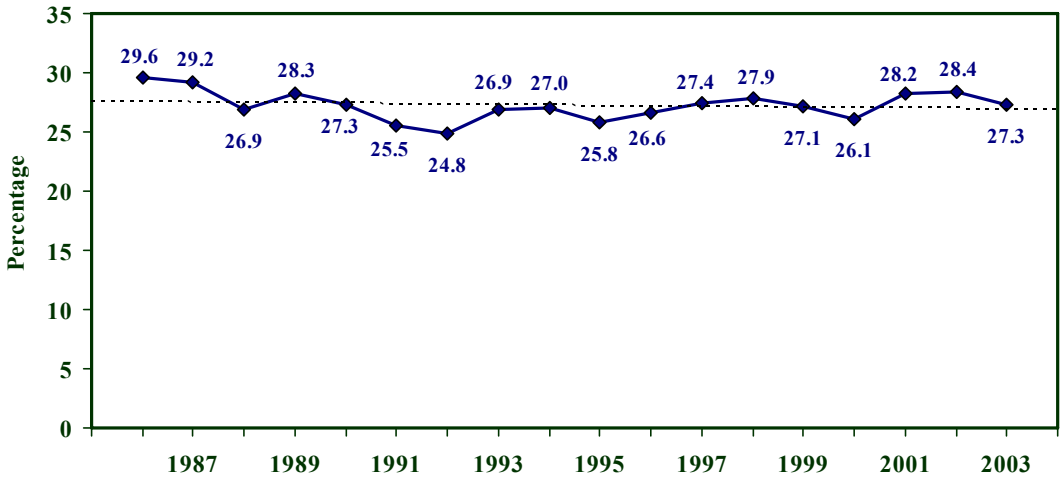
Objective 27.1c

Reduce the prevalence of cigarette smoking among women aged 18-44 (i.e., childbearing ages) to 25% or lower. (Baseline: 36% in 1998; Current: 36.7% in 2003)

Table 8.1: Prevalence of current cigarette smoking: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,318	**27.6**	(24.8-30.4)	2,025	**27.1**	(24.8-29.4)	3,343	**27.3**	(25.6-29.1)
Age									
18-24	92	**36.4**	(25.3-47.6)	111	**36.0**	(25.8-46.2)	203	**36.2**	(28.6-43.8)
25-34	187	**34.2**	(26.9-41.4)	268	**38.8**	(32.5-45.0)	455	**36.5**	(31.7-41.3)
35-44	235	**33.5**	(27.0-39.9)	322	**35.5**	(29.7-41.3)	557	**34.5**	(30.2-38.8)
45-54	282	**31.0**	(25.1-36.8)	388	**29.3**	(24.4-34.2)	670	**30.1**	(26.3-33.9)
55-64	250	**18.2**	(13.2-23.3)	396	**23.7**	(19.2-28.2)	646	**21.0**	(17.6-24.4)
65+	271	**12.4**	(8.1-16.7)	529	**9.7**	(7.2-12.2)	800	**10.8**	(8.5-13.0)
Education									
Less than H.S.	244	**35.7**	(28.2-43.2)	390	**29.1**	(24.0-34.3)	634	**32.3**	(27.8-36.9)
H.S. or G.E.D.	525	**29.7**	(25.4-34.0)	792	**30.7**	(27.0-34.4)	1,317	**30.2**	(27.4-33.0)
Some Post-H.S.	265	**28.0**	(21.9-34.2)	476	**28.1**	(23.2-33.1)	741	**28.1**	(24.2-32.0)
College Graduate	281	**14.7**	(10.1-19.3)	366	**15.1**	(11.1-19.2)	647	**14.9**	(11.9-18.0)
Income									
Less than $15,000	171	**38.6**	(30.2-47.0)	354	**33.6**	(28.0-39.3)	525	**35.7**	(30.9-40.5)
$15,000- 24,999	262	**34.6**	(28.1-41.2)	461	**33.2**	(28.4-38.1)	723	**33.8**	(29.9-37.8)
$25,000- 34,999	193	**33.1**	(25.7-40.6)	269	**24.1**	(18.3-29.8)	462	**28.3**	(23.7-33.0)
$35,000- 49,999	209	**24.3**	(18.0-30.7)	267	**27.7**	(21.5-33.9)	476	**25.9**	(21.5-30.4)
$50,000- 74,999	168	**15.8**	(10.0-21.6)	225	**20.7**	(14.9-26.5)	393	**18.2**	(14.1-22.4)
$75,000+	183	**17.6**	(11.2-23.9)	146	**11.8**	(6.0-17.6)	329	**15.5**	(10.9-20.2)

Figure 8.1: Prevalence of current cigarette smoking by year: WVBRFSS, 1986-2003



------- Trend Line

Figure 8.2: Current cigarette smoking by county: WVBRFSS, 1999-2003

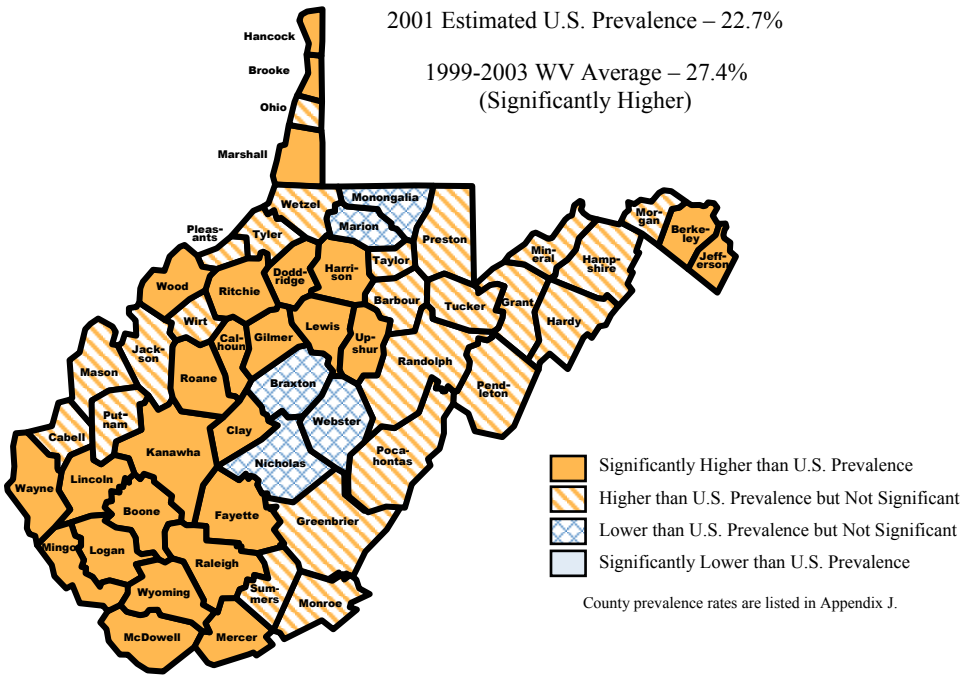
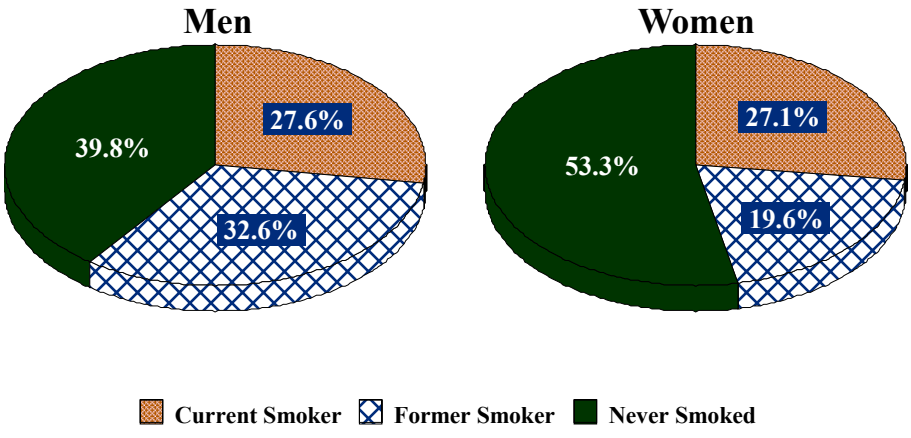


Figure 8.3: Distribution of smoking status by gender: WVBRFSS, 2003



CHAPTER 9: SMOKELESS TOBACCO USE

Smokeless Tobacco Users: Use smokeless tobacco products such as chewing tobacco or snuff every day or some days.

State Prevalence

7.7% (95% CI: 6.6-8.9); 1st among 12 BRFSS participants.

Time Trends

Smokeless tobacco use decreased slightly between 2002 and 2003 (from 8.4% to 7.7%). Since 1986, there has been an overall decline in the prevalence of smokeless tobacco use. In fact, the rate has significantly decreased from a high of 9.7% in 1988 to a low of 7.7% in 2003. Because smokeless tobacco use is overwhelmingly a male activity, changes in prevalence for the adult population primarily reflect changes in men's behavior (therefore, this discussion will focus on men).

Gender

Men 15.9% (95% CI: 13.6-18.1); **Women 0.3%** (95% CI: 0.03-0.52).
Men had a significantly higher prevalence of smokeless tobacco use than women. Between 2002 and 2003, the rate among men decreased from 17.2% to 15.9% (although the decline was not significant).

Age

The highest prevalence of smokeless tobacco use occurred among men aged 25 to 34 (26.3%) and 35 to 44 (22.1%). Men aged 25 to 34 were significantly more likely to use smokeless tobacco then men in most other age groupings. Among men, those in the youngest age grouping (18-24) were least likely to use smokeless tobacco (8.3%).

Education

The prevalence of smokeless tobacco use significantly decreased as educational attainment increased. Men without a high school diploma/GED were more than three times as likely as college graduates to use smokeless tobacco (21.1% versus 6.7%). College graduates had a significantly lower prevalence of smokeless tobacco use than adults at all other levels of education.

Household Income

There was no consistent relationship between smokeless tobacco use and household income. Among men, smokeless tobacco use was lowest among those in the poorest and wealthiest households and highest among those with an income between $25,000 and $34,999 (although this pattern was not statistically significant).

Quick Stats

- 34.5% of all every day smokeless tobacco users tried to quit for at least one day in the past 12 months. This is a decline from the 2002 prevalence of 41.7%.
- 68.2% of all current smokeless tobacco users were not advised by a health professional to quit using smokeless tobacco in the past 12 months.

West Virginia Healthy People 2010 Objectives

Objective 27.7

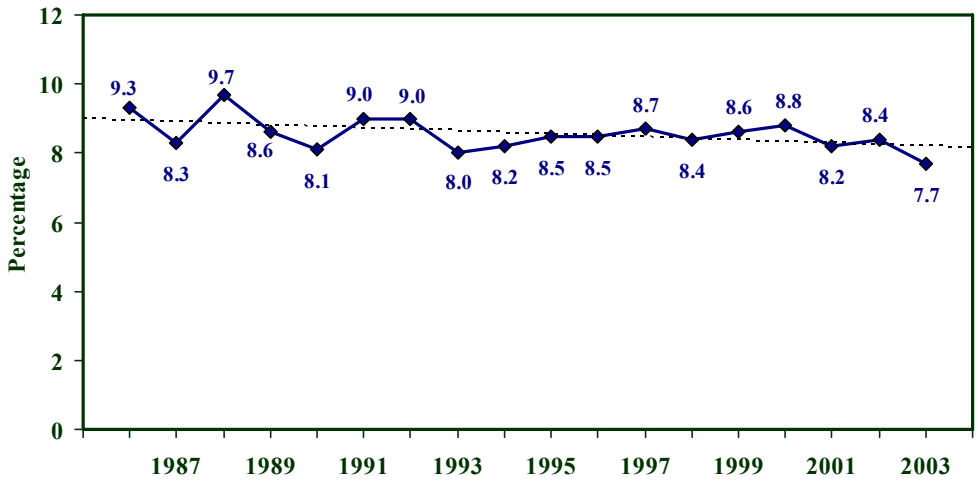
Reduce smokeless tobacco use among adult men aged 18+ to 13% or lower. (Baseline: 18% in 1998; Current: 15.9% in 2003)

Table 9.1: Current smokeless tobacco use: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,307	**15.9**	(13.6-18.1)	2,002	**0.3**	(0.03-0.52)	3,309	**7.7**	(6.6-8.9)
Age									
18-24	88	**8.3**	(1.5-15.0)	109	**0.8**	(-)	197	**4.6**	(1.0-8.2)
25-34	185	**26.3**	(19.5-33.2)	261	**0.0**	(-)	446	**13.2**	(9.5-16.9)
35-44	230	**22.1**	(16.4-27.8)	318	**0.2**	(-)	548	**10.9**	(7.9-13.8)
45-54	283	**12.6**	(8.3-16.9)	385	**0.7**	(-)	667	**6.7**	(4.4-9.0)
55-64	248	**12.3**	(8.0-16.6)	392	**0.0**	(-)	640	**6.0**	(3.9-8.2)
65+	273	**12.4**	(8.0-16.7)	526	**0.1**	(-)	799	**5.1**	(3.3-6.9)
Education									
Less than H.S.	243	**21.1**	(15.0-27.2)	386	**0.9**	(-)	629	**10.8**	(7.7-14.0)
H.S. or G.E.D.	520	**17.2**	(13.6-20.8)	775	**0.1**	(-)	1,295	**8.3**	(6.5-10.2)
Some Post-H.S.	263	**16.6**	(11.8-21.4)	475	**0.3**	(-)	738	**7.4**	(5.2-9.6)
College Graduate	278	**6.7**	(3.6-9.9)	365	**0.0**	(-)	643	**3.5**	(1.8-5.1)
Income									
Less than $15,000	170	**13.4**	(7.7-19.0)	353	**0.6**	(-)	523	**6.0**	(3.5-8.5)
$15,000- 24,999	257	**18.9**	(13.4-24.4)	455	**0.2**	(-)	712	**8.3**	(5.8-10.9)
$25,000- 34,999	193	**19.7**	(13.4-26.0)	267	**0.4**	(-)	460	**9.6**	(6.4-12.7)
$35,000- 49,999	210	**18.0**	(12.3-23.7)	265	**0.7**	(-)	475	**9.9**	(6.7-13.0)
$50,000- 74,999	167	**15.5**	(9.6-21.4)	223	**0.0**	(-)	390	**7.7**	(4.7-10.8)
$75,000+	182	**13.0**	(7.0-19.1)	144	**0.0**	(-)	326	**8.4**	(4.4-12.4)

Note: The number of women reporting use of smokeless tobacco is too small for subgroup analysis.

Figure 9.1: Current smokeless tobacco use by year: WVBRFSS, 1986-2003



------- Trend Line

CHAPTER 10: OTHER TOBACCO INDICATORS

Quit Smoking for a Day: Every day current smokers who tried to quit smoking for at least one day in the past 12 months.

State Prevalence

44.0% (95% CI: 39.8-48.3); 51st among 54 BRFSS participants. National prevalence: 48.4% (95% CI: 47.6-49.3).

Time Trends

The percentage of smokers who attempted to quit decreased in the early 1990s and then increased to a high of 52.8% in 1999. Between 1999 and 2002, the rate significantly decreased to 43.4%. Since 2000 the prevalence seems to have stabilized.

Gender

Men 42.3% (95% CI: 35.7-48.8); **Women 45.7%** (95% CI: 40.2-51.2).
There was no significant gender difference in the rate of smoking cessation.

Age, Education, and Income

Adults in the youngest age group (18-24 years, 57.4%), adults with some post high school education (54.5%), and adults with a household income between $35,000 and $49,999 (49.4%) were most likely to attempt to quit smoking for at least one day in the past 12 months.

Health Professional Advice on Smoking Cessation: Current smokers (every day and some days smokers) who were NOT advised to quit smoking by a doctor, nurse, or other health professional when they sought any kind of medical care in the past 12 months.

State Prevalence

27.6% (95% CI: 23.3-31.9); 8th highest among 18 BRFSS participants.

Time Trends

There was an increase in the percentage of smokers who were not advised to quit smoking between 2002 and 2003 (from 24.0% to 27.6%, although the increase was not significant).

Gender

Men 28.1% (95% CI: 20.8-35.4); **Women 27.2%** (95% CI: 22.0-32.5).
There was no significant difference in the percentage of men and women who were advised to quit smoking by a health professional.

Age, Education, and Income

There were no consistent patterns of being advised to quit smoking within the age, education, and income groupings. Adults aged 25 to 34 (36.5%), college graduates (31.2%), and those with a household income between $15,000 and $24,999 (34.8%) were least likely to be advised to quit smoking.

