

Community Health Behavior Survey 2001

Metro Public Health Department
311 23rd Avenue North
Nashville, TN 37203
<http://healthweb.nashville.org>

Community Health Behavior Survey 2001

Line of Business: Epidemiology, Surveillance, and
Response

Celia Larson, Ph.D., Director

Metro Public Health Department
December 2003

For more information, please contact:
Research Division
Metro Public Health Department
311 23rd Avenue North, Nashville, TN 37203
Telephone (615) 340-2141; Fax: (615) 340-2292
Email: karen.grimm@nashville.gov
Web Site: <http://healthweb.nashville.org/>

Board of Health

Janie E. Parmley, R.N.
Henry Foster, M.D.
Margaret Behm, J.D.
Samuel O. Okpaku, M.D.
William Hance, J.D.
Ruth Stewart, M.D.



Community Health Behavior Survey 2001

Project Team

Rhonda Belue, Ph.D
Pramod Dwivedi, M.S.W., M.S.
Melissa Garcia, M.P.H.
Tebeb Gebretsadik, M.P.H.
Karen Grimm, M.A.
Nancy Horner, R.N.
Jim Jellison, B.A.
Tameka Jobe, M.A.
Celia Larson, Ph.D.
Burns Rogers, M.P.H.
Erika Sundrud, M.A.

Community Health Behavior Survey

This report is developed in the public domain and may be used and reprinted without special permission. Citation as to source, however, is appreciated. Suggested citation: "Research Division, Metro Public Health Department of Nashville and Davidson County: *Community Health Behavior Survey.*" 2003.

Message from the Director of Health



Stephanie B.C. Bailey, MD, MSHSA
Director of Health

I am pleased to present the latest Community Health Behavior Survey (CHBS) Report to the community. Our report is modeled after the Behavior Risk Factor Surveillance System (BRFSS) developed by the Centers for Disease Control and Prevention (CDC).

The CHBS is the primary source of information which examines and estimates the risky behaviors practiced by the adult population (18 years and older) in Nashville in 2001. These risky behaviors, which are largely preventable, are responsible for major causes of disease and disability in the Nashville/Davidson County area. The data are collected on actual behaviors (rather than on attitudes or knowledge). This allows our department to plan, initiate, support, and evaluate health promotion and disease prevention programs, and to look at health disparities in our population.

This report comes to you at a time when Metropolitan Public Health Department has begun to implement the objectives of its strategic plan and set the targets to meet the goals of Healthy People 2010. A number of indicators in our strategic plan and Healthy People 2010 directly originate from the data reported in the CHBS. In addition, the CHBS data validate and confirm our efforts to provide appropriate education and prevention opportunities so that Nashvillians will be able to make informed decisions in matters related to their personal health.

As you leaf through this report, you will become aware of important information associated with access to appropriate health care, smoking, nutrition, sexual behavior, etc. The report examines these and many other behaviors according to age, gender, race, income, and educational attainment of our population. I hope the information narrated in this report will encourage our residents to adopt healthier life styles.

Please do not hesitate to call (615-340-5622) or email (stephanie.bailey@nashville.gov) me with questions or comments. Thank you and enjoy!

Executive Summary

Access to Health Care

The Community Health Behavior Survey 2001 found that nearly eleven percent of the respondents reported having no health insurance; eighty-nine percent had some form of health care coverage. Seventy four percent reported having a usual source of primary care; someone they thought of as their personal doctor or provider.

Morbidity

Diabetes

Six and a half percent of respondents reported having been diagnosed with diabetes, excluding gestational diabetes. The prevalence of diabetes was significantly higher among African Americans; 8.7% compared to 5.6% for Whites and 5.1% for other races. Lower income was associated with higher rates of diabetes.

Asthma

Eleven percent of respondents reported having been diagnosed with asthma at some time. Sixty six percent of those said they still had asthma at the time of the survey. African Americans reported higher rates of asthma diagnosis and current asthma. Household income was not significantly associated with higher rates of asthma diagnosis, but lower income respondents who had ever been told they had asthma were more likely to say they still had asthma.

Preventive Behavior

Immunization

Thirty-two percent of respondents said they had a flu shot in the past 12 months. The prevalence of flu immunization was 69% among adults over age 65. Twenty-two percent of all respondents said they had received a pneumonia vaccination. Of respondents 65 or over, 60% had been immunized against pneumonia.

Exercise

Of the respondents polled, 75% reported engaging in some physical activity or exercise in the past month. Men were more likely than women to report engaging in physical activity in the past month, but both men and women were equally likely to say they were exercising to lose weight.

Nutrition

More than half (57%) of respondents reported that they did not eat the recommended daily amount of fruits and vegetables. Most (67%) reported that they tried to avoid eating foods that were high in fat. Fifty-two percent of respondents reported taking a multivitamin daily. Women were more likely than men to eat the recommended daily value of fruit and vegetables, avoid foods high in fat, and take a multivitamin.

Cancer Screenings

Ninety-four percent of female respondents reported having had a Pap test, and eighty three percent reported having one within the past three years. Ninety two percent of female respondents age 45 and over reported having had a mammogram; seventy four percent reported having had a mammogram within the past year, and eighty nine percent within the past two years. Women with health insurance coverage were more likely to report having had a mammogram in the past two years compared to women

Executive Summary

with no health coverage. Of men age 45 and over, eighty six percent reported having had a digital rectal exam; and fifty nine percent a prostate specific antigen test (PSA).

Risk Factors

Weight

Twenty one percent of respondents were classified obese based on the calculation of body mass index (BMI) from height and weight information they provided. An additional thirty three percent were considered overweight. Males and females were equally likely to be characterized as obese. However, men were more likely than women to be overweight. African Americans were more likely to be classified obese than Whites or Other races.

High Blood Pressure

Twenty-nine percent of survey respondents said they had been told by a health professional they had high blood pressure. The most notable percentages were reported by the following subgroups: African Americans, persons age 65 and older, persons with household incomes less than \$10,000 and those who reported less than high school education.

High Blood Cholesterol

Twenty-eight percent of respondents said they had been told by a health professional that their blood cholesterol was high. The most notable percentages were reported by the following subgroups: African Americans, persons age 65 and older, persons with household incomes less than \$10,000, and those with health insurance.

Risk Behaviors

Tobacco

Twenty six percent of respondents reported they currently smoke cigarettes. Seventy three percent of those who reported smoking cigarettes said they had been advised by a doctor or other health professional to quit smoking, and sixty seven percent said they planned to quit smoking. Sixty four percent said they had quit smoking for one day or longer in the past year. Three percent of all respondents said they used some form of smokeless tobacco (chewing tobacco, snuff, etc.). Ninety five percent of smokeless tobacco users were male. Sixty-five percent of respondents reported being exposed to second hand smoke in the past 30 days.

Alcohol

Forty percent of the respondents said that they had at least one drink during an average week in the past month. Thirty six percent of these current drinkers reported having five or more drinks on an occasion at least once during the past month.

HIV/AIDS Risk (Sexual Risk Behavior)

Sixty-eight percent of respondents reported having one or more sexual partners in the past 12 months. Only one and a half percent reported having more than one sexual partner. Twenty-seven percent of sexually active respondents said they always used condoms for protection. The most notable percentages for condom use were reported by the following subgroups of respondents: Younger respondents (age 18 to 24), African Americans, males, single persons, respondents who live in households with incomes below \$25,000, and uninsured persons.

Executive Summary

Health Insurance Coverage

Most respondents reported having some type of health insurance coverage (89%). Respondents with health insurance coverage were more likely to report having a usual source of primary care, an important factor in maintaining health. In addition, respondents with health insurance were more likely to have cancer screenings and immunizations for influenza and pneumonia.

Race

Whites were more likely to report tobacco and alcohol use (both current drinking and binge drinking). Based on reported height and weight, higher rates of obesity were found for African Americans. A greater percentage of African Americans reported having diabetes and high blood pressure compared to Whites. Fewer African American respondents reported having had influenza and pneumonia vaccinations.

Gender

Women were more likely to have health insurance coverage, to eat nutritionally (eating five or more servings of fruits and vegetables a day and avoiding high fat foods) and to take a multivitamin daily. Smaller percentages of women reported exercising, having had a sexual partner in the past year, and smoking.

Income

Respondents with higher incomes were more likely to report having health insurance coverage, to have a personal doctor, to exercise, and to have the recommended cancer screenings for their age and gender (Pap test, mammography, digital rectal exam, and prostate-specific antigen test). Individuals who reported a household income of \$50,000 or more were more likely to report binge drinking (five or more drinks on an occasion). Lower income groups had higher rates of current asthma, smoking, diabetes, and high blood pressure.

Introduction and Methodology

The Nashville and Davidson County Community Health Survey is a cross-sectional telephone survey that was conducted over a 6-month period from January through May 2001. The target population was non-institutionalized adults age 18 and over with telephones in Davidson County. The survey used a stratified sample in order to produce citywide as well as neighborhood specific estimates. Neighborhoods were defined using the Council District. There are a total of 36 council district neighborhoods in Davidson County, each defined by several adjoining zip codes.

Methods

A computer-assisted telephone interviewing (CATI) system was used to collect the survey data. The sampling frame was constructed through a list of telephone numbers provided by a commercial vendor. Households were then selected randomly using a random digit dialing method; 10 attempts were made to reach each household. Upon agreement to participate in the survey, one adult was randomly selected from each household. Interviews were conducted in English. All data collected were self-reported.

The survey was designed as a stratified random sample, where Council District neighborhoods acted as strata. Approximately 200 complete interviews were conducted in each of the 36 strata, resulting in a total sample size of 7,200. One hundred thirty seven interviews were discarded, as they were deemed incomplete. An incomplete survey is defined as a respondent who begins the interview but terminates it without answering several key demographic questions (i.e. age, sex, race).

Survey Instrument

The survey was based on the CDC's Behavioral Risk Surveillance Survey. Of the 55 questions on the survey, topics included: access to health care, cardiovascular disease risks, mental health, nutrition and exercise, clinical preventative services, smoking, and alcohol among others. Most questions were identical or very similar to those asked in either the BRFSS or the National Health Interview Survey. Additional questions on topics such as intent to change behavior in the areas of smoking, exercising, and eating fruits and vegetables were included.

Data Analysis

In order to appropriately analyze the data, weights were applied to each record. The weight consisted of a post-stratification weight. The post-stratification weights were created by weighting each record to the population of the Council District while taking into account the respondent's age, sex, and race. The statistical package, SAS, was used to obtain appropriate standard errors for the point estimates.

Table of Contents

| | |
|---|-----------|
| Message from the Director of Health | page iv |
| Executive Summary | page v |
| Introduction and Methodology | page viii |
| Access to Care | page 1 |
| Diabetes | page 9 |
| Asthma | page 26 |
| Influenza and Pneumonia Immunization | page 25 |
| Utilization of Screening Tests for Breast, Cervical, and Prostate Cancers | page 31 |
| Tobacco Use and Environmental Smoke Exposure | page 47 |
| Alcohol Use and Binge Drinking | page 65 |
| HIV/AIDS Risk (Sexual Risk Behavior) | page 72 |
| Exercise, Nutrition, and Obesity | page 81 |
| Risk Factors for Cardiovascular Disease | page 92 |
| Appendices | |
| Glossary | page 106 |
| Community Health Behavior Survey 2001 Questions | page 109 |

List of Figures

| | <u>Page</u> |
|------------|--|
| Figure 1. | Health Insurance Coverage by Annual Household Income.....2 |
| Figure 2. | Health Insurance Coverage by Age.....2 |
| Figure 3. | Health Insurance Coverage by Race.....3 |
| Figure 4. | Health Insurance Coverage by Gender.....3 |
| Figure 5. | Health Insurance Coverage by Education.....4 |
| Figure 6. | Health Insurance Coverage by Marital Status4 |
| Figure 7. | Usual Source of Care by Age.....5 |
| Figure 8. | Usual Source of Care by Race.....5 |
| Figure 9. | Usual Source of Care by Gender.....6 |
| Figure 10. | Usual Source of Care by Annual Household Income.....6 |
| Figure 11. | Usual Source of Care by Marital Status.....7 |
| Figure 12. | Usual Source of Care by Health Insurance Coverage.....7 |
| Figure 13. | Diabetes Diagnosis by Age.....11 |
| Figure 14. | Diabetes Diagnosis by Race.....11 |
| Figure 15. | Diabetes Diagnosis by Education.....12 |
| Figure 16. | Diabetes Diagnosis by Household Income.....12 |
| Figure 17. | Diabetes Diagnosis by Marital Status.....13 |
| Figure 18. | Diabetes Diagnosis by Health Care Coverage.....13 |
| Figure 19. | Asthma (Ever Diagnosed) by Age.....18 |
| Figure 20. | Asthma (Ever Diagnosed) by Annual Household Income.....18 |
| Figure 21. | Asthma (Ever Diagnosed) by Education.....19 |
| Figure 22. | Current Asthma by Age.....19 |
| Figure 23. | Current Asthma by Gender.....20 |
| Figure 24. | Current Asthma by Annual Household Income.....20 |
| Figure 25. | Current Asthma by Education.....21 |
| Figure 26. | Current Asthma by Marital Status.....21 |
| Figure 27. | Current Asthma by Health Insurance Coverage.....22 |
| Figure 28. | Immunization by Age.....26 |
| Figure 29. | Flu Immunization by Race.....26 |
| Figure 30. | Immunization by Education.....27 |
| Figure 31. | Immunization by Marital Status.....27 |
| Figure 32. | Pneumonia Vaccination by Annual Household Income.....28 |
| Figure 33. | Immunization by Health Insurance Coverage.....28 |
| Figure 34. | Had Mammogram within Past Two Years by Age.....33 |
| Figure 35. | Had Mammogram within Past Two Years by Race.....33 |
| Figure 36. | Had Mammogram within Past Two Years by Marital Status.....34 |
| Figure 37. | Had Mammogram within Past Two Years by Annual Household Income34 |
| Figure 38. | Had Mammogram within Past Two Years by Education.....35 |
| Figure 39. | Had Mammogram within Past Two Years by Health Insurance Coverage35 |
| Figure 40. | Had Pap Test within Past Three Years by Age.....36 |
| Figure 41. | Had Pap Test within Past Three Years by Race.....37 |
| Figure 42. | Had Pap Test within Past Three Years by Marital Status.....37 |
| Figure 43. | Had Pap Test within Past Three Years by Annual Household Income38 |
| Figure 44. | Had Pap Test within Past Three Years by Education.....38 |
| Figure 45. | Had Pap Test within Past Three Years by Health Insurance Coverage39 |

List of Figures

| | <u>Page</u> |
|------------|--|
| Figure 46. | Ever Had Digital Rectal Exam by Age.....39 |
| Figure 47. | Ever Had Digital Rectal Exam by Race.....40 |
| Figure 48. | Ever Had Digital Rectal Exam by Annual Household Income.....40 |
| Figure 49. | Ever Had Digital Rectal Exam by Education.....41 |
| Figure 50. | Ever Had Digital Rectal Exam by Health Insurance Coverage.....41 |
| Figure 51. | Ever Had PSA Test by Age.....42 |
| Figure 52. | Ever Had PSA Test by Marital Status.....43 |
| Figure 53. | Ever Had PSA Test by Health Insurance Coverage.....43 |
| Figure 54. | Ever Smoked and Current Smokers.....48 |
| Figure 55. | Current Smoking by Age.....49 |
| Figure 56. | Current Smoking by Race.....49 |
| Figure 57. | Current Smoking by Gender.....50 |
| Figure 58. | Current Smoking by Annual Household Income.....50 |
| Figure 59. | Current Smoking by Education.....51 |
| Figure 60. | Current Smoking by Marital Status.....51 |
| Figure 61. | Current Smoking by Health Insurance Coverage.....52 |
| Figure 62. | Advised to Quit Smoking by Age (Percentage of Current Smokers)52 |
| Figure 63. | Advised to Quit Smoking by Race (Percentage of Current Smokers)53 |
| Figure 64. | Advised to Quit Smoking by Gender (Percentage of Current Smokers)53 |
| Figure 65. | Advised to Quit Smoking by Annual Household Income (Percentage of Current Smokers).....54 |
| Figure 66. | Advised to Quit Smoking by Health Insurance Coverage (Percentage of Current Smokers).....54 |
| Figure 67. | Plan to Quit Smoking by Age (Percentage of Current Smokers).....55 |
| Figure 68. | Plan to Quit Smoking by Race (Percentage of Current Smokers).....55 |
| Figure 69. | Plan to Quit Smoking by Education (Percentage of Current Smokers)56 |
| Figure 70. | Plan to Quit Smoking by Marital Status (Percentage of Current Smokers)56 |
| Figure 71. | Quit Attempt by Age (Percentage of Current Smokers).....57 |
| Figure 72. | Quit Attempt by Race (Percentage of Current Smokers).....57 |
| Figure 73. | Second Hand Smoke Exposure by Age.....58 |
| Figure 74. | Second Hand Smoke Exposure by Race.....59 |
| Figure 75. | Second Hand Smoke Exposure by Marital Status.....59 |
| Figure 76. | Second Hand Smoke Exposure by Health Insurance Coverage.....60 |
| Figure 77. | Smokeless Tobacco Use by Gender.....61 |
| Figure 78. | Smokeless Tobacco Use by Education.....61 |
| Figure 79. | Smokeless Tobacco Use by Health Insurance Coverage.....62 |
| Figure 80. | Current and Binge Drinking.....66 |
| Figure 81. | Alcohol Use by Age.....66 |
| Figure 82. | Alcohol Use by Race.....67 |
| Figure 83. | Alcohol Use by Gender.....67 |
| Figure 84. | Current Drinkers (Drank in Average Week in Past Month) by Annual Household Income.....68 |
| Figure 85. | Alcohol Use by Education.....68 |

List of Figures

| | <u>Page</u> |
|-------------|--|
| Figure 86. | Alcohol Use by Marital Status.....69 |
| Figure 87. | Alcohol Use by Health Insurance Coverage.....69 |
| Figure 88. | Sexually Active in Past Year by Age.....73 |
| Figure 89. | Sexually Active in Past Year by Gender.....73 |
| Figure 90. | Sexually Active in Past Year by Education.....74 |
| Figure 91. | Sexually Active in Past Year by Marital Status.....74 |
| Figure 92. | Sexually Active in Past Year by Annual Household Income.....75 |
| Figure 93. | Sexually Active in Past Year by Health Insurance Coverage.....75 |
| Figure 94. | Condom Use by Age.....76 |
| Figure 95. | Condom Use by Race.....76 |
| Figure 96. | Condom Use by Gender.....77 |
| Figure 97. | Condom Use by Annual Household Income.....77 |
| Figure 98. | Condom Use by Marital Status.....78 |
| Figure 99. | Condom Use by Health Insurance Coverage.....78 |
| Figure 100. | Exercised in Past Month by Gender.....83 |
| Figure 101. | Exercised in Past Month by Race.....83 |
| Figure 102. | Exercised in Past Month by Age.....84 |
| Figure 103. | Exercised in Past Month by Annual Household Income.....84 |
| Figure 104. | Exercised in Past Month by Education.....85 |
| Figure 105. | Nutrition Related Behaviors.....85 |
| Figure 106. | Nutrition Related Behaviors by Age.....86 |
| Figure 107. | Nutrition Related Behaviors by Gender.....86 |
| Figure 108. | Nutrition Related Behaviors by Race.....87 |
| Figure 109. | Body Mass Index.....88 |
| Figure 110. | Obesity by Race.....88 |
| Figure 111. | Obesity and Overweight by Gender.....89 |
| Figure 112. | High Blood Pressure by Age.....93 |
| Figure 113. | High Blood Pressure by Race.....94 |
| Figure 114. | High Blood Pressure by Household Income.....94 |
| Figure 115. | High Blood Pressure by Education.....95 |
| Figure 116. | High Blood Pressure by Insurance Coverage.....95 |
| Figure 117. | High Cholesterol by Age.....96 |
| Figure 118. | High Cholesterol by Education.....96 |
| Figure 119. | High Cholesterol by Marital Status.....97 |
| Figure 120. | High Cholesterol by Insurance Coverage.....97 |
| Figure 121. | Advised to Lower Fat Intake by Age.....98 |
| Figure 122. | Advised to Lower Fat Intake by Marital Status.....99 |
| Figure 123. | Advised to Lower Fat Intake by Insurance Coverage.....99 |
| Figure 124. | Advised to Exercise by Age.....100 |
| Figure 125. | Advised to Exercise by Race.....101 |
| Figure 126. | Advised to Exercise by Gender.....101 |
| Figure 127. | Advised to Exercise by Education.....102 |

List of Tables

| | <u>Page</u> |
|------------|---|
| Table 1. | Demographic Characteristics of Sample |
| Table 2. | Access to Health Care. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District, Age, Sex, and Race (95% Confidence Interval).....8 |
| Table 3. | Diabetes. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)15 |
| Table 4. | Asthma. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District, Age, Sex, and Race (95% Confidence Interval).....24 |
| Table 5. | Flu and Pneumonia Immunization. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Age, Gender, Race, and Council District (95% Confidence Interval).....30 |
| Table 6a. | Cancer Screening: Pap Test and Mammography. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....45 |
| Table 6b. | Cancer Screening: Digital Rectal Exam and Prostate Specific Antibody Test. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....46 |
| Table 7a. | Tobacco Use Characteristics: Current Smokers, Advised to Quit, and Plan to Quit. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....63 |
| Table 7b. | Tobacco Use Characteristics: Quit One Day or More in Past Year, Use Smokeless Tobacco, and Exposed to Second Hand Smoke in the Past Month (95% Confidence Interval).....64 |
| Table 8. | Alcohol Use. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District, Age, Sex, and Race (95% Confidence Interval).....71 |
| Table 9. | Sexual Behavior: Sexually Active, More Than One Sexual Partner in Past Year, and Always Use Condoms. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....80 |
| Table 10a. | Exercise, Nutrition, and Obesity: Overweight, Obesity, and Exercised in Past Month. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....90 |
| Table 10b. | Exercise, Nutrition, and Obesity: Avoid High Fat Foods, Takes a Multivitamin, and Eats Five or More Fruits and Vegetables Daily. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....91 |
| Table 11a. | Cardiovascular Disease Risk Factors: Have High Blood Pressure and Have High Blood Cholesterol. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....103 |
| Table 11b. | Cardiovascular Disease Risk Factors: Advised to Eat Less Fat and Advised to Exercise More. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval).....104 |

Access to Care

Access to medical care is defined by the Institute of Medicine as “the timely use of personal health services to achieve the best possible health outcomes.”¹ Routine medical care can prevent and lessen the severity of health problems. Lack of access to health care contributes to mortality and morbidity due to preventable diseases. One of the ways in which poverty produces poorer health outcomes is through lack of access to health care.²

Access to routine primary care can reduce unnecessary and costly hospitalizations for chronic conditions such as asthma, hypertension, congestive heart failure, chronic obstructive pulmonary disease, and diabetes.³ Hospitalization for chronic conditions is much more costly than routine care, and can be an indicator of decline in health status. Access to care has been found to be associated with lower rates of hospitalization for the chronic conditions asthma, hypertension, congestive heart failure, chronic obstructive pulmonary disease, and diabetes.³

National and State Prevalence

Nationwide, in 2001, 13.3% of adults 18 and over did not have any kind of health care coverage. In Tennessee in 2001, 10.7% had no health care coverage.⁴

Healthy People 2010

Objective 1-1 of Healthy People 2010 is “Increase the proportion of persons with health insurance.” The target for this objective is 100%. Objective 1-5 is “Increase the proportion of persons with a usual primary care provider.” The target is 85%. The Healthy People 2010 baseline for this objective, measured nationwide in 1996, is 77%.¹

Description of Measures

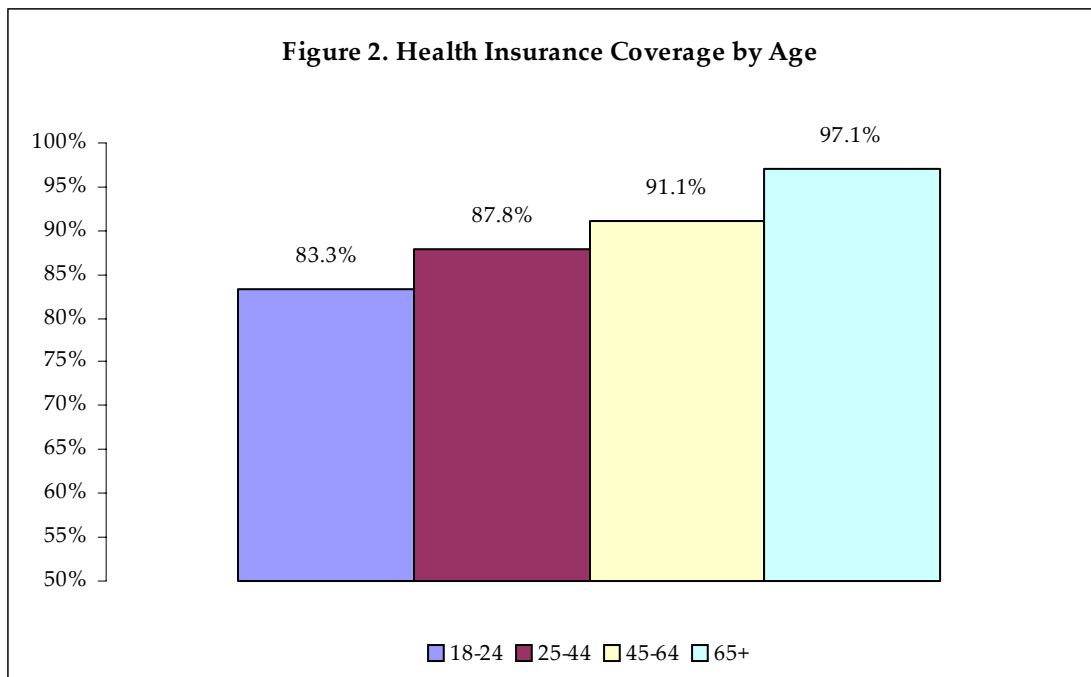
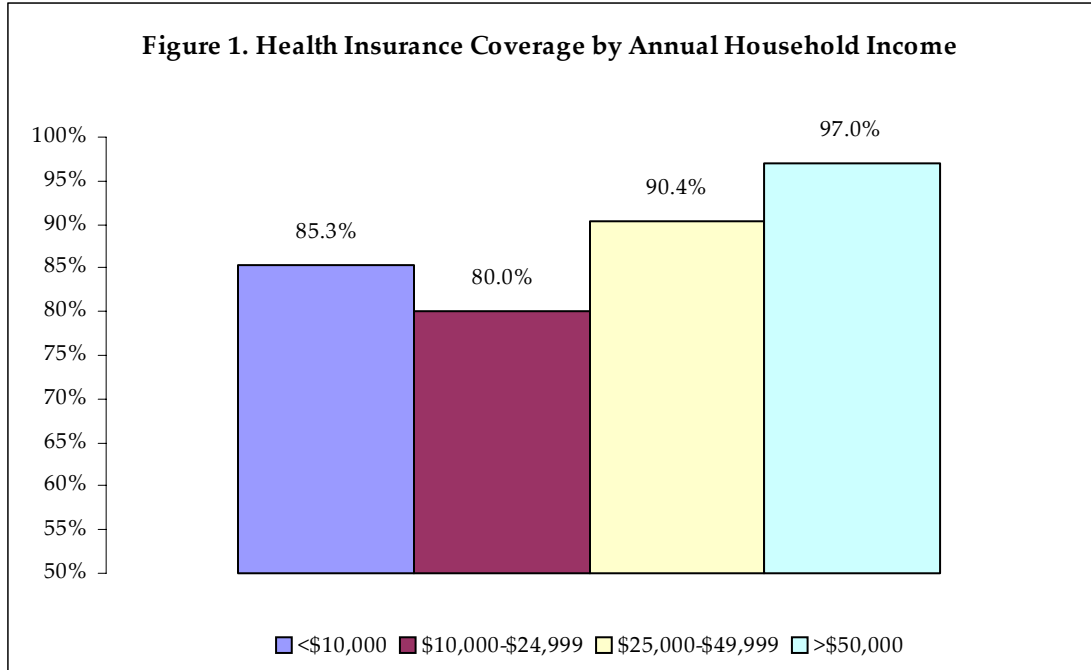
The Community Health Behavior Survey used two indicators of health care access: health insurance coverage, and having a usual primary care provider.