West Virginia Healthy People 2010 Objectives

Objective 27.4

Increase to at least 60% the proportion of adult smokers who have been advised to quit smoking in the past 12 months. (Revised 2003) (Baseline: 48.6% in 2000)[6]

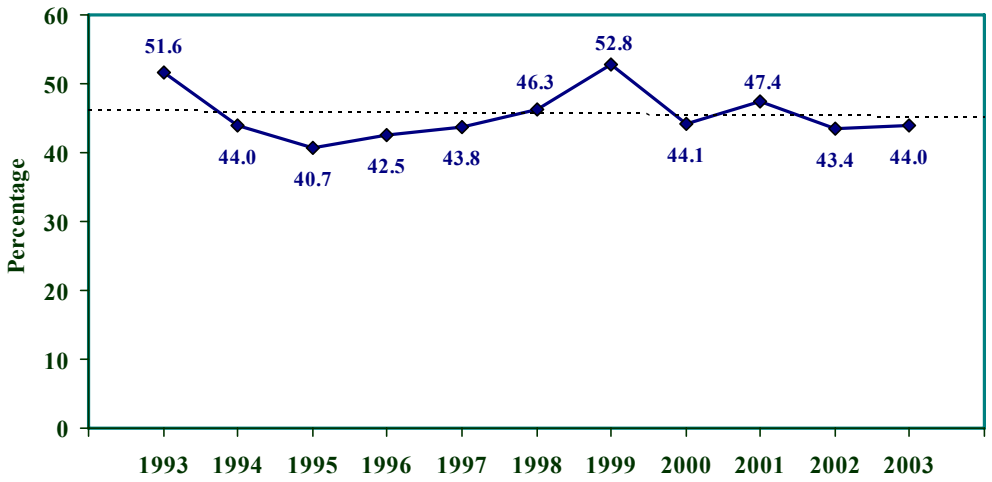
[6] Altered survey questions: The 2000 prevalence is not directly comparable to that of 2001-2003. Beginning in 2001, the question on smoking cessation advice has been asked only of current smokers who visited a health care professional in the past 12 months.

Table 10.1: "Quit smoking for a day" and health professional advice on smoking cessation: WVBRFSS, 2003

Characteristic	Every day current smokers who quit smoking for at least one day in the past 12 months			Current smokers who were NOT advised to quit smoking by a health professional when they sought any kind of medical care in the past 12 months		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	725	**44.0**	(39.8-48.3)	604	**27.6**	(23.3-31.9)
Sex						
Males	297	**42.3**	(35.7-48.8)	194	**28.1**	(20.8-35.4)
Females	428	**45.7**	(40.2-51.2)	410	**27.2**	(22.0-32.5)
Age						
18-24	56	**57.4**	(42.0-72.8)	40[a]	**32.2**	(15.0-49.5)
25-34	136	**51.6**	(42.5-60.8)	105	**36.5**	(26.4-46.6)
35-44	154	**40.4**	(31.9-49.0)	121	**19.8**	(12.6-27.1)
45-54	168	**33.8**	(26.3-41.3)	145	**29.0**	(20.9-37.2)
55-64	131	**42.5**	(33.0-52.0)	113	**17.7**	(10.1-25.4)
65+	79	**38.2**	(26.5-50.0)	79	**29.0**	(17.8-40.3)
Education						
Less than H.S.	161	**33.2**	(24.5-41.8)	135	**30.3**	(20.5-40.2)
H.S. or G.E.D.	326	**44.9**	(38.7-51.0)	257	**30.3**	(23.7-36.9)
Some Post-H.S.	158	**54.5**	(45.6-63.4)	146	**18.8**	(11.5-26.0)
College Graduate	78	**44.2**	(31.1-57.2)	66	**31.2**	(18.8-43.6)
Income						
Less than $15,000	164	**37.0**	(28.5-45.5)	140	**24.4**	(16.1-32.8)
$15,000- 24,999	186	**45.5**	(37.3-53.7)	169	**34.8**	(26.3-43.4)
$25,000- 34,999	92	**47.6**	(36.4-58.7)	69	**23.6**	(12.7-34.4)
$35,000- 49,999	100	**49.4**	(38.5-60.3)	76	**18.7**	(10.0-27.4)
$50,000+	89	**47.4**	(35.7-59.1)	76	**24.7**	(14.3-35.1)

a. Use caution in interpreting percentages with N<50.

Figure 10.1: "Quit smoking for a day" among every day current smokers: WVBRFSS, 1993-2003



------- Trend Line

Workplace Smoking Policies: Smoking is not allowed in a) Indoor public/common areas and b) Indoor work areas. ***Asked only of respondents who are employed or self-employed and who work indoors most of the time.***

State Prevalence

Indoor public/common areas: **79.6%** (95% CI: 76.9-82.2); 7th highest among 18 BRFSS participants.
Indoor work areas: **85.4%** (95% CI: 83.1-87.8); 9th highest among 18 BRFSS participants.
Both public/common and work areas: **77.3%** (95% CI: 74.6-80.0); 6th highest among 18 BRFSS participants.

There was a significantly higher prevalence of no-smoking policies in work areas than public/common areas. More than three-fourths of employed adults reported that smoking was prohibited in both work and public areas within the workplace.

Gender

Indoor public/common areas:
Men 72.9% (95% CI: 68.2-77.6); **Women 85.0%** (95% CI: 82.2-87.7).
Indoor work areas:
Men 78.5% (95% CI: 74.1-82.9); **Women 91.0%** (95% CI: 88.9-93.2).

Women reported a significantly higher rate of no-smoking policies in public/common areas and in work areas than men. In addition, women were significantly more likely to be employed in a workplace where smoking was prohibited in both areas (83.1% versus 70.1%).

Age, Education, and Income

Generally, the prevalence of no-smoking policies increased with age, education, and income. The highest rates of workplace no-smoking policies were among elderly adults, college graduates, and those with a household income of $50,000 or more.

Rules about Smoking at Home: Smoking is not allowed anywhere inside their home.

State Prevalence

57.1% (95% CI: 55.2-59.0); 18th among 18 BRFSS participants. The prevalence significantly increased from 53.2% in 2002 to 57.1% in 2003.

Gender

Men 57.2% (95% CI: 54.2-60.2); **Women 57.0%** (95% CI: 54.5-59.4).
There was no significant difference in the percentage of men and women who did not allow smoking within the home.

Age

There was no consistent relationship between age and no-smoking rules inside the home. Adults aged 25 to 34 reported the highest prevalence (60.5%).

Education

The prevalence of smoke-free homes significantly increased as educational attainment increased. Approximately 45% of adults without a high school diploma/GED did not allow smoking in their homes, compared with more than 73% of college graduates.

Household Income

There was a significant positive relationship between no smoking within the home and household income. Adults living in homes with an income of $50,000 or more were significantly more likely to prohibit smoking than those with less household income. More than 78% of the wealthiest homes were smoke-free compared with less than half of the poorest homes.

Table 10.2: Workplace smoking policies (common areas and work areas) and rules about smoking at home: WVBRFSS, 2003

Characteristic	Smoking not allowed in any indoor public or common areas at place of work (such as lobbies, restrooms, and lunchrooms) [a]			Smoking not allowed in any work areas at place of work[a]			Smoking not allowed anywhere inside the home		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,260	**79.6**	(76.9-82.2)	1,262	**85.4**	(83.1-87.8)	3,309	**57.1**	(55.2-59.0)
Sex									
Males	453	**72.9**	(68.2-77.6)	455	**78.5**	(74.1-82.9)	1,307	**57.2**	(54.2-60.2)
Females	807	**85.0**	(82.2-87.7)	807	**91.0**	(88.9-93.2)	2,002	**57.0**	(54.5-59.4)
Age									
18-24	74	**73.9**	(62.4-85.4)	74	**82.2**	(71.6-92.8)	197	**58.0**	(50.2-65.7)
25-34	250	**76.8**	(71.0-82.6)	250	**82.5**	(77.2-87.8)	446	**60.5**	(55.5-65.4)
35-44	310	**76.5**	(71.2-81.7)	311	**85.7**	(81.3-90.1)	548	**51.6**	(47.0-56.2)
45-54	352	**84.4**	(80.1-88.6)	352	**85.5**	(81.4-89.7)	668	**55.4**	(51.3-59.5)
55-64	217	**84.0**	(78.7-89.3)	217	**90.3**	(86.1-94.5)	641	**57.1**	(52.9-61.3)
65+	52	**84.7**	(74.2-95.2)	53	**92.8**	(86.3-99.3)	797	**60.0**	(56.3-63.7)
Education									
Less than H.S.	83	**64.1**	(50.4-77.7)	83	**64.0**	(50.1-77.8)	628	**44.5**	(40.0-49.1)
H.S. or G.E.D.	458	**73.8**	(69.3-78.4)	459	**82.5**	(78.5-86.5)	1,296	**54.0**	(51.0-57.1)
Some Post-H.S.	314	**78.5**	(73.1-83.9)	315	**85.6**	(81.1-90.2)	739	**59.7**	(55.6-63.8)
College Graduate	405	**91.3**	(88.3-94.3)	405	**94.0**	(91.6-96.4)	642	**73.3**	(69.6-77.0)
Income									
Less than $15,000	69	**72.6**	(60.0-85.3)	69	**79.6**	(68.2-91.1)	523	**42.2**	(37.2-47.2)
$15,000- 24,999	207	**71.2**	(63.8-78.5)	207	**81.9**	(75.5-88.3)	712	**50.5**	(46.4-54.6)
$25,000- 34,999	183	**79.9**	(73.1-86.7)	183	**86.6**	(80.7-92.5)	460	**56.0**	(51.0-61.0)
$35,000- 49,999	249	**80.2**	(74.6-85.9)	250	**83.3**	(77.6-89.0)	475	**56.1**	(51.1-61.1)
$50,000- 74,999	247	**82.5**	(77.2-87.9)	248	**88.1**	(83.6-92.7)	390	**68.1**	(63.0-73.1)
$75,000+	225	**84.2**	(78.4-90.1)	225	**86.9**	(81.3-92.6)	326	**78.1**	(73.2-83.0)

a. Among respondents who are either employed or self-employed AND who work indoors at their job most of the time.

West Virginia Healthy People 2010 Objectives

Objective 27.16 (Developmental) Increase to 95% the number of employers having 10 or more employees who have written and enforced tobacco restriction policies for the workplace, designed to protect workers from exposure to secondhand smoke. (Revised 2003) (Baseline: 87% in 2002)

CHAPTER 11: ALCOHOL CONSUMPTION

Heavy Drinking: Defined as consumption of more than two drinks per day for men and more than one drink per day for women during the past one month.[7]

State Prevalence

3.1% (95% CI: 2.4-3.9); 49th among 54 BRFSS participants.
National prevalence: 5.6% (95% CI: 5.4-5.8).

Time Trends

The prevalence of heavy drinking has slightly increased since 1989. The 2003 rate is slightly lower than the 2002 prevalence of 4.5%. Compared with the rest of the nation, West Virginia has consistently had low rates of heavy drinking.

Gender

Men 4.5% (95% CI: 3.2-5.8); **Women 1.9%** (95% CI: 1.0-2.7).
Men had a significantly higher rate of heavy drinking than women. The prevalence decreased for both men and women between 2002 and 2003 (by 2.4 points for men and 0.5 points for women).

Age

Generally, heavy drinking decreased with age. Heavy drinking was most prevalent among young adults aged 18 to 24 (7.8%). Adults of this age group were significantly more likely to be heavy drinkers than those aged 55 to 64 (1.6%) and those aged 65 and older (0.9%).

Education

There was no significant relationship between heavy drinking and educational attainment. Adults with a high school diploma/GED reported the highest prevalence of heavy drinking (3.6%).

Household Income

Again, there was no significant association between heavy drinking and household income. The highest prevalence was among adults with a household income between $35,000 and $49,999 (4.4%).

Quick Stats

- 66.0% of adults consumed no alcoholic drinks in the past 30 days.

West Virginia Healthy People 2010 Objectives

Objective 26.9

Reduce the rate of heavier drinking reported among adults 18 and older by 20%. (Baseline: 2.2% in 1997 (new definition); Current: 3.1% in 2003)

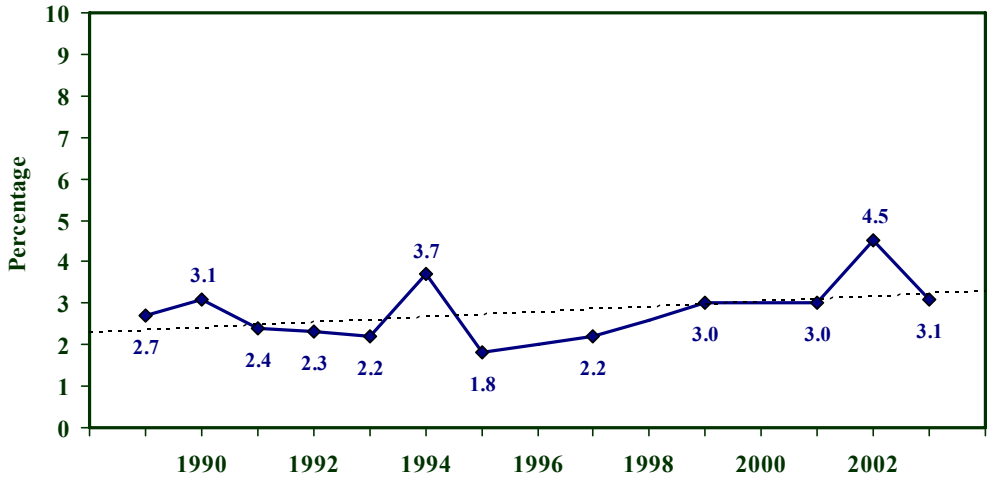
[7] Prior to 2001, heavy drinking was defined as consuming 60 or more drinks during the past month regardless of gender. This report redefines the data prior to 2001 to match the current definition of heavy drinking. Therefore, numbers presented in this chapter may not agree with prior publications.

Table 11.1: Prevalence of heavy drinking: WVBRFSS, 2003[a]

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,301	**4.5**	(3.2-5.8)	2,021	**1.9**	(1.0-2.7)	3,322	**3.1**	(2.4-3.9)
Age									
18-24	85	**10.5**	(3.7-17.3)	110	**5.2**	(0.0-10.6)	195	**7.8**	(3.5-12.2)
25-34	185	**3.7**	(1.1-6.2)	268	**2.1**	(0.6-3.7)	453	**2.9**	(1.4-4.4)
35-44	231	**7.3**	(3.8-10.8)	320	**2.5**	(0.5-4.5)	551	**4.8**	(2.9-6.8)
45-54	282	**3.3**	(1.2-5.5)	399	**1.5**	(0.2-2.7)	670	**2.4**	(1.2-3.6)
55-64	248	**3.0**	(0.6-5.3)	395	**0.3**	(0.0-0.7)	643	**1.6**	(0.4-2.8)
65+	269	**0.9**	(0.0-1.9)	529	**0.8**	(0.1-1.6)	798	**0.9**	(0.3-1.5)
Education									
Less than H.S.	240	**3.6**	(0.9-6.4)	391	**0.5**	(0.0-1.1)	631	**2.0**	(0.6-3.4)
H.S. or G.E.D.	517	**5.1**	(3.0-7.1)	790	**2.3**	(0.7-3.9)	1,307	**3.6**	(2.3-4.9)
Some Post-H.S.	261	**5.1**	(1.7-8.5)	474	**2.1**	(0.4-3.8)	735	**3.4**	(1.6-5.1)
College Graduate	280	**3.8**	(1.3-6.3)	365	**2.0**	(0.5-3.4)	645	**2.9**	(1.4-4.4)
Income									
Less than $15,000	170	**5.1**	(0.8-9.4)	355	**1.6**	(0.0-4.0)	525	**3.1**	(0.8-5.4)
$15,000- 24,999	257	**2.4**	(0.6-4.1)	460	**1.4**	(0.4-2.3)	717	**1.8**	(0.9-2.7)
$25,000- 34,999	190	**3.9**	(0.8-7.0)	269	**1.5**	(0.0-3.0)	459	**2.6**	(1.0-4.3)
$35,000- 49,999	207	**6.6**	(3.0-10.3)	267	**2.1**	(0.3-3.8)	474	**4.4**	(2.4-6.5)
$50,000- 74,999	167	**4.9**	(1.2-8.6)	222	**2.0**	(0.03-4.0)	389	**3.5**	(1.4-5.6)
$75,000+	183	**4.6**	(1.0-8.1)	145	**0.6**	(0.0-1.7)	328	**3.2**	(0.8-5.5)

a. The definitions of heavy drinking are different for men and women. See page 42.

Figure 11.1: Prevalence of heavy drinking by year: WVBRFSS, 1989-2003



------- Trend Line

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

Binge Drinking: Defined as consumption of five or more alcoholic drinks on one or more occasion during the past one month.

State Prevalence

11.1% (95% CI: 9.8-12.4); 49th highest among 54 BRFSS participants.
National prevalence: 15.8% (95% CI: 15.5-16.0).

Time Trends

Since 1984 there has been a decreasing trend in the prevalence of binge drinking. Between 1995 and 2002, the prevalence significantly increased from 6.0% to 11.4%. The 2003 prevalence is slightly lower than the 2002 rate, but remains significantly higher than the low of 6.0% in 1995. Compared with the rest of the nation, West Virginia typically ranks low in binge drinking.

Gender

Men 16.8% (95% CI: 14.5-19.2); **Women 5.9%** (95% CI: 4.6-7.3).
The prevalence of binge drinking was significantly higher among men than women. Between 2002 and 2003 the prevalence decreased among men (by 1.7 points) and increased among women (by 1.0 point).

Age

Binge drinking significantly decreased with age. Nearly one-fourth of young adults aged 18 to 24 reported binge drinking in the past month, compared with approximately 2% of elderly adults. The prevalence of binge drinking significantly decreased at ages 45 to 54 and again at ages 55 to 64. Men had a significantly higher rate of binge drinking than women at every age grouping except for the youngest (18-24).

Education

There was no consistent relationship between binge drinking and educational attainment. The highest prevalence occurred among adults with some post high school education (15.4%). Men had a significantly higher rate of binge drinking than women at every level of education.