The survey measured health insurance coverage by asking “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMO’s or government plans such as Medicaid?” Usual source of primary care was measured by the question, “Do you have one person you think of as your personal doctor or health care provider?”

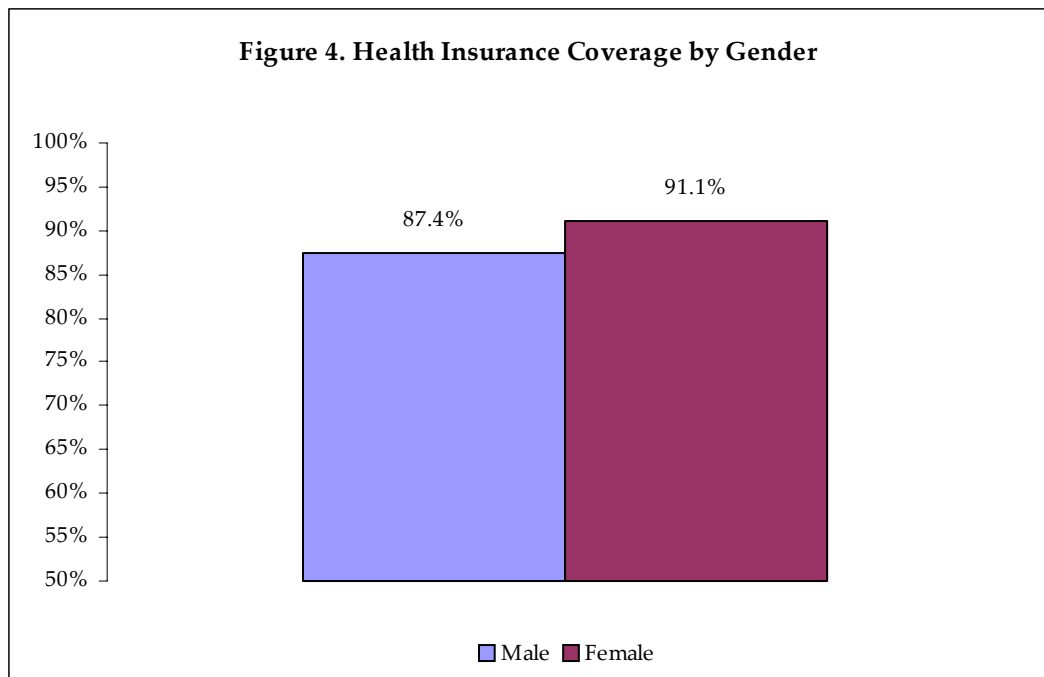
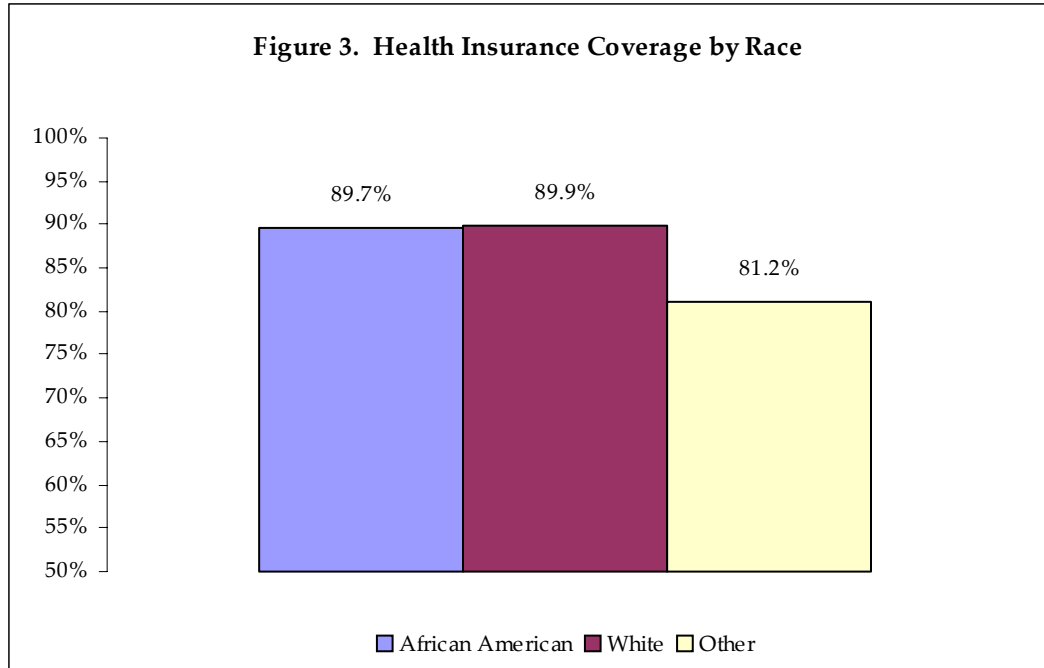
Results

Health Insurance Coverage

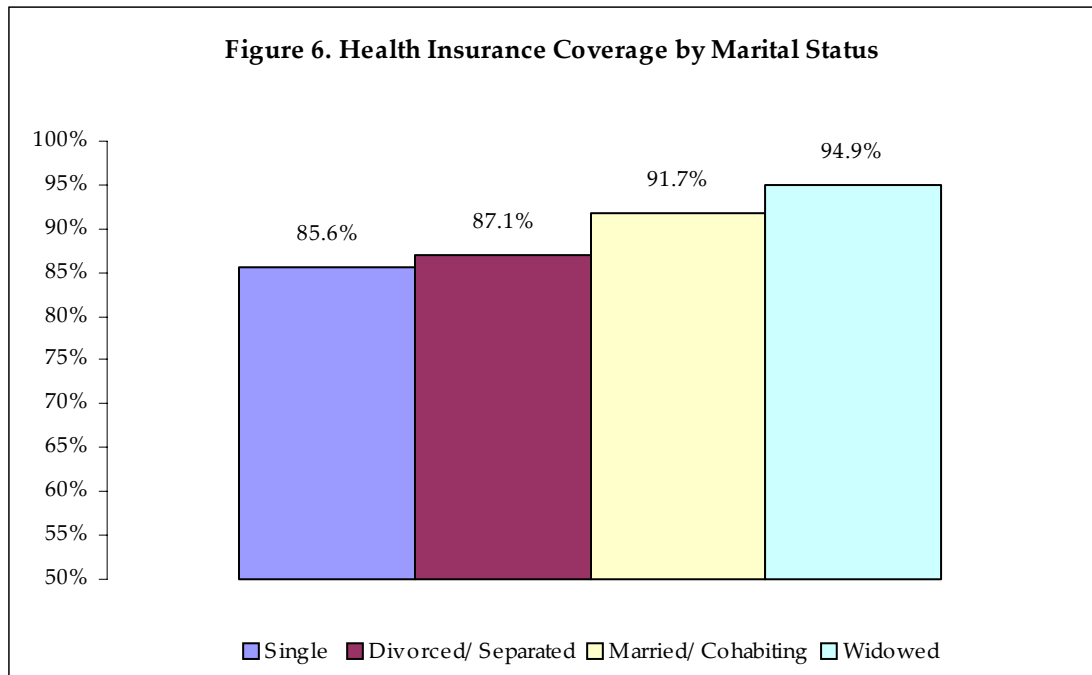
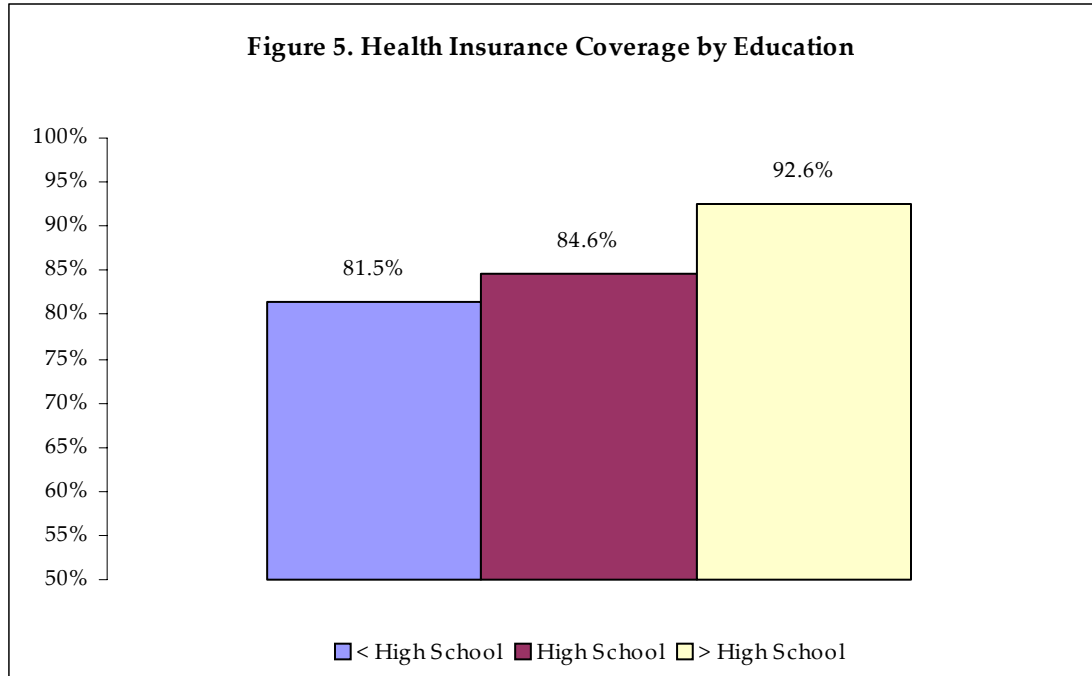
- In Metro Nashville, 89.3% (95% confidence interval, 88.6% – 90.0%) reported having some kind of health care coverage; 10.7% (95% confidence interval, 10.0% – 11.4%) were uninsured.
- Those with higher household incomes were more likely to have medical insurance. Almost all respondents (97.0%) with household incomes of \$50,000 or more had health insurance. Among people with household incomes under \$25,000, 20.0% had no health care coverage. (Figure 1)



- Older respondents were more likely to have health insurance. Rates of insurance coverage ranged from 83.3% for 18-24 year olds, to 97.1% for those 65 and older. (Figure 2)
- There was no significant difference in coverage rates between African American (89.7%) and White (89.9%) respondents. The rate for “Others” was substantially lower (81.2%). (Figure 3)



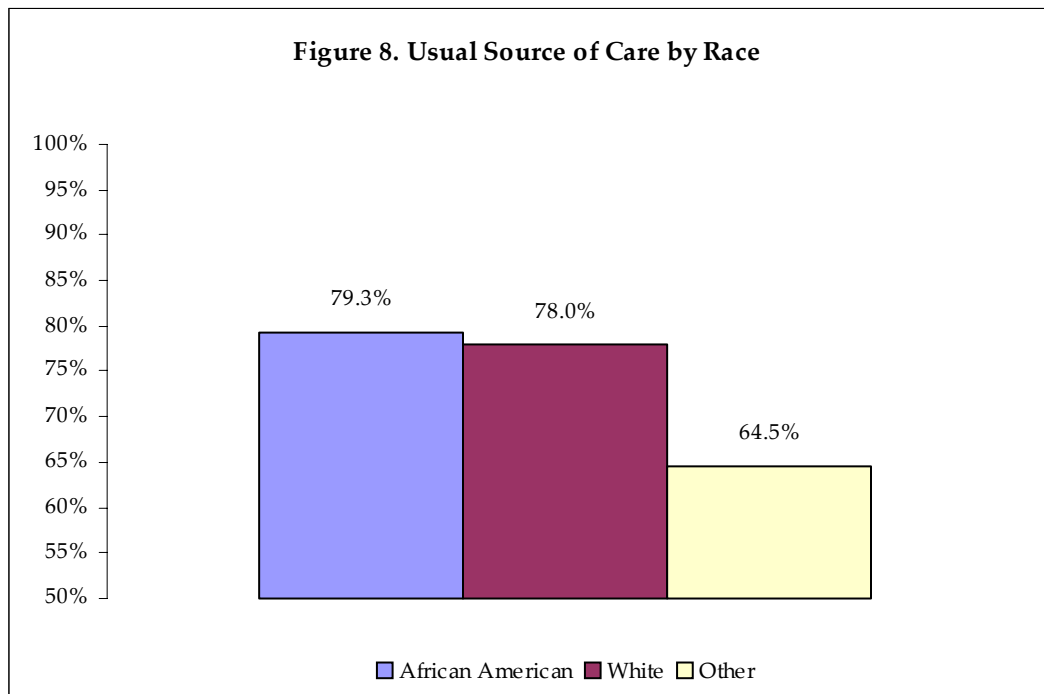
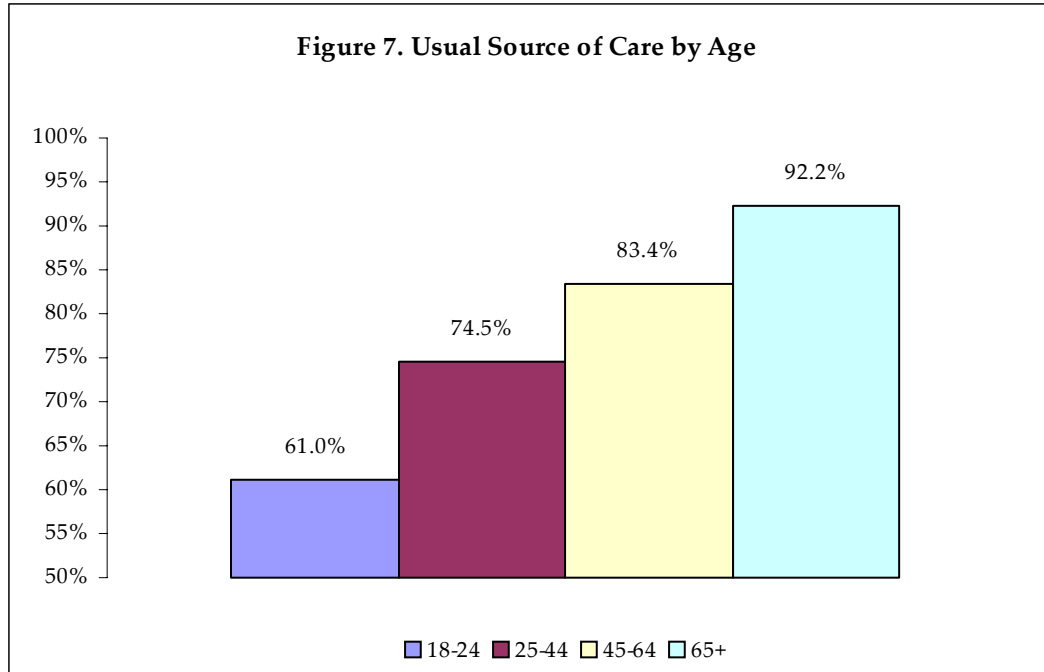
- Females were more likely than males to have health coverage. The rate was 87.4% for males and 91.1% for females. (Figure 4)
- Respondents with education beyond high school were significantly more likely to have health coverage than those with less education, at 92.6%. This was significantly higher than 84.6% for high school graduates and 81.5% for those who did not graduate. These two groups were not significantly different from each other. (Figure 5)



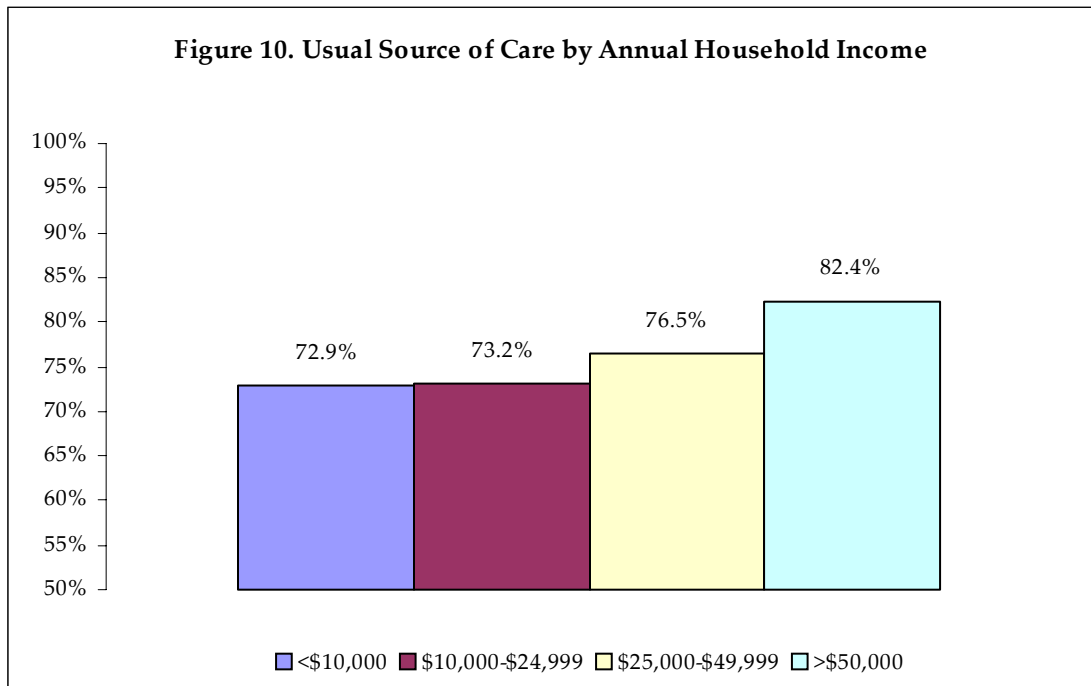
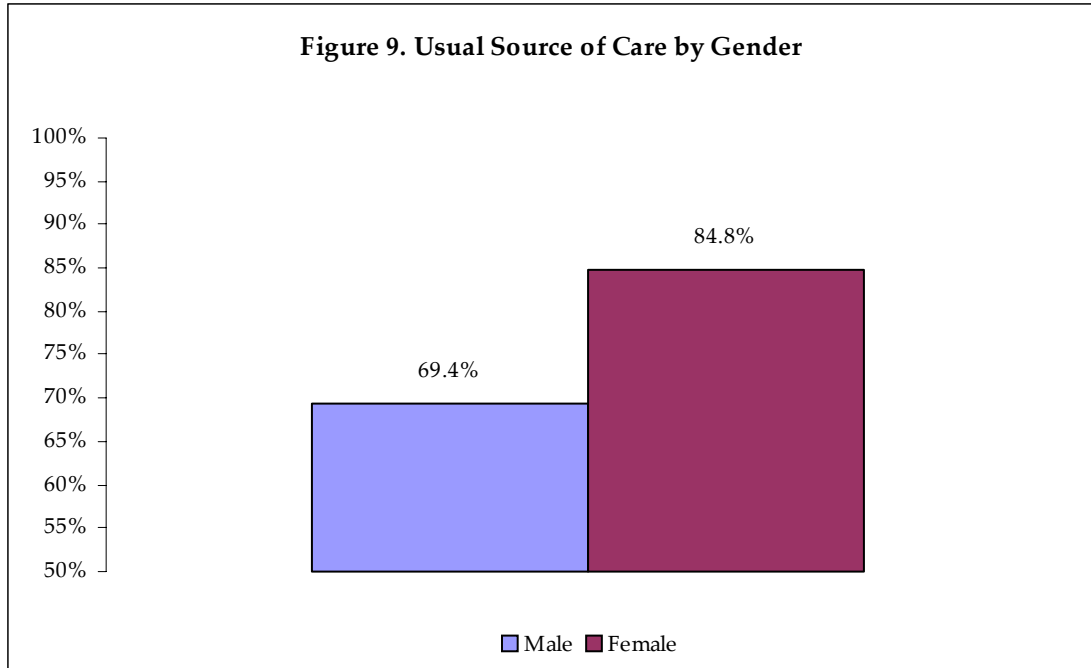
- Rates of insurance coverage for single respondents (85.6%) and divorced and separated (87.1%) were not significantly different and were lower than for married/cohabiting (91.7%) and widowed (94.9%) respondents. (Figure 6)

Personal Doctor or Provider

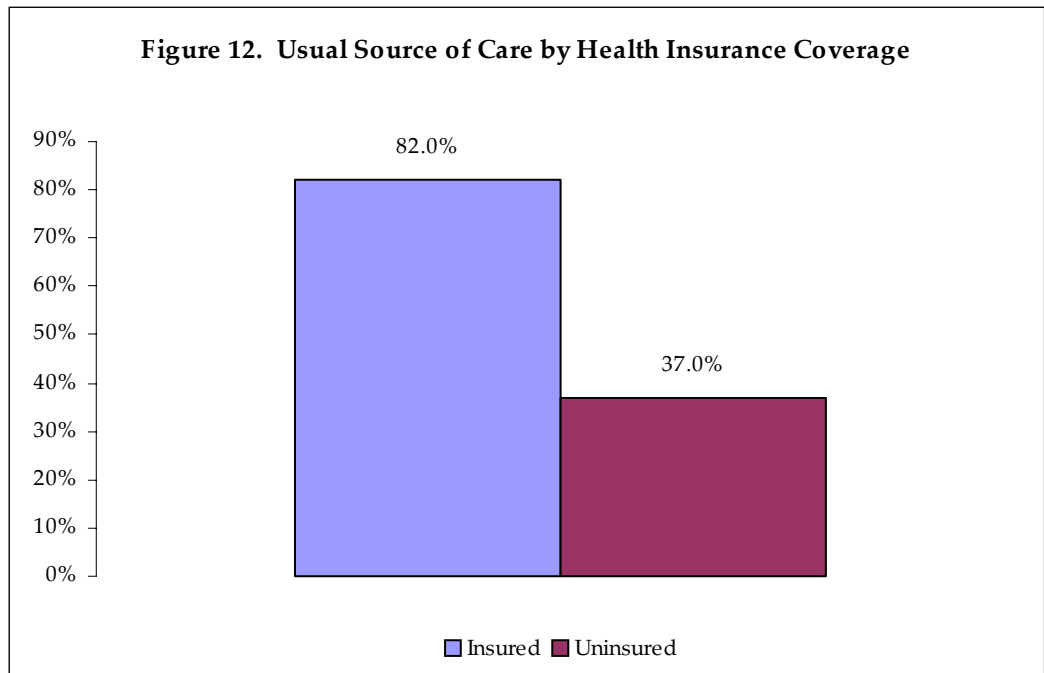
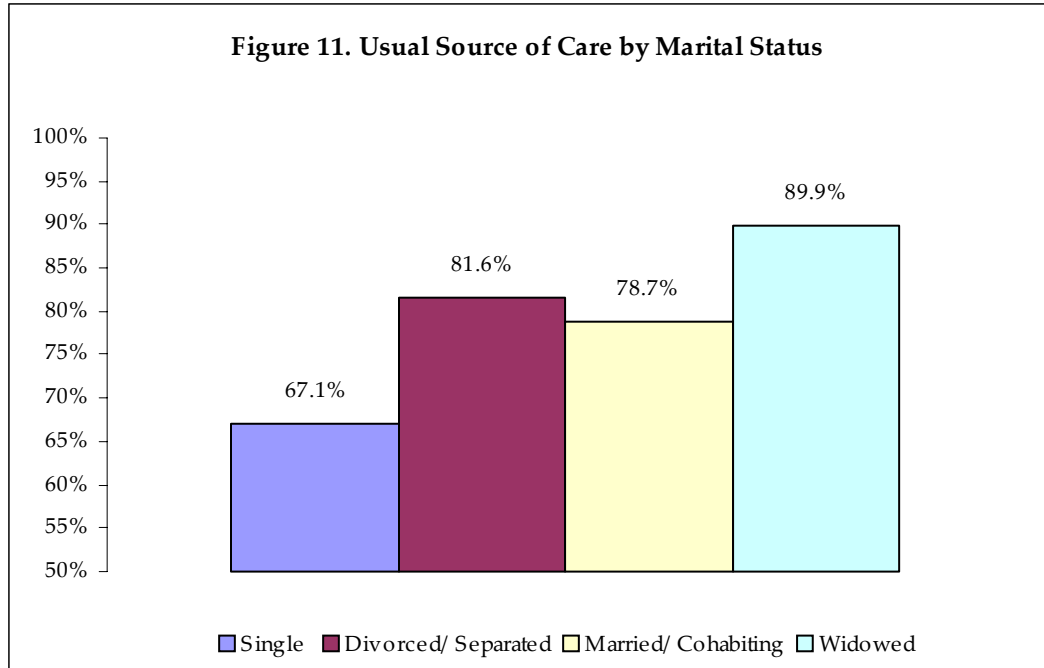
- 77.4% (95% confidence interval, 76.5% – 78.4%) reported having someone they thought of as their personal doctor or health care provider.