Household Income

The prevalence of binge drinking increased as household income increased, although the trend was not statistically significant. The overall prevalence of binge drinking was lowest among adults with less than $15,000 in income (8.3%) and highest among those with an income of $75,000 or more (16.3%). The pattern was less clear among women.

Quick Stats

- Of those who binged in the past month, 28.9% binged 5 or more times.

West Virginia Healthy People 2010 Objectives

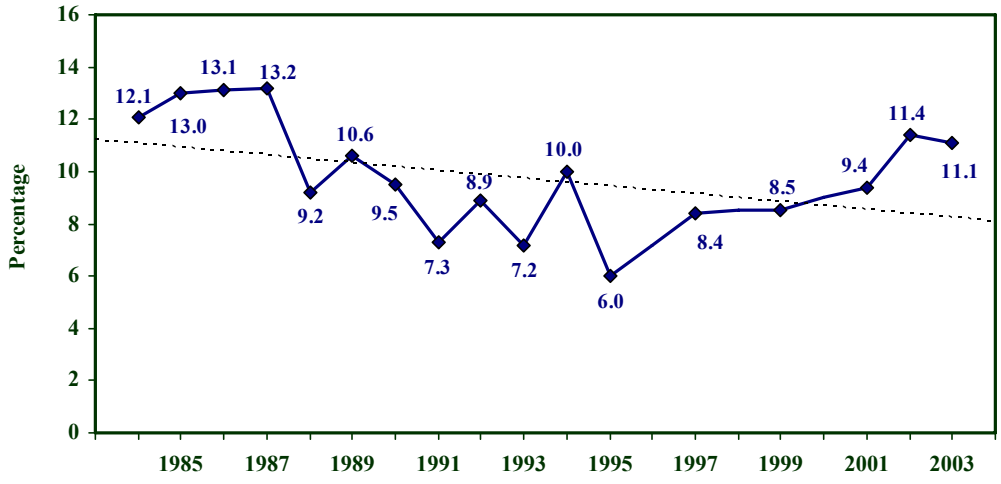
Objective 26.10

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; Current: 11.1% in 2003)

Table 11.2: Prevalence of binge drinking: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,302	**16.8**	(14.5-19.2)	2,020	**5.9**	(4.6-7.3)	3,322	**11.1**	(9.8-12.4)
Age									
18-24	82	**33.0**	(22.0-44.0)	111	**16.4**	(8.6-24.2)	193	**24.5**	(17.8-31.3)
25-34	187	**26.8**	(20.3-33.4)	268	**9.7**	(6.1-13.4)	455	**18.3**	(14.4-22.1)
35-44	233	**20.8**	(15.4-26.2)	321	**11.1**	(7.0-15.2)	554	**15.8**	(12.5-19.2)
45-54	281	**13.9**	(9.6-18.2)	387	**1.9**	(0.5-3.2)	668	**7.9**	(5.6-10.2)
55-64	247	**6.6**	(3.3-9.9)	394	**1.0**	(0.0-1.9)	641	**3.7**	(2.0-5.4)
65+	271	**4.1**	(1.8-6.4)	528	**0.8**	(0.1-1.4)	799	**2.1**	(1.1-3.1)
Education									
Less than H.S.	239	**14.6**	(9.0-20.3)	390	**3.2**	(1.2-5.2)	629	**8.7**	(5.7-11.7)
H.S. or G.E.D.	518	**16.2**	(12.8-19.6)	791	**4.8**	(2.8-6.6)	1,309	**10.2**	(8.2-12.1)
Some Post-H.S.	262	**22.8**	(16.8-28.8)	474	**9.8**	(6.2-13.5)	736	**15.4**	(12.0-18.8)
College Graduate	280	**14.3**	(9.8-18.7)	364	**6.0**	(3.2-8.8)	644	**10.3**	(7.6-13.0)
Income									
Less than $15,000	168	**11.9**	(6.1-17.6)	354	**5.8**	(2.4-9.2)	522	**8.3**	(5.2-11.5)
$15,000- 24,999	259	**14.4**	(9.7-19.1)	460	**4.5**	(2.4-6.7)	719	**8.8**	(6.4-11.2)
$25,000- 34,999	192	**17.4**	(11.5-23.3)	269	**6.7**	(3.1-10.2)	461	**11.7**	(8.3-15.1)
$35,000- 49,999	207	**17.0**	(11.3-22.6)	267	**7.4**	(3.3-11.6)	474	**12.4**	(8.8-15.9)
$50,000- 74,999	167	**19.8**	(13.4-26.1)	223	**4.2**	(1.3-7.2)	390	**12.0**	(8.4-15.6)
$75,000+	183	**19.7**	(12.7-26.6)	144	**10.1**	(4.1-16.1)	327	**16.3**	(11.3-21.3)

Figure 11.2: Prevalence of binge drinking by year: WVBRFSS, 1984-2003



------- Trend Line

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

Figure 11.3: Prevalence of HEAVY drinking by county: WVBRFSS, 1999, 2001-2003

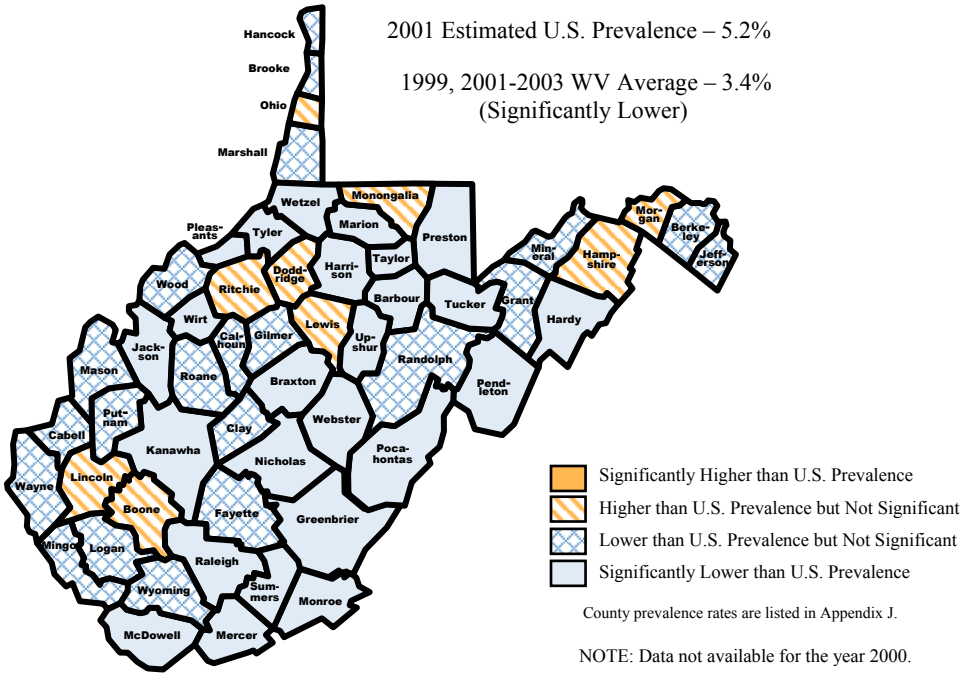
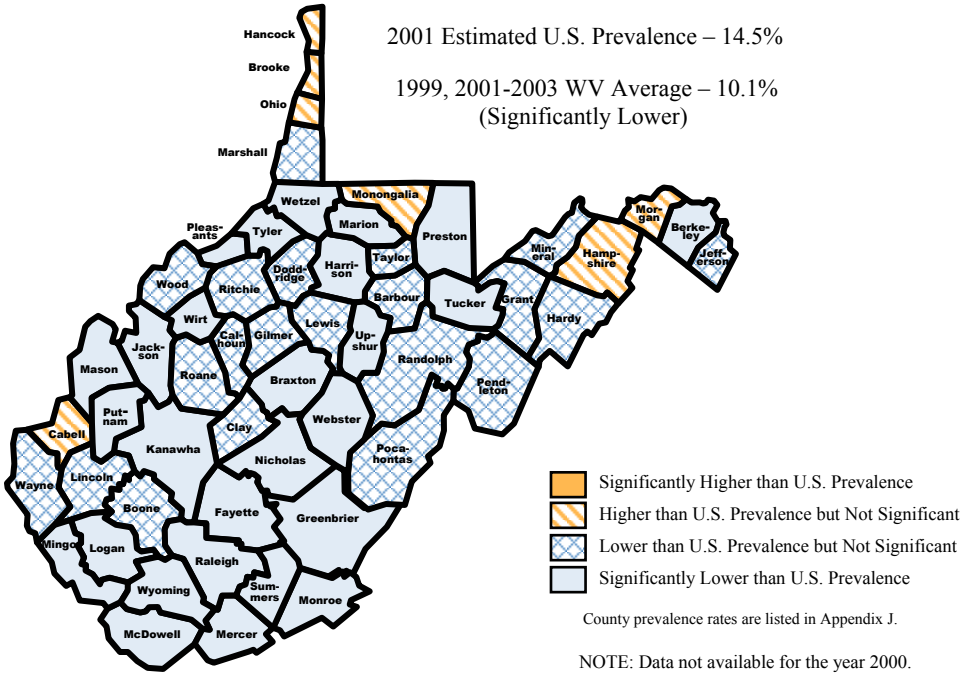


Figure 11.4: Prevalence of BINGE drinking by county : WVBRFSS, 1999, 2001- 2003



CHAPTER 12: CHOLESTEROL

Cholesterol Screening: Have never had their blood cholesterol checked.

State Prevalence

20.4% (95% CI: 18.7-22.2); 37th among 54 BRFSS participants.
National average: 22.2% (95% CI: 21.9-22.5).

Time Trends

The prevalence of no cholesterol screening has significantly decreased from a high of 49.3% in 1988 to a low of 20.4% in 2003. The 2003 rate is also significantly lower than the 1997 prevalence of 29.5%.

Gender

Men 23.1% (95% CI: 20.3-26.0); **Women 17.9%** (95% CI: 15.8-20.0).
The prevalence of no cholesterol screening was significantly higher among men than women.

Age

Cholesterol screening significantly increased at each higher age grouping until age 65. More than half of young adults aged 18 to 24 had never had their blood cholesterol checked, compared with 4.5% of elderly adults.

Education

The percentage of adults who had never had a cholesterol screening generally decreased as educational attainment increased. Adults with a high school diploma/GED were significantly more likely to have never been screened than those with a college degree (23.0% versus 14.6%).

Household Income

The prevalence of no cholesterol screening also decreased with income. Adults with a household income between $15,000 and $24,999 (26.8%) were significantly more likely to have never been screened than those in the three highest income categories (17.4%, 12.4%, and 15.6%, respectively).

Quick Stats

- Of those who had ever had their cholesterol checked, 78.3% had it checked within the past year.

West Virginia Healthy People 2010 Objectives

Objective 12.4

Increase to at least 75% the proportion of adults who have had their blood cholesterol checked within the preceding five years. (Baseline: 67.2% in 1997; Current: 76.7% in 2003)

Objective 12.5

Reduce the mean serum cholesterol level among adults to no more than 193 mg/dl. (Baseline: 202.56 mg/dl in 1999)

Table 12.1: Never had their cholesterol checked: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,289	**23.1**	(20.3-26.0)	1,978	**17.9**	(15.8-20.0)	3,267	**20.4**	(18.7-22.2)
Age									
18-24	88	**54.8**	(43.3-66.2)	105	**53.7**	(43.0-64.5)	193	**54.3**	(46.4-62.2)
25-34	180	**40.8**	(33.0-48.6)	261	**29.7**	(23.7-35.6)	441	**35.2**	(30.2-40.1)
35-44	228	**25.9**	(19.6-32.1)	315	**20.6**	(15.7-25.5)	543	**23.2**	(19.2-27.1)
45-54	279	**15.0**	(10.4-19.5)	382	**10.0**	(6.5-13.4)	661	**12.5**	(9.6-15.3)
55-64	246	**5.2**	(2.6-7.8)	391	**7.1**	(4.2-9.9)	637	**6.1**	(4.2-8.1)
65+	267	**4.5**	(2.1-6.9)	513	**4.4**	(2.5-6.4)	780	**4.5**	(2.9-6.0)
Education									
Less than H.S.	236	**28.6**	(20.9-36.3)	376	**17.0**	(12.4-21.5)	612	**22.7**	(18.1-27.3)
H.S. or G.E.D.	514	**26.9**	(22.4-31.4)	773	**19.4**	(16.0-22.8)	1,287	**23.0**	(20.2-25.8)
Some Post-H.S.	260	**19.8**	(13.9-25.7)	465	**17.6**	(13.2-22.1)	725	**18.6**	(15.0-22.2)
College Graduate	276	**13.4**	(8.3-18.6)	363	**15.8**	(10.7-20.9)	639	**14.6**	(11.0-18.2)
Income									
Less than $15,000	167	**23.3**	(15.7-30.8)	344	**18.5**	(13.6-23.3)	511	**20.5**	(16.3-24.8)
$15,000- 24,999	252	**31.4**	(24.5-38.2)	454	**23.4**	(18.6-28.1)	706	**26.8**	(22.8-30.8)
$25,000- 34,999	189	**20.3**	(13.7-26.9)	266	**17.7**	(12.2-23.2)	455	**18.9**	(14.7-23.2)
$35,000- 49,999	206	**19.9**	(13.3-26.4)	259	**14.6**	(9.4-19.8)	465	**17.4**	(13.1-21.7)
$50,000- 74,999	165	**13.3**	(7.3-19.2)	220	**11.6**	(6.4-16.8)	385	**12.4**	(8.5-16.4)
$75,000+	182	**17.5**	(10.4-24.6)	145	**12.2**	(5.6-18.8)	327	**15.6**	(10.4-20.8)

Table 12.2: Prevalence of high blood cholesterol among those who have ever had their blood cholesterol checked: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,033	**33.8**	(30.7-36.9)	1,682	**41.7**	(39.1-44.4)	2,715	**38.1**	(36.0-40.1)
Age									
18-24	43	**2.7**[a]	(0.0-8.1)	50	**19.1**	(4.9-33.2)	93	**10.5**	(2.8-18.2)
25-34	109	**20.8**	(12.9-28.8)	181	**21.6**	(15.0-28.1)	290	**21.2**	(16.1-26.3)
35-44	168	**30.6**	(25.3-37.8)	252	**29.2**	(22.9-35.6)	420	**29.9**	(25.1-34.6)
45-54	234	**34.9**	(28.5-41.3)	347	**39.8**	(34.2-45.3)	581	**37.4**	(33.2-41.6)
55-64	229	**50.0**	(43.1-56.9)	361	**55.1**	(49.6-60.6)	590	**52.5**	(48.1-56.9)
65+	249	**40.2**	(33.7-46.7)	482	**58.6**	(53.9-63.3)	731	**51.1**	(47.1-55.0)
Education									
Less than H.S.	182	**38.4**	(30.7-46.1)	313	**55.6**	(49.5-61.7)	495	**47.7**	(42.7-52.6)
H.S. or G.E.D.	392	**34.4**	(29.5-39.4)	647	**45.3**	(41.0-49.5)	1,039	**40.3**	(37.0-43.6)
Some Post-H.S.	215	**32.1**	(25.6-38.7)	400	**38.8**	(33.2-44.3)	615	**35.9**	(31.6-40.2)
College Graduate	244	**30.8**	(24.7-36.8)	322	**24.4**	(19.5-29.4)	566	**27.7**	(23.8-31.7)
Income									
Less than $15,000	128	**43.5**	(33.6-53.5)	282	**53.8**	(47.0-60.5)	410	**49.5**	(43.7-55.3)
$15,000- 24,999	188	**41.6**	(34.1-49.2)	367	**45.7**	(40.1-51.3)	555	**44.1**	(39.6-48.6)
$25,000- 34,999	153	**38.4**	(30.2-46.7)	228	**45.6**	(38.5-52.6)	381	**42.3**	(36.9-47.7)
$35,000- 49,999	170	**31.6**	(24.2-38.9)	228	**30.4**	(24.0-36.9)	398	**31.0**	(26.1-35.9)
$50,000- 74,999	143	**26.9**	(19.5-34.2)	200	**34.7**	(27.6-41.8)	343	**30.8**	(25.7-36.0)
$75,000+	159	**30.0**	(22.6-37.4)	132	**22.3**	(14.9-29.7)	291	**27.2**	(21.8-32.6)

a. Use caution in interpreting percentages with N<50.

High Blood Cholesterol: Have ever been told by a doctor or other health professional that their blood cholesterol is high. ***Expressed as a percentage of adults who have ever had their blood cholesterol checked.***

State Prevalence

38.1% (95% CI: 36.0-40.1); 2nd among 54 BRFSS participants.
National prevalence: 33.6% (95% CI: 33.2-33.9).

Time Trends

The prevalence of high blood cholesterol among those ever checked steadily increased from 1995 to 2002. The 2003 prevalence is slightly lower than the 2002 rate of 40.7% but is significantly higher than the 1995 and 1997 rates (30.4% and 32.2%, respectively).

Gender

Men 33.8% (95% CI: 30.7-36.9); **Women 41.7%** (95% CI: 39.1-44.4).
Women had a significantly higher rate of high blood cholesterol than men. Between 2002 and 2003 the prevalence of high cholesterol significantly decreased among men (from 41.1% to 33.8%).

Age

The prevalence of high cholesterol significantly increased with age. Adults aged 55 to 64 were five times as likely to have high cholesterol as those aged 18 to 24 (52.5% versus 10.5%). At ages 65 and older, the prevalence of high cholesterol was significantly higher among women than men (58.6% versus 40.2%).