- Respondents in older age groups were more likely to have a personal physician or provider. The rate ranged from 61.0% for the 18 – 24 age group to 92.2% for those 65 or older. (Figure 7)
- African Americans (79.3%) and Whites (78.0%) were about equally likely to have a personal doctor. The rate for “Others” was significantly lower, 64.4%. (Figure 8)



- Females (84.8%) were significantly more likely than males (69.4%) to have a personal doctor. (Figure 9)
- Of those reporting household incomes over \$50,000, 82.4% reported having a personal physician. This is significantly higher than the lower income groups, which ranged from 72.9% to 76.5%. The differences between the three lower groups were not significant. (Figure 10)



- Married and divorced respondents were not substantially different but were significantly more likely than singles and less likely than widowed persons to have a personal physician. (Figure 11)
- Persons who had health care coverage were much more likely to have a personal physician or regular care provider than were those without coverage. Most people with health insurance (82.3%) had a personal doctor. (Figure 12)

References

1. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington, DC: January 2000.
2. Stanhope M, Lancaster, J., *Community and Public Health Nursing*. St.Louis: Mosby; 1996.
3. Bindman, A.B., et al., preventable hospitalizations and access to health care. *JAMA*, 1995. **274**(4): p. 305-11.
4. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/display.asp>. Accessed June 19, 2003.

| Table 2. Access to Health Care | | |
|--|---------------------------------------|------------------------------------|
| Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee weighted by Council District, Age, Sex, and Race (95% Confidence Interval) | | |
| <i>Demographics</i> | <u>Have Health Insurance Coverage</u> | <u>Have a Usual Source of Care</u> |
| <u>Total</u> | 89.3% (88.6 - 90.0) | 77.4% (76.5 - 78.4) |
| <u>Age</u> | | |
| 18-24 | 83.3% (80.4 - 86.2) | 61.0% (57.2 - 64.8) |
| 25-44 | 87.8% (86.7 - 89.0) | 74.5% (73.0 - 76.0) |
| 45-64 | 91.1% (89.9 - 92.3) | 83.4% (81.7 - 85.0) |
| 65 or older | 97.1% (96.2 - 98.0) | 92.2% (90.7 - 93.7) |
| <u>Race</u> | | |
| African American | 89.7% (88.2 - 91.1) | 79.3% (77.4 - 81.2) |
| White | 89.9% (89.1 - 90.7) | 78.0% (76.9 - 79.1) |
| Other | 81.2% (75.9 - 86.5) | 64.4% (58.0 - 70.9) |
| <u>Gender</u> | | |
| Male | 87.3% (86.1 - 88.7) | 69.4% (67.6 - 71.2) |
| Female | 91.1% (90.2 - 91.9) | 84.8% (83.7 - 85.8) |
| <u>Income</u> | | |
| <\$10,000 | 85.3% (81.2 - 89.5) | 72.9% (67.7 - 78.0) |
| \$10,000-\$24,999 | 80.0% (78.2 - 81.9) | 73.2% (71.1 - 75.2) |
| \$25,000-\$49,999 | 90.4% (89.3 - 91.6) | 76.5% (74.8 - 78.1) |
| \$50,000 or more | 97.0% (96.2 - 97.8) | 82.4% (80.6 - 84.1) |
| <u>Education</u> | | |
| < High School | 81.5% (78.9 - 84.1) | 76.1% (73.2 - 78.9) |
| High School | 84.6% (83.0 - 86.2) | 76.6% (74.8 - 78.5) |
| > High School | 92.6% (91.8 - 93.4) | 78.2% (76.9 - 79.4) |
| <u>Marital Status</u> | | |
| Single | 85.6% (84.4 - 86.8) | 67.1% (65.4 - 68.8) |
| Married/Cohabiting | 91.7% (90.3 - 93.2) | 81.6% (79.5 - 83.6) |
| Divorced/Separated | 87.1% (85.6 - 88.6) | 78.7% (76.9 - 80.6) |
| Widowed | 94.9% (93.4 - 96.4) | 89.9% (87.9 - 91.9) |
| <u>Insurance Coverage</u> | | |
| Insured | | 82.3% (81.4 - 83.2) |
| Uninsured | | 37.2% (34.5 - 39.8) |

Diabetes

Diabetes is a group of diseases whose main characteristic is abnormally high levels of blood glucose. Normally, with the aid of the hormone insulin, glucose enters the cells and is converted to energy. In Type I diabetes, the pancreas does not produce enough insulin. In Type II diabetes, insulin is present but the body has become insulin resistant and is unable to use it. In diabetes, glucose and fats remain in the blood and cause damage to vital organs, veins, and nerves.¹

Mortality

Diabetes is the sixth most common cause of death (as specified on death certificates) nationwide. In 1999, diabetes was listed as the cause of 68,399 deaths. This accounted for 2.9 percent of all deaths, and 25.2 deaths per 100,000 people. Diabetes was a contributing cause of an additional 131,000 deaths. The true mortality associated with diabetes is probably higher, as diabetes is thought to be underreported on death certificates. In Tennessee in 1999, the diabetes death rate was 26.6 per 100,000 population. Tennessee had the 21st highest rate of all states of death due to diabetes.²

The risk of death from any cause is about twice as high for people with diabetes as for people without diabetes, and even greater for younger people and women.¹

Complications

Heart disease is the leading cause of diabetes-related death. Adults with diabetes die from heart disease at two to four times the rate of adults without diabetes.¹ The risk of stroke is also two to four times higher for persons with diabetes. Cardiovascular disease accounts for 48% of deaths of persons with diabetes.³

Diabetes increases the risk of complications and death from influenza and pneumonia. Each year from 10,000 to 30,000 persons with diabetes die from complications of these two illnesses. Persons with diabetes are three times more likely to die of flu and pneumonia complications than persons without diabetes.⁴

Diabetes is the leading cause of new cases of blindness. Each year, from 12,000 to 24,000 persons lose their sight because of diabetes. Diabetes is also the leading cause of nontraumatic lower limb amputations, causing approximately 86,000 such amputations each year. Diabetes can also lead to kidney failure. Each year more than 38,000 people with diabetes begin treatment for renal disease.²

Preventive Care

Diabetes cannot be cured; however, with proper management (glucose monitoring, diet, exercise, and in some cases medication), these dangerous and disabling complications can be avoided. Therefore it is important for people who have diabetes to be aware of it, and to make regular visits to their health care provider. It is estimated that 35 percent of people who have diabetes have not been diagnosed.¹

Healthy People 2010

One of the goals of Healthy People 2010 is "Through prevention programs, reduce the disease and economic burden of diabetes, and improve the quality of life for all persons who have or are at risk for diabetes."⁵

National and State Prevalence

The nationwide prevalence of diagnosed diabetes as reported by the Behavioral Risk Factor Surveillance System has steadily increased between 1995 and 2001, from 4.4% in 1995 to 6.5% in 2001. The prevalence of diabetes in Tennessee has been higher than the nationwide figure in all years except 1997. Tennessee's prevalence decreased from 1995 to 1997, then climbed from a low of 4.4% in 1997 to a high of 7.7% in 2001. ⁶

Preventive Care Practices

The Centers for Disease Control and Prevention Diabetes Surveillance System reports that in a survey of 42 states in 2001, 89.6% of adults with diabetes had visited a health professional in the past year for diabetes (the age-adjusted rate is 86.7%).⁷ In 2001, 90.5% of adults with diabetes in Tennessee reported a visit to a health professional in the past year for diabetes.⁸

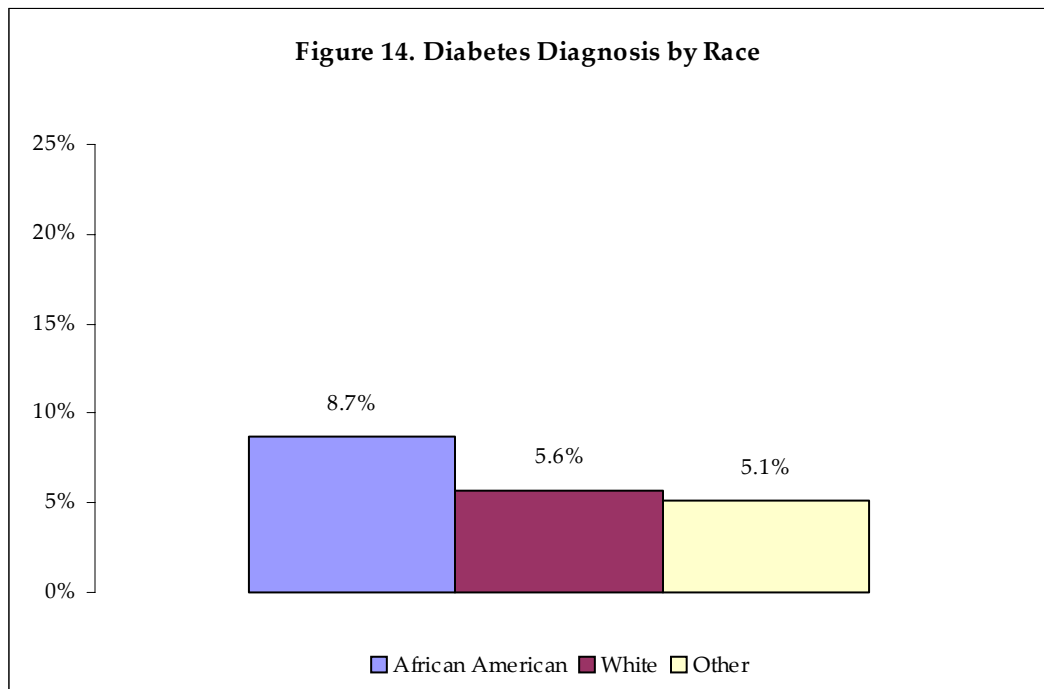
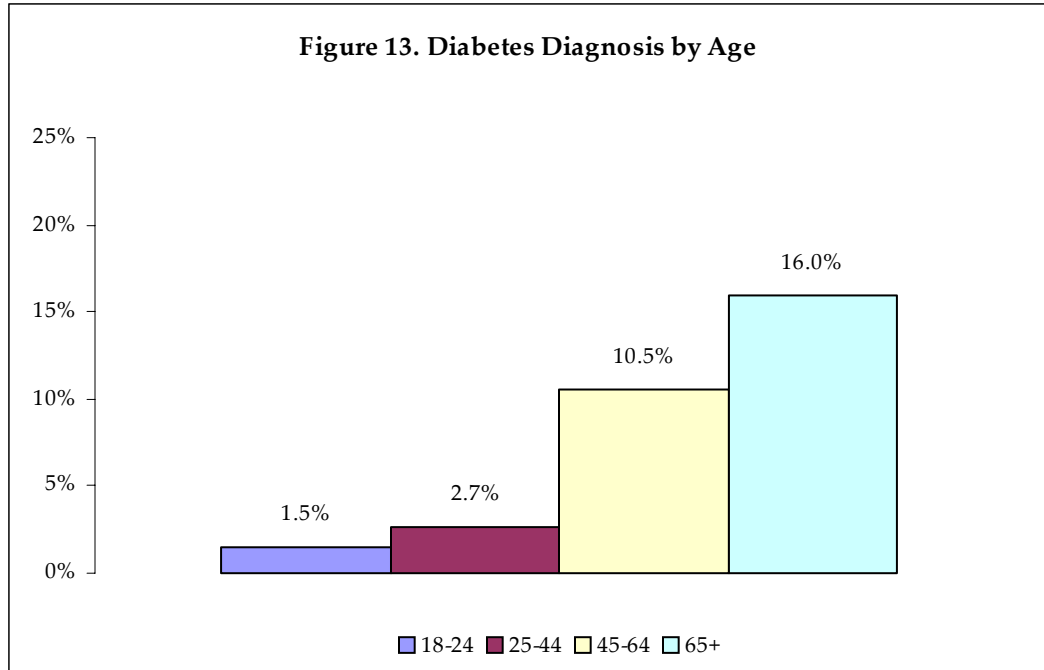
Description of Measures

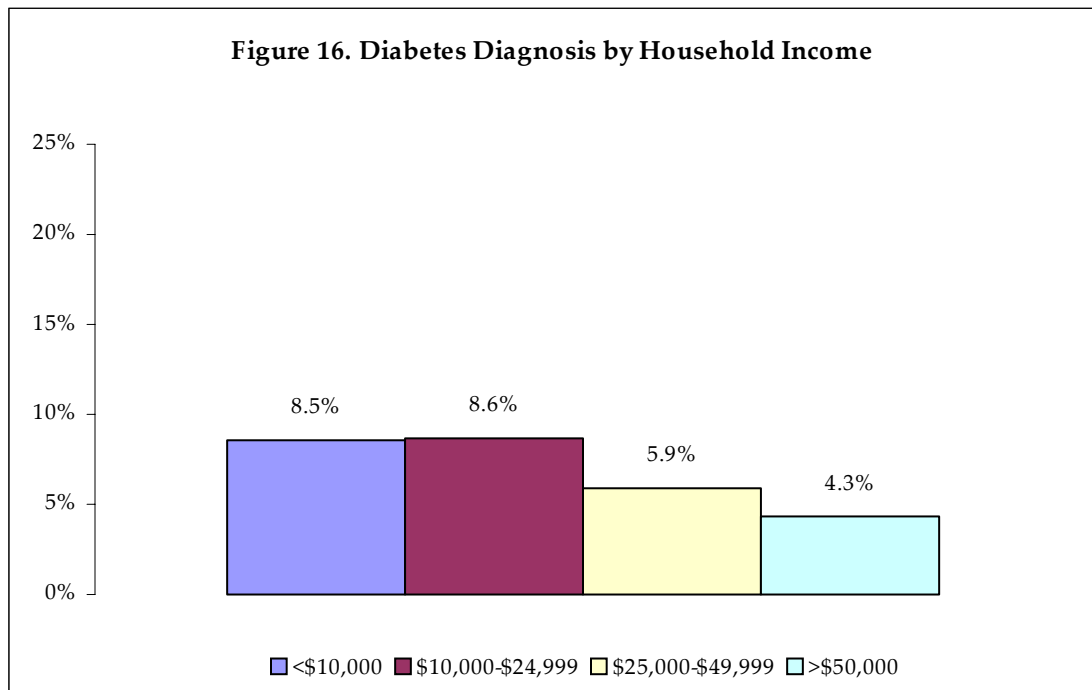
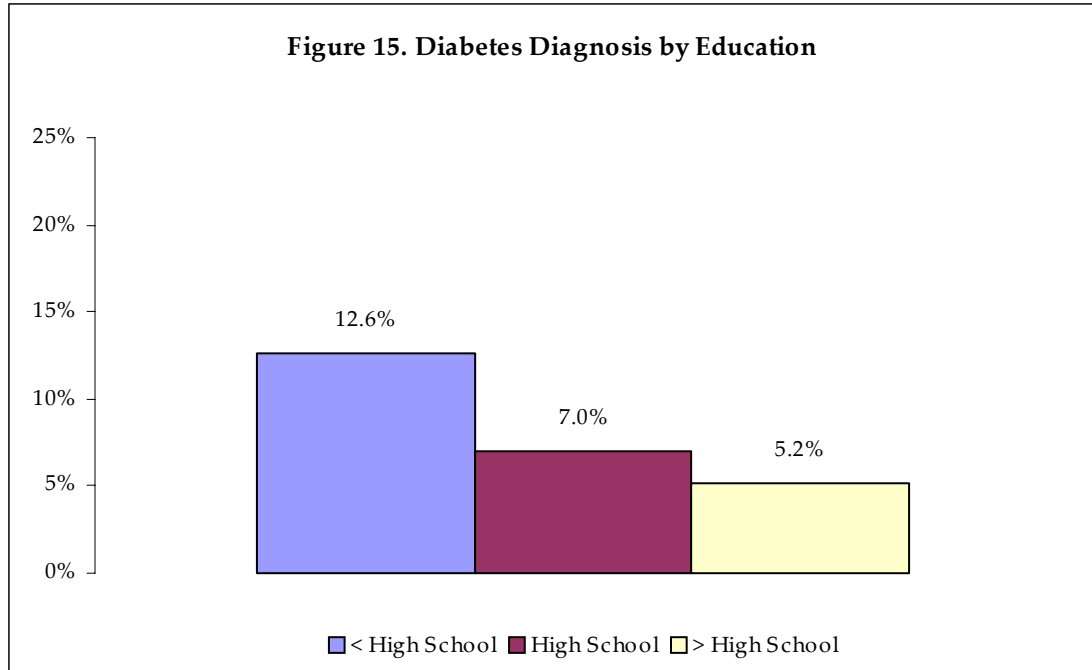
Prevalence of diabetes was measured by asking, "Have you ever been told by a doctor that you have diabetes?" If the response was "Yes" and the respondent was female, she was also asked "Was this only during a pregnancy?" Respondents indicating they had been given a diagnosis of diabetes not limited to pregnancy were then asked "About how many times in the past 12 months have you seen a doctor, nurse, or other health professional, for your diabetes?" Due to small numbers of responses, this question was analyzed as a dichotomous variable indicating that the respondent had or had not visited a healthcare professional in the past year for diabetes.

Results

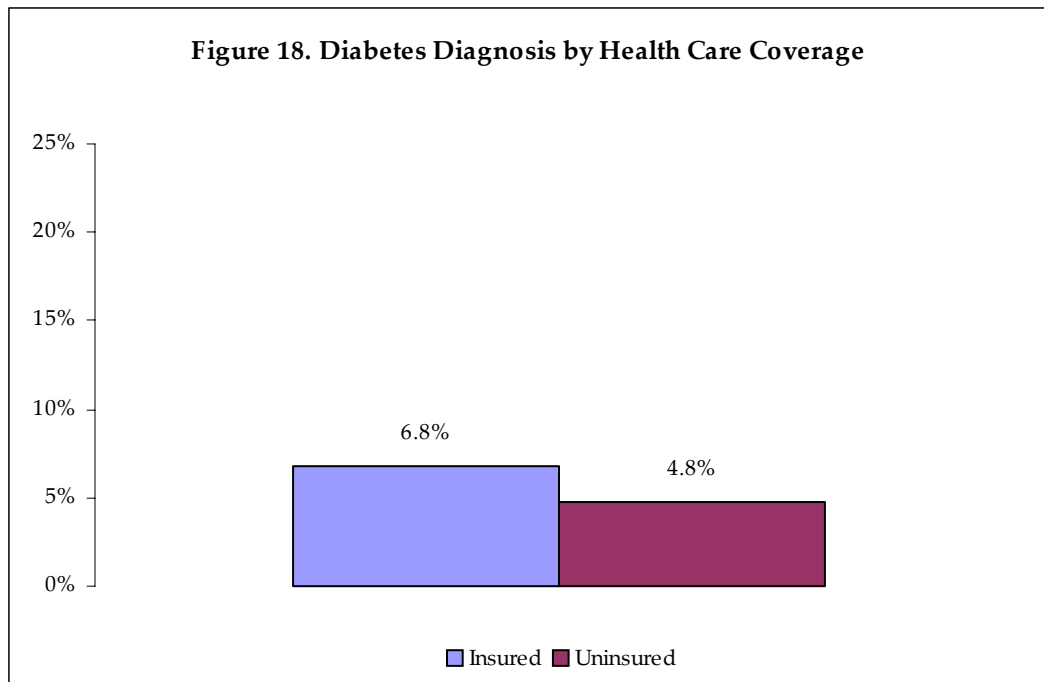
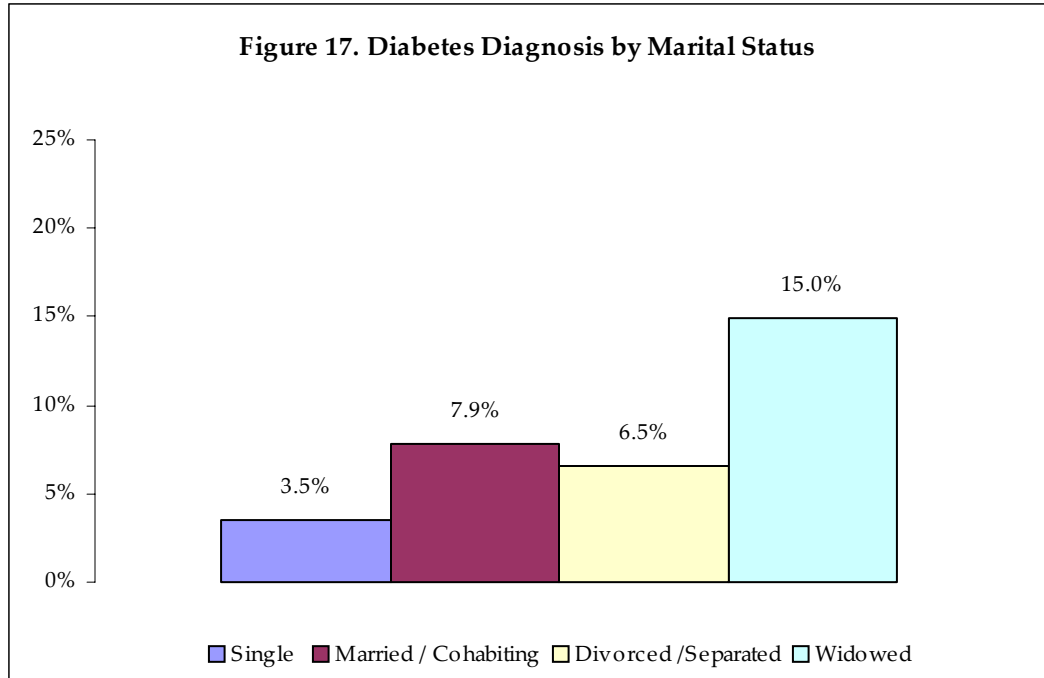
Diagnosis and Awareness

- **Overall:** Of Davidson County respondents, 6.5% (95% confidence interval, 5.4% - 7.63%) said they had been told they had diabetes, not including only during pregnancy.
- **Age:** Likelihood of a diabetic diagnosis increased with age. Of respondents 65 and older, 16.0% said they had been told they had diabetes, compared to 10.5% of the 45 to 64 year old group, 2.7% of respondents from 25 to 44, and 1.5% of respondents 18 to 24 years of age. (Figure 13)
- **Race:** A substantially higher percentage of African Americans (8.7%) reported having diabetes compared to Whites (5.6%) and Others (5.1%). (Figure 14)
- **Gender:** There was no significant difference between males and females in percentage reporting having diabetes.





- Educational Attainment:** Percentages of respondents reporting that they had diabetes varied substantially between levels of educational attainment, from 12.6% of those without a high school diploma, 7.0% of high school graduates, and 5.2% of those with education beyond high school, reporting that they had been told they had diabetes. (Figure 15)
- Income:** The rate of diabetes diagnosis was substantially higher in the two lower income groups compared to the two higher groups. The two lower income groups had very similar rates of reported diabetes. The percentage of respondents reporting a diagnosis



of diabetes dropped from 8.6% for those with a household income of \$10,000 to \$24,999, to 5.9% for incomes of \$25,000 to \$49,999, and 4.3% for incomes over \$50,000. (Figure 16)

- Marital Status:** The rate of reported diabetes was substantially lower among never-married singles, and substantially higher among widowed persons, than for married/cohabiting and divorced/separated respondents. Married/cohabiting and divorced/separated percentages were not significantly different from each other. (Figure 17)

- **Health Insurance Coverage:** Substantially higher percentages of respondents with health insurance coverage reported having been told they had diabetes (6.8%), compared to those without coverage, 4.8%. (Figure 18)

Preventive Care and Disease Management

Overall, 79.9% (95% confidence interval, 76.5% - 83.3%) of respondents who were diabetic said they had seen a healthcare professional within the last year for diabetes. This is approximately 10 percentage points lower than both the nationwide and statewide figures. There were no substantial differences between any of the demographic groups in percentage of persons with diabetes who had visited a doctor in the past year.

References

1. Centers for Disease Control and Prevention. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2000. USDHHS Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation. March 25, 2002. Available at: www.cdc.gov/diabetes/pubs/factsheet.htm. Accessed 4/15/2003.
2. Centers for Disease Control and Prevention. The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives 2002. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 8/20/2002. Available at: www.cdc.gov/nccdphp/burdenbook2002/01_tables.htm. Accessed 4/21/2003.
3. Cardiovascular disease risk factors and related preventive health practices among adults with and without diabetes—Utah, 1988-1993. *Morbidity and Mortality Weekly Report*. Nov 3 1995;44(43):805-809.
4. Centers for Disease Control and Prevention. Diabetes: Disabling, Deadly, and on the Rise. Available at: www.cdc.gov/diabetes/pubs/glance.htm. Accessed 4/15/2003, 2003.
5. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.
6. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/display.asp?yr=1997&cat=DB&state=TN&qkey=1364&grp=0&SUBMIT3=Go>. Accessed June 19, 2003.
7. Centers for Disease Control and Prevention. Prevalence of Doctor Visit for Diabetes in the Last Year and Daily Self-Monitoring of Blood Glucose per 100 Adults with Diabetes, by Socio-Demographic Characteristics, 42 States, 2001 [Web page]. January 10, 2003. Available at: <http://www.cdc.gov/diabetes/statistics/preventive/table2.htm>. Accessed June 2, 2003.
8. Centers for Disease Control and Prevention. Prevalence of Seeing a Health Professional for Diabetes per 100 Adults with Diabetes, by State, United States, 1995 - 2001 [Web page]. January 10, 2003. Available at: <http://www.cdc.gov/diabetes/statistics/preventive/table6.htm>. Accessed June 2, 2003.

Table 3. Diabetes. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Ever told you had diabetes (other than during pregnancy)</u> | <u>Seen a Doctor in Past 12 Months for Diabetes (Percent of Those with Diabetes)</u> |
|---------------------------|---|--|
| <u>Total</u> | 6.5% (5.4 - 7.6) | 79.9% (76.5 - 83.3) |
| <u>Age</u> | | |
| 18-24 | 1.5% (0.6 - 2.4) | 44.2% (11.8 - 76.7) |
| 25-44 | 2.7% (2.1 - 3.2) | 67.2% (57.1 - 77.2) |
| 45-64 | 10.5% (9.2 - 11.9) | 87.8% (83.6 - 92.1) |
| 65+ | 16.0% (14.0 - 18.0) | 84.8% (79.3 - 89.8) |
| <u>Race</u> | | |
| African American | 8.7% (7.4 - 10.0) | 81.5% (75.6 - 87.4) |
| White | 5.6% (5.0 - 6.3) | 78.0% (73.6 - 82.4) |
| Other | 5.1% (2.1 - 8.1) | 93.3% (78.5 - 100.0) |
| <u>Gender</u> | | |
| Male | 6.9% (5.9 - 7.8) | 82.6% (77.2 - 88.0) |
| Female | 6.2% (5.5 - 6.9) | 77.4% (73.0 - 81.9) |
| <u>Income</u> | | |
| <\$10,000 | 8.5% (5.3 - 11.7) | 83.3% (70.0 - 96.7) |
| \$10,000-\$24,999 | 8.6% (7.3 - 9.9) | 83.2% (77.7 - 88.7) |
| \$25,000-\$49,999 | 5.9% (5.0 - 6.8) | 76.3% (69.7 - 82.9) |
| \$50,000 or more | 4.3% (3.3 - 5.3) | 82.8% (73.9 - 91.6) |
| <u>Education</u> | | |
| <High School | 12.6% (10.4 - 14.8) | 81.9% (74.9 - 88.9) |
| High School | 7.0% (5.9 - 8.2) | 80.1% (73.8 - 86.5) |
| >High School | 5.2% (4.5 - 5.8) | 79.1% (74.1 - 84.2) |
| <u>Marital Status</u> | | |
| Single | 3.5% (2.7 - 4.3) | 79.3% (73.7 - 84.8) |
| Married/Cohabiting | 7.9% (6.4 - 9.3) | 84.3% (77.4 - 91.3) |
| Divorced/Separated | 6.5% (5.6 - 7.4) | 74.2% (64.7 - 83.7) |
| Widowed | 15.0% (12.6 - 17.4) | 81.3% (74.7 - 88.0) |
| <u>Insurance Coverage</u> | | |
| Insured | 6.8% (6.2 - 7.4) | 80.1% (76.5 - 83.6) |
| Uninsured | 4.8% (3.6 - 5.9) | 77.7% (63.9 - 91.5) |

Asthma

Asthma is defined as ‘an inflammatory disease of the airways’.¹ Identifying the risk factors for asthma remains important in addressing the needs of those stricken by the disease. While the cause of the increasing morbidity is not specifically known, some common allergens and irritants have been identified. Among these allergens are dust mites, roaches, rodents, tobacco smoke, molds, and pets.^{2,3,4,5} In addition to these allergens, some housing conditions can also contribute to the severity and prevalence of asthma. These household conditions include dampness, water damage, humidifiers, gas stoves, carpeting, double-glazed windows, and exposure to volatile organic compounds.^{3,6}

While asthma affects many individuals, a disproportionate number of those affected are low-income and members of minority groups.^{2,3,4,5,7} It is important to note that even when statistical analyses control for socioeconomic status, differences between racial and ethnic groups persist.⁷ Minorities are not only represented in disproportionate numbers among those suffering from asthma, but also in hospitalization and emergency room visits. According to researchers African Americans are up to four times more likely than Whites to visit the emergency room, require hospitalization, and experience mortality.^{8,9} This highlights the possibility that there is a relationship between demographic characteristics and the prevalence of asthma.

Public Health Initiatives/Planning/Policy

A variety of measures are currently employed to assess the disparities that are seen in asthma. The Federal Department of Health and Human Services (HHS) has developed an asthma strategy that consists of two components.¹⁰ The first component, *Healthy People 2010*, focuses primarily on treating asthma. The second, *Action Against Asthma*, lists the prevention and tracking goals of HHS. It is important to note that neither of these components seeks to prevent asthma or attempt to stop its rate of growth. As noted earlier, many of the causes/irritants of asthma are preventable.

Other programs seek to provide sufferers and their caregivers with knowledge to help them deal with the effects of the disease. Many of these educational programs include home environmental assessments, individual action plans, and follow-up visits.^{3,4} Other programs seek to form community partnerships. These partnerships seek to create an official liaison between the community and hospital officials.¹¹ Finally, programs often encourage patients to become more involved in their care.⁵ These programs help patients identify their symptoms and possible causes. Researchers suggest that this increased knowledge will empower the patients and help them manage the disease effectively.