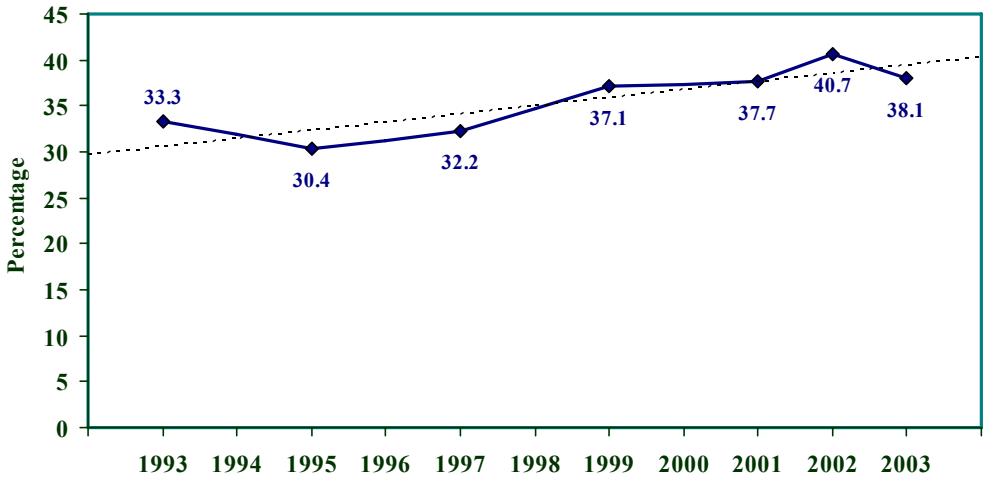
Education

There was a significant inverse relationship between high cholesterol and educational attainment. Adults with a high school diploma/GED (40.3%) or less (47.7%) had significantly higher rates of high cholesterol than college graduates (27.7%). Men were significantly less likely than women to have high cholesterol at the two lowest levels of education.

Household Income

The risk of high cholesterol significantly decreased when household income reached $35,000. Nearly half of adults with an income less than $15,000 had high cholesterol, compared with approximately 27% of those with an annual income of $75,000 or more.

Figure 12.1: Prevalence of high blood cholesterol by year: WVBRFSS, 1993-2003[a]



------- Trend Line

NOTES: Data not available for the years 1994, 1996, 1998, and 2000.
[a] Among those who have ever had their cholesterol checked.

CHAPTER 13: HYPERTENSION

Hypertension Awareness: Have ever been told by a doctor or other health professional that they have high blood pressure. ***Women told they had hypertension only during pregnancy are treated as an answer of "no".***

State Prevalence

33.6% (95% CI: 31.8-35.3); 1st among 54 BRFSS participants.
National prevalence: 25.8% (95% CI: 25.4-26.1).

Time Trends

The prevalence of hypertension decreased in the late 1980s and early 1990s. Since 1995 the rate has gradually increased to a high of 33.6% in 2003. West Virginia has reported one of the six highest hypertension rates all 13 times that the prevalence has been measured by all BRFSS participants.

Gender

Men 35.0% (95% CI: 32.2-37.8); **Women 32.3%** (95% CI: 30.0-34.5).
There was no significant gender difference in the prevalence of hypertension.

Age

The prevalence of hypertension significantly increased at ages 35 to 44 and every age grouping thereafter. Elderly adults (59.9%) were more than two times as likely as adults aged 35 to 44 (25.4%) to have hypertension and eight times as likely as those aged 18 to 24 (7.5%). Men had a significantly higher prevalence of hypertension than women at ages 35 to 44 (32.2% versus 18.9%).

Education

The risk of hypertension significantly decreased as educational attainment increased. Adults without a high school diploma had a significantly higher rate of hypertension than those at every other level of education. Nearly half of them had ever had hypertension, compared with approximately one-fourth of college graduates. The decline in risk at increasing levels of education was greater among women than men.

Household Income

There was also a significant inverse relationship between hypertension awareness and household income. Adults living in households with less than $15,000 annual income had a significantly higher rate of hypertension than those with an income of $25,000 or more. Women had a significantly lower prevalence of hypertension than men when household income was $35,000 to $49,999 and $75,000 or more.

Quick Stats

- 77.7% of adults with hypertension were currently taking medication to reduce their high blood pressure. Women were significantly more likely to be taking medication than men (83.2% versus 72.1%).
- Adults who had ever been told they had high blood pressure were significantly more likely than adults who had never had hypertension to have experienced heart attack, heart disease, and stroke (see Figure 13.3).

West Virginia Healthy People 2010 Objectives

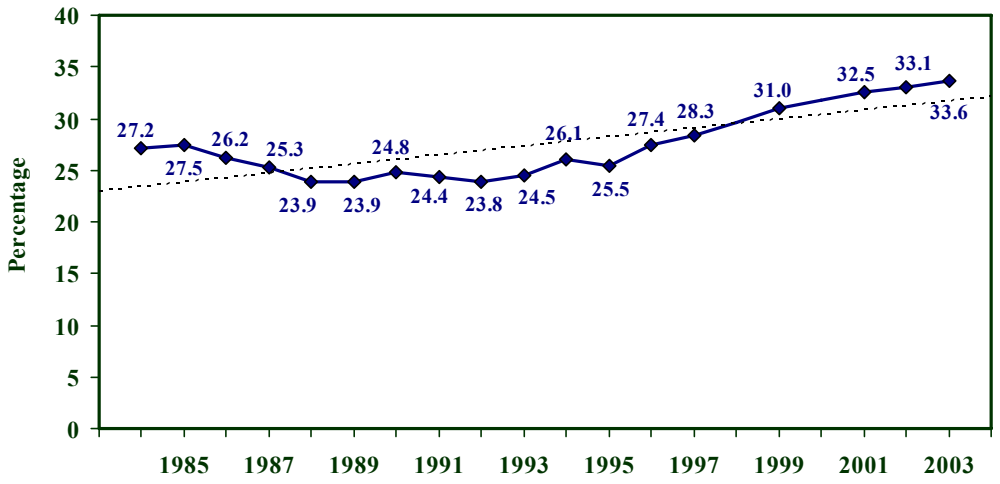
Objective 12.3

Decrease the proportion of adults who have high blood pressure to no more than 22%. (Baseline: 28.3% in 1997; Current: 33.6% in 2003)

Table 13.1: Prevalence of hypertension awareness: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,319	**35.0**	(32.2-37.8)	2,023	**32.3**	(30.0-34.5)	3,342	**33.6**	(31.8-35.3)
Age									
18-24	92	**7.2**	(2.2-12.2)	111	**7.8**	(2.4-13.1)	203	**7.5**	(3.8-11.1)
25-34	187	**16.8**	(11.1-22.6)	267	**9.3**	(5.6-13.0)	454	**13.1**	(9.6-16.5)
35-44	234	**32.2**	(25.6-38.7)	321	**18.9**	(14.0-23.8)	555	**25.4**	(21.3-29.5)
45-54	284	**38.2**	(32.1-44.2)	388	**29.2**	(24.4-34.1)	672	**33.7**	(29.8-37.6)
55-64	249	**50.9**	(44.3-57.5)	397	**50.5**	(45.1-55.8)	646	**50.7**	(46.4-54.9)
65+	272	**59.4**	(53.1-65.7)	528	**60.3**	(55.8-64.8)	800	**59.9**	(56.2-63.6)
Education									
Less than H.S.	245	**44.0**	(36.9-51.1)	390	**50.9**	(45.4-56.5)	635	**47.5**	(43.0-52.1)
H.S. or G.E.D.	526	**33.9**	(29.6-38.2)	790	**33.2**	(29.6-36.8)	1,316	**33.5**	(30.7-36.3)
Some Post-H.S.	264	**34.0**	(27.9-40.2)	476	**25.7**	(21.6-29.8)	740	**29.3**	(25.8-32.9)
College Graduate	281	**29.3**	(23.6-34.9)	366	**19.7**	(15.4-24.0)	647	**24.6**	(21.1-28.2)
Income									
Less than $15,000	170	**48.2**	(39.5-57.0)	355	**43.6**	(37.8-49.4)	525	**45.5**	(40.5-50.5)
$15,000- 24,999	261	**38.9**	(32.6-45.2)	460	**38.3**	(33.5-43.2)	721	**38.6**	(34.7-42.5)
$25,000- 34,999	194	**34.6**	(27.4-41.9)	269	**34.3**	(28.2-40.4)	463	**34.5**	(29.8-39.2)
$35,000- 49,999	211	**37.2**	(30.2-44.3)	267	**23.4**	(18.1-28.7)	478	**30.7**	(26.2-35.2)
$50,000- 74,999	168	**26.1**	(19.3-32.9)	225	**22.8**	(17.1-28.6)	393	**24.5**	(20.0-28.9)
$75,000+	183	**26.2**	(19.5-33.0)	146	**11.9**	(6.1-17.6)	329	**21.2**	(16.3-26.0)

Figure 13.1: Prevalence of hypertension awareness by year: WVBRFSS, 1984-2003



------- Trend Line

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

Figure 13.2: Hypertension awareness by county: WVBRFSS, 1999, 2001-2003

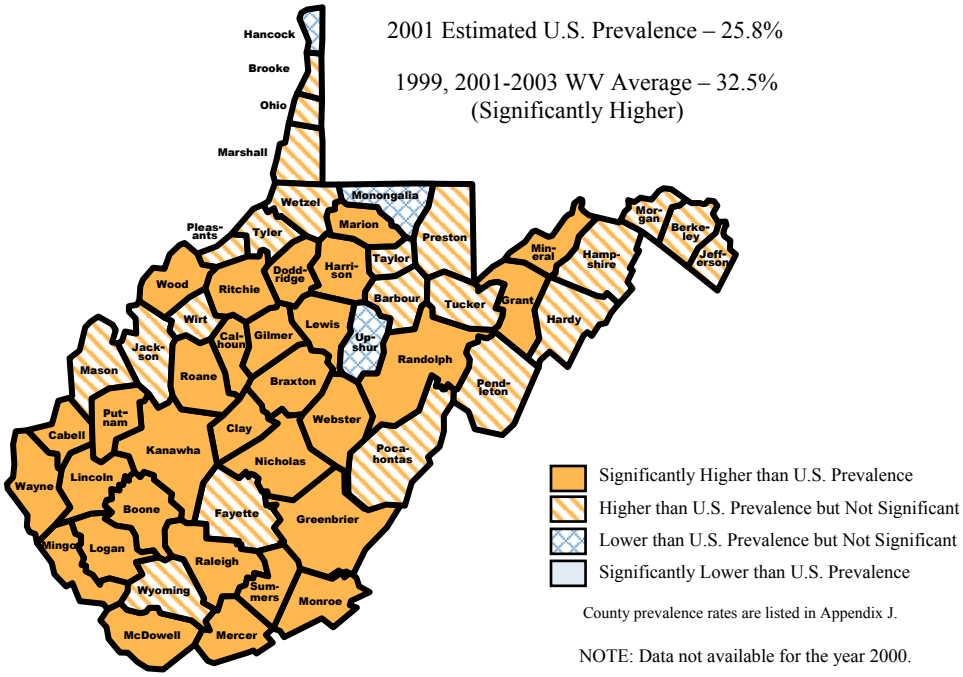
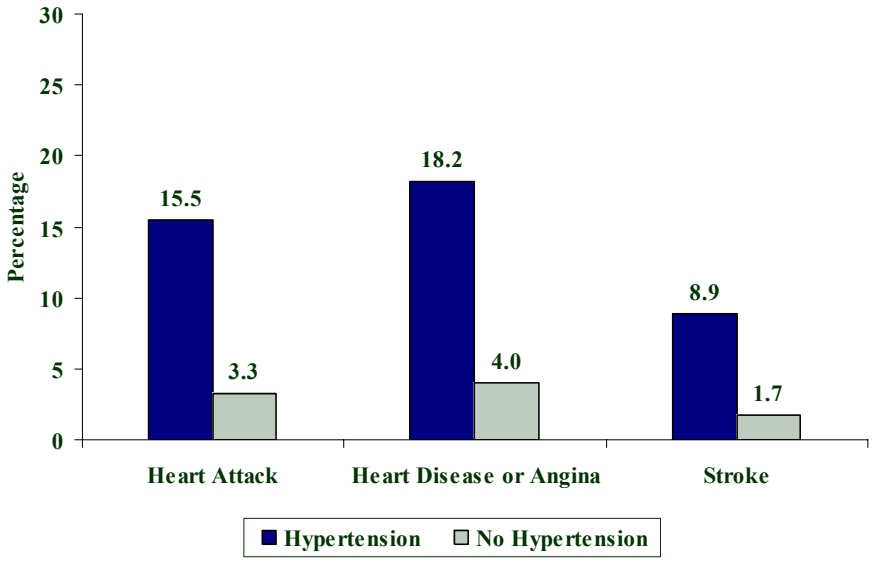


Figure 13.3: Hypertension awareness by diagnosis of cardiovascular diseases: WVBRFSS 2003



CHAPTER 14: CARDIOVASCULAR DISEASE

Definition: Have ever been diagnosed with a) Heart attack or myocardial infarction, b) Angina or coronary heart disease, or c) Stroke by a doctor, nurse, or other health professional.

HEART ATTACK AND ANGINA

- **State Prevalence:** The rates of heart attack and angina were not significantly different.
  - **Heart attack: 7.4%** (95% CI: 6.5-8.4); 1st among 25 BRFSS participants.
  - **Angina: 8.7%** (95% CI: 7.7-9.7); 1st among 25 BRFSS participants.

- **Time Trends:** The prevalence of lifetime heart attack significantly decreased from 7.6% to 5.6% between 2000 and 2002 and then significantly increased to 7.4% in 2003.

- **Gender:** Men had a significantly higher prevalence of heart attack than women. Among men, the prevalence of heart attack significantly increased from 5.8% in 2002 to 9.5% in 2003.
  - **Heart attack: Men 9.5%** (95% CI: 7.9-11.1); **Women 5.5%** (95% CI: 4.5-6.6).
  - **Angina: Men 9.4%** (95% CI: 7.8-11.0); **Women 8.1%** (95% CI: 6.9-9.4).

- **Age:** The rates of both heart attack and angina significantly increased with age. Adults aged 65 and older were most likely to have ever had a heart attack (19.6%) and angina (20.9%). Among those who had ever had a heart attack, 49% had their first attack before the age of 55.

- **Education:** The prevalence of both heart attack and angina significantly decreased as education increased. Approximately 14% of adults without a high school diploma/GED had suffered a heart attack or angina, compared with about 4% of college graduates.

- **Household Income:** The prevalence of both heart attack and angina also significantly decreased with increasing household income. Adults with an income less than $15,000 were more than six times as likely as the wealthiest adults to have had a heart attack or angina.

STROKE

- **State Prevalence: 4.2%** (95% CI: 3.5-4.8); 1st among 25 BRFSS participants.

- **Time Trends:** The prevalence of stroke did not significantly change between 1999 and 2003.

- **Gender: Men 3.1%** (95% CI: 2.1-4.0); **Women 5.1%** (95% CI: 4.2-6.1). Women had a significantly higher prevalence of stroke than men. Among women, the prevalence of stroke significantly increased between 2002 and 2003 (from 3.1% to 5.1%).

- **Age:** The elderly were significantly more likely to have ever had a stroke than adults in all younger age groupings. Among those who had ever had a stroke, 39.1% had their first stroke before the age of 55.

- **Education:** Adults without a high school diploma/GED had a significantly higher prevalence of stroke than those with higher levels of education. There were no significant differences in the risk of stroke among adults in the three highest education categories.

- **Household Income:** The prevalence of stroke was highest among adults in the poorest households (9.2%). The risk of stroke was significantly lower among adults with an income of $35,000 or more than among those with an annual income less than $25,000.