Behavioral Factors

Although little evidence exists that point to behavioral factors as a cause of asthma, research does show that the disease can be affected by stress, anxiety, and sadness.¹² These researchers find that airways are reactive not only to physiological factors, but also psychological ones. Green et al.² indicate that maintaining a smoke-free environment, eating a balanced diet, and avoiding lead exposure are important factors in controlling asthma. Many researchers point to patient management of asthma as a primary concern. However, it is important to note that minorities may visit the emergency room more because of their lack of insurance coverage and inability to afford medications prescribed by their doctors.

National and State Prevalence

Nationwide, 11.2% of adults reported having been diagnosed with asthma in the 2001 Behavioral Risk Factor Surveillance System survey. (This was the median percentage out of 54 states.) In Tennessee, 9.3% had been diagnosed with asthma.¹³

Nationwide, the median percentage of people who still had asthma was 67.8% of those who had ever been diagnosed with asthma. In Tennessee, 74.2% of those ever diagnosed still had asthma.¹³

Healthy People 2010

The Healthy People 2010 goal with respect to respiratory diseases is: "Promote respiratory health through better prevention, detection, treatment, and education."

The Healthy People 2010 asthma objectives are:

- Reduce asthma deaths and reduce hospitalizations for asthma,
- Reduce hospital emergency department visits for asthma,
- Reduce activity limitations for asthma,
- Increase the proportion of persons with asthma who receive formal patient education,
- Increase the proportion of persons with asthma who receive appropriate asthma care according to the NAEPP guidelines.¹⁴

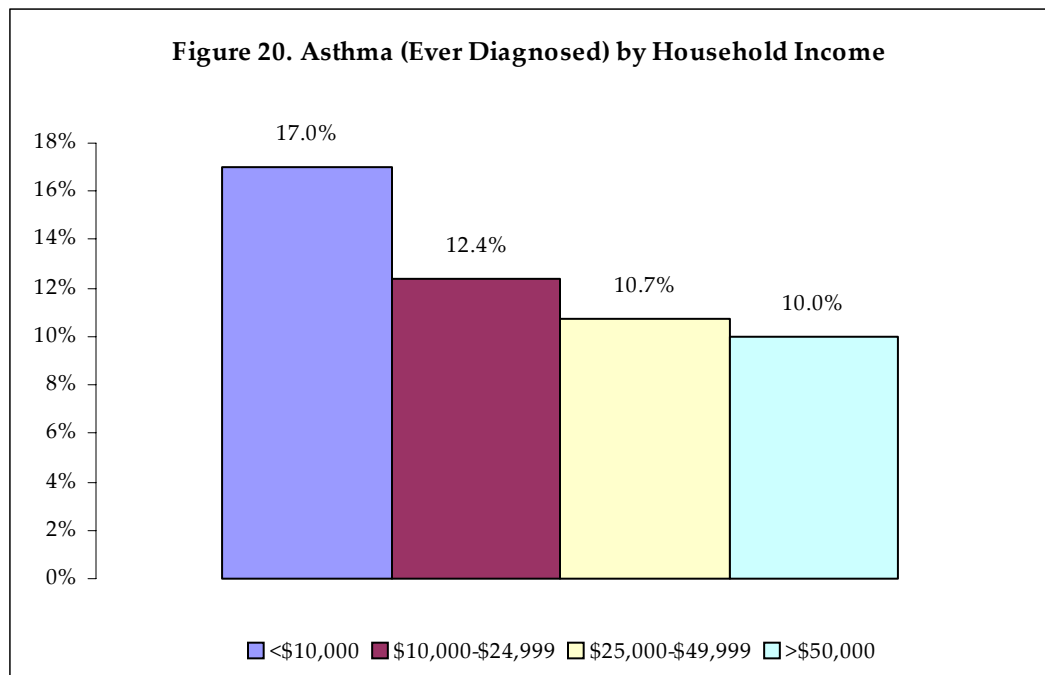
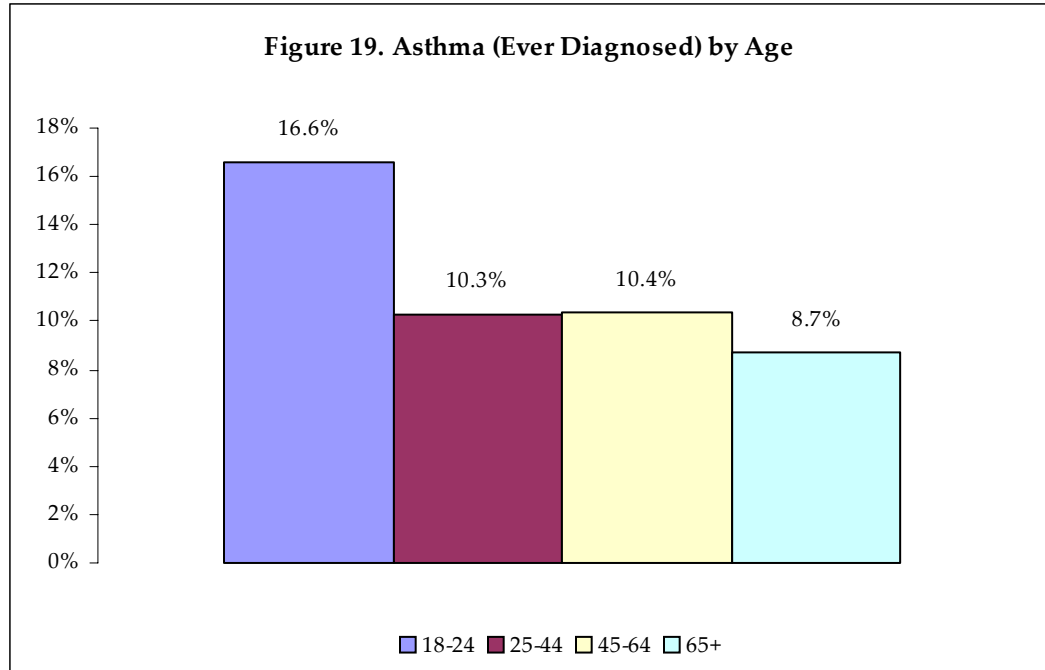
Description of Measures

The 2001 Davidson County Community Health Behavior Survey asked respondents to report on diagnoses that they had received from a physician. Two items were targeted directly at assessing the prevalence of asthma. All respondents were asked, "Did a doctor ever tell you that you had asthma?" If the answer was positive, the respondent was then asked, "Do you still have asthma?"

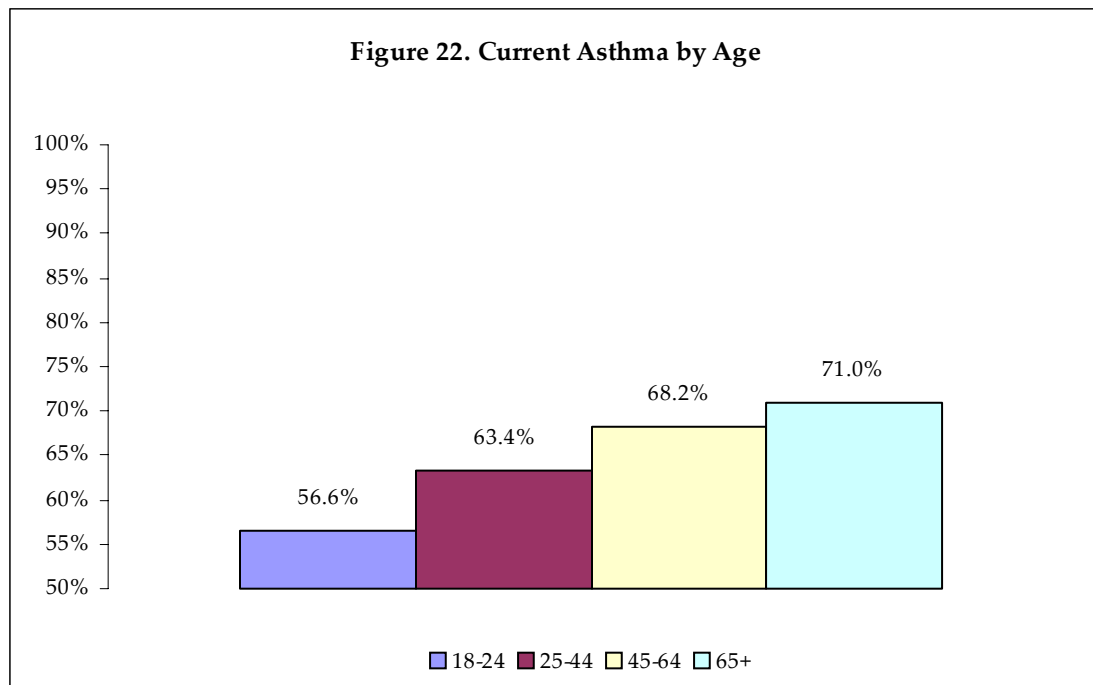
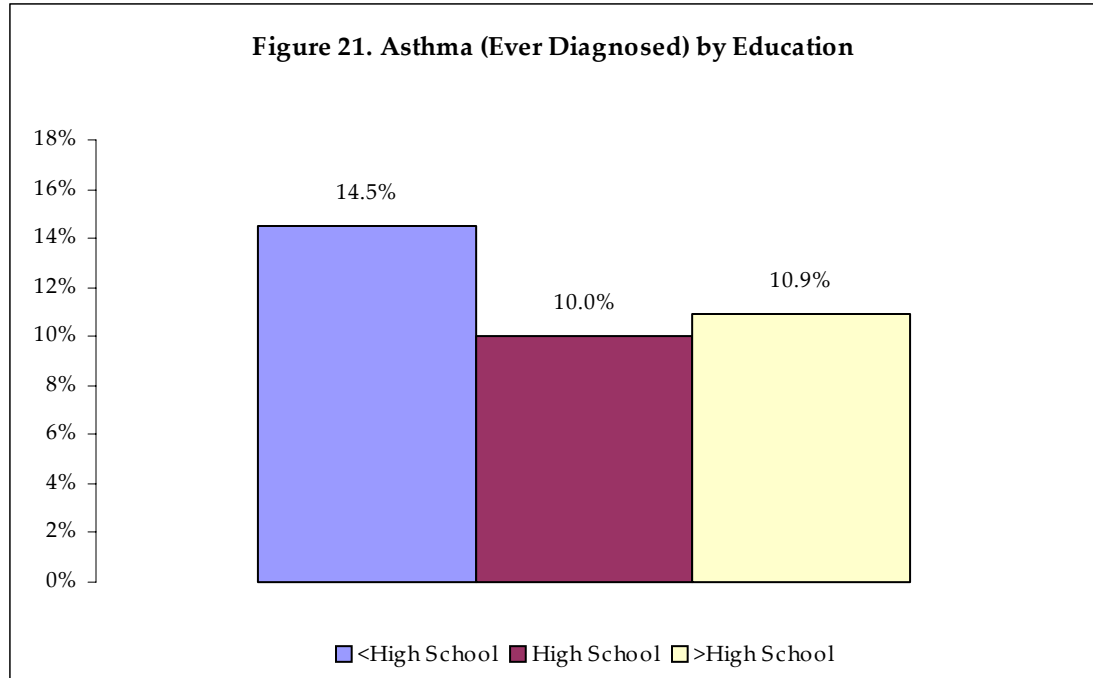
Results

Ever diagnosed with asthma

- Eleven percent (95% confidence interval, 10.4% - 11.7%) of those interviewed said they had been told they had asthma. This is similar to the national rate and higher than the statewide rate.
- A significantly higher percentage of residents 18-24 years of age reported having been diagnosed with asthma (16.6%). The three older groups were not significantly different from each other. (Figure 19)
- A similar pattern was seen between income groups, with those making less than \$10,000 a year more likely to be diagnosed with asthma than those with household incomes of \$25,000 or more a year. (Figure 20)

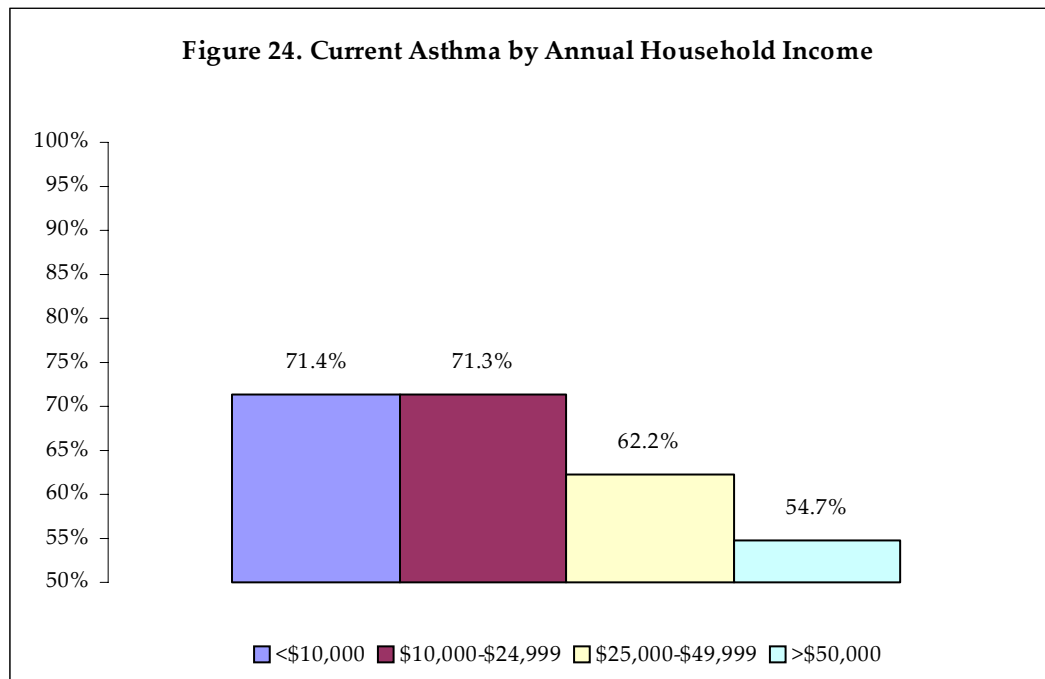
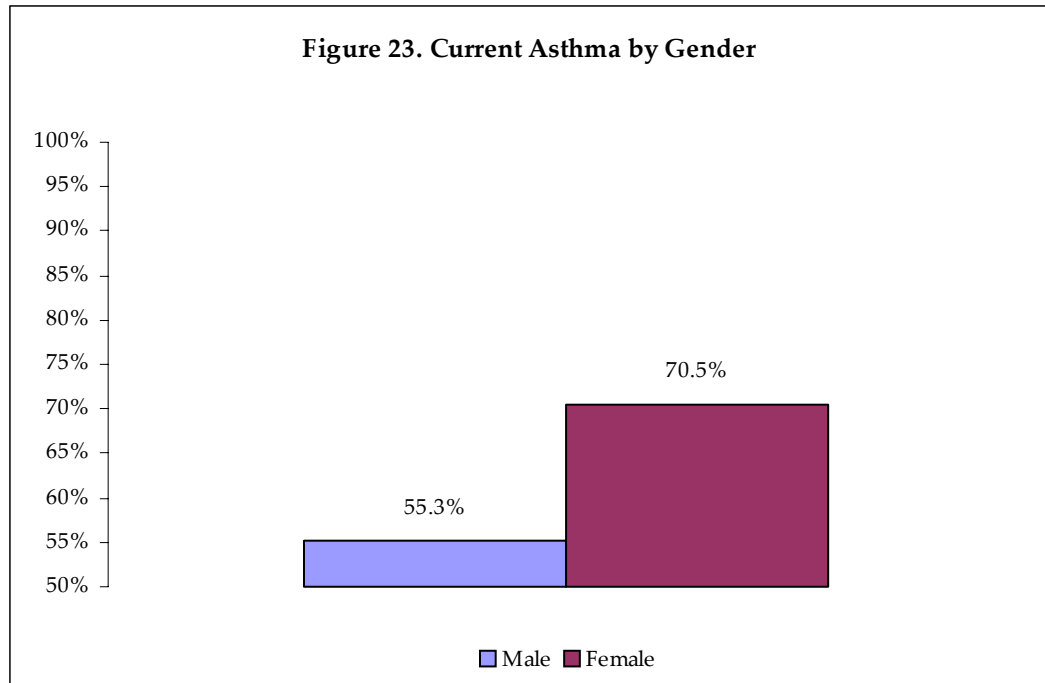


- A higher percentage of respondents with less than a high school education reported having been diagnosed with asthma. High school graduates with and without further education were similar in percentage of asthma diagnosis. (Figure 21)

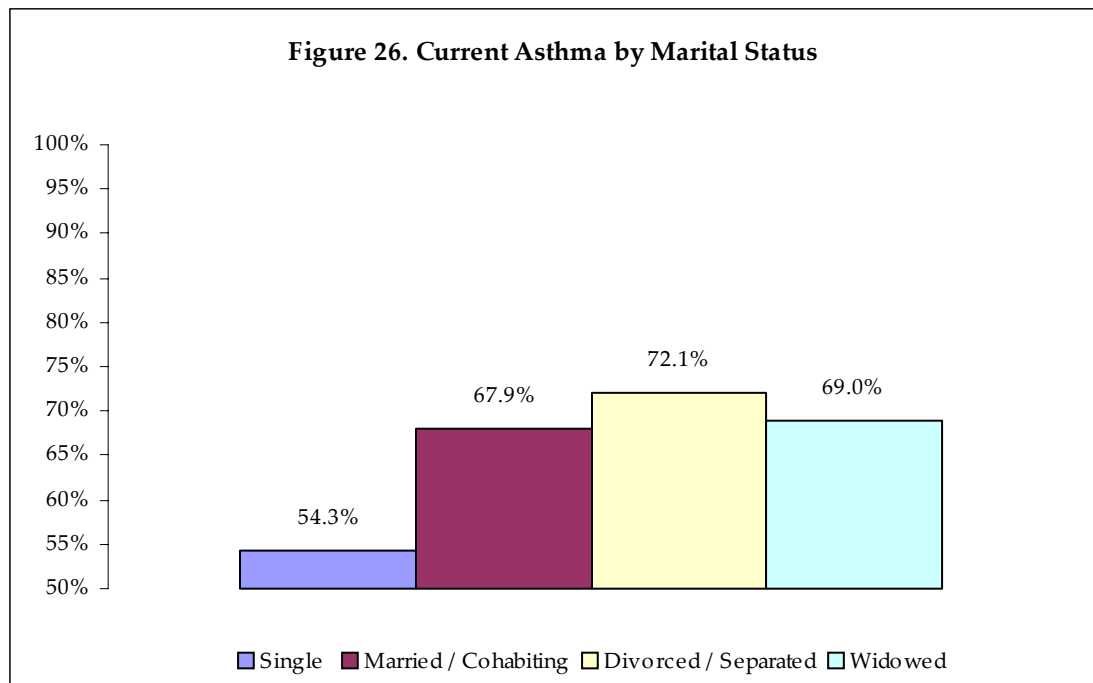
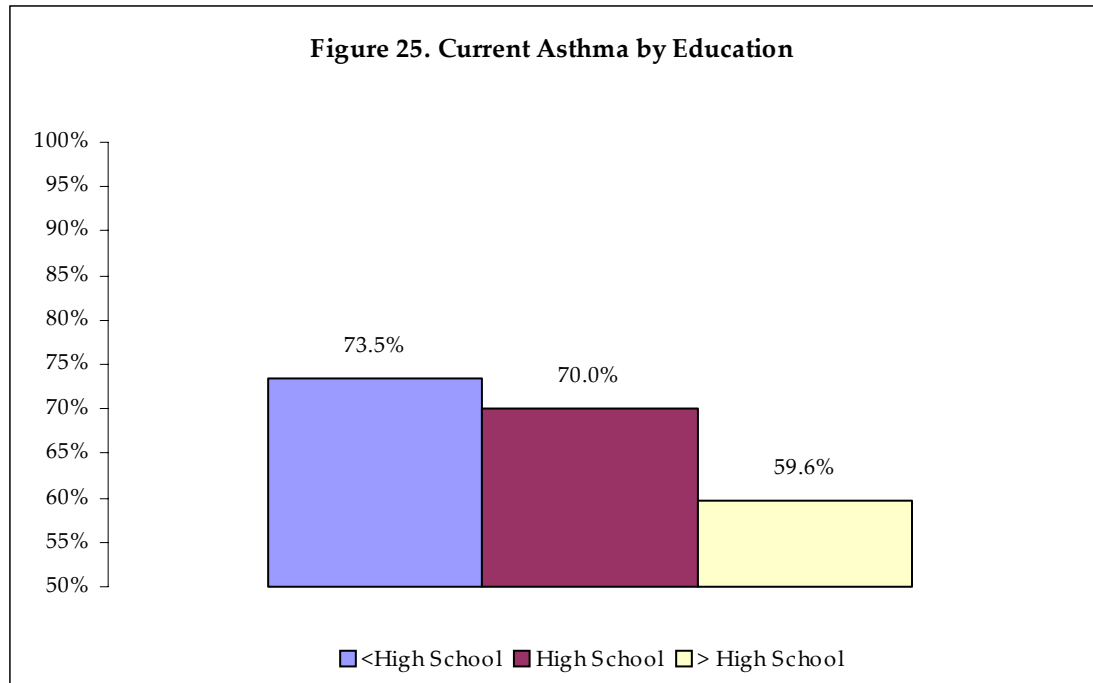


Still asthmatic (of those who had been previously diagnosed)

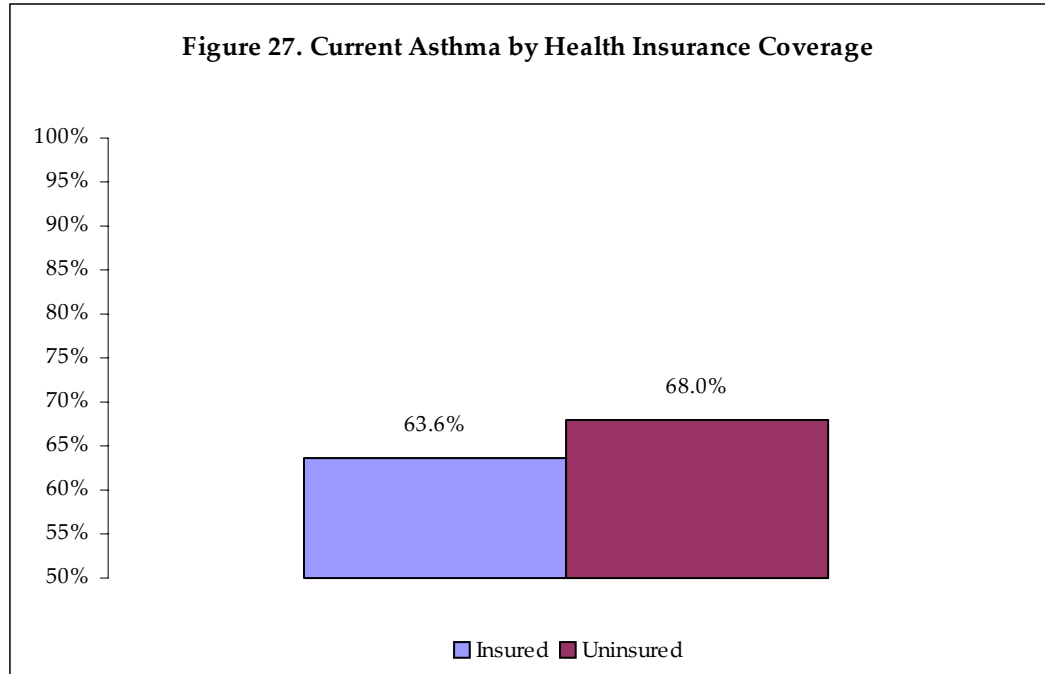
- Of survey respondents who had ever been diagnosed with asthma, 64.0% (95% confidence interval, 62.9% - 65.0%) still had asthma.
- The likelihood of reporting currently having asthma increased with age. (Figure 22)



- Over seventy-one percent (71.5%) of women were currently asthmatic, while only 55.3% of men were current sufferers. (Figure 23)
- In addition, residents who reported lower levels of income were more likely to currently have the disease, than those reporting higher income levels. (Figure 24)



- Respondents with no education past high school were more likely to still have asthma. (Figure 25)
- Single respondents were substantially less likely than others to currently have asthma. (Figure 26)



- Respondents without insurance coverage were more likely to still have asthma than those with health coverage. (Figure 27)

Discussion

The results found in the Davidson County BRFSS were similar to those found Nationwide and throughout Tennessee for diagnosing asthma and current sufferers. Racial and income disparities existed and were consistent with current research findings. Previous research indicated that minorities and individuals with low income were disproportionately represented among those suffering from asthma. Davidson County residents were not an exception to this nationwide trend.

References

1. Morris, Richard J. 1996. "Asthma: Specific Preventive Strategies." *Postgraduate Medicine* 100: 105-120.
2. Green, Lesley, Mindy Fullilove, David Evans, and Peggy Shepard. 2002. "Hey, Mom, Thanks!: Use of Focus Groups in the Developments of Place-Specific Materials for a Community Environmental Action Campaign." *Environmental Health Perspectives* 110:265-269.
3. Krieger, James, Tim Takaro, Carol Allen, Lin Song, Marcia Weaver, Sanders Chai, and Phillip Dickey. 2002. "The Seattle-King County Healthy Homes Project: Implementation of a Comprehensive Approach to Improving Indoor Environmental Quality for Low-Income Children with Asthma." *Environmental Health Perspectives* 110: 311-322.
4. Persky, Victoria, Lenore Coover, Eva Hernandez, Alicia Contreras, Julie Slezak, Julie Piorowski, Luke Curtis, Mary Turyk, Viswanathan Ramakrishnan, and Peter Scheff. 1999. "Chicago Community-Based Asthma Intervention Trial: Feasibility of Delivering Peer Education in an Inner-City Population." *Chest* 116:216-223

5. Rachelefsky, Gary S. 1995. "Helping Patients Live with Asthma." *Hospital Practice* November:51-64.
6. Spear, Stuart. 2002. "New Research Links Poor Air Quality to Increase in Asthma Cases." *Journal of Environmental Health* September: 47-48.
7. Ray, Nancy Fox, Mae Thamer, Bhar Fadillioglu, and Peter J. Gergen. 1998. " Race, income, urbanicity, and asthma hospitalization in California: A small area analysis." *Chest* 113:1277-1284.
8. Grant, Evalyn, Christopher Lyttle, and Kevin Weiss. 2000. " The Relation of Socioeconomic factors and Racial /Ethnic Differences in US Asthma Mortality." *American Journal of Public Health* 90:1923-1925.
9. Eisner, Mark. D., Patricia Katz, Edward Yelin, Stephen Shiboski, and Paul Blanc. 2001. " Risk Factors for Hospitalizations among Adults with Asthma: The Influence of Sociodemographic Factors and Asthma Severity." *Respiratory Research* 2:53-60.
10. Pew Environmental Health Commission. "Attack Asthma: Why American needs a Public Health Defense System to Battle Environmental Threats." Available at: <http://pewenvirohealth.jhsph.edu/html/home/home/html>. Accessed December 9, 2003.
11. Mosley, Adrian M. 1998. " Community partnerships in neighborhood-based health care: a response to diminishing resources." *Health and Social Work* 23:231-236.
12. Lehrer, Paul, Jonathan Feldman, Nicholas Giardino, Hye- Sue Song, and Karen Schmaling. 2002. " Psychological Aspects of Asthma." *Journal of Consulting and Clinical Psychology* 70: 691-711.
13. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/>. Accessed June 19, 2003.
14. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition in Two Volumes). Washington DC: January 2000.