Table 14.1: Prevalence of heart attack, angina, and stroke: WVBRFSS, 2003

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,300	**7.4**	(6.5-8.4)	3,289	**8.7**	(7.7-9.7)	3,310	**4.2**	(3.5-4.8)
Sex									
Males	1,303	**9.5**	(7.9-11.1)	1,297	**9.4**	(7.8-11.0)	1,305	**3.1**	(2.1-4.0)
Females	1,997	**5.5**	(4.5-6.6)	1,992	**8.1**	(6.9-9.4)	2,005	**5.1**	(4.2-6.1)
Age									
18-24	197	**0.0**	--	197	**0.0**	--	197	**0.2**	(0.0-0.6)
25-34	447	**0.4**	(0.0-1.3)	447	**1.7**	(0.3-3.1)	447	**0.4**	(0.0-1.2)
35-44	548	**1.8**	(0.6-3.0)	548	**2.9**	(1.3-4.4)	549	**0.6**	(0.0-1.3)
45-54	667	**7.4**	(5.2-9.6)	666	**8.1**	(5.8-10.3)	668	**2.4**	(1.1-3.7)
55-64	637	**11.3**	(8.4-14.1)	639	**14.9**	(11.7-18.0)	639	**5.3**	(3.5-7.1)
65+	792	**19.6**	(16.5-22.6)	780	**20.9**	(17.8-24.0)	798	**13.2**	(10.7-15.8)
Education									
Less than H.S.	624	**13.6**	(10.8-16.5)	615	**13.8**	(10.9-16.7)	631	**11.1**	(8.5-13.6)
H.S. or G.E.D.	1,291	**6.7**	(5.2-8.1)	1,291	**9.0**	(7.4-10.6)	1,294	**3.1**	(2.2-4.0)
Some Post-H.S.	739	**6.5**	(4.6-8.4)	736	**7.9**	(5.9-9.8)	739	**2.4**	(1.3-3.5)
College Graduate	642	**4.0**	(2.3-5.7)	643	**4.2**	(2.6-5.7)	642	**1.5**	(0.5-2.4)
Income									
Less than $15,000	521	**13.8**	(10.4-17.2)	515	**16.2**	(12.7-19.8)	523	**9.2**	(6.6-11.8)
$15,000- 24,999	710	**10.3**	(8.0-12.7)	710	**10.6**	(8.3-12.9)	712	**6.5**	(4.6-8.5)
$25,000- 34,999	459	**7.1**	(4.6-9.6)	460	**9.6**	(6.6-12.6)	461	**3.0**	(1.4-4.6)
$35,000- 49,999	474	**4.6**	(2.6-6.6)	472	**6.4**	(4.1-8.7)	475	**1.5**	(0.3-2.6)
$50,000- 74,999	389	**4.8**	(2.5-7.0)	390	**5.8**	(3.4-8.2)	390	**1.5**	(0.2-2.9)
$75,000+	326	**2.2**	(0.5-3.8)	326	**2.2**	(0.7-3.6)	326	**0.7**	(0.0-1.5)

Table 14.2: Other cardiovascular disease issues: WVBRFSS, 2003

Characteristics	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Respondents who had their first heart attack before the age of 55[a]	136	**53.4**	(44.3-62.4)	105	**41.5**	(31.2-51.9)	241	**49.0**	(42.1-55.8)
Respondents who had their first stroke before the age of 55[b]	43	**45.9[d]**	(29.7-62.2)	114	**35.3**	(25.5-45.1)	157	**39.1**	(30.4-47.8)
Respondents who did NOT have any outpatient rehabilitation after leaving the hospital following their heart attack or stroke[c]	164	**74.5**	(67.3-81.6)	203	**78.1**	(71.7-84.5)	367	**76.2**	(71.4-81.0)

a. Among respondents who have ever been told by a doctor that they had a heart attack.
b. Among respondents who have ever been told by a doctor that they had a stroke.
c. Among respondents who have ever been told by a doctor that they had either a heart attack or a stroke.
d. Use caution in interpreting percentages with N<50.

West Virginia Healthy People 2010 Objectives

Objective 12.1 Reduce heart disease mortality to no more than 200 deaths per 100,000 population. (Age-adjusted Baseline: 323.5 in 1998; Current: 294.3 in 2003; Source: WV Vital Statistics, 2003).

Objective 12.2 Reduce stroke deaths to no more than 45 per 100,000 population. (Age-adjusted Baseline: 59.1 in 1998; Current: 61.5 in 2003; Source: WV Vital Statistics, 2003).

Aspirin Therapy: Adults aged 35 and older who take aspirin daily or every other day.

State Prevalence **38.2%** (95% CI: 36.2-40.3); 1st among 25 BRFSS participants.

Time Trends The percentage of adults on aspirin therapy significantly increased from 33.4% in 2002 to 38.2% in 2003.

Gender **Men 42.3%** (95% CI: 39.0-45.5); **Women 34.7%** (95% CI: 32.2-37.2). Men were significantly more likely to be on aspirin therapy than women.

Age The prevalence of aspirin therapy significantly increased at every age grouping. Approximately 18% of adults aged 35 to 44 were taking aspirin regularly, compared with nearly 60% of elderly adults.

Education Aspirin therapy did not significantly differ by educational attainment. Adults without a high school diploma/GED were most likely to be on an aspirin regimen (43.5%).

Household Income Generally, the prevalence of aspirin therapy decreased as income increased. Adults with an income between $25,000 and $34,999 had a significantly higher rate of aspirin use (43.7%) than those in the two highest income categories (31.2% and 30.1%, respectively).

Quick Stats Of those that took aspirin regularly…

- 90.8% took it to reduce the chance of a heart attack or stroke.
- 6.3% took it for pain only.
- 34.5% had a diagnosis of heart attack, angina, or stroke.

Table 14.3: Daily or alternate-day aspirin therapy among adults aged 35 and older: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,028	**42.3**	(39.0-45.5)	1,623	**34.7**	(32.2-37.2)	2,651	**38.2**	(36.2-40.3)
Age									
35-44	230	**17.8**	(12.6-23.0)	319	**18.7**	(13.8-23.7)	549	**18.3**	(14.7-21.8)
45-54	280	**37.4**	(31.3-43.6)	386	**22.3**	(17.9-26.7)	666	**29.8**	(26.0-33.7)
55-64	248	**52.8**	(46.1-59.4)	393	**42.0**	(36.7-47.3)	641	**47.3**	(43.1-51.6)
65+	270	**64.4**	(58.3-70.5)	525	**52.0**	(47.4-56.7)	795	**57.0**	(53.3-60.8)
Education									
Less than H.S.	202	**47.9**	(40.5-55.4)	346	**39.8**	(34.2-45.4)	548	**43.5**	(38.9-48.1)
H.S. or G.E.D.	402	**42.6**	(37.4-47.8)	651	**33.0**	(29.1-37.0)	1,053	**37.4**	(34.2-40.6)
Some Post-H.S.	203	**42.7**	(35.4-50.1)	350	**34.1**	(28.7-39.5)	553	**37.9**	(33.5-42.4)
College Graduate	219	**36.2**	(29.4-43.0)	275	**33.1**	(27.0-39.2)	494	**34.7**	(30.2-39.3)
Income									
Less than $15,000	140	**45.8**	(36.3-55.3)	299	**39.9**	(33.7-46.0)	439	**42.3**	(37.0-47.6)
$15,000- 24,999	195	**46.0**	(38.5-53.5)	357	**37.2**	(31.8-42.6)	552	**40.9**	(36.5-45.4)
$25,000- 34,999	155	**52.0**	(43.5-60.6)	214	**36.0**	(29.1-43.0)	369	**43.7**	(38.1-49.2)
$35,000- 49,999	156	**38.2**	(30.1-46.2)	203	**29.2**	(22.6-35.9)	359	**33.9**	(28.6-39.1)
$50,000- 74,999	138	**35.3**	(27.0-43.5)	185	**27.2**	(20.2-34.2)	323	**31.2**	(25.8-36.6)
$75,000+	148	**34.5**	(26.5-42.5)	118	**22.6**	(14.7-30.5)	266	**30.1**	(24.2-35.9)

CHAPTER 15: ASTHMA

Lifetime Asthma: Have ever been told by health professional that they had asthma.
Current Asthma: Currently have asthma. ***Expressed as a percentage of all adults.***

State Prevalence

Lifetime asthma: **11.8%** (95% CI: 10.6-13.0); 22nd among 54 BRFSS participants. National prevalence: 12.0% (95% CI: 11.7-12.2).

Current asthma: **8.1%** (95% CI: 7.1-9.1); 17th among 54 BRFSS participants. National prevalence: 7.7% (95% CI: 7.5-7.9). Of those who had ever been diagnosed with asthma, 69.2% reported that they still had asthma (95% CI: 63.8-74.5).

Time Trends

Data on asthma have been collected since 2000. The prevalence of lifetime asthma increased from 11.7% to 12.8% between 2000 and 2002 and then decreased to 11.8% in 2003. Current asthma prevalence decreased from a high of 9.3% in 2001 to a low of 8.1% in 2003.

Gender

Lifetime asthma:
Men 9.6% (95% CI: 7.8-11.4); **Women 13.9%** (95% CI: 12.2-15.6).

Current asthma:
Men 5.3% (95% CI: 4.0-6.6); **Women 10.7%** (95% CI: 9.2-12.2).

Women had a significantly higher prevalence of lifetime and current asthma than men. Between 2002 and 2003, the prevalence of lifetime and current asthma decreased (but not significantly) among both men and women; however, the declines were greater for men.

Age

Generally, lifetime asthma rates were higher in younger ages, whereas current asthma rates were higher in older ages. The relationship between asthma prevalence and age was inconsistent across gender. Women had a significantly higher prevalence of current asthma than men at ages 35 to 64.

Education

There was not a significant relationship between either lifetime or current asthma status and educational attainment. The highest rate of both lifetime and current asthma was among adults without a high school diploma (15.1% and 11.5%, respectively).

Household Income

The prevalence of both lifetime and current asthma significantly decreased as household income increased. Adults in the wealthiest households had a significantly lower rate of lifetime asthma than those with an income less than $25,000. They were also significantly less likely to currently have asthma than those earning less than $35,000.

Quick Stats

- 69.2% of adults who had ever been diagnosed with asthma reported that they still had asthma. Men were significantly more likely than women to report that they no longer had asthma (44.4% versus 22.2%; see Figure 15.2).

West Virginia 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: 8.1% in 2003)

Table 15.1: Prevalence of lifetime asthma: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,321	**9.6**	(7.8-11.4)	2,025	**13.9**	(12.2-15.6)	3,346	**11.8**	(10.6-13.0)
Age									
18-24	92	**14.3**	(6.9-21.7)	111	**10.8**	(4.9-16.8)	203	**12.6**	(7.8-17.4)
25-34	187	**11.7**	(6.7-16.8)	268	**15.7**	(10.8-20.5)	455	**13.7**	(10.2-17.2)
35-44	235	**6.3**	(3.4-9.3)	321	**16.7**	(12.2-21.3)	556	**11.6**	(8.9-14.4)
45-54	284	**8.6**	(5.1-12.1)	388	**14.9**	(11.1-18.7)	672	**11.8**	(9.2-14.3)
55-64	250	**5.1**	(2.3-8.0)	397	**16.5**	(12.4-20.6)	647	**10.9**	(8.3-13.5)
65+	272	**12.2**	(8.0-16.3)	529	**9.7**	(7.1-12.2)	801	**10.7**	(8.4-12.9)
Education									
Less than H.S.	244	**12.2**	(7.4-17.0)	390	**18.0**	(13.7-22.3)	634	**15.1**	(11.9-18.4)
H.S. or G.E.D.	529	**10.4**	(7.4-13.4)	792	**12.4**	(9.9-14.9)	1,321	**11.5**	(9.5-13.4)
Some Post-H.S.	265	**5.1**	(2.4-7.9)	476	**14.7**	(11.0-18.3)	741	**10.5**	(8.1-12.9)
College Graduate	280	**10.2**	(6.6-13.9)	366	**11.8**	(8.3-15.2)	646	**11.0**	(8.4-13.5)
Income									
Less than $15,000	171	**12.3**	(6.5-18.2)	355	**19.5**	(15.1-23.9)	526	**16.5**	(12.9-20.0)
$15,000- 24,999	261	**13.1**	(8.2-18.1)	460	**18.7**	(14.5-23.0)	721	**16.3**	(13.1-19.5)
$25,000- 34,999	194	**7.7**	(3.7-11.8)	269	**15.1**	(10.3-20.0)	463	**11.6**	(8.4-14.8)
$35,000- 49,999	211	**10.1**	(5.4-14.8)	267	**8.8**	(4.9-12.6)	478	**9.5**	(6.4-12.6)
$50,000- 74,999	168	**6.1**	(2.8-9.3)	225	**12.0**	(7.6-16.5)	393	**9.0**	(6.3-11.8)
$75,000+	183	**5.5**	(2.0-9.1)	146	**9.1**	(4.5-13.6)	329	**6.8**	(4.0-9.6)

Table 15.2: Prevalence of current asthma: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,319	**5.3**	(4.0-6.6)	2,022	**10.7**	(9.2-12.2)	3,341	**8.1**	(7.1-9.1)
Age									
18-24	92	**5.2**	(0.3-10.1)	111	**7.4**	(2.7-12.1)	203	**6.2**	(2.8-9.7)
25-34	187	**4.5**	(1.4-7.6)	267	**10.8**	(6.6-15.1)	454	**7.7**	(5.0-10.3)
35-44	233	**3.1**	(1.1-5.0)	320	**13.8**	(9.6-17.9)	553	**8.6**	(6.2-11.0)
45-54	284	**5.2**	(2.4-8.0)	388	**12.5**	(9.0-16.0)	672	**8.8**	(6.6-11.1)
55-64	250	**3.4**	(1.1-5.7)	397	**13.7**	(10.0-17.5)	647	**8.7**	(6.4-10.9)
65+	272	**10.0**	(6.2-13.7)	528	**6.7**	(4.6-8.8)	800	**8.0**	(6.1-10.0)
Education									
Less than H.S.	244	**8.0**	(4.0-11.9)	389	**14.8**	(10.7-18.9)	633	**11.5**	(8.6-14.3)
H.S. or G.E.D.	529	**5.4**	(3.4-7.5)	792	**10.0**	(7.7-12.3)	1,321	**7.8**	(6.3-9.3)
Some Post-H.S.	264	**3.5**	(1.1-5.8)	475	**9.7**	(6.8-12.6)	739	**7.0**	(5.0-8.9)
College Graduate	279	**4.3**	(2.1-6.5)	365	**9.4**	(6.2-12.6)	644	**6.8**	(4.8-8.7)
Income									
Less than $15,000	171	**5.3**	(1.8-8.8)	355	**15.1**	(11.1-19.0)	526	**11.0**	(8.2-13.7)
$15,000- 24,999	260	**9.6**	(5.3-13.9)	458	**14.4**	(10.7-18.2)	718	**12.3**	(9.5-15.1)
$25,000- 34,999	193	**6.0**	(2.4-9.5)	269	**13.6**	(8.9-18.2)	462	**10.0**	(7.0-13.0)
$35,000- 49,999	211	**3.2**	(0.7-5.8)	267	**7.6**	(3.9-11.2)	478	**5.3**	(3.1-7.5)
$50,000- 74,999	168	**4.7**	(1.8-7.5)	224	**7.7**	(4.0-11.3)	392	**6.2**	(3.8-8.5)
$75,000+	183	**3.0**	(0.2-5.8)	146	**5.5**	(2.2-8.8)	329	**3.9**	(1.7-6.0)

Figure 15.1: Current asthma prevalence by county: WVBRFSS, 2000-2003

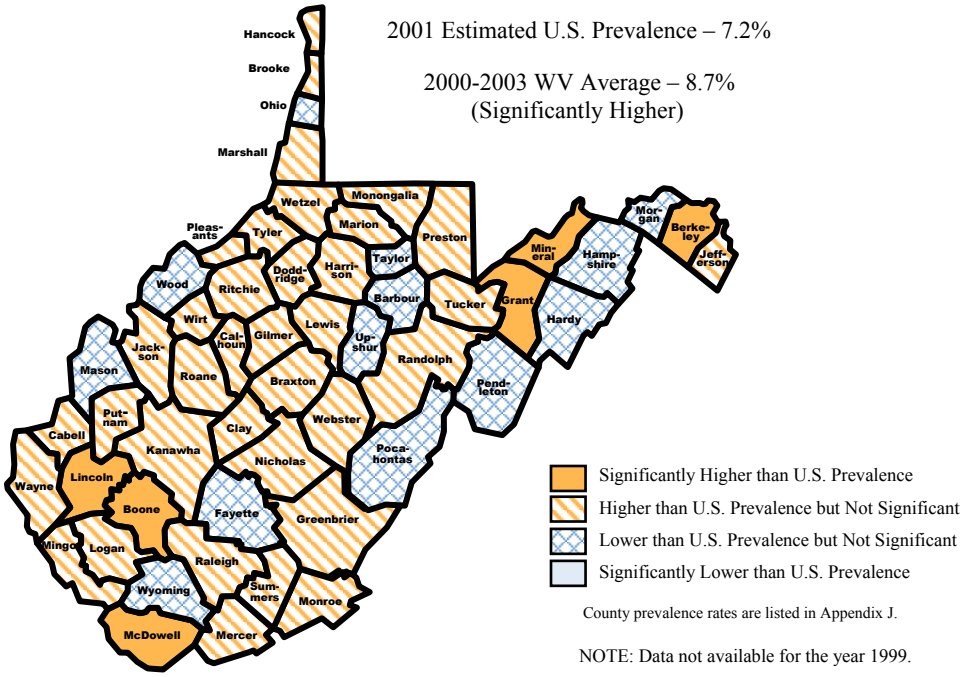
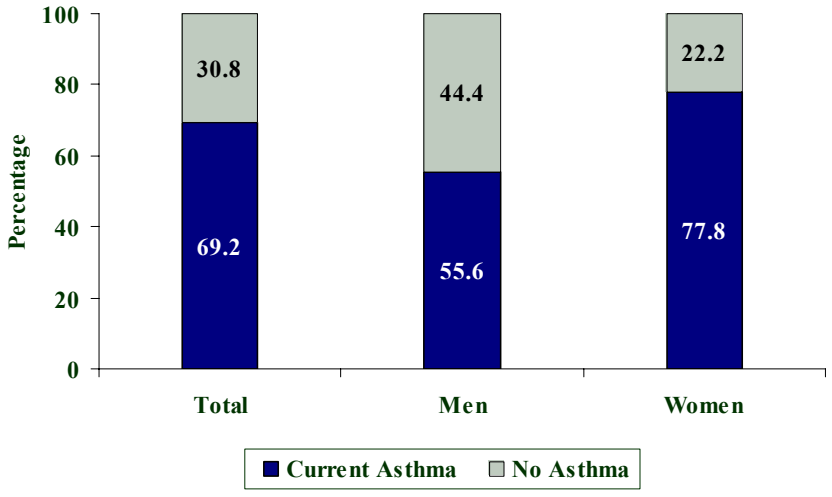


Figure 15.2: Current asthma status among adults who have ever had asthma: WVBRFSS 2003



CHAPTER 16: ARTHRITIS

Arthritis Awareness: Have ever been told by a doctor or other health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

State Prevalence

37.2% (95% CI: 35.4-39.0); 1st among 54 BRFSS participants.
National prevalence: 27.1% (95% CI: 26.8-27.4).

Gender

Men 34.9% (95% CI: 32.1-37.8); **Women 39.3%** (95% CI: 37.0-41.7).
There was no significant gender difference in the prevalence of arthritis.

Age

The prevalence of arthritis significantly increased among adults at each higher age grouping until age 65. Only 7.4% of adults aged 18 to 24 had ever been diagnosed with some form of arthritis, compared with nearly two-thirds of those aged 65 and older.

Education

The prevalence of arthritis significantly decreased as educational attainment increased. Adults without a high school diploma/GED had a significantly higher rate of arthritis than those at all higher levels of education.

Household Income

The risk of arthritis also significantly decreased as household income increased. Adults in the poorest households were more than twice as likely as those in the wealthiest households to have been diagnosed with arthritis (50.8% versus 21.6%).

Quick Stats

- 55.9% of adults had pain, aching, or stiffness in or around a joint (not including neck or back) in the past 30 days.

Table 16.1: Prevalence of arthritis: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,313	**34.9**	(32.1-37.8)	2,016	**39.3**	(37.0-41.7)	3,329	**37.2**	(35.4-39.0)
Age									
18-24	91	**6.4**	(0.8-12.1)	111	**8.3**	(2.9-13.8)	202	**7.4**	(3.4-11.3)
25-34	186	**20.4**	(14.0-26.9)	268	**15.3**	(10.6-20.0)	454	**17.9**	(13.9-21.8)
35-44	234	**30.0**	(23.6-36.3)	320	**27.1**	(21.7-32.6)	554	**28.5**	(24.3-32.7)
45-54	282	**41.0**	(34.7-47.2)	386	**40.5**	(35.3-45.8)	668	**40.8**	(36.7-44.8)
55-64	248	**49.7**	(43.0-56.4)	395	**60.4**	(55.2-65.6)	643	**55.1**	(50.9-59.4)
65+	271	**56.3**	(50.0-62.6)	525	**66.3**	(61.9-70.7)	796	**62.2**	(58.6-65.9)
Education									
Less than H.S.	245	**46.0**	(38.7-53.3)	390	**55.0**	(49.5-60.5)	635	**50.6**	(46.0-55.2)
H.S. or G.E.D.	524	**34.4**	(30.0-38.8)	787	**40.0**	(36.2-43.7)	1,311	**37.3**	(34.4-40.2)
Some Post-H.S.	263	**31.0**	(25.0-37.0)	473	**35.0**	(30.3-39.8)	736	**33.3**	(29.5-37.0)
College Graduate	278	**29.1**	(23.5-34.8)	365	**27.3**	(22.4-32.1)	643	**28.2**	(24.5-32.0)
Income									
Less than $15,000	171	**51.1**	(42.3-59.9)	354	**50.6**	(44.6-56.5)	525	**50.8**	(45.7-55.9)
$15,000- 24,999	259	**43.6**	(37.0-50.2)	458	**44.2**	(39.2-49.3)	717	**43.9**	(39.9-48.0)
$25,000- 34,999	193	**38.4**	(31.0-45.9)	268	**37.8**	(31.5-44.1)	461	**38.1**	(33.3-42.9)
$35,000- 49,999	211	**34.1**	(27.2-41.0)	266	**36.2**	(30.0-42.4)	477	**35.1**	(30.4-39.8)
$50,000- 74,999	168	**29.2**	(21.8-36.5)	225	**24.4**	(18.4-30.5)	393	**26.8**	(22.0-31.6)
$75,000+	183	**21.6**	(15.0-28.2)	146	**21.5**	(14.8-28.3)	329	**21.6**	(16.7-26.4)

Activity Limitation: Are now limited in any way in usual activities because of arthritis or joint symptoms. ***Asked of adults who reported three months of joint pain or a diagnosis of arthritis.***
Work Limitation: Arthritis or joint symptoms now affect place of work, type of work, or amount of work. ***Asked of adults aged 18 to 64 who reported three months of joint pain or a diagnosis of arthritis.***

State Prevalence

Activity Limitation: **36.3%** (95% CI: 34.0-38.7); 4th highest among 54 BRFSS participants. National prevalence: 29.7% (95% CI: 29.3-30.2).

Work Limitation: **31.6%** (95% CI: 28.8-34.3); 5th highest among 54 BRFSS participants. National prevalence: 26.0% (95% CI: 25.5-26.6).

Gender

Activity Limitation:
Men 35.0% (95% CI: 31.3-38.7); **Women 37.5%** (95% CI: 34.5-40.4).

Work Limitation:
Men 32.4% (95% CI: 28.2-36.7); **Women 30.8%** (95% CI: 27.3-34.2).

There were no significant gender differences in the prevalence of arthritis-related limitations.

Age

Generally, the prevalence of activity and work limitations increased with age. Adults aged 55 to 64 reported the highest rate of both activity and work limitations (42.7% and 33.3%, respectively). Adults of this age were significantly more likely to have an activity limitation than those aged 18 to 24 (21.7%) and those aged 25 to 34 (28.2%).

Education

Arthritis-related limitations significantly decreased as educational attainment increased. College graduates had a significantly lower rate of both activity and work limitation than those with a high school diploma and those with less than a high school education.

Household Income

The prevalence of activity and work limitations also decreased as household income increased. The risk of activity limitation significantly decreased until household income reached $35,000. More than half of adults in the poorest households had an arthritis-related work limitation, compared with approximately 12% of adults with an annual income of $75,000 or more.

Quick Stats

- 24.1% of adults aged 18 to 64 with joint pain or arthritis have both an activity and work limitation.

West Virginia Healthy People 2010 Objectives

Objective 2.5

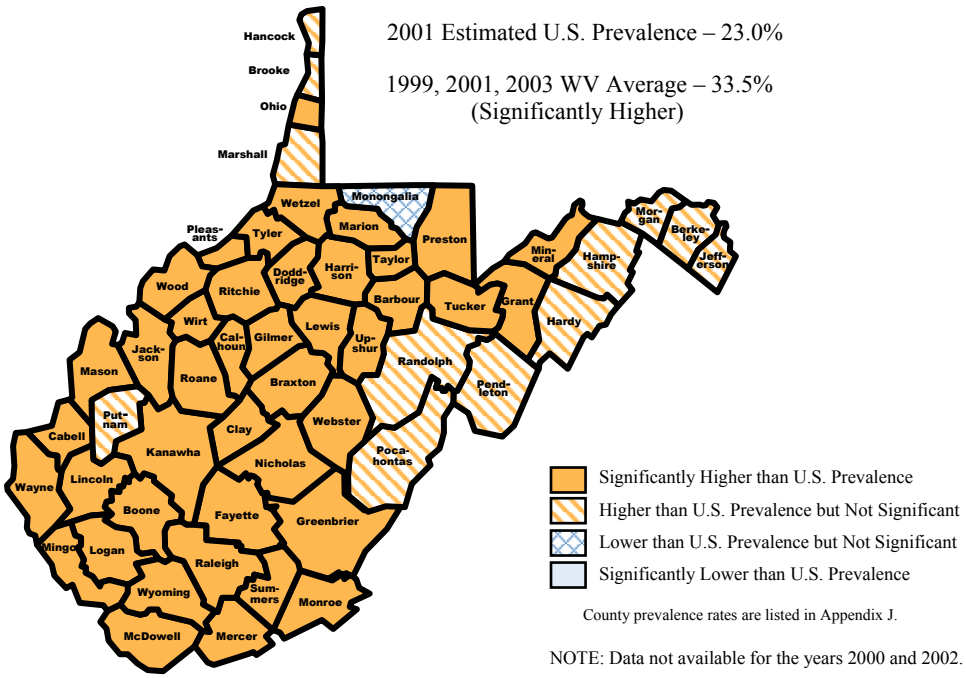
Reduce to no more than 30% the proportion of people with arthritis who experience a limitation in activity due to arthritis. (Baseline: 40.1% in 1999; Current: 36.3% have only an activity limitation, 41.7% have either an activity or work limitation in 2003)

Table 16.2: Limitations resulting from arthritis or joint pain: WVBRFSS, 2003

Characteristic	Arthritis or joint symptoms limit usual activities [a]			Arthritis or joint symptoms affect place of work, type of work, or amount of work [ab]		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,992	**36.3**	(34.0-38.7)	1,405	**31.6**	(28.8-34.3)
Sex						
Males	756	**35.0**	(31.3-38.7)	573	**32.4**	(28.2-36.7)
Females	1,236	**37.5**	(34.5-40.4)	832	**30.8**	(27.3-34.2)
Age						
18-24	56	**21.7**	(9.8-33.7)	56	**21.2**	(9.5-32.9)
25-34	192	**28.2**	(21.1-35.4)	193	**30.7**	(23.3-38.0)
35-44	270	**37.7**	(31.4-44.1)	270	**31.9**	(25.8-38.1)
45-54	436	**36.5**	(31.6-41.4)	432	**33.1**	(28.3-38.0)
55-64	454	**42.7**	(37.7-47.8)	454	**33.3**	(28.5-38.1)
65+	579	**37.8**	(33.6-42.1)	--	--	--
Education						
Less than H.S.	447	**49.7**	(44.5-55.0)	244	**50.3**	(43.0-57.6)
H.S. or G.E.D.	791	**36.0**	(32.2-39.7)	570	**34.3**	(29.9-38.7)
Some Post-H.S.	434	**30.3**	(25.5-35.0)	332	**23.0**	(18.1-28.0)
College Graduate	318	**26.0**	(20.8-31.2)	259	**16.9**	(11.9-21.9)
Income						
Less than $15,000	377	**57.6**	(51.8-63.4)	236	**55.1**	(47.6-62.5)
$15,000- 24,999	467	**41.5**	(36.6-46.5)	293	**44.0**	(37.6-50.4)
$25,000- 34,999	262	**30.1**	(24.0-36.2)	194	**31.3**	(23.7-38.8)
$35,000- 49,999	269	**27.2**	(21.1-33.2)	218	**23.2**	(16.7-29.8)
$50,000- 74,999	202	**26.4**	(19.6-33.2)	186	**15.3**	(9.8-20.8)
$75,000+	141	**17.6**	(11.2-24.0)	134	**11.9**	(6.2-17.5)

a. Among adults who reported three months of joint pain or diagnosis of arthritis by a doctor or health care professional
b. Among adults aged 18 to 64

Figure 16.1: Arthritis awareness by county: WVBRFSS, 1999, 2001, 2003



CHAPTER 17: DISABILITY AND FALLS

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

State Prevalence

26.4% (95% CI: 24.7-28.0); 1st among 54 BRFSS participants.
National prevalence: 18.7% (95% CI: 18.5-19.0).

Time Trends

The prevalence of disability in West Virginia has increased each time it has been measured (from 18.1% in 1995 to 24.0% in 2001 to 26.4% in 2003). The increase from 1995 to 2003 was statistically significant.

Gender

Men 28.1% (95% CI: 25.5-30.7); **Women 24.8%** (95% CI: 22.8-26.9).
There was no significant gender difference in the prevalence of disability.

Age

Disability rates increased until age 64. Adults aged 55 to 64 had the highest prevalence of disability (36.2%) – significantly higher than those aged 18 to 24 (10.9%), 25 to 34 (16.8%), and 35 to 44 (26.3%). At ages 45 to 54, men were significantly more likely to be disabled than women (37.5% versus 23.6%).

Education

There was a significant inverse relationship between disability and educational attainment. Adults without a high school diploma were more than twice as likely to be disabled as college graduates (37.5% versus 17.8%).

Household Income

The prevalence of disability significantly decreased until household income reached $35,000, and significantly declined again when it reached $75,000. More than 47% of adults in the poorest households were disabled, compared with approximately 12% of those in the wealthiest homes.

Table 17.1: Prevalence of disability: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,314	**28.1**	(25.5-30.7)	2,022	**24.8**	(22.8-26.9)	3,336	**26.4**	(24.7-28.0)
Age									
18-24	91	**14.3**	(6.7-21.9)	111	**7.2**	(2.0-12.4)	202	**10.9**	(6.2-15.6)
25-34	187	**18.6**	(12.9-24.2)	267	**15.1**	(10.5-19.6)	454	**16.8**	(13.2-20.4)
35-44	231	**23.5**	(17.7-29.4)	322	**28.8**	(23.3-34.3)	553	**26.3**	(22.2-30.3)
45-54	283	**37.5**	(31.4-43.5)	387	**23.6**	(19.1-28.0)	670	**30.5**	(26.7-34.3)
55-64	249	**36.3**	(29.8-42.7)	397	**36.1**	(30.9-41.2)	646	**36.2**	(32.1-40.3)
65+	272	**34.6**	(28.6-40.6)	527	**31.2**	(27.0-35.4)	799	**32.6**	(29.1-36.1)
Education									
Less than H.S.	244	**40.5**	(33.5-47.5)	390	**34.6**	(29.5-39.7)	634	**37.5**	(33.2-41.7)
H.S. or G.E.D.	524	**28.6**	(24.5-32.7)	790	**25.0**	(21.7-28.2)	1,314	**26.7**	(24.1-29.3)
Some Post-H.S.	264	**25.7**	(20.0-31.4)	476	**21.5**	(17.4-25.6)	740	**23.3**	(19.9-26.7)
College Graduate	279	**17.1**	(12.1-22.0)	365	**18.5**	(14.1-22.8)	644	**17.8**	(14.5-21.0)
Income									
Less than $15,000	169	**55.8**	(46.8-64.7)	354	**41.3**	(35.6-47.1)	523	**47.4**	(42.4-52.4)
$15,000- 24,999	261	**36.9**	(30.5-43.2)	461	**30.7**	(26.1-35.3)	722	**33.4**	(29.6-37.2)
$25,000- 34,999	194	**27.8**	(21.0-34.7)	269	**19.4**	(14.4-25.0)	463	**23.4**	(19.2-27.6)
$35,000- 49,999	211	**19.6**	(14.0-25.3)	267	**19.5**	(14.0-24.4)	478	**19.6**	(15.6-23.5)
$50,000- 74,999	168	**20.1**	(13.6-26.7)	224	**13.6**	(8.8-18.4)	392	**16.9**	(12.8-20.9)
$75,000+	183	**11.3**	(6.3-16.3)	146	**13.2**	(7.4-18.9)	329	**11.9**	(8.1-15.8)

Use of Special Equipment: A health problem requires the use of special equipment such as a cane, a wheelchair, a special bed, or a special telephone. ***Includes occasional use or in certain circumstances.***

State Prevalence

8.6% (95% CI: 7.6-9.6) of all adults use special equipment; 1st among 54 BRFSS participants. National prevalence: 6.3% (95% CI: 6.1-6.4).
25.8% (22.8-28.8) of disabled adults use special equipment; 17th among 54 BRFSS participants. National prevalence: 25.0% (95% CI: 24.3-25.7).

Time Trends

Between 2001 and 2003, the use of special equipment increased slightly among all adults (from 8.3% to 8.6%) and decreased among disabled adults (from 27.7% to 25.8%).

Gender

There were no significant gender differences in the use of special equipment.

Age

The use of special equipment significantly increased at ages 45 to 54 and 65 and older. Rates of special equipment use were highest among elderly adults and lowest among those aged 25 to 34.

Education

Overall, special equipment use significantly decreased as educational attainment increased. Adults without a high school diploma/GED were significantly more likely to use special equipment than those at all higher levels of education.

Household Income

The rate of special equipment use also declined with increasing income. Among all adults, the use of special equipment significantly decreased until annual income reached $35,000. Disabled adults with an income less than $25,000 were significantly more likely to use equipment than those with a higher income.

Table 17.2: Use of special equipment: WVBRFSS, 2003

Characteristic	Among All Adults			Among Disabled Adults		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,341	**8.6**	(7.6-9.6)	955	**25.8**	(22.8-28.8)
Sex						
Males	1,317	**7.8**	(6.3-9.3)	404	**23.0**	(18.6-27.4)
Females	2,024	**9.2**	(7.9-10.6)	551	**28.7**	(24.6-32.8)
Age						
18-24	202	**3.1**	(0.6-5.6)	22	**18.5**[a]	(1.6-35.3)
25-34	455	**1.6**	(0.3-2.8)	79	**8.7**	(1.7-15.7)
35-44	555	**4.2**	(2.1-6.2)	141	**11.0**	(5.6-16.5)
45-54	671	**8.8**	(6.5-11.1)	209	**26.7**	(20.2-33.3)
55-64	645	**10.8**	(8.2-13.4)	234	**27.7**	(21.4-34.1)
65+	801	**19.2**	(16.3-22.0)	268	**42.0**	(35.6-48.3)
Education						
Less than H.S.	634	**19.2**	(15.9-22.6)	260	**36.1**	(29.7-42.5)
H.S. or G.E.D.	1,317	**6.8**	(5.4-8.2)	388	**22.6**	(18.1-27.1)
Some Post-H.S.	741	**7.0**	(5.1-8.9)	188	**24.4**	(17.9-30.9)
College Graduate	645	**3.4**	(1.9-4.8)	116	**16.5**	(9.3-23.7)
Income						
Less than $15,000	525	**20.5**	(16.5-24.5)	267	**32.1**	(25.9-38.4)
$15,000- 24,999	723	**12.8**	(10.2-15.4)	253	**32.8**	(26.4-39.2)
$25,000- 34,999	463	**4.2**	(2.3-6.1)	109	**13.3**	(6.7-19.9)
$35,000- 49,999	478	**3.0**	(1.4-4.6)	89	**14.2**	(6.7-21.7)
$50,000+	722	**2.6**	(1.5-3.7)	108	**13.1**	(6.6-19.6)

a. Use caution in interpreting percentages with N<50.