Table 4. Asthma. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District, Age, Sex, and Race (95% Confidence Interval)

| <i>Demographics</i> | <u>Asthma Diagnosis</u> | <u>Still Asthmatic (of those ever diagnosed with asthma)</u> |
|---------------------------|-------------------------|--|
| <u>Total</u> | 11.1% (10.4 - 11.7) | 64.0% (62.9 - 65.0) |
| <u>Age</u> | | |
| 18-24 | 16.6% (9.6 - 24.4) | 56.6% (52.7 - 60.5) |
| 25-44 | 10.3% (13.7 - 19.5) | 63.4% (61.7 - 65.1) |
| 45-64 | 10.4% (9.3 - 11.4) | 68.2% (66.2 - 70.3) |
| 65+ | 8.7% (7.2 - 10.3) | 71.0% (68.6 - 73.5) |
| <u>Race</u> | | |
| African American | 12.5% (10.9 - 14.0) | 69.7% (67.5 - 71.8) |
| White | 10.6% (9.8 - 11.4) | 62.8% (61.5 - 64.1) |
| Other | 11.0% (6.7 - 15.2) | 53.3% (46.6 - 60.1) |
| <u>Gender</u> | | |
| Male | 10.0% (8.9 - 11.2) | 55.3% (53.4 - 57.2) |
| Female | 12.0% (11.1 - 12.9) | 70.5% (69.2 - 71.8) |
| <u>Income</u> | | |
| < \$10,000 | 17.0% (12.7 - 21.4) | 71.4% (66.1 - 76.6) |
| \$10,000 - \$24,999 | 12.4% (10.9 - 13.9) | 71.3% (69.2 - 73.4) |
| \$25,000 - \$49,999 | 10.7% (9.5 - 11.9) | 62.2% (60.3 - 64.1) |
| > \$50,000 or more | 10.0% (8.6 - 11.4) | 54.7% (52.4 - 57.1) |
| <u>Education</u> | | |
| < High School | 14.5% (12.2 - 16.9) | 73.5% (70.6 - 76.4) |
| High School | 10.0% (8.7 - 11.4) | 70.0% (68.0 - 72.0) |
| > High School | 10.9% (10.0 - 11.9) | 59.6% (58.2 - 61.1) |
| <u>Marital Status</u> | | |
| Single | 11.5% (9.8 - 13.1) | 54.3% (52.5 - 56.1) |
| Married/Cohabiting | 13.2% (11.7 - 14.7) | 67.9% (65.5 - 70.4) |
| Divorced/Separated | 9.8% (8.7 - 10.8) | 72.1% (70.1 - 74.1) |
| Widowed | 9.0% (7.1 - 10.9) | 69.0% (65.8 - 72.1) |
| <u>Insurance Coverage</u> | | |
| Insured | 11.1% (10.4 - 11.9) | 63.6% (62.4 - 64.7) |
| Uninsured | 10.4% (8.7 - 12.1) | 68.0% (65.5 - 70.6) |

Influenza and Pneumonia Immunization

Influenza (flu) is a contagious viral disease that attacks the respiratory tract. Each year, from ten to twenty percent of the U.S. population contracts influenza. Most of these people recover; however, in an average year, 36,000 die of flu and complications, and 114,000 are hospitalized. The most common complications of flu are pneumonia, bronchitis, sinus infections, and ear infections. Flu can also aggravate chronic conditions, especially asthma and congestive heart failure.¹

Pneumococcal bacterial pneumonia accounts for an estimated 40,000 deaths annually in the United States² and is a common complication of influenza.³

Three groups of people are most at risk of serious flu complications: very young children, adults over 65 years of age, and people with diabetes and other chronic diseases. People over 65 account for 90% of deaths due to influenza and pneumonia.⁴ Diabetics are three times more likely than persons without diabetes to die of complications of flu, and annually 10,000 to 30,000 diabetics die from complications of flu or pneumonia.⁵ For this reason, CDC's Advisory Committee on Immunization Practices (ACIP) recommends that all people with diabetes and people over 65 be immunized against influenza every year, and once in a lifetime against pneumococcal disease.⁴

National and State Prevalence

Nationwide, in 54 states, the median percentage of persons who had a flu shot in the past 12 months was 31.8%. In Tennessee in 2001, 33.1% had received a flu shot within one year (95% confidence interval 31.3% – 35.0%, n=964).

Nationwide, in 2001, 21.8% reported being vaccinated against pneumonia (median percentage, 54 states). In Tennessee, the percentage was lower, 19.8% (95% confidence interval 18.2% – 21.3%).⁷

Healthy People 2010

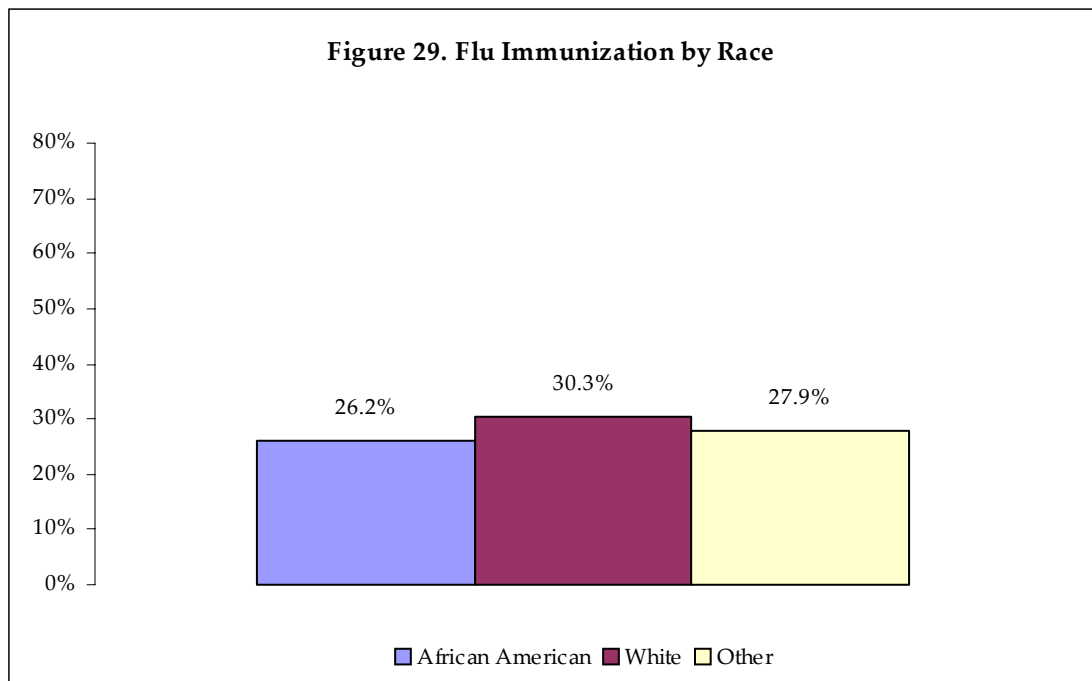
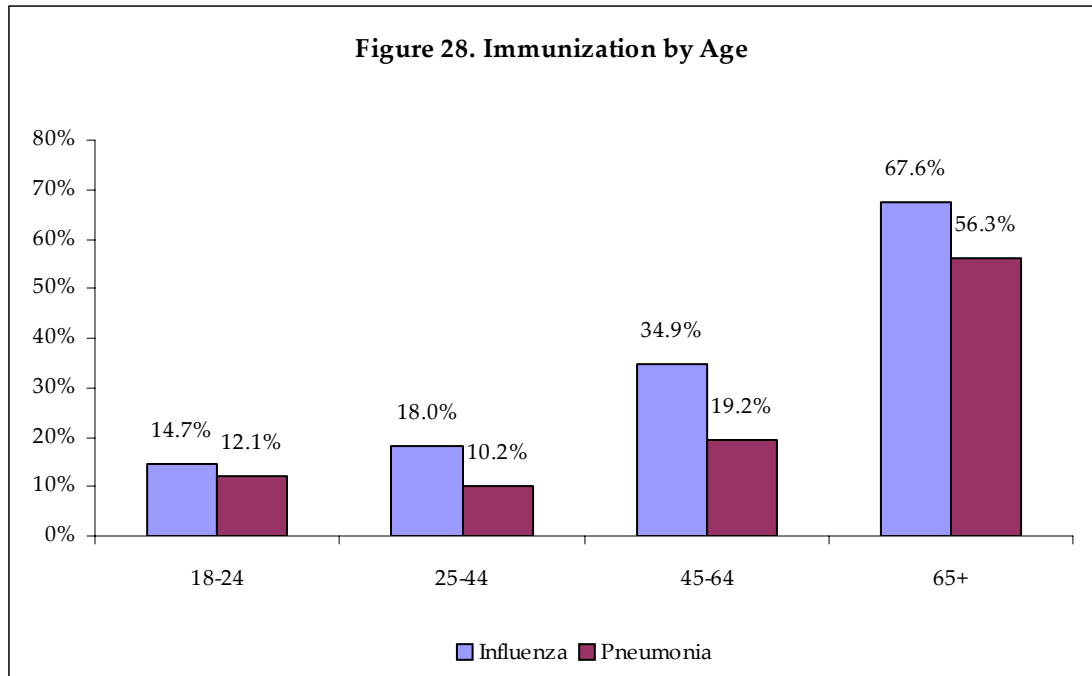
Healthy People 2010 Objective 14-29 states “Increase the proportion of noninstitutionalized adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease.” The target is 90% of noninstitutionalized adults aged 65 years and older and 60% of noninstitutionalized high risk adults aged 18-64 years.⁶

Description of Measures

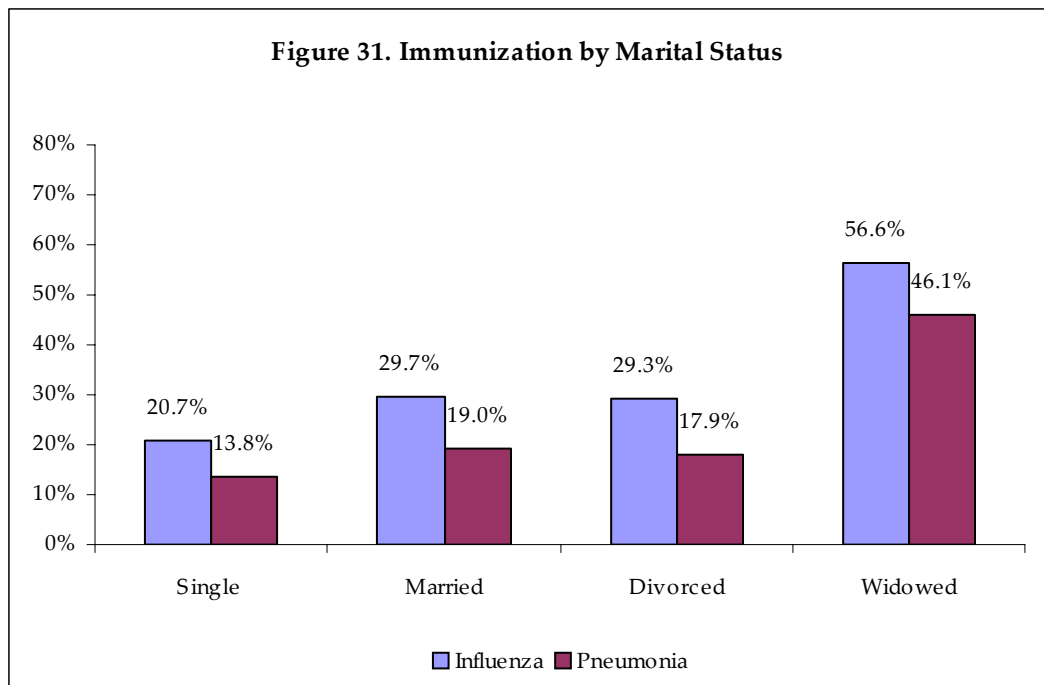
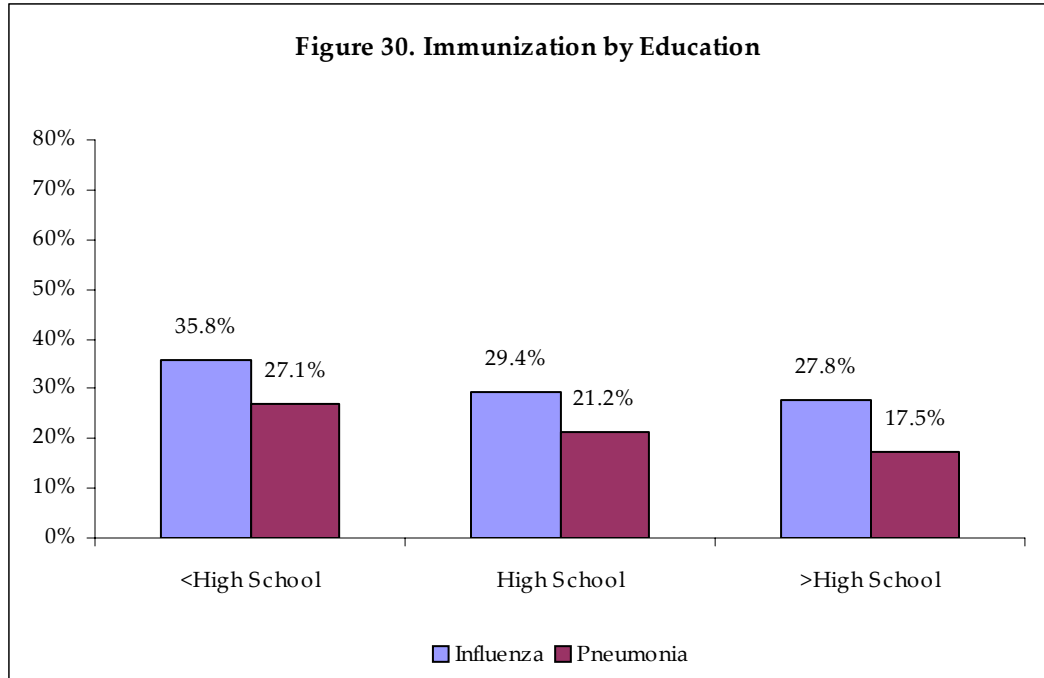
The Community Health Survey used two questions from the BRFSS regarding immunizations: “During the last 12 months, have you had a flu shot?” and “Have you ever had a pneumonia vaccination?”

Results

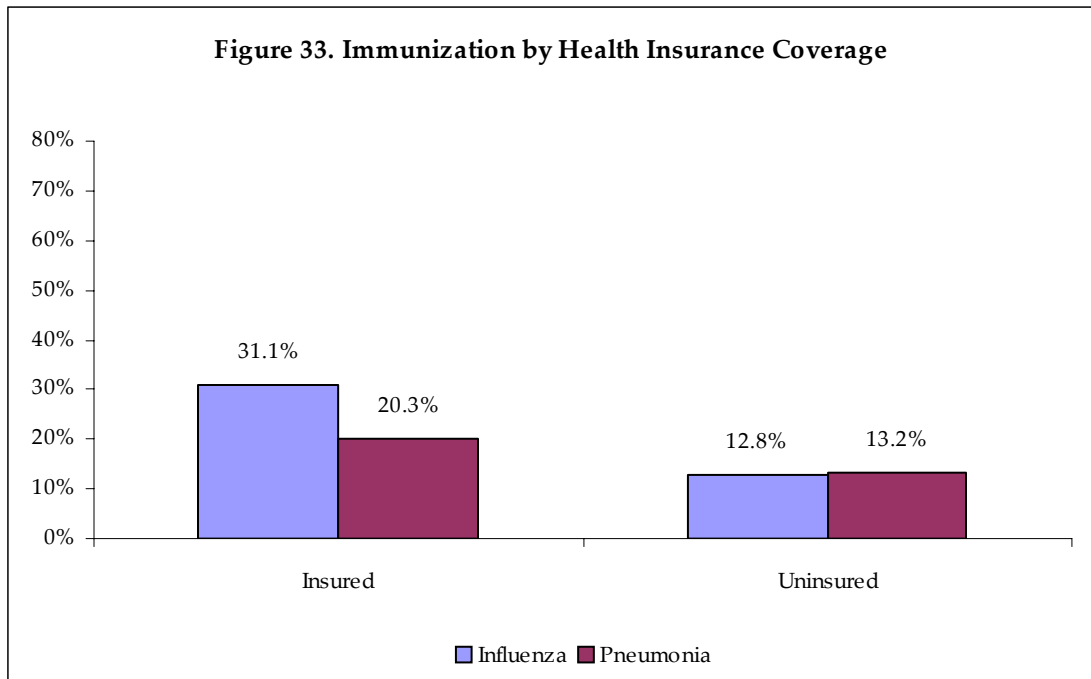
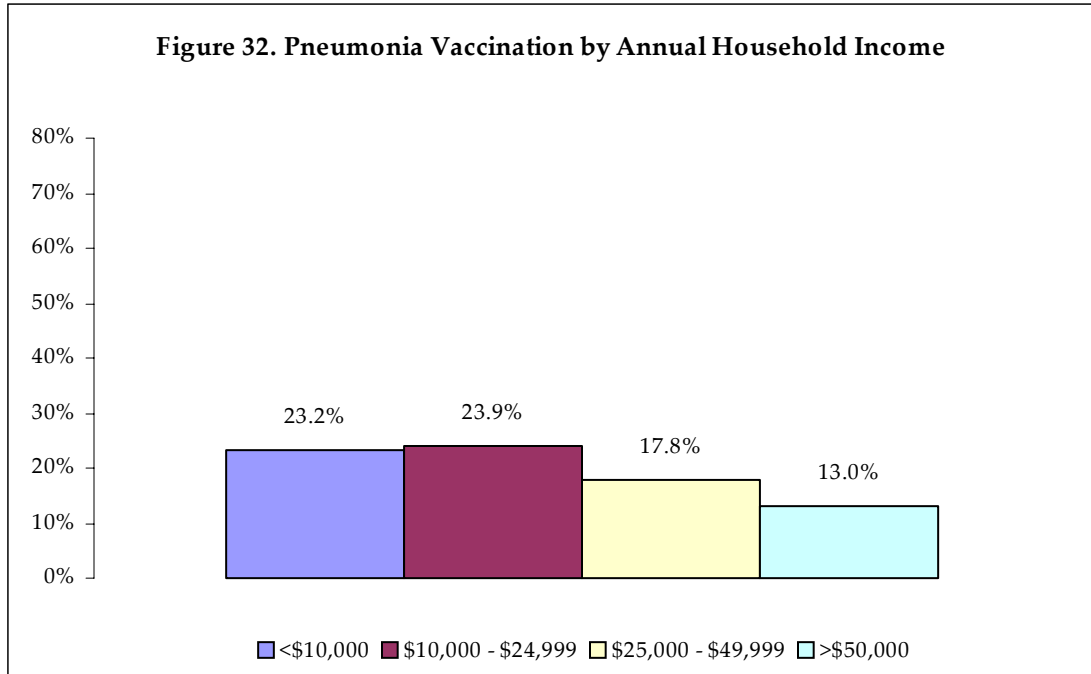
- Of the Nashville sample, 31.4% (95% confidence interval 30.4% – 32.4%) had received a flu shot in the past 12 months.
- Twenty-one percent (95% confidence interval 30.4% – 32.4%) had ever been vaccinated against pneumonia (95% confidence interval 20.4% – 22.2%).



- Older age groups were most likely to have had either immunization. The percentage of adults age 65 and over who were immunized was 67.6% for flu and 56.3% for pneumonia. (Figure 28)
- More Whites than African Americans or other races were immunized against flu. There was no significant racial difference for pneumonia immunization. (Figure 29)



- A higher percentage of people with less than high school education were immunized against both flu and pneumonia. (Figure 30)
- Widowed persons were most likely to be immunized, and never-married singles were least likely to be immunized. (Figure 31)



- Higher percentages of persons with lower household incomes were vaccinated against pneumonia. Income did not make a significant difference for flu immunization. (Figure 32)
- Those with health insurance were more likely than the uninsured to be immunized; 31.1% compared to 12.8% for influenza, and 20.3% compared to 13.2% for pneumonia. (Figure 33)

References

1. Centers for Disease Prevention and Control, National Center for Infectious Diseases. Influenza: The Disease [web page]. Available at: <http://www.cdc.gov/ncidod/diseases/flu/fluinfo.htm>. Accessed July 3, 2003.
2. Pneumococcal and influenza vaccination levels among adults aged > or = 65 years – United States, 1995. *Morbidity and Mortality Weekly Report* Oct 3 1997;46(39):913-919.
3. Influenza and pneumococcal vaccination levels among persons aged > or = 65 years—United States, 2001. *Morbidity and Mortality Weekly Report* Nov 15 2002;51(45):1019-1024.
4. Centers for Disease Control and Prevention. Diabetes: Disabling, Deadly, and on the Rise. Available at: www.cdc.gov/diabetes/pubs/glance.htm. Accessed 4/15/2003.
5. Centers for Disease control and Prevention. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report* 2003;52(No. RR-8):1-26.
6. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington, DC: January 2000.
7. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/>. Accessed June 19, 2003. Accessed July 2, 2003.

Table 5. Flu and Pneumonia Immunization. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Age, Gender, Race, and Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Influenza Immunization in Past Year</u> | <u>Pneumococcal Immunization (Ever)</u> |
|---------------------------|--|---|
| <u>Total</u> | 31.4% (30.4 - 32.4) | 21.3% (20.4 - 22.2) |
| <u>Age</u> | | |
| 18-24 | 14.7% (12.0 - 17.5) | 12.1% (9.6 - 14.6) |
| 25-44 | 18.0% (16.7 - 19.3) | 10.2% (9.1 - 11.2) |
| 45-64 | 34.9% (32.9 - 37.0) | 19.2% (17.5 - 20.9) |
| 65+ | 67.6% (65.0 - 70.1) | 56.3% (53.6 - 59.0) |
| <u>Race</u> | | |
| African American | 26.2% (24.2 - 28.3) | 19.4% (17.5 - 21.3) |
| White | 30.3% (29.0 - 31.5) | 19.4% (18.4 - 20.5) |
| Other | 27.9% (21.9 - 34.0) | 20.9% (15.4 - 26.4) |
| <u>Gender</u> | | |
| Male | 29.3% (27.5 - 31.0) | 18.7% (17.2 - 20.2) |
| Female | 29.1% (27.8 - 30.4) | 20.4% (19.3 - 21.6) |
| <u>Income</u> | | |
| < \$10,000 | 27.0% (21.9 - 32.2) | 23.2% (18.3 - 28.1) |
| \$10,000 - \$24,999 | 30.4% (28.3 - 32.5) | 23.9% (21.9 - 25.9) |
| \$25,000 - \$49,999 | 26.3% (24.6 - 28.0) | 17.8% (16.3 - 19.3) |
| > \$50,000 or more | 28.3% (26.2 - 30.5) | 13.0% (11.4 - 14.6) |
| <u>Education</u> | | |
| < High School | 35.8% (32.7 - 39.0) | 27.1% (24.1 - 30.0) |
| High School | 29.4% (27.3 - 31.4) | 21.2% (19.3 - 23.0) |
| > High School | 27.8% (26.5 - 29.1) | 17.5% (16.3 - 18.6) |
| <u>Marital Status</u> | | |
| Single | 20.7% (19.2 - 22.1) | 13.8% (12.6 - 15.0) |
| Married/Cohabiting | 29.7% (27.3 - 32.1) | 19.0% (17.0 - 21.1) |
| Divorced/Separated | 29.3% (27.3 - 32.3) | 17.9% (16.2 - 19.6) |
| Widowed | 56.6% (53.2 - 59.9) | 46.1% (42.7 - 49.4) |
| <u>Insurance Coverage</u> | | |
| Insured | 31.1% (30.0 - 32.3) | 20.3% (19.3 - 21.3) |
| Uninsured | 12.8% (11.0 - 14.6) | 13.2% (11.4 - 15.1) |

Utilization of Screening Tests for Breast, Cervical, and Prostate Cancers

Breast Cancer

Breast cancer is the second leading cause of cancer deaths among North American women.¹ Racial differences in breast and cervical cancer incidence and mortality have been documented;² although survival rates in cancer patients have shown improvement, survival rates for breast cancer tend to be lower among racial minorities.³ National data show that African American women have the highest mortality rates from breast and cervical cancers.¹ Late stage diagnosis, lower use of preventive early detection services, and less access to optimal treatment may explain the observed differences. Regular screening mammography has shown clear benefits in reducing breast cancer mortality.^{4,5} The U.S. Preventive Services Task Force recommends routine mammography screening in women who are at average risk who are 40 years of age or older.⁶ Improved use of preventive/early detection services may improve the poor survival rates observed among ethnic minorities.

National and State Prevalence

In 2000, 62.2% of women surveyed by the CDC BRFSS had ever had a mammogram. Of those women who had ever had a mammogram, 69.1% had one in the past year; another 15.5% had a mammogram in the past 2 years. In Tennessee, 62.9% of women had a mammogram, 69.1% of them in the last year and an additional 15.3% in the last two years.⁷

Healthy People 2010

The Healthy People 2010 mammography goal aims for 70% of women age 50 years and older to report having received an annual mammogram.⁸

Cervical Cancer

Older, poorer, and minority women living in the United States are the most likely to die of invasive cervical cancer.² Pap testing is an essential component of early detection and treatment. Mortality rates are substantially decreased when cervical cancers are detected and treated at an early stage.⁹

Cervical cancer screening with Pap smear testing is recommended for all women who are sexually active and who have a cervix. Pap smears should begin with the onset of sexual activity and should be repeated at least every 3 years. A recent publication of the 2000 National Health Interview Survey did not indicate improvement in screening among groups with greatest need: those without a usual source of care and the uninsured.¹⁰

National and State Prevalence

In 2000, the median percentage of women who had ever had a Pap smear was 94.8%. Of these women, 70.5% had a Pap test in the past year, and an additional 16.9% in the

past 3 years. In Tennessee in 2000, 93.6% of women reported ever having had a Pap test, 74.8% of them in the past year and 15.1% more in the past three years.⁷

Healthy People 2010

The Healthy People 2010 objectives related to Pap testing are:

- Increase the percentage of women 18 years and older who have ever received a Pap test to 97% (1998 baseline 92%).
- Increase the percentage of women who received a Pap test within the preceding 3 years to 90% (1998 baseline 79%).⁸

Prostate Cancer

Prostate cancer is the second leading cause of death among men.¹ The principal screening tests for prostate cancer are the digital rectal examination (DRE) and the prostate specific antigen (PSA) test. Digital rectal examinations are performed on both men and women to check for conditions other than prostate cancer. However, as the concern in this survey was with prostate cancer screening, only male respondents were asked if they had ever had a digital rectal exam. The PSA has been the subject of controversy and hope.^{9,11} While some observational studies suggest some benefit of reducing deaths due to prostate cancer,¹² others believe that the extensive use of PSA will lead to increased diagnoses of prostate cancers resulting in probably harmful therapy without reducing mortality and morbidity.^{9,13} There is currently no evidence that screening for the early detection and treatment of prostate cancer results in reduction in prostate cancer related mortality.^{9,11} Recently updated guidelines of the American Cancer Society recommends that the annual examination of men age 50 and older should include a serum PSA measurement and DRE exam.¹⁴ PSA screening should begin at age 45 for African American men and those with a family history (first-degree relative) of prostate cancer. Men with multiple first-degree relatives diagnosed at an early age should begin testing at 40.

Healthy People 2010

The relevant Healthy People 2010 objective is to reduce the prostate cancer death rate to 28.7 deaths per 100,000 males (down from the 1997 baseline of 33.8 per 100,000 males). There were no targets for prostate cancer screening tests.⁸

Description of Measures

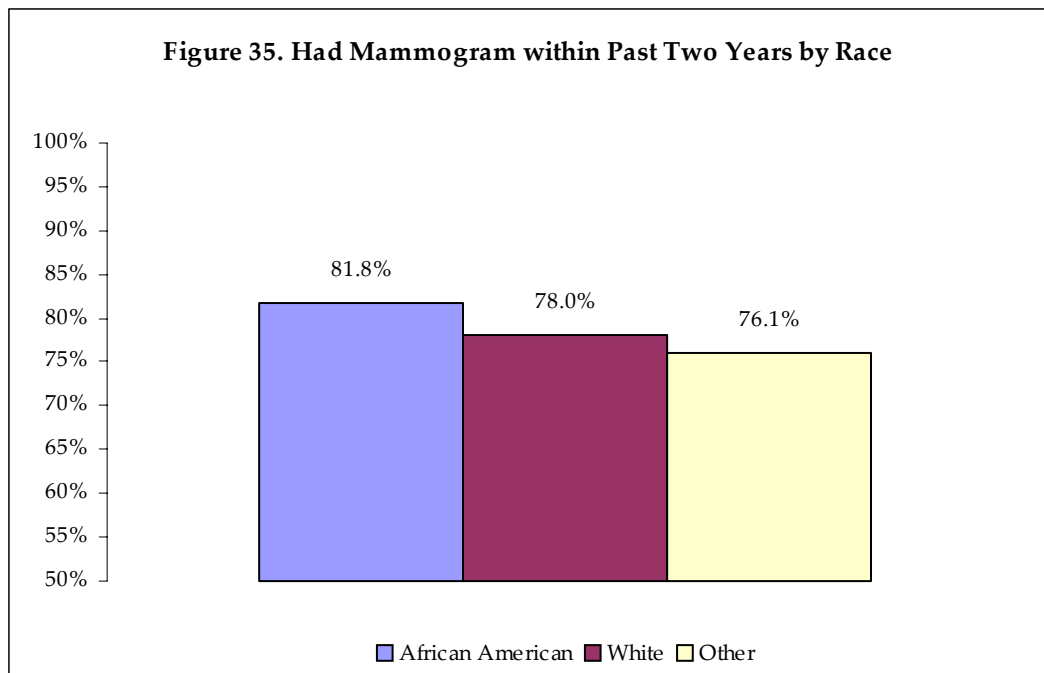
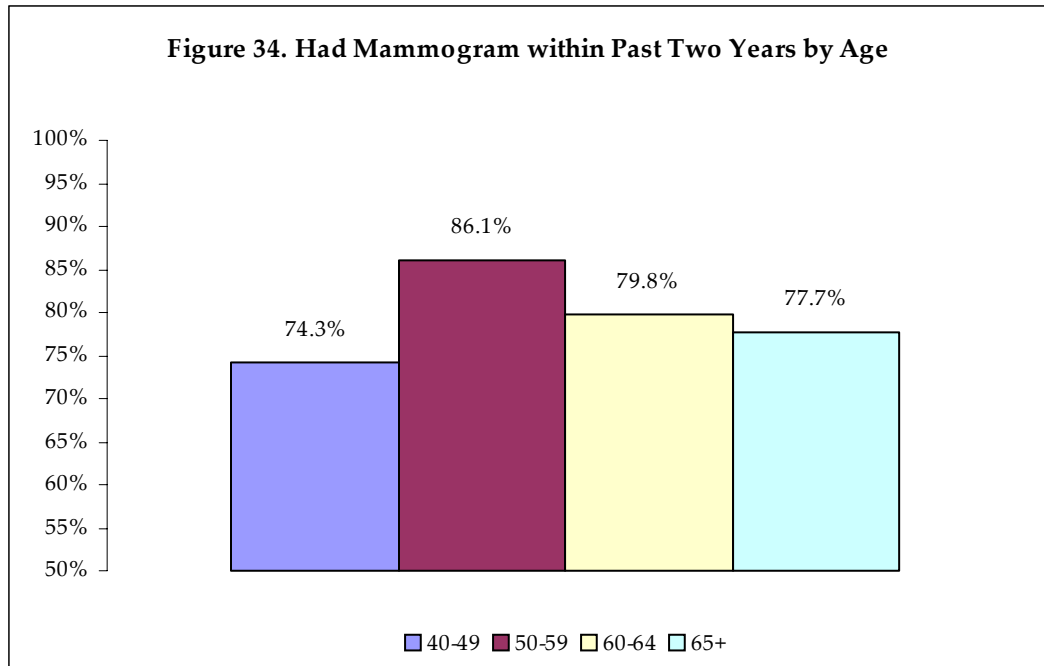
Female respondents were asked, "A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?" Respondents who answered affirmatively were asked, "How long has it been since your last mammogram?" All women were also asked, "A Pap smear is a test for cancer of the cervix. Have you ever had a Pap smear?" Those who reported that they had were then asked, "How long has it been since you had your last Pap smear?"

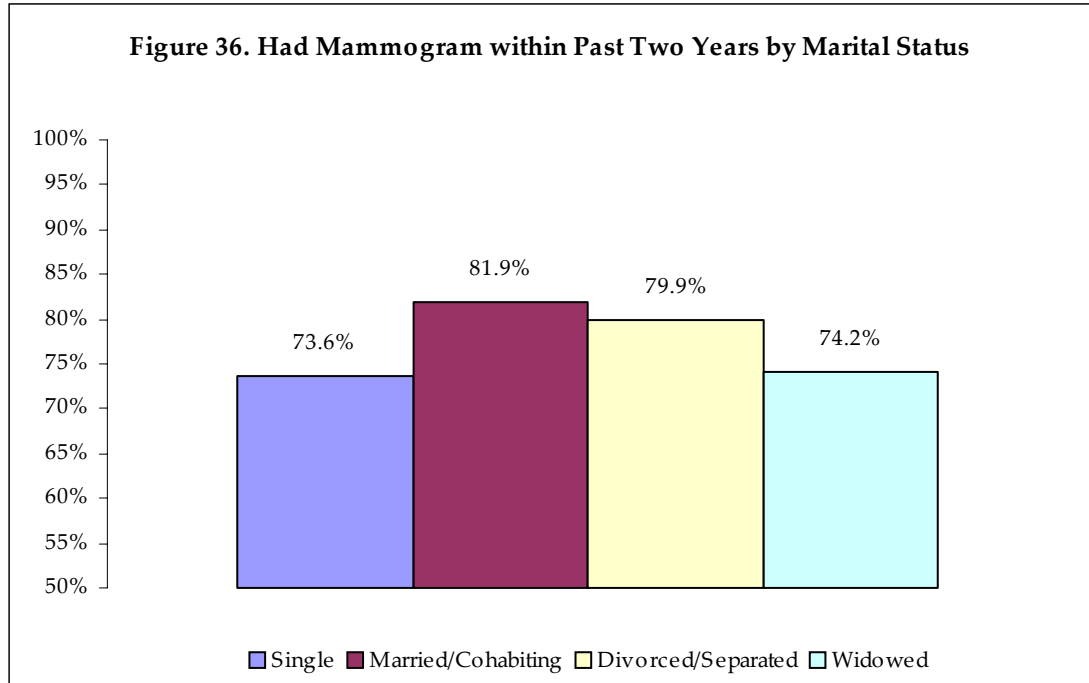
The survey items presented to male respondents were: "A digital rectal exam is when a doctor or other health professional inserts a finger in the rectum to check for prostate cancer and other health problems. Have you ever had this exam?" and "Have you ever had a blood test for prostate specific antigen, also known as a PSA test?"

Results

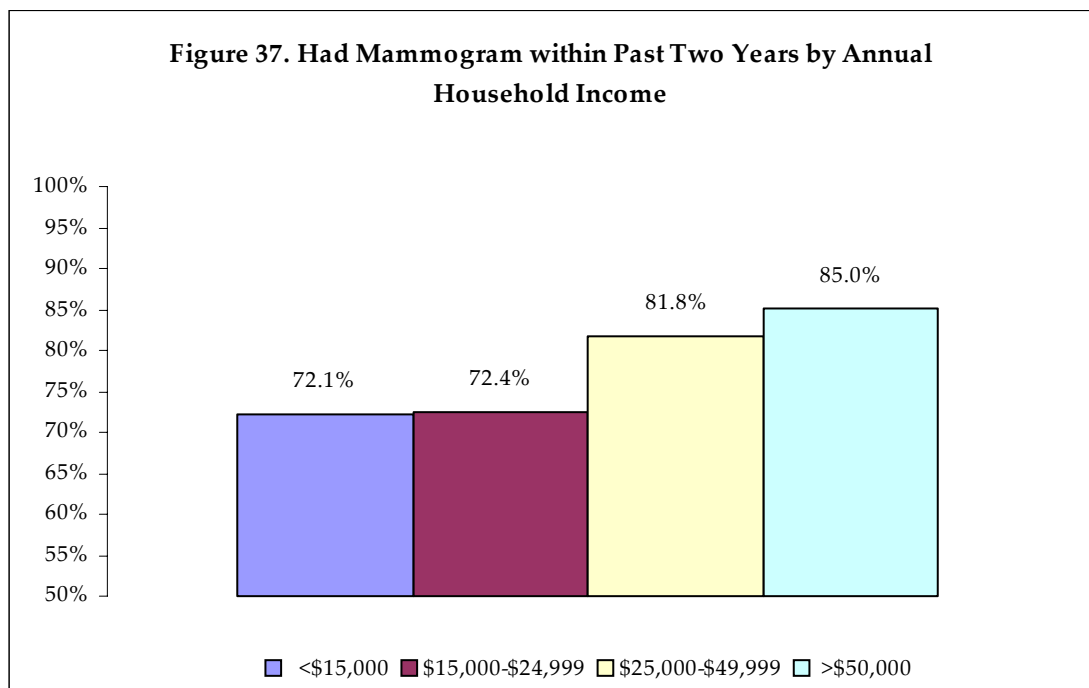
Mammography

- In Nashville, 85.8% (95% confidence interval 84.5% - 87.1%) of women age 40 and over had ever had a mammogram, and 78.8% (95% confidence interval 77.3% - 80.3%) said they had one within the past 2 years.
- The age group 50 to 59 was most likely to have had a mammogram ever and within the past 2 years. (Figure 34)

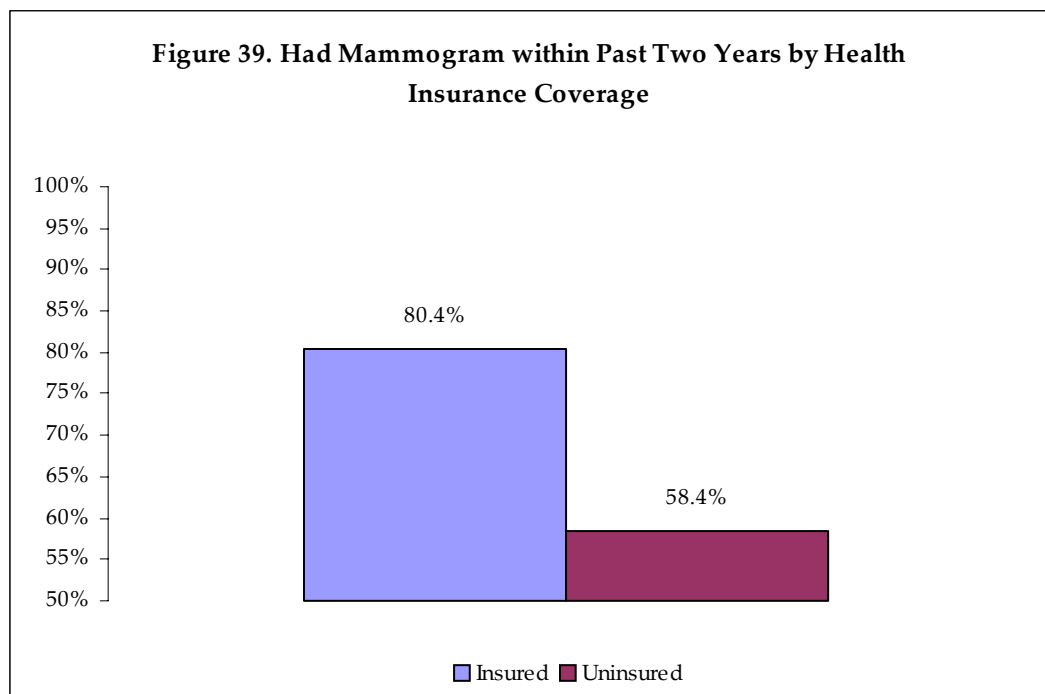
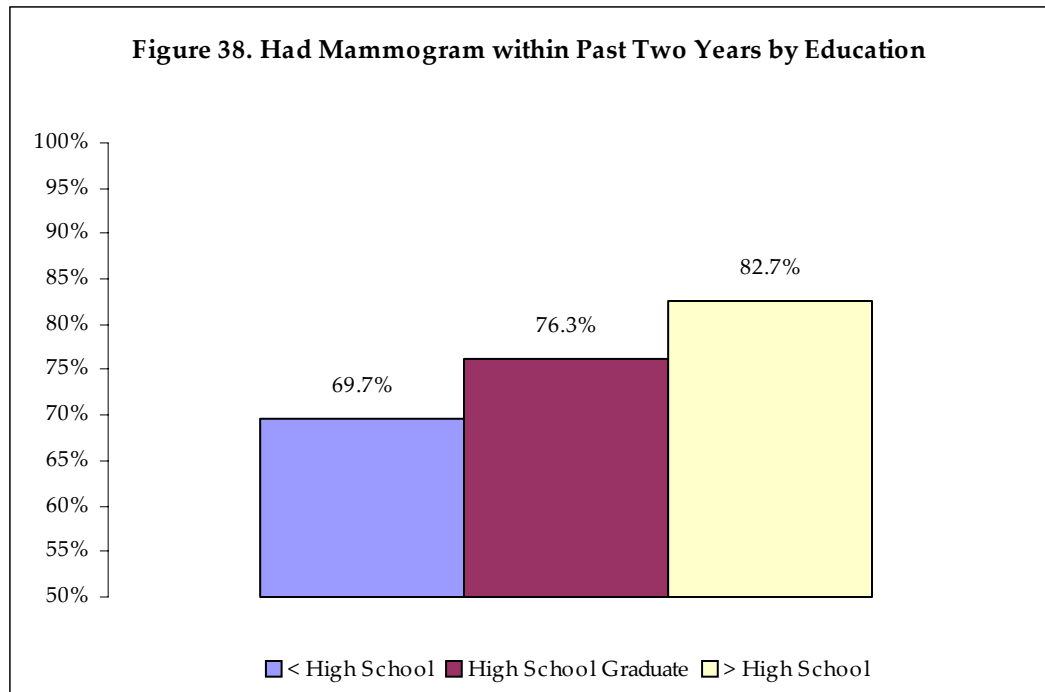




- African American women were more likely than White or Other races to report they had a mammogram within the past two years; however, the 95% confidence intervals overlapped slightly. Women of all races were nearly equally likely to report ever having had a mammogram. (Figure 35)
- Widows were least likely to have ever had a mammogram and to have had one in the past 2 years. (Figure 36)
- Women with household incomes of \$25,000 or more were more likely to have had mammograms ever and within the past two years, than women with lower household incomes. (Figure 37)

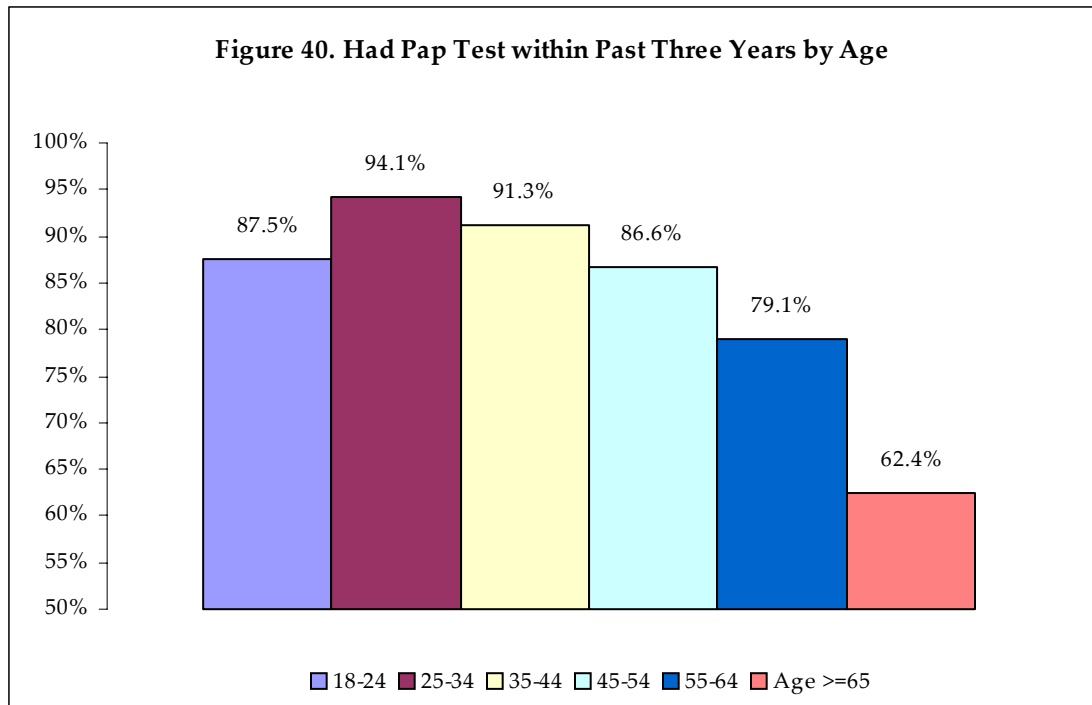


- The percentages of women who said they had mammograms increased with increasing education; however, the confidence intervals overlapped slightly. (Figure 38)
- There was a substantial difference between women who had health insurance and those who did not in likelihood of having ever had a mammogram and having had one within the last 2 years. (Figure 39)

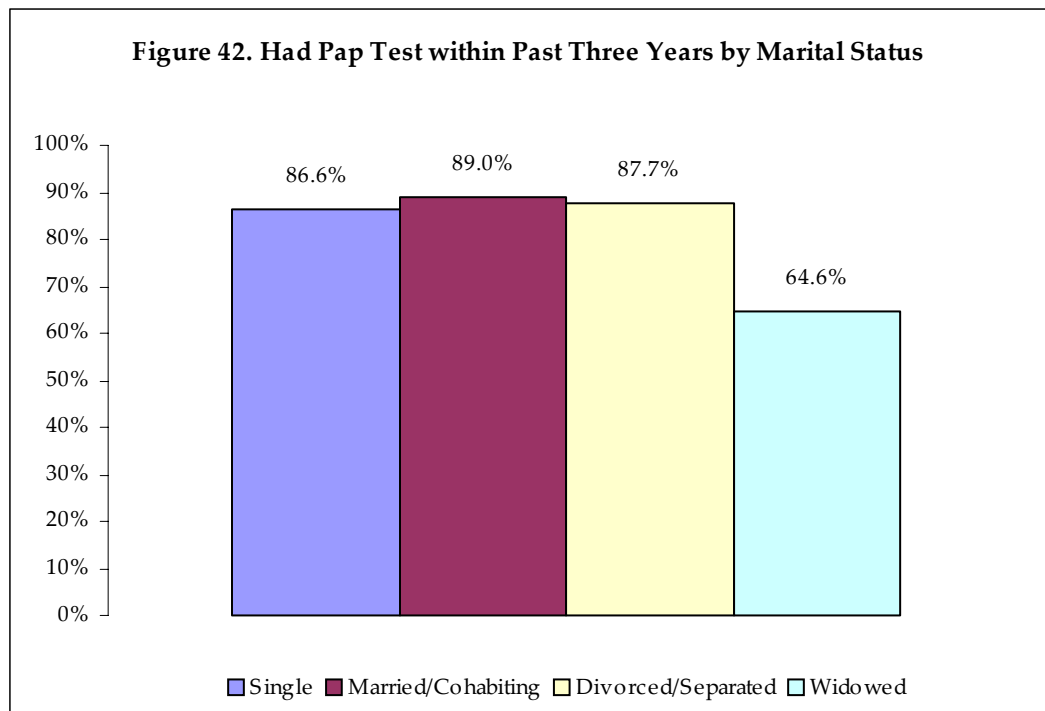
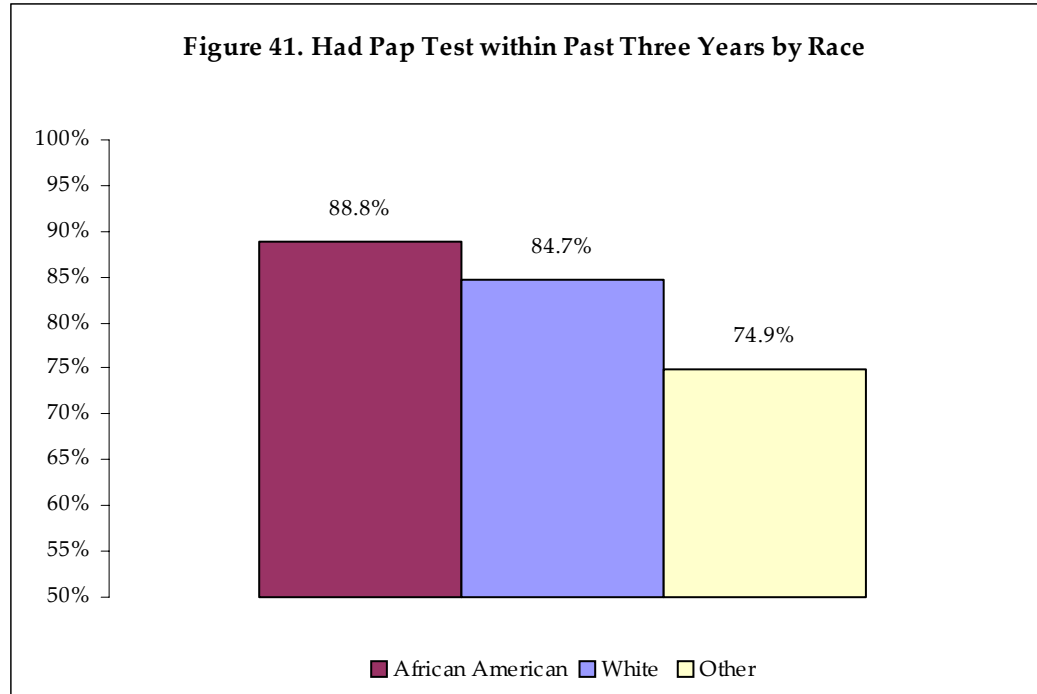


Pap Test

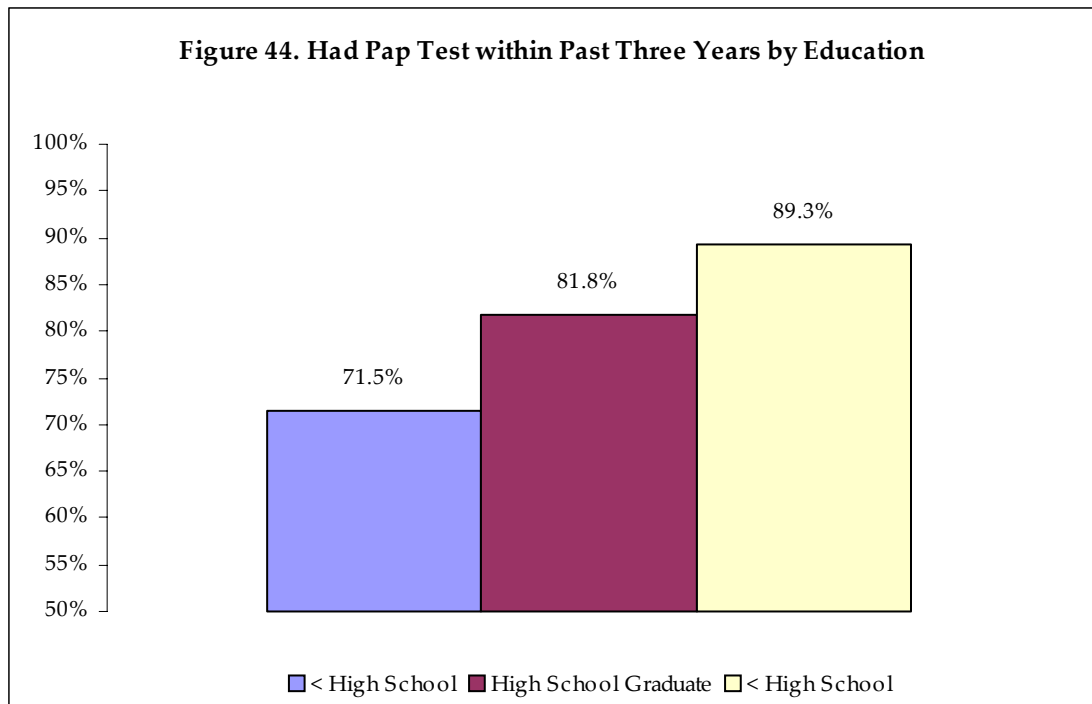
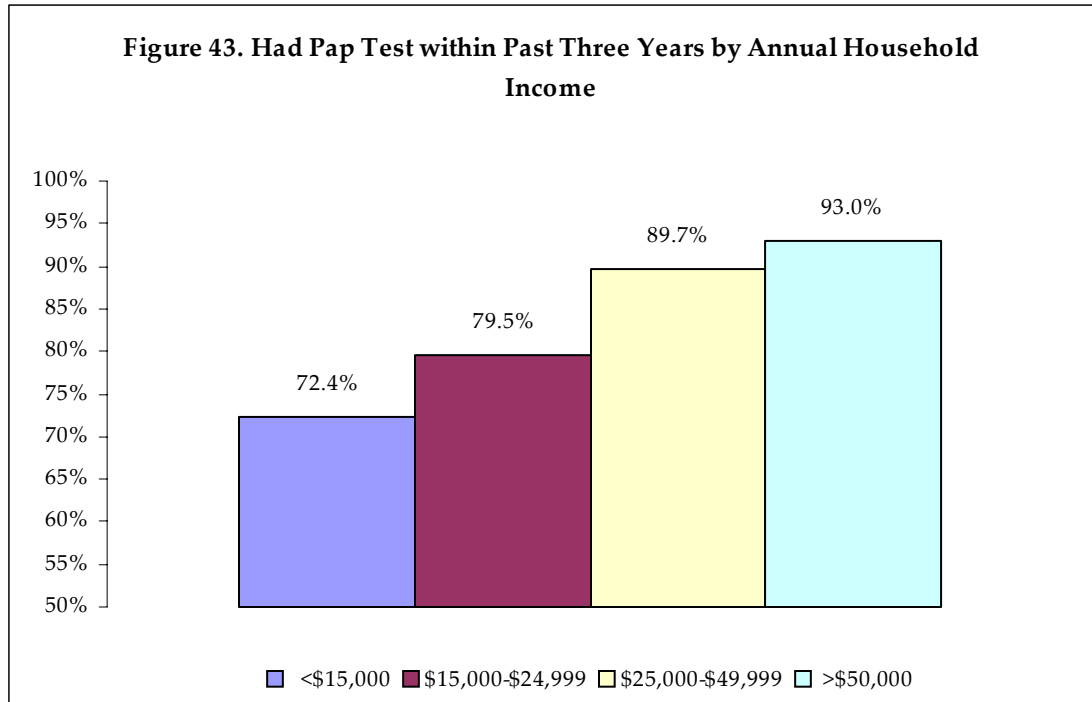
- In Nashville, 94.4% (95% confidence interval 93.5 – 94.9) of women said they had ever had a Pap test, and 87.7% (95% confidence interval 86.7 – 88.6) said they had one within 3 years.
- The youngest (18-24) and oldest (65 and over) groups were least likely to have ever had a Pap test. The age group 25-44 years was most likely to have had a Pap test within 3 years. (Figure 40)