Fall: Adults aged 45 and older who experienced a fall in the past three months.

Fall Injury: Adults aged 45 and older who were injured by a fall in the past three months. ***Expressed as a percentage of adults who fell in the past 3 months.***

State Prevalence

Fall: **16.0%** (95% CI: 14.3-17.7) of adults experienced a fall; 4th highest among 54 BRFSS participants. National prevalence: 12.7% (95% CI: 12.4-13.0).

Fall Injury: **37.4%** (95% CI: 31.8-43.0) of adults who fell were injured; 24th among 54 BRFSS participants. National prevalence: 38.2% (95% CI: 37.0-39.5).

Gender

Fall: **Men 17.1%** (95% CI: 14.3-20.0); **Women 15.0%** (95% CI: 12.9-17.1).
Injury: **Men 29.7%** (95% CI: 21.5-38.0); **Women 44.9%** (95% CI: 37.5-52.3).
There was no significant gender difference in the prevalence of falls or injuries.

Age

Elderly adults were most likely to fall (17.3%) but least likely to experience an injury as the result of a fall (36.6%). There were no significant age differences in the prevalence of falls or fall injuries.

Education

Adults without a high school diploma reported the highest prevalence of falls and fall injuries (18.7% and 48.3%, respectively). These adults were significantly more likely to be injured than college graduates (48.3% versus 22.1%).

Household Income

Adults with an income less than $15,000 were most likely to fall (19.0%) and be injured (49.9%). These adults had a significantly higher rate of injury than those in the wealthiest households (49.9% versus 24.2%).

Quick Stats

- 24.4% of disabled adults aged 45 and older experienced a fall in the past three months; 47.6% of them were injured as a result of the fall.

Table 17.3: Adults aged 45 and older who experienced a fall and were injured by a fall in the past three months: WVBRFSS, 2003

Characteristic	Experienced a fall in the past three months			Were injured by a fall in the past three months (of those that fell)		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,114	**16.0**	(14.3-17.7)	336	**37.4**	(31.8-43.0)
Sex						
Males	804	**17.1**	(14.3-20.0)	137	**29.7**	(21.4-38.0)
Females	1,310	**15.0**	(12.9-17.1)	199	**44.9**	(37.5-52.3)
Age						
45-54	671	**15.7**	(12.7-18.6)	105	**38.0**	(28.0-47.9)
55-64	644	**14.7**	(11.6-17.7)	93	**38.0**	(27.1-48.9)
65+	799	**17.3**	(14.4-20.2)	138	**36.6**	(27.9-45.3)
Education						
Less than H.S.	487	**18.7**	(14.9-22.4)	91	**48.3**	(37.2-59.4)
H.S. or G.E.D.	838	**13.2**	(10.7-15.7)	110	**36.0**	(26.3-45.7)
Some Post-H.S.	422	**17.5**	(13.5-21.6)	73	**38.5**	(26.2-50.8)
College Graduate	365	**16.3**	(12.1-20.5)	60	**22.1**	(11.6-32.7)
Income						
Less than $15,000	384	**19.0**	(14.7-23.4)	73	**49.9**	(37.1-62.7)
$15,000- 24,999	449	**18.8**	(14.8-22.7)	82	**35.1**	(23.8-46.4)
$25,000- 34,999	293	**14.3**	(9.9-18.7)	43	**24.7**[a]	(10.0-39.4)
$35,000- 49,999	267	**14.2**	(9.7-18.6)	38	**42.6**[a]	(25.9-59.3)
$50,000+	411	**14.0**	(10.3-17.7)	54	**24.2**	(12.8-35.5)

a. Use caution in interpreting percentages with N<50.

CHAPTER 18: IMMUNIZATION

No Flu Immunization: Adults aged 65 and older who did not have a flu shot in past 12 months.
No Pneumonia Immunization: Adults aged 65 and older who have never had a pneumonia shot (pneumococcal vaccine).

State Prevalence

***No Flu:* 30.9%** (95% CI: 27.5-34.4); 21st among 54 BRFSS participants. National prevalence: 30.8% (95% CI: 30.1-31.5).

***No Pneumonia:* 36.2%** (95% CI: 32.5-39.8); 24th among 54 BRFSS participants. National prevalence: 36.2% (95% CI: 35.5-37.0).

Time Trends

The percentage of elderly adults who were not immunized decreased significantly between 1993 and 2003. The prevalence of no flu shot declined from 50.2% in 1993 to 30.9% in 2003, while the percentage of elderly adults who had never received a pneumonia shot decreased from 71.2% to 36.2%.

Gender

No Flu:
Men 29.3% (95% CI: 23.5-35.2); **Women 32.1%** (95% CI: 27.7-36.4).

No Pneumonia:
Men 33.7% (95% CI: 27.7-39.8); **Women 37.9%** (95% CI: 33.4-42.4).

Women had slightly higher rates of no flu and pneumonia immunization than men (although the differences were not statistically significant).

Age

Adults aged 65 to 74 were significantly more likely to have not received a flu shot (36.1% versus 25.7%) and a pneumonia shot (44.3% versus 28.0%) than those aged 75 and older.

Education

The risk of no immunization did not significantly differ by educational attainment. Adults with a high school diploma/GED were most likely to have not received a flu shot (33.9%) and a pneumonia shot (39.9%).

Household Income

The prevalence of no flu immunization decreased as income increased, until household income reached $50,000. Adults in the poorest households had a significantly higher rate of no flu immunization than those with an annual income between $35,000 and $49,999. The prevalence of pneumonia vaccination did not significantly differ by household income.

West Virginia Healthy People 2010 Objectives

Objective 14.13a

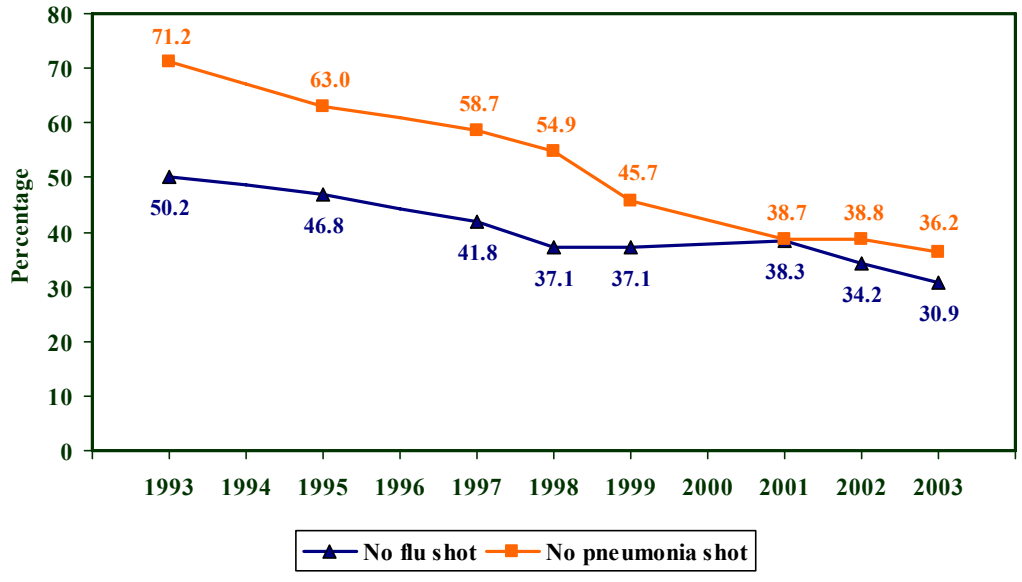
Increase the proportion of non-institutionalized adults 65+ years who are vaccinated for:
14.13a.1 Influenza to 90%. (Baseline: 58% in 1997; Current: 69.1% in 2003)
14.13a.2 Pneumococcal disease to 90%. (Baseline: 41% in 1997; Current: 63.8% in 2003)

Table 18.1: No immunizations among adults aged 65 and older: WVBRFSS, 2003

Characteristic	No flu shot in past 12 months			No pneumonia shot in lifetime		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	801	**30.9**	(27.5-34.4)	785	**36.2**	(32.5-39.8)
Sex						
Males	274	**29.3**	(23.5-35.2)	270	**33.7**	(27.7-39.8)
Females	527	**32.1**	(27.7-36.4)	515	**37.9**	(33.4-42.4)
Age						
65-74	437	**36.1**	(31.1-41.1)	427	**44.3**	(39.2-49.4)
75+	364	**25.7**	(20.9-30.5)	358	**28.0**	(22.9-33.0)
Education						
Less than H.S.	275	**33.7**	(27.6-39.9)	269	**36.7**	(30.4-42.9)
H.S. or G.E.D.	296	**33.9**	(28.1-39.7)	291	**39.9**	(33.8-46.0)
Some Post-H.S.	141	**25.7**	(17.4-33.9)	138	**29.6**	(21.6-37.7)
College Graduate	87	**19.8**	(11.3-28.4)	85	**31.7**	(21.0-42.3)
Income						
Less than $15,000	179	**39.2**	(31.1-47.3)	177	**38.1**	(30.1-46.2)
$15,000- 24,999	228	**30.7**	(24.3-37.1)	225	**35.7**	(29.0-42.4)
$25,000- 34,999	111	**27.7**	(19.0-36.4)	111	**34.1**	(24.8-43.4)
$35,000- 49,999	67	**18.1**	(8.9-27.2)	65	**33.6**	(21.7-45.5)
$50,000+	44	**31.2**[a]	(17.1-45.2)	43[a]	**46.0**	(30.3-61.7)

a. Use caution in interpreting percentages with N<50.

Figure 18.1: No flu shot (in past 12 months) and no pneumonia shot (in lifetime) among adults aged 65 and older by year: WVBRFSS, 1993-2003



------- Trend Line

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

CHAPTER 19: SEXUALLY TRANSMITTED DISEASES

HIV Testing: Adults aged 18 to 64 who have ever had an HIV test that was not part of a blood donation.

State Prevalence

38.2% (95% CI: 36.0-40.4); 43rd among 54 BRFSS participants. The prevalence of testing significantly decreased from 47.5% in 2000 to 38.2% in 2003.
National prevalence: 45.9% (95% CI: 45.5-46.3).

Gender

Men 33.9% (95% CI: 30.6-37.2); **Women 42.6%** (95% CI: 39.6-45.5).
The prevalence of HIV testing was significantly higher among women than men.

Age

Adults aged 25 to 34 reported the highest rate of HIV testing (58.2%, significantly higher than adults of all other ages). After age 34 the prevalence decreased with age. Adults aged 55 to 64 had a significantly lower rate of testing than those in the four younger age groupings.

Education

The prevalence of HIV testing was higher among adults with education beyond high school. Adults with some post high school training (46.5%) were significantly more likely to have been tested than those with lower levels of educational attainment.

Household Income

There was no significant relationship between HIV testing and household income. The highest rate of testing was among adults with an annual income less than $25,000 (41.5%).

Quick Stats

- 33.1% of adults who were tested for HIV received their last test at a private doctor's office, 31.4% at a hospital, and 21.6% at a clinic.

Condom Counseling: Adults aged 18 to 64 who were NOT counseled by a health professional about condom use to prevent sexually transmitted diseases in the past 12 months.

State Prevalence

91.3% (95% CI: 89.9-92.7); 8th highest among 54 BRFSS participants.
National prevalence: 87.1% (95% CI: 86.7-87.4).

Gender

Men 95.1% (95% CI: 93.4-96.7); **Women 87.5%** (95% CI: 85.3-89.7).
Men were significantly more likely than women to report that they had not received any counseling about using condoms to prevent STDs.

Age

The rate of no condom/STD counseling significantly increased with age. The youngest adults were significantly more likely to have been counseled than those aged 25 and older. Still, more than three-fourths of adults aged 18 to 24 did not receive counseling.

Education

College graduates were significantly more likely to have not received counseling (95.2%) than those with some post high school education (88.7%) and those without a high school diploma (88.9%).

Household Income

Generally, condom/STD counseling decreased as household income increased. Adults with an annual income of $50,000 or more were significantly more likely to have not received counseling than those with an income less than $25,000.

Table 19.1: HIV testing and health professional counseling about condom use: WVBRFSS, 2003

Characteristic	Ever had an HIV test that was not part of a blood donation [a]			Was NOT counseled in the past year by a health professional about condom use to prevent sexually transmitted diseases [a]		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	2,411	**38.2**	(36.0-40.4)	2,496	**91.3**	(89.9-92.7)
Sex						
Males	998	**33.9**	(30.6-37.2)	1,031	**95.1**	(93.4-96.7)
Females	1,413	**42.6**	(39.6-45.5)	1,465	**87.5**	(85.3-89.7)
Age						
18-24	199	**39.4**	(31.9-46.9)	198	**76.2**	(69.7-82.7)
25-34	434	**58.2**	(53.2-63.3)	447	**86.9**	(83.6-90.2)
35-44	538	**44.4**	(39.8-49.0)	548	**93.2**	(91.1-95.3)
45-54	641	**29.0**	(25.2-32.8)	666	**97.6**	(96.3-98.9)
55-64	599	**19.6**	(16.0-23.2)	637	**98.2**	(97.1-99.3)
Education						
Less than H.S.	342	**34.8**	(28.8-40.8)	353	**88.9**	(85.0-92.9)
H.S. or G.E.D.	952	**34.3**	(30.9-37.8)	994	**91.7**	(89.6-93.8)
Some Post-H.S.	575	**46.5**	(41.8-51.3)	593	**88.7**	(85.3-92.1)
College Graduate	540	**38.6**	(34.0-43.3)	554	**95.2**	(93.3-97.2)
Income						
Less than $15,000	328	**41.5**	(35.2-47.8)	342	**87.5**	(83.1-91.8)
$15,000- 24,999	469	**41.5**	(36.5-46.6)	483	**86.0**	(82.4-89.6)
$25,000- 34,999	340	**37.8**	(32.1-43.6)	348	**90.9**	(87.2-94.6)
$35,000- 49,999	387	**36.9**	(31.5-42.3)	405	**94.4**	(91.7-97.1)
$50,000- 74,999	342	**32.8**	(27.4-38.1)	357	**97.7**	(96.1-99.2)
$75,000+	307	**40.3**	(34.0-46.6)	313	**95.7**	(92.4-99.0)

a. Among adults aged 18 to 64.

Table 19.2: HIV factual knowledge: WVBRFSS, 2003

Response	A pregnant woman with HIV can get treatment to help reduce the chances that she will pass the virus on to her baby [a] (Correct Response = True)			There are medical treatments available that are intended to help a person who is infected with HIV to live longer [a] (Correct Response = True)		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL						
"True"	1,233	**47.7**	(45.5-50.0)	2,166	**85.7**	(84.0-87.4)
"False"	459	**19.4**	(17.5-21.2)	89	**4.0**	(3.0-5.0)
"Not Sure"	821	**32.9**	(30.8-35.1)	255	**10.3**	(8.8-11.8)
MEN						
"True"	461	**43.7**	(40.4-47.1)	892	**84.7**	(82.0-87.4)
"False"	236	**23.5**	(20.6-26.4)	41	**4.7**	(3.1-6.3)
"Not Sure"	341	**32.8**	(29.5-36.0)	105	**10.6**	(8.3-12.9)
WOMEN						
"True"	772	**51.7**	(48.8-54.6)	1,274	**86.6**	(84.6-88.7
"False"	223	**15.2**	(13.1-17.4)	48	**3.3**	(2.2-4.4)
"Not Sure"	480	**33.1**	(30.3-35.8)	150	**10.0**	(8.2-11.9)

a. Among adults aged 18 to 64.

- 43.4% of adults gave two correct responses (True) and 1.3% gave two incorrect responses (False).

CHAPTER 20: SUNBURN

Sunburn: Experienced sunburn with redness lasting at least 12 hours in the past 12 months.

State Prevalence

38.1% (95% CI: 36.1-40.0); 20th among 54 BRFSS participants. National prevalence: 33.4% (95% CI: 33.0-33.7). Between 2002 and 2003, the prevalence of sunburn increased significantly from 28.4% to 38.1%.

Gender

Men 44.6% (95% CI: 41.5-47.6); **Women 32.1%** (95% CI: 29.7-34.5). Women were significantly less likely than men to have experienced sunburn.

Age

The prevalence of sunburn significantly decreased after age 44. Approximately 60% of young adults aged 18 to 24 experienced sunburn, compared with about 9% of the elderly. Men had a significantly higher rate of sunburn than women at the two oldest age groupings (55-64 and 65+).

Education

The risk of sunburn significantly increased as educational attainment increased. College graduates were nearly twice as likely as adults without a high school diploma to have had sunburn in the past year (46.8% versus 24.2%). The prevalence of sunburn was significantly higher among men than women at the two lowest levels of education.

Household Income

Generally, the prevalence of sunburn increased as household income increased. Adults in the wealthiest homes were significantly more likely to have experienced sunburn than those with an income less than $35,000.