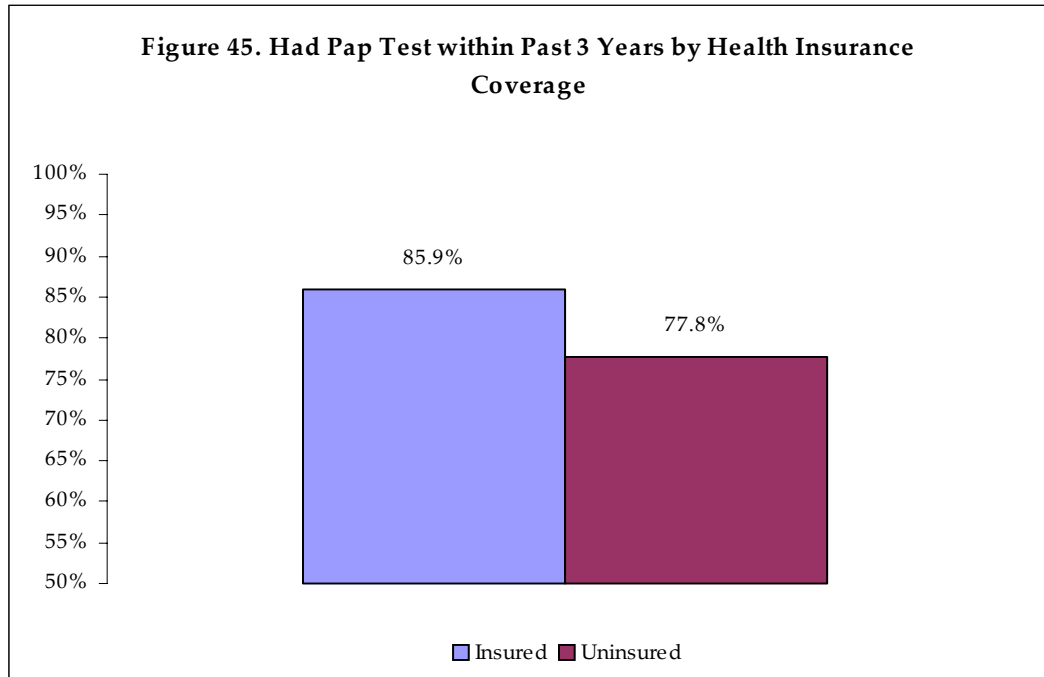
- There was no substantial difference between White and African American women in the likelihood of having a Pap test. The percentage of women of all other races who had had a Pap test was substantially less. African American women were more likely than White or Other races to have had a Pap test within the past 3 years. (Figure 41)
- Widowed and single women were less likely than married, divorced, or separated women to have had a Pap test. Widows were less likely to have had a Pap test in the last 3 years. (Figure 42)



- Women with annual household incomes over \$25,000 were more likely to have ever had a Pap test and to have had one within the past 3 years. (Figure 43)
- Women with education past high school were more likely to have ever had a Pap test and to have had one within the past 3 years. (Figure 44)

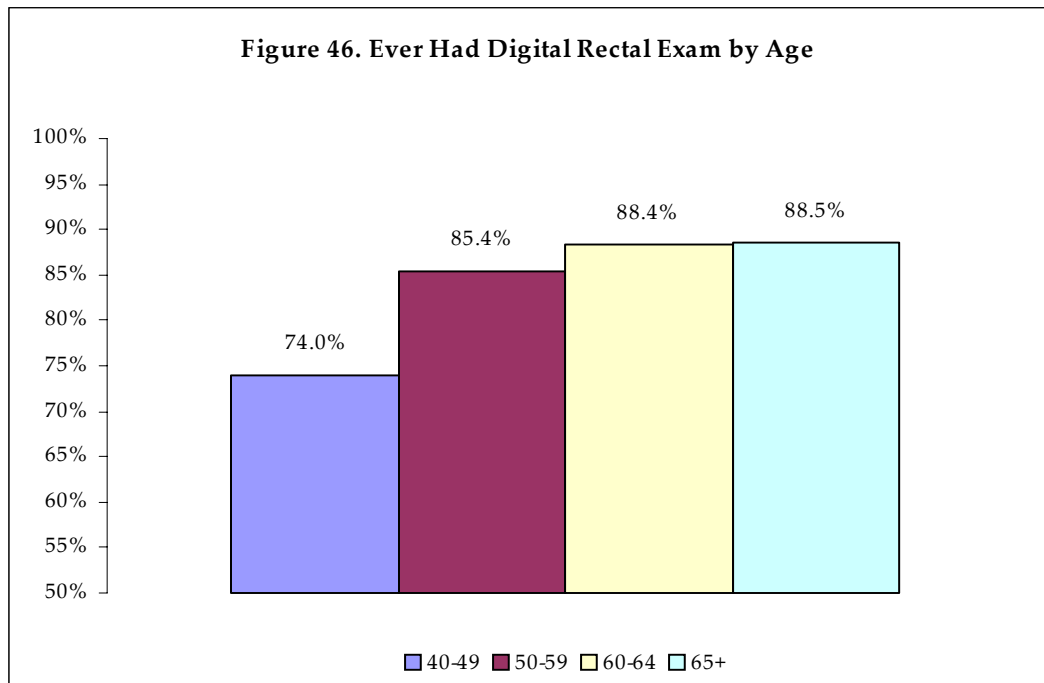


- Women with health insurance coverage were substantially more likely than uninsured women to have ever had a Pap test and to have had one in the past 3 years. (Figure 45)

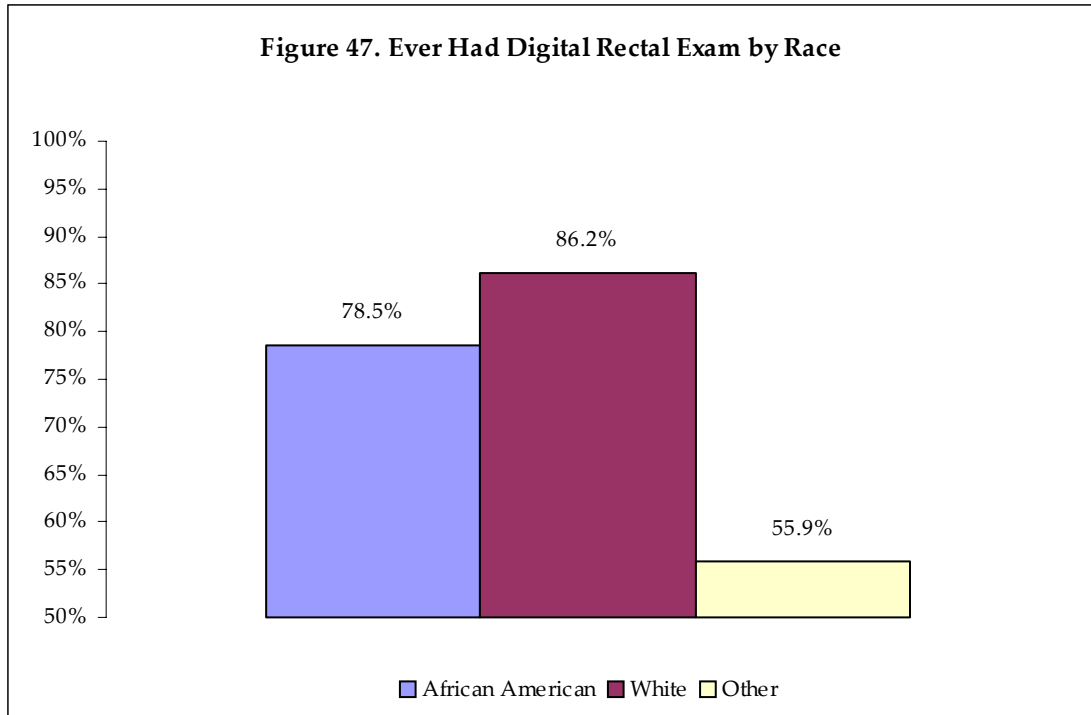


Digital Rectal Exam

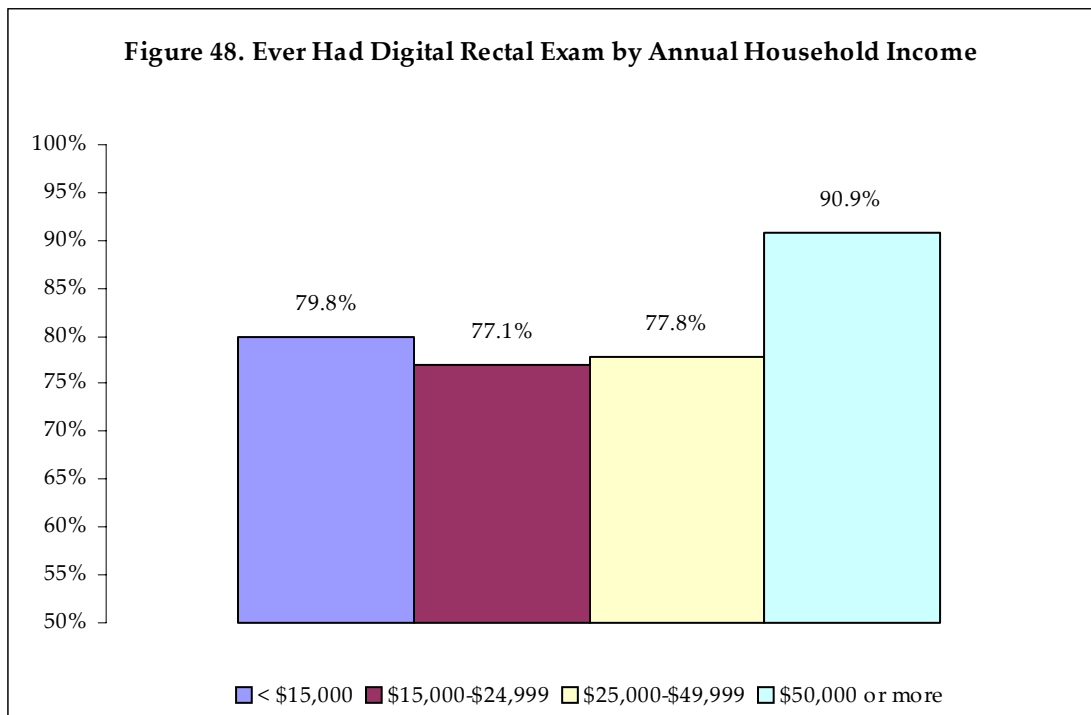
- In Nashville, 82.5% (95% confidence interval 80.5 – 84.5) of men 40 or more years of age said they had had a digital rectal examination.
- The percentage was lowest in the 40-49 age group. (Figure 46)



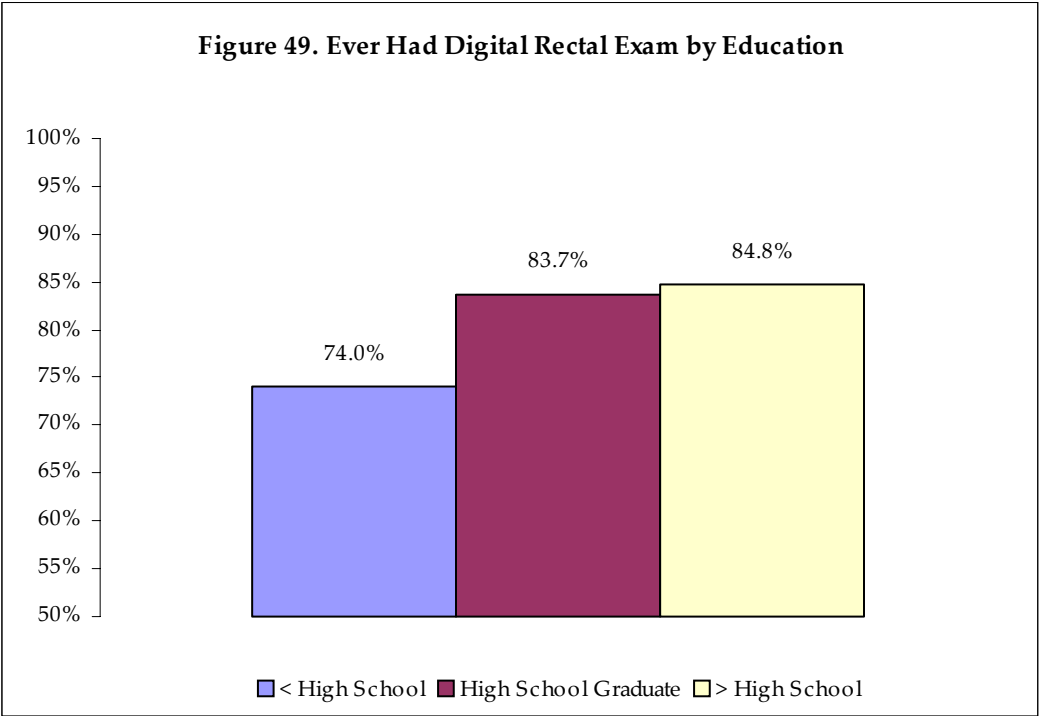
- A higher percentage of white men said they had had the exam. However, the 95% confidence intervals overlapped slightly, so it is possible that this difference is due to sampling error. The percentage for other races was substantially lower, with nonoverlapping confidence intervals. (Figure 47)



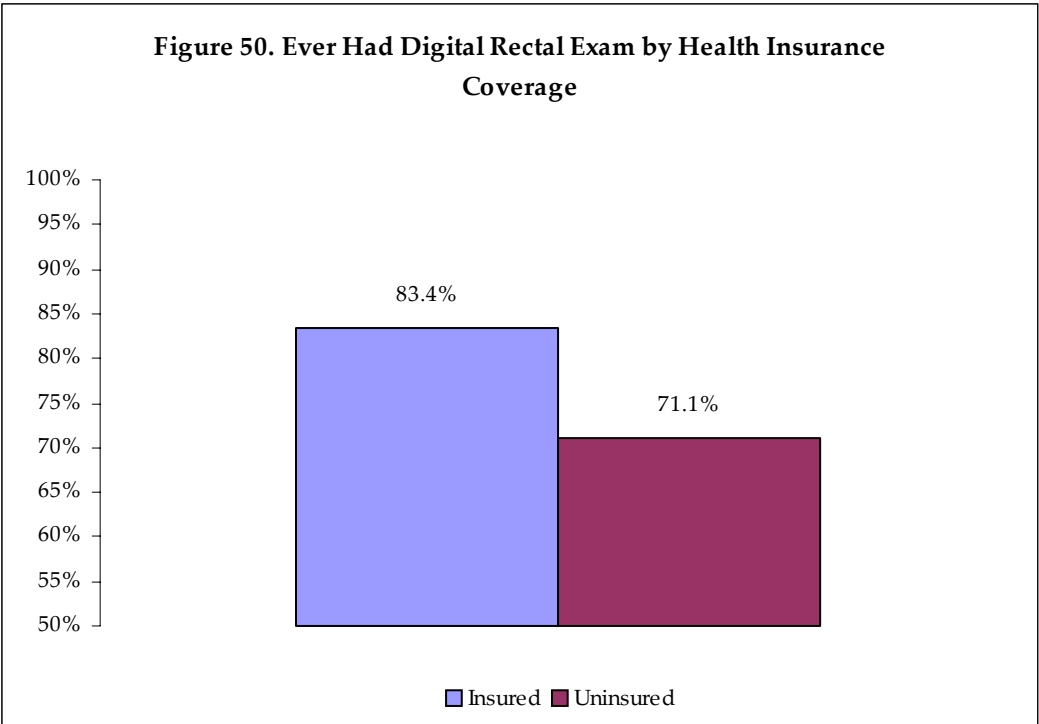
- Men with household incomes of \$50,000 or more were more likely to have had the exam. (Figure 48)



- Men with less than a high school education were significantly less likely to report having had a digital rectal exam. The difference between other educational levels was not substantial. (Figure 49)

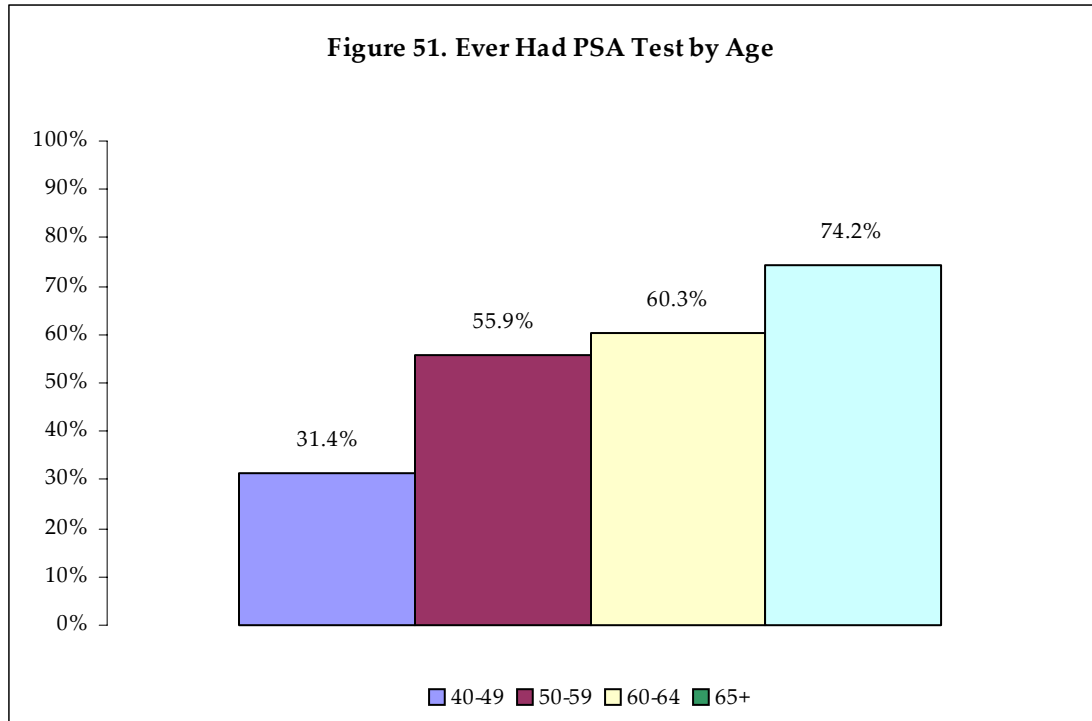


- Men with health insurance coverage were substantially more likely than uninsured men to have had the exam. (Figure 50)

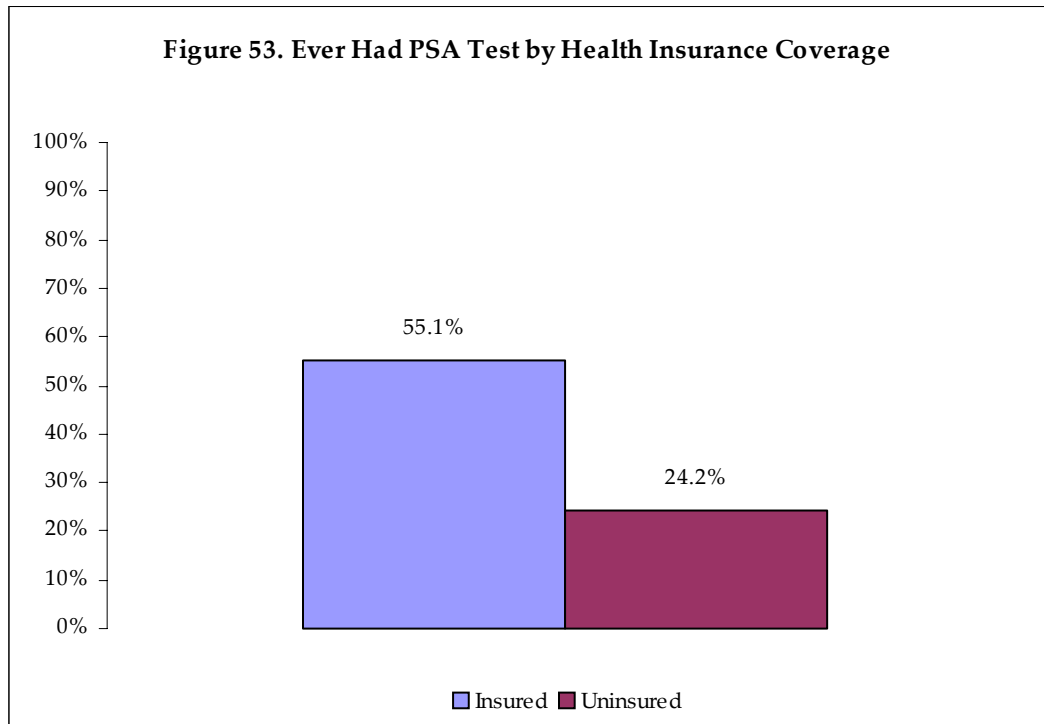
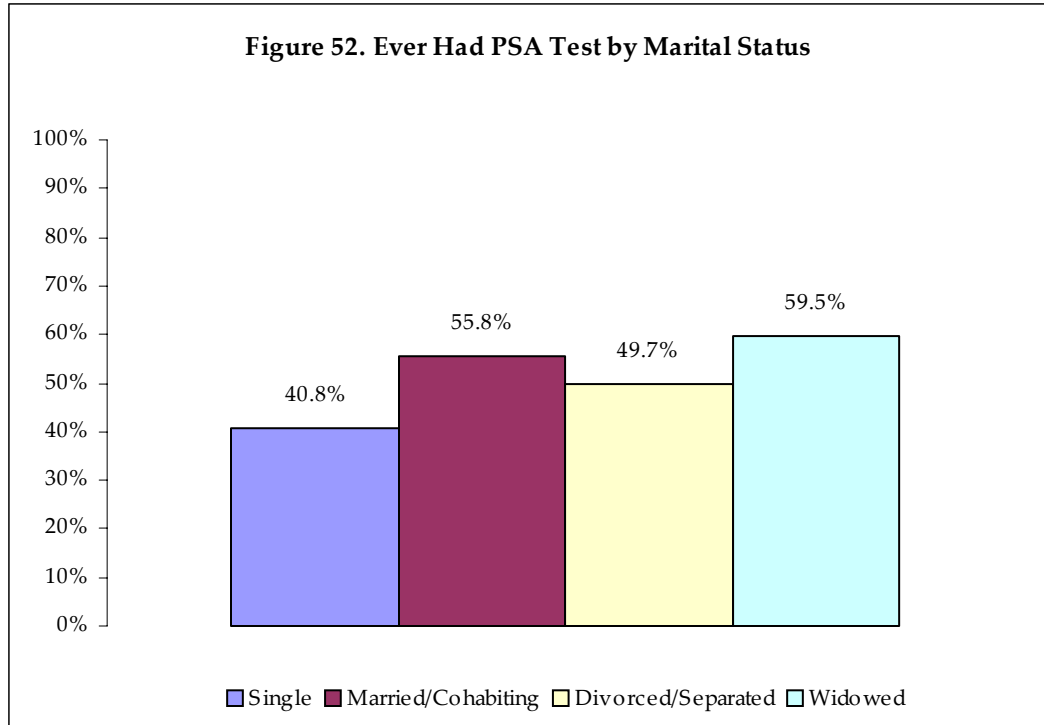


- **Prostate Specific Antigen Test**

- In Nashville, 52.5% (95% confidence interval 49.9 – 55.1) of men 40 years of age or over said they had had a prostate specific antigen test.
- The percentages increased with increasing age. (Figure 51)



- Single men over 40 were less likely than widowed men over 40 to have had a PSA test. (Figure 52)
- There was no substantial difference due to household income, or education.
- Men with health insurance were substantially more likely to have had a PSA test than uninsured men. (Figure 53)



References

1. Ries, L.A et al. The annual report to the nation on the status of cancer, 1973 – 1997, with a special section on colorectal cancer. *Cancer*. 2000; 88(10): 2398 – 424.
2. Committee on Cancer Research Among Minorities and the Medically Underserved, Institutes of Medicine. The Burden of Cancer among Ethnic Minorities and Medically Underserved Populations. In *The Unequal Burden of Cancer: An Assessment of NIH Research*. M. Alfred Haynes and Brian D. Smedley, eds. Washington, D.C., 1999; The National Academies Press.
3. Clegg, L.X., et al. Cancer survival among US whites and minorities: a SEER (Surveillance, Epidemiology, and End Results) Program population-based study. *Archives of Internal Medicine*. 2002; 162(17): 1985 – 93.
4. Kerlikowske, K., et al. Efficacy of screening mammography: a meta-analysis. *Journal of the American Medical Association*. 1995; 273(2): 149-54.
5. Fletchers S.W. and J.G. Elmore. Clinical practice. Mammographic screening for breast cancer. *New England Journal of Medicine*, 2003; 348(17): 1672 – 80.
6. U.S. Preventive Services Task Force. Screening for breast cancer: recommendations and rationale. *Annals of Internal Medicine*. 2002; 137 (5 Part 1): 344-346.
7. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/>. Accessed June 19, 2003.
8. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington, DC: January 2000.
9. U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services*. 2nd edition. Baltimore, 1996. Williams & Wilkins. 73-87, 119-134, 105-117.
10. Swan, J., et al. Progress in cancer screening practices in the United States: results from the 2000 National Health Interview Survey. *Cancer*. 2003; 97 (6): 1528 – 40.
11. Frankel, S., et al., Screening for prostate cancer. *Lancet.*, 2003; 361(9363): 1122-28.
12. Hankey, B.F., et al. Cancer surveillance series: interpreting trends in prostate cancer – part I: Evidence of the effects of screening in recent prostate cancer incidence, mortality, and survival rates. *Journal of the National Cancer Institute*. 1999; 91(12): 1017 – 1024.
13. Cookson, M.M. Prostate cancer: screening and early detection. *Cancer Control*. 2001; 8(2): 100-40.
14. Smith, R.A., V. Cokkinides, and H.J. Eyre, American Cancer Society guidelines for the early detection of cancer, 2003. *CA: A Cancer Journal for Clinicians*. 2003; 53(1): 27-43.

| Table 6a. Cancer Screening: Pap Test and Mammography. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval) | | | |
|--|--|---------------------------|--|
| | <u>Pap Test Use Per Guidelines - Within Past Three Years for Women Eighteen Years of Age and Older</u> | | <u>Mammography Use Per Guidelines - Within Past Two Years for Women Forty Years of Age and Older</u> |
| <i>Demographics</i> | | <i>Demographics</i> | |
| <u>Total</u> | 87.7% (86.7 - 88.6) | <u>Total</u> | 78.8% (77.3 - 80.3) |
| <u>Age</u> | | <u>Age</u> | |
| 18-24 | 87.5% (83.7 - 90.3) | | |
| 25-34 | 94.1% (91.8 - 95.0) | | |
| 35-44 | 91.3% (89.4 - 93.0) | 40-49 | 74.3% (71.1 - 76.9) |
| 45-54 | 86.6% (83.4 - 88.4) | 50-59 | 86.1% (82.5 - 88.1) |
| 55-64 | 79.1% (75.7 - 82.8) | 60-64 | 79.8% (77.4 - 87.1) |
| 65+ | 62.4% (58.6 - 65.0) | 65+ | 77.7% (74.8 - 80.3) |
| | | | |
| <u>Race</u> | | <u>Race</u> | |
| African American | 88.8% (86.2 - 89.9) | African American | 81.8% (79.0 - 85.0) |
| White | 84.7% (80.3 - 83.0) | White | 78.0% (76.0 - 79.7) |
| Other | 74.9% (69.8 - 85.9) | Other | 76.1% (59.4 - 86.3) |
| | | | |
| <u>Income</u> | | <u>Income</u> | |
| <\$15,000 | 73.4% (66.7 - 75.2) | <\$15,000 | 72.1% (68.6 - 78.5) |
| \$15,000-\$24,999 | 79.5% (75.2 - 80.3) | \$15,000-\$24,999 | 72.4% (68.9 - 76.1) |
| \$25,000-\$49,999 | 89.7% (86.9 - 90.1) | \$25,000-\$49,999 | 81.8% (79.5 - 84.9) |
| >\$50,000 | 93.0% (89.9 - 93.5) | >\$50,000 | 85.0% (82.0 - 88.2) |
| | | | |
| <u>Education</u> | | <u>Education</u> | |
| <High School | 71.5% (65.8 - 73.2) | <High School | 69.7% (66.6 - 75.1) |
| High School | 81.8% (77.6 - 82.0) | High School | 76.3% (73.7 - 79.6) |
| >High School | 89.3% (88.1 - 90.4) | >High School | 82.7% (80.7 - 84.6) |
| | | | |
| <u>Marital Status</u> | | <u>Marital Status</u> | |
| Single | 86.6% (84.3 - 88.4) | Single | 73.6% (68.4 - 78.8) |
| Married/Cohabiting | 90.0% (85.4 - 88.4) | Married/Cohabiting | 81.9% (79.5 - 84.2) |
| Divorced/Separated | 87.7% (84.2 - 88.7) | Divorced/Separated | 79.9% (77.0 - 83.2) |
| Widowed | 64.6% (60.2 - 67.3) | Widowed | 74.2% (71.3 - 77.9) |
| | | | |
| <u>Insurance Coverage</u> | | <u>Insurance Coverage</u> | |
| Insured | 85.9% (83.7 - 84.9) | Insured | 80.4% (77.7 - 83.8) |
| Uninsured | 76.9% (71.6 - 78.5) | Uninsured | 58.4% (50.1 - 65.2) |