Quick Stats

- Of those adults who experienced sunburn during the past year, 40.8% had only one burn, while 13.4% had five or more sunburns.

Table 20.1: Experienced sunburn lasting at least 12 hours in the past 12 months: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,318	**44.6**	(41.5-47.6)	2,020	**32.1**	(29.7-34.5)	3,338	**38.1**	(36.1-40.0)
Age									
18-24	92	**60.2**	(49.3-71.1)	111	**59.6**	(49.3-69.9)	203	**59.9**	(52.4-67.4)
25-34	186	**64.2**	(56.9-71.5)	268	**51.0**	(44.7-57.4)	454	**57.6**	(52.7-62.5)
35-44	233	**54.5**	(47.6-61.4)	321	**46.2**	(40.2-52.1)	554	**50.3**	(45.7-54.8)
45-54	284	**42.6**	(36.4-48.8)	387	**31.5**	(26.5-36.4)	671	**37.0**	(33.0-41.0)
55-64	249	**35.5**	(29.1-41.9)	394	**17.4**	(13.3-21.5)	643	**26.3**	(22.5-30.2)
65+	273	**14.0**	(9.3-18.6)	528	**5.4**	(3.4-7.4)	801	**8.9**	(6.6-11.2)
Education									
Less than H.S.	242	**32.5**	(24.9-40.1)	390	**16.3**	(12.0-20.7)	632	**24.2**	(19.7-28.7)
H.S. or G.E.D.	528	**46.2**	(41.4-50.9)	789	**31.7**	(27.9-35.5)	1,317	**38.7**	(35.6-41.7)
Some Post-H.S.	264	**46.8**	(40.0-53.6)	476	**37.5**	(32.3-42.7)	740	**41.6**	(37.4-45.7)
College Graduate	281	**51.3**	(44.9-57.7)	364	**42.0**	(36.2-47.8)	645	**46.8**	(42.5-51.2)
Income									
Less than $15,000	170	**27.9**	(19.9-36.0)	354	**21.9**	(16.5-27.2)	524	**24.4**	(19.8-29.0)
$15,000- 24,999	261	**37.2**	(30.6-43.7)	460	**25.8**	(21.1-30.4)	721	**30.7**	(26.8-34.6)
$25,000- 34,999	194	**42.6**	(35.1-50.2)	269	**33.7**	(27.4-40.0)	463	**37.9**	(33.0-42.8)
$35,000- 49,999	210	**55.0**	(47.7-62.3)	266	**45.9**	(39.2-52.5)	476	**50.7**	(45.7-55.7)
$50,000- 74,999	168	**49.0**	(40.9-57.2)	224	**35.8**	(28.9-42.8)	392	**42.4**	(37.0-47.8)
$75,000+	183	**55.0**	(47.0-63.0)	146	**44.6**	(35.8-53.3)	329	**51.3**	(45.2-57.4)

APPENDIXES

Appendix A

Behavioral Risk Factor Prevalences by Year
West Virginia Behavioral Risk Factor Surveys
1997-2003

Behavioral Risk Factor	1997 (52 Partic.)		1998 (52 Partic.)		1999 (52 Partic.)		2000 (52 Partic.)		2001 (54 Partic.)		2002 (54 Partic.)		2003 (54 Partic.)	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Hypertension[a]	28.3	3	--	--	31.0	3	--	--	32.5	1	33.1	1	33.6	1
Obesity[b]	20.6	4	23.9	1	24.6	1	23.2	5	25.1	2	27.6	1	27.7	3
Physical Inactivty	--	--	43.7	3	--	--	33.6	6	31.7	7	28.4	10	28.0	11
Current Smoking	27.4	5	27.9	3	27.1	6	26.1	6	28.2	4	28.4	4	27.3	3
Smokeless Tobacco[c]	8.7	1	8.4	1	8.6	1	8.8	1	8.2	1	8.4	2	7.7	1
Heavy Drinking[d]	2.2	48	--	--	3.0	46	--	--	3.0	52	4.5	45	3.1	49
Binge Drinking	8.4	49	--	--	8.5	50	--	--	9.4	52	11.4	49	11.1	49
Seatbelt Nonuse[e]	29.3	30	29.8	4	29.7	--	--	--	--	--	25.6	18	--	--

Source: Centers for Disease Control & Prevention - 1997-2003 Beahvioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

-- Prevalence / rank not available

[a] Hypertension: 13 states 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 years 1996 and 1997, prior publications 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).

[c] Smokeless Tobacco Use: 17 states in 1997; 13-1998; 19-1999; 18-2000; 15-2001; 15-2002; 12-2003.

[d] 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, prior publications defined heavy drinking as consumption of 60 or more drinks during the past month regardless of gender.

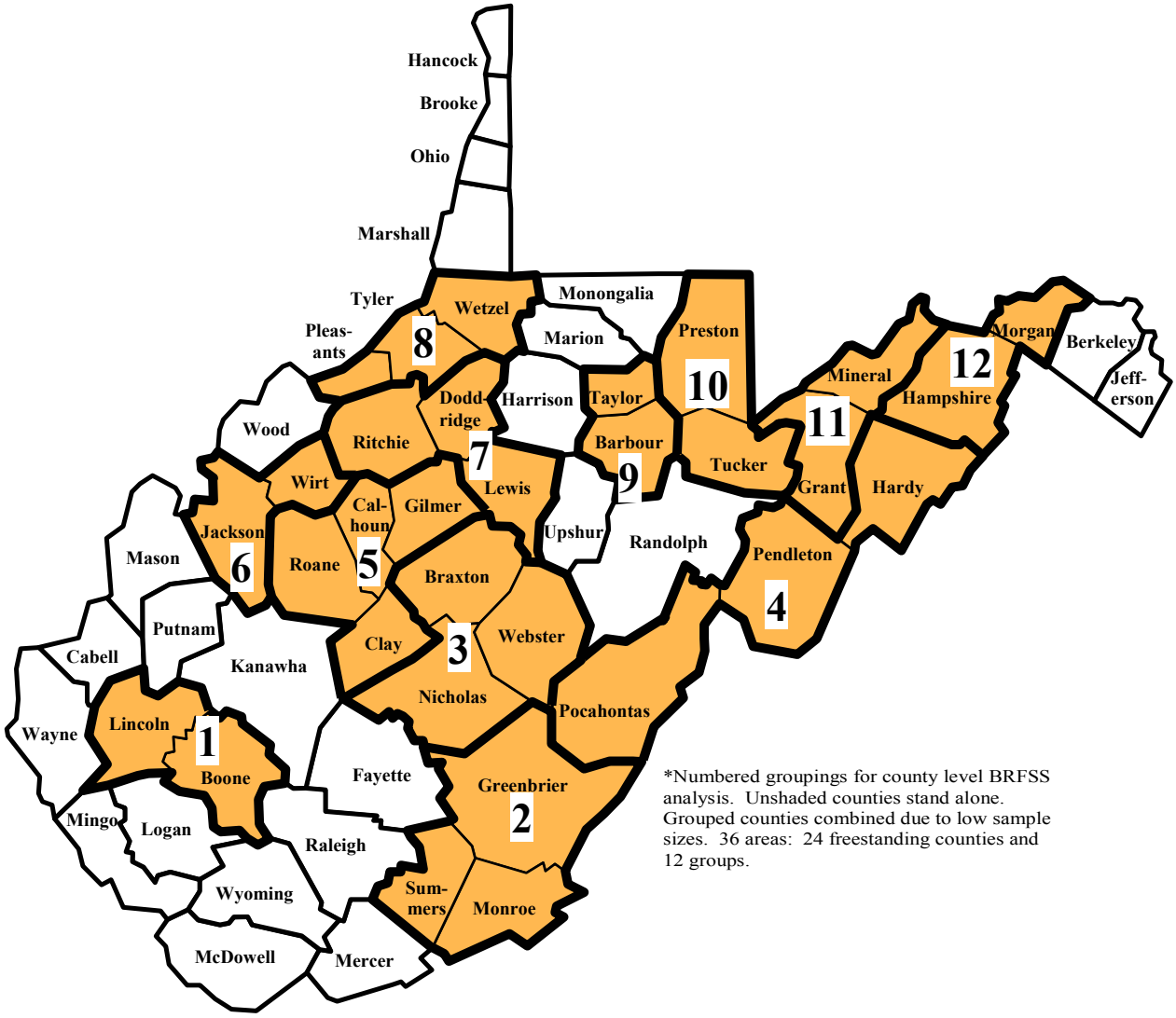
[e] Seatbelt Nonuse: Defined as using a seatbelt almost always, sometimes, seldom, or never; 8 states in 1998.

NOTE: Figures in Appendix A may not agree with prior publications. Rates have been re-calculated to exclude unknown responses.

Appendix I

Groupings for County Level Analysis for Years 1999-2003

West Virginia Behavioral Risk Factor Surveillance System



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

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

Appendix J
1999-2003 WV Behavioral Risk Factors by County

County	Fair or Poor Health		No Health Insurance, Ages 18-64		Diabetes Awareness		Obesity		No Leisure Exercise†		Cigarette Smoking		Binge Drinking†		Heavy Drinking†		Hypertension Awareness†		Asthma†		Arthritis†	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Individual Counties																						
Berkeley	18.2	32	21.0	24	8.2	23	29.2 H	5	33.7 H	15	32.5 H	6	8.3 L	20	3.5	17	28.7	30	11.2 H	5	27.1	33
Brooke	21.1	28	15.0	36	11.7 H	2	24.7	22	35.6 H	10	31.5 H	8	18.5	1	4.3	8	31.5	21	8.0	25	31.8	26
Cabell	21.4 H	27	22.0 H	20	9.5	9	23.2	27	22.2 L	34	24.7	27	16.4	5	4.2	9	32.6 H	19	8.7	17	36.0 H	12
Fayette	32.0 H	7	25.8 H	13	8.0	27	26.6	15	34.1 H	14	30.7 H	10	7.4 L	27	3.8	13	28.0	31	7.1	28	35.2 H	16
Hancock	15.7	35	17.5	31	5.6	34	24.8	21	29.3	22	30.1 H	12	14.9	6	4.0	11	25.4	34	10.5	10	25.5	34
Harrison	21.6 H	25	25.3 H	14	8.1	25	25.9	16	28.3	24	27.8 H	20	9.6 L	18	2.5 L	25	33.9 H	15	8.7	17	33.5 H	21
Jefferson	17.4	33	16.4	34	10.5 H	7	27.1	11	24.0	33	29.4 H	13	10.7	14	4.2	9	26.2	33	9.3	14	29.2	30
Kanawha	20.5 H	29	19.2	26	9.1 H	13	26.7 H	14	26.8	31	27.4 H	22	11.8 L	10	2.6 L	24	32.7 H	18	8.3	22	27.9 H	31
Logan	35.1 H	3	33.7 H	2	7.7	30	35.7 H	1	37.5 H	5	35.5 H	2	6.6 L	30	3.8	13	35.1 H	12	8.5	20	41.2 H	3
McDowell	45.5 H	1	34.4 H	1	15.9 H	1	31.0 H	3	37.4 H	6	32.9 H	4	3.2 L	35	0.6 L	35	43.7 H	1	14.4 H	1	48.0 H	1
Marion	25.5 H	16	21.9	22	5.9	33	24.4	23	29.7	20	21.1	36	8.1 L	21	2.5 L	25	33.2 H	16	10.9	7	33.6 H	20
Marshall	22.9 H	20	16.9	32	10.9	5	24.4	23	28.3	24	30.8 H	9	12.6	8	3.3	18	29.1	29	8.5	20	29.9	29
Mason	28.2 H	10	18.5	28	9.3	10	28.5	7	27.5	29	28.9	16	7.6 L	26	2.8	21	29.3	27	6.8	29	37.5 H	8
Mercer	27.9 H	11	24.6 H	15	11.1 H	4	21.0	35	30.4	17	27.5 H	21	7.7 L	24	2.9 L	19	35.9 H	8	9.7	12	35.9 H	14
Mingo	35.5 H	2	27.5 H	9	10.1	8	29.1 H	6	44.6 H	1	33.8 H	3	4.0 L	34	2.8	21	37.4 H	4	10.8	8	42.9 H	2
Monongalia	14.0	36	17.9	30	4.7 L	35	22.2	32	18.9 L	36	22.6	34	18.1	2	7.0	2	22.5	36	8.2	23	20.2	36
Ohio	16.6	34	15.8	35	6.7	32	21.6	34	21.0 L	35	26.4	25	18.0	3	7.7	1	29.3	27	5.0	35	32.9 H	22
Putnam	22.6 H	21	16.9	32	9.2	11	25.0	19	30.3	19	22.9	33	7.7 L	24	3.6	15	34.3 H	14	8.0	25	24.4	35
Raleigh	27.9 H	11	22.3 H	19	8.3	22	27.3 H	10	32.4 H	16	30.4 H	11	4.6 L	33	2.4 L	28	36.0 H	7	8.9	15	37.2 H	10
Randolph	22.0	23	31.0 H	6	8.9	14	25.3	17	34.9	12	23.3	32	10.9	13	2.9	19	35.3 H	10	8.9	15	32.2	25
Upshur	21.6	25	31.5 H	4	4.4	36	22.6	29	30.4	17	32.2 H	7	5.8 L	32	0.9 L	34	24.0	35	6.8	29	32.7 H	23
Wayne	29.4 H	8	21.1	23	7.8	29	27.5	9	37.1 H	7	28.9 H	16	9.9	17	4.4	7	34.9 H	13	10.7	9	31.5 H	27
Wood	19.6 H	31	18.1	29	8.2	23	22.0	33	27.9	28	26.7 H	23	12.6	8	4.8	6	30.8 H	22	5.9	32	34.2 H	19
Wyoming	33.2 H	5	27.3 H	10	8.6	15	22.4	31	41.4 H	2	32.6 H	5	2.1 L	36	0.0	36	28.0	31	6.3	31	36.0 H	12
Grouped Counties*																						
Boone, Lincoln	32.4 H	6	26.4 H	12	8.4	19	31.1 H	2	39.3 H	4	39.0 H	1	11.4	12	6.0	4	38.6 H	2	11.2 H	5	38.3 H	7
Greenbrier, Summers, Monroe	26.4 H	14	26.6 H	11	8.4	19	22.6	29	34.2 H	13	24.6	28	6.4 L	31	2.0 L	29	35.2 H	11	8.7	17	38.4 H	5
Braxton, Nicholas, Webster	33.8 H	4	29.9 H	7	11.4 H	3	27.1 H	11	37.0 H	8	21.8	35	7.1 L	29	1.5 L	30	36.4 H	6	10.2	11	32.4 H	24
Hardy, Pendleton, Pocahontas	23.6 H	18	22.0	20	7.9	28	20.7	36	24.6	32	24.4	29	9.6	18	1.5 L	30	32.0	20	5.6	33	27.4	32
Calhoun, Clay, Gilmer, Roane	27.1 H	13	32.5 H	3	10.8 H	6	24.4	23	40.6 H	3	29.0 H	15	10.4	15	3.9	12	36.9 H	5	9.4	13	35.6 H	15
Jackson, Wirt	28.4 H	9	19.8	25	8.1	25	27.7	8	29.4	21	28.3	19	8.0 L	22	1.0 L	33	30.8	22	7.4	27	35.0 H	17
Doddridge, Lewis, Ritchie	25.4 H	17	24.1 H	16	8.4	19	25.2	18	36.9 H	9	29.3 H	14	11.6	11	5.8	5	35.5 H	9	11.6	2	39.3 H	4
Pleasants, Tyler, Wetzel	21.9 H	24	23.6 H	18	8.6	15	22.9	28	29.2	23	28.6	18	8.0 L	22	1.3 L	32	29.7	26	11.3	4	36.8 H	11
Barbour, Taylor	23.0 H	19	29.1 H	8	8.5	17	27.0	13	35.1 H	11	23.6	31	10.3	16	2.5 L	25	32.9	17	4.9	36	37.5 H	8
Preston, Tucker	26.4 H	14	31.2 H	5	8.5	17	30.5 H	4	28.2	26	23.7	30	7.4 L	27	2.7 L	23	30.1	25	8.1	24	38.4 H	5
Grant, Mineral	20.4	30	18.8	27	7.4	31	24.9	20	28.2	26	25.6	26	13.5	7	3.6	15	38.3 H	3	11.6 H	2	34.8 H	18
Hampshire, Morgan	22.3 H	22	24.0 H	17	9.2	11	24.1	26	27.5	29	26.7	23	17.5	4	6.4	3	30.4	24	5.2	34	30.0	28
Total WV/US	**24.5 H**	**15.7**	**23.0 H**	**16.4**	**8.7 H**	**6.8**	**25.7 H**	**21.6**	**30.4 H**	**26.4**	**27.4 H**	**22.7**	**10.1 L**	**14.5**	**3.4 L**	**5.2**	**32.5 H**	**25.8**	**8.7 H**	**7.2**	**33.5 H**	**23.0**

Source: Centers for Disease Control & Prevention - 1999-2003 Behavioral Risk Factor Data; West Virginia Health Statistics Center, 2005.

L - Significantly lower than US rate.

† Data only available for limited years: Leisure Exercise, Asthma (2000-2003); Binge Drinking, Heavy Drinking, Hypertension (1999, 2001-2003); Arthritis (1999, 2001, 2003

H - Significantly Higher than US rate.

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

Note: Counties with the same prevalence share the same rank.

NOTES