Table 6b. Cancer Screening: Digital Rectal Exam and Prostate Specific Antibody Test. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| | <u>Digital Rectal Exam - Ever Had for Men Forty Years of Age and Older</u> | <u>Prostate Specific Antibody Test - Ever Had for Men Forty Years of Age and Older</u> |
|---------------------------|--|--|
| <i>Demographics</i> | | |
| <u>Total</u> | 82.5% (80.5 - 84.5) | 52.5% (49.9 - 55.1) |
| <u>Age</u> | | |
| 40-49 | 74.0% (69.8 - 77.2) | 31.4% (26.9 - 34.7) |
| 50-59 | 85.4% (82.1 - 89.5) | 55.9% (50.9 - 61.4) |
| 60-64 | 88.4% (83.6 - 94.8) | 60.3% (54.4 - 71.8) |
| 65+ | 88.5% (86.3 - 92.7) | 74.2% (70.5 - 79.5) |
| <u>Race</u> | | |
| African American | 78.5% (73.0 - 83.2) | 58.3% (50.9 - 63.0) |
| White | 86.2% (82.4 - 86.8) | 52.5% (48.0 - 54.1) |
| Other | 55.9% (41.1 - 71.3) | 30.8% (19.1 - 47.7) |
| <u>Income</u> | | |
| <\$15,000 | 79.8% (68.8 - 86.2) | 49.1% (40.6 - 61.4) |
| \$15,000-\$24999 | 77.1% (72.1 - 82.9) | 48.4% (40.2 - 53.0) |
| \$25,000-\$49,999 | 77.8% (75.8 - 83.4) | 48.5% (43.6 - 53.1) |
| \$50,000 or more | 90.9% (86.0 - 92.2) | 56.0% (50.6 - 60.3) |
| <u>Education</u> | | |
| <High School | 74.0% (68.0 - 81.4) | 46.9% (39.4 - 54.8) |
| High School | 83.7% (79.0 - 86.7) | 51.1% (44.9 - 55.1) |
| >High School | 84.8% (82.4 - 87.2) | 62.6% (59.4 - 65.9) |
| <u>Marital Status</u> | | |
| Single | 76.0% (69.3 - 80.3) | 40.8% (32.2 - 44.5) |
| Married/Cohabiting | 85.4% (83.2 - 88.5) | 55.8% (52.2 - 59.7) |
| Divorced/Separated | 79.2% (75.2 - 84.0) | 49.7% (43.6 - 54.6) |
| Widowed | 84.8% (78.6 - 91.8) | 59.5% (54.1 - 72.1) |
| <u>Insurance Coverage</u> | | |
| Insured | 83.4% (82.0 - 86.1) | 55.1% (51.4 - 58.8) |
| Uninsured | 71.1% (60.3 - 76.3) | 24.2% (19.4 - 37.9) |

Tobacco Use and Environmental Smoke Exposure

Health Risks of Tobacco Smoke

Cigarette smoking is the leading cause of preventable morbidity and mortality in the United States.¹ These health consequences include smoking-related disease such as lung cancer, chronic obstructive lung disease, and coronary heart disease. The health consequences extend beyond smokers to non-smokers involuntarily exposed to environmental tobacco smoke or secondhand smoke. Each year, an estimated 3,000 lung cancer deaths and 62,000 deaths from coronary heart disease in adult non-smokers are attributed to secondhand smoke.²

Environmental (second hand) cigarette smoke is also a health risk for nonsmokers, especially infants and children. Studies have found associations between exposure to secondhand smoke and an increased risk of sudden infant death syndrome, low birth weight, chronic middle ear infections, lower respiratory tract infection such as bronchitis and pneumonia, increased prevalence of fluid in the middle ear, symptoms of upper respiratory tract irritation, and a small but significant reduction in lung function.³

National and State Prevalence of Tobacco Use

Current Smokers

In 2000, the nationwide Behavioral Risk Factor Surveillance System survey indicated that 23.3% of the population was currently smoking. In the state of Tennessee, 25.7% of 2,916 survey respondents reported being current smokers (95% confidence interval, 23.9 - 27.4).

Attempts to Quit Smoking

Nationwide, the 2000 BRFSS reported that 49.4% of current smokers tried to quit smoking for one day or longer during the past twelve months. In the state of Tennessee, 45.3% (95% confidence interval 40.7 - 49.8) of current smokers had quit smoking for one day or longer in the last year.

Healthy People 2010

Objectives in Healthy People 2010 concerning behaviors covered by the Community Health Survey are:

- Reduce tobacco use by adults to 12% of the population aged 18 and over.
- Increase smoking cessation attempts by adult smokers to 75%.
- Reduce the proportion of nonsmokers exposed to environmental tobacco smoke to 45%.

Description of Measures

To assess current cigarette smoking, respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes every day, some days, or not at all?" Current smokers were defined as those who reported having

smoked 100 or more cigarettes during their lifetime and who also currently smoke every day or some days. Current smokers were asked if they had been advised to quit by a doctor or health professional, if they planned to quit, and if they had quit for a day or more in the past year.

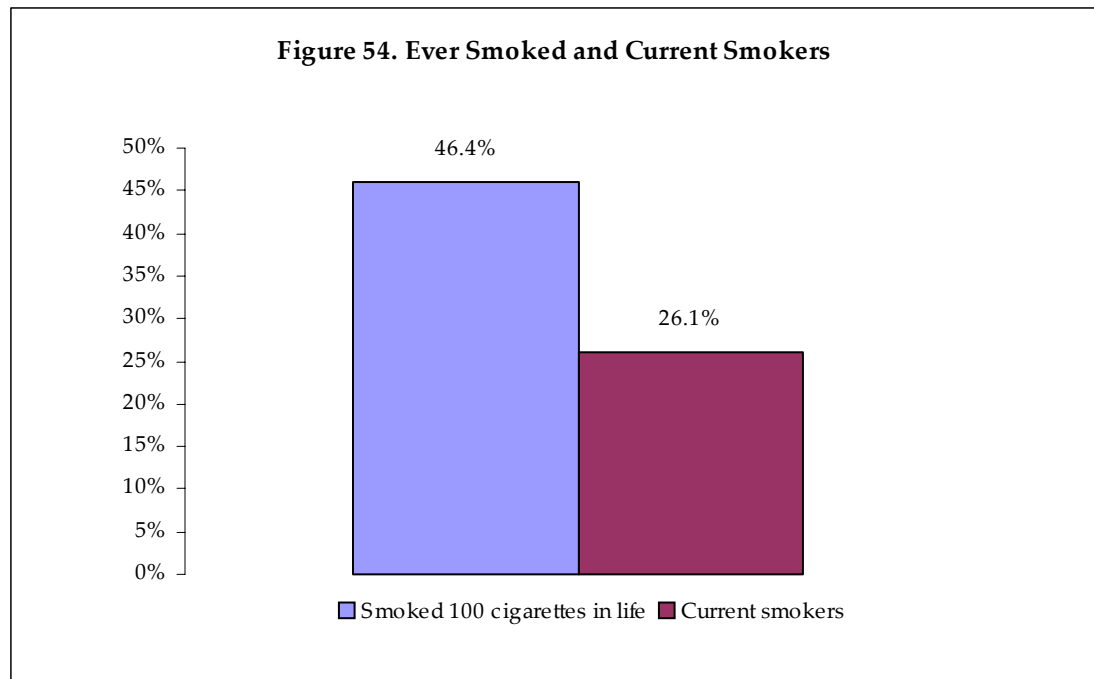
All survey respondents were also asked if they used smokeless tobacco products, such as chewing tobacco or snuff.

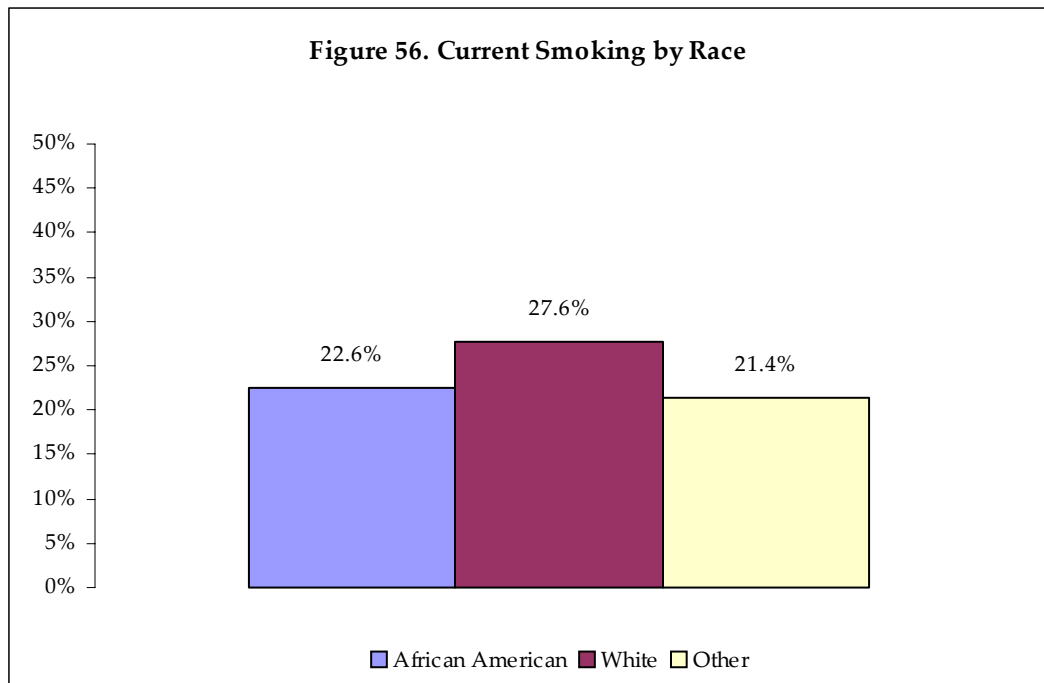
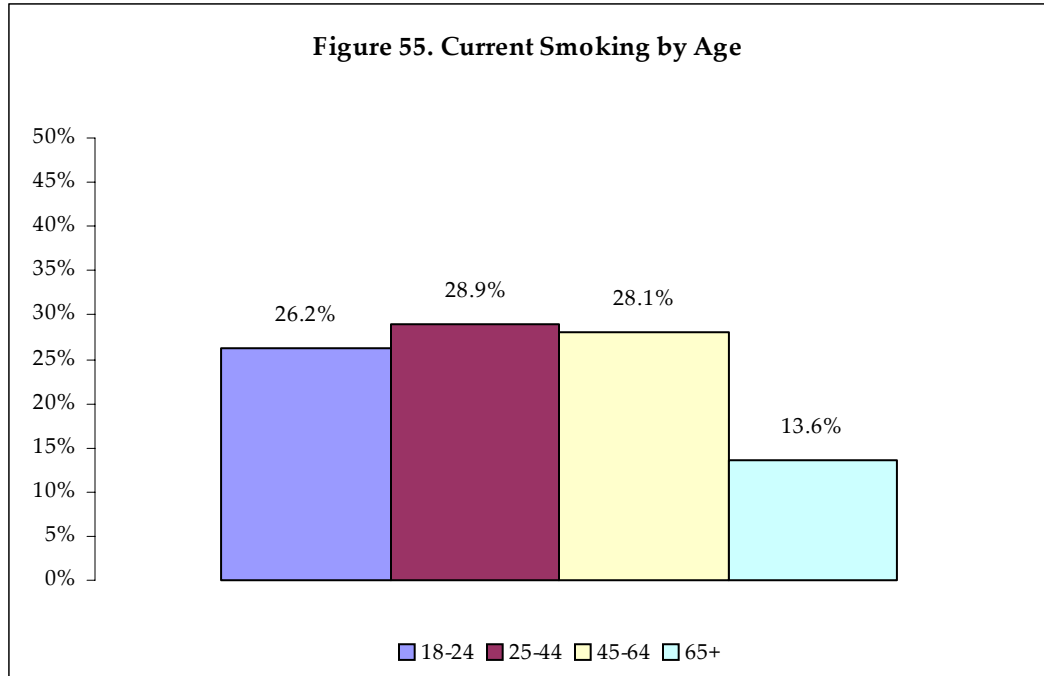
To assess exposure to second hand smoke, respondents were asked, "In the past 30 days have you been exposed to second hand smoke?"

Results

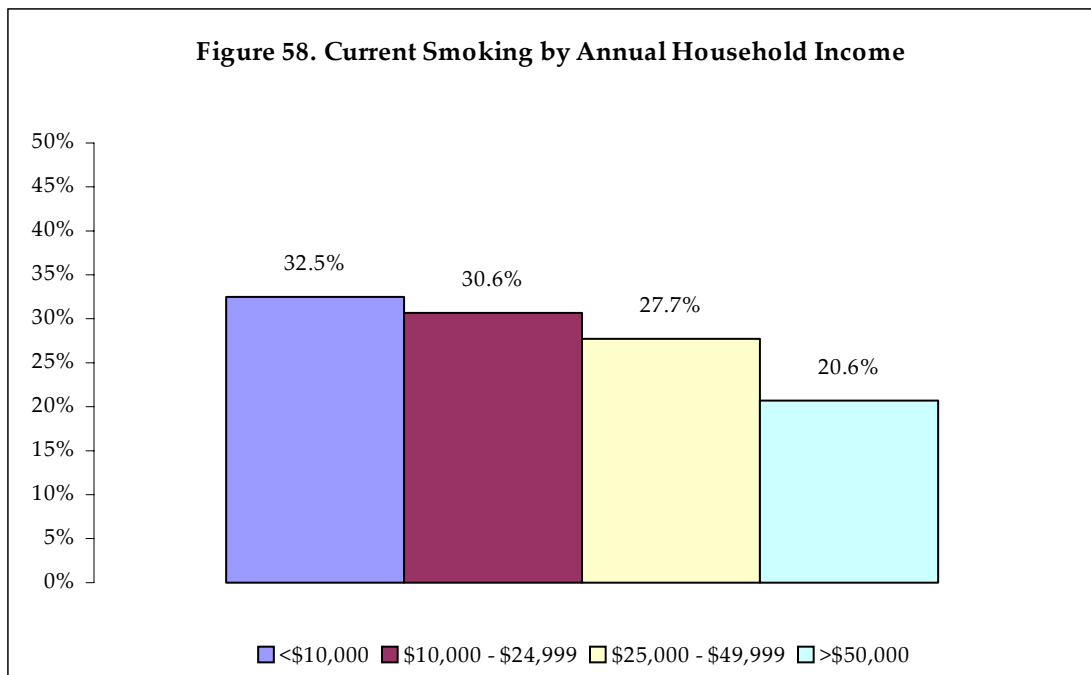
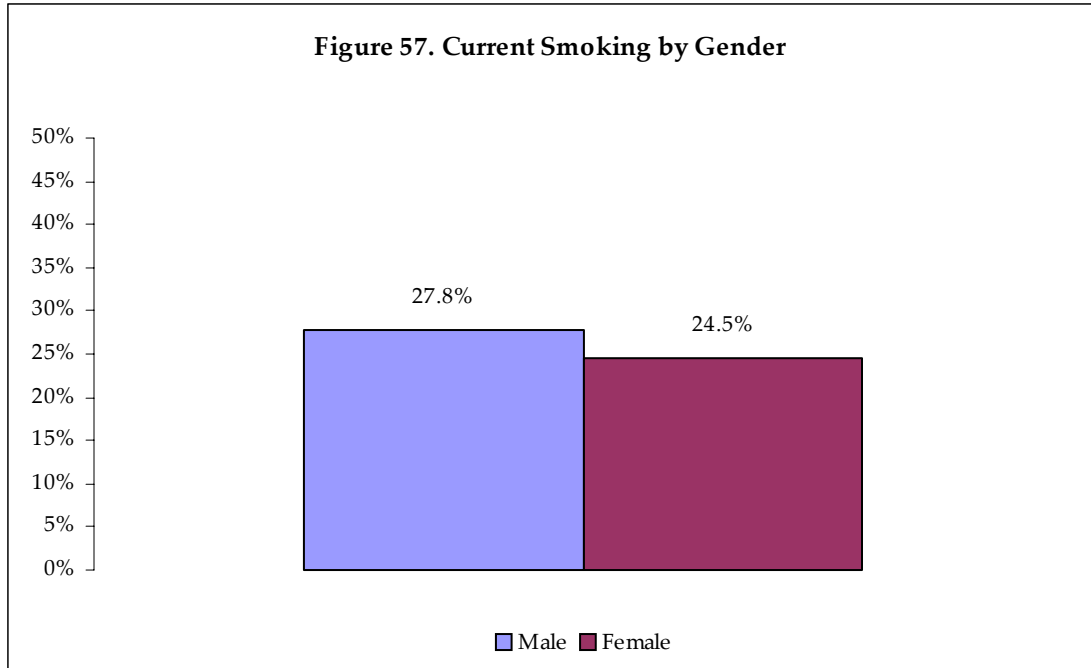
Current Smoking

- In Nashville and Davidson County, 46.4% (95% confidence interval, 45.3 - 47.5) of respondents had smoked at least 100 cigarettes in their entire life.
- Of the respondents who had smoked 100 or more cigarettes, 44.2% (95% confidence interval 42.5 - 45.9) smoked everyday, and 12.2% (95% confidence interval 11.1 - 13.3) smoked some days. A total of 26.1% of respondents in Nashville were current smokers. (Figure 54)
- Adults age 65 and over were roughly half as likely to be current smokers as those under 65. There was no substantial difference between the three younger age groups. (Figure 55)
- White respondents were more likely to smoke than either African Americans or Others. (Figure 56)

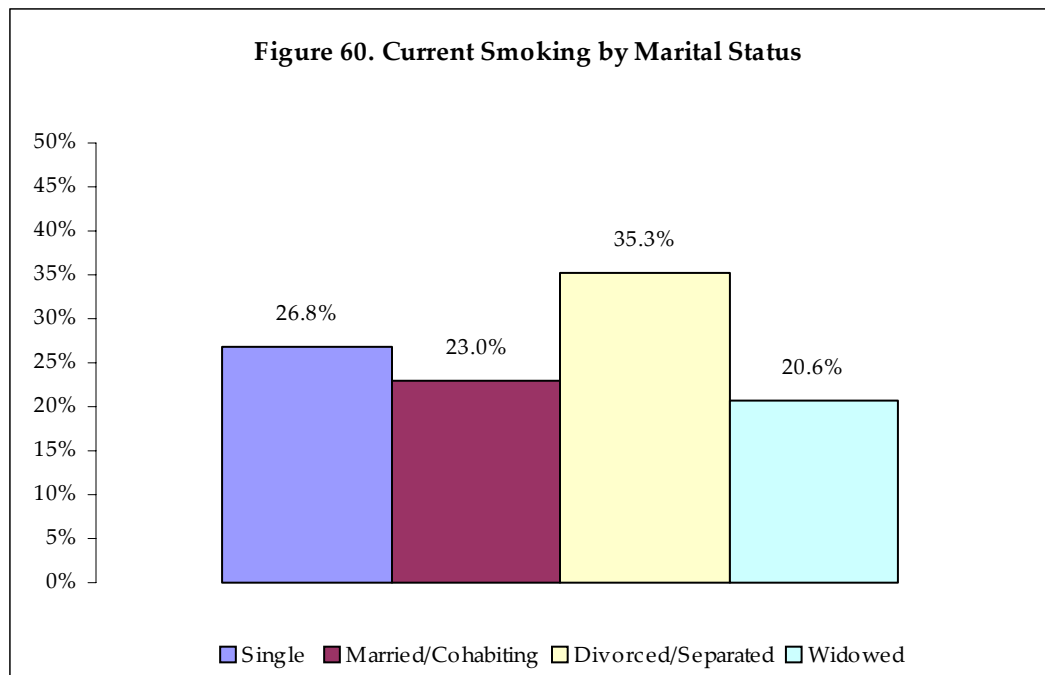
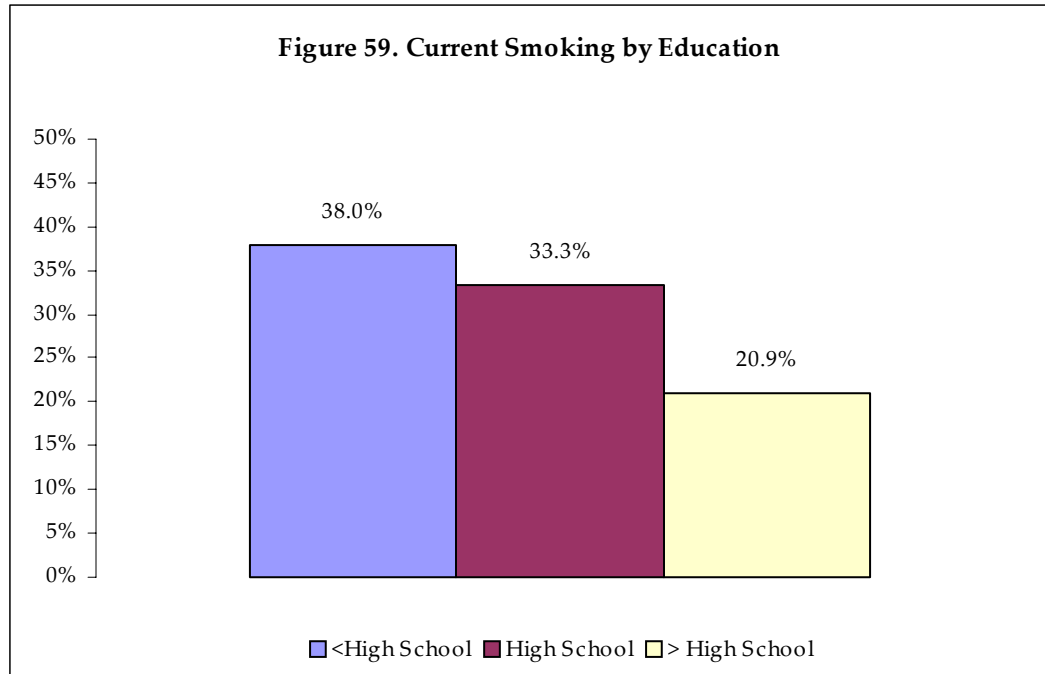




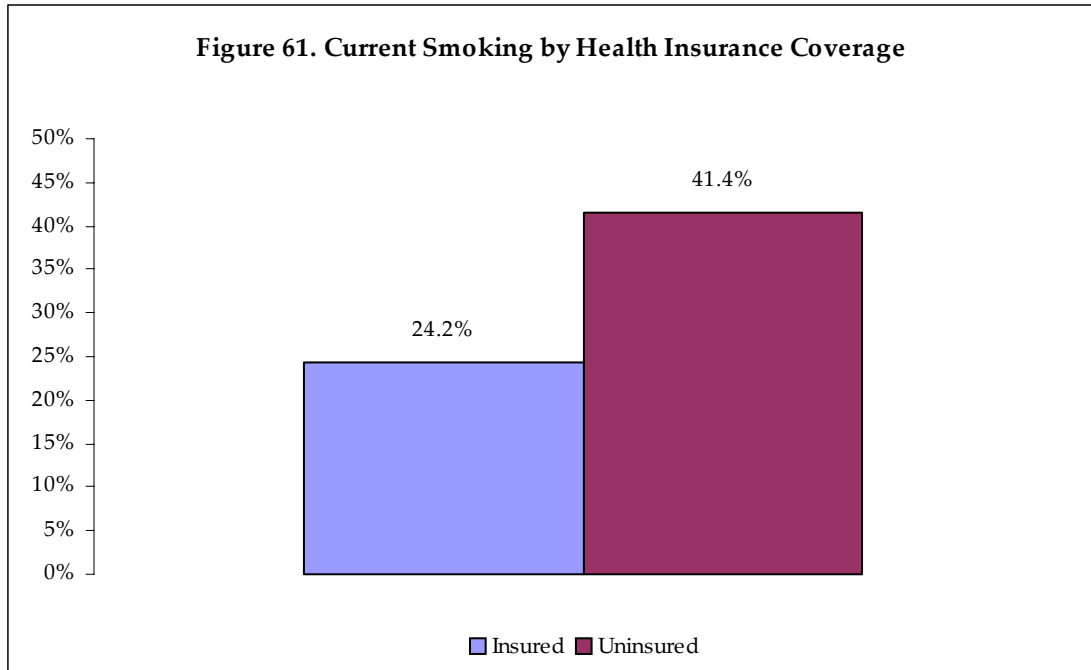
- Men were more likely than women to be current smokers (Figure 57)
- Those with household incomes of \$50,000 or more were less likely to currently smoke than those with lower household incomes. Differences between other income levels were not significant. (Figure 58)



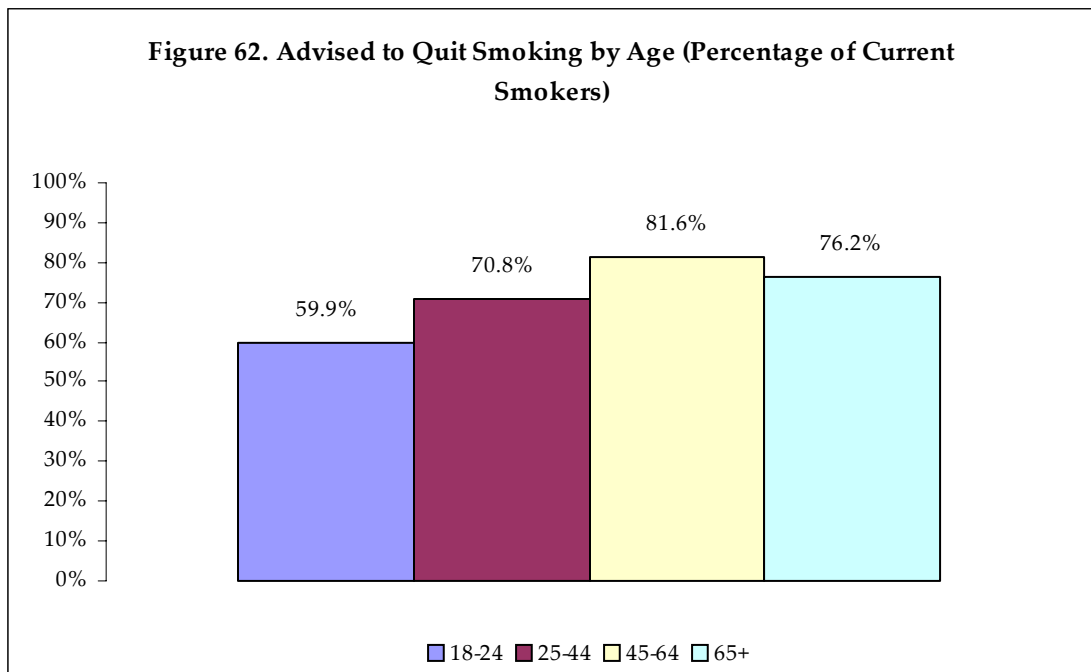
- Persons with education past high school were less likely than those with a high school diploma or less, to be current smokers. The difference between high school graduates and non-graduates was not significant. (Figure 59)
- Divorced persons were more likely to be current smokers than any other marital status. (Figure 60)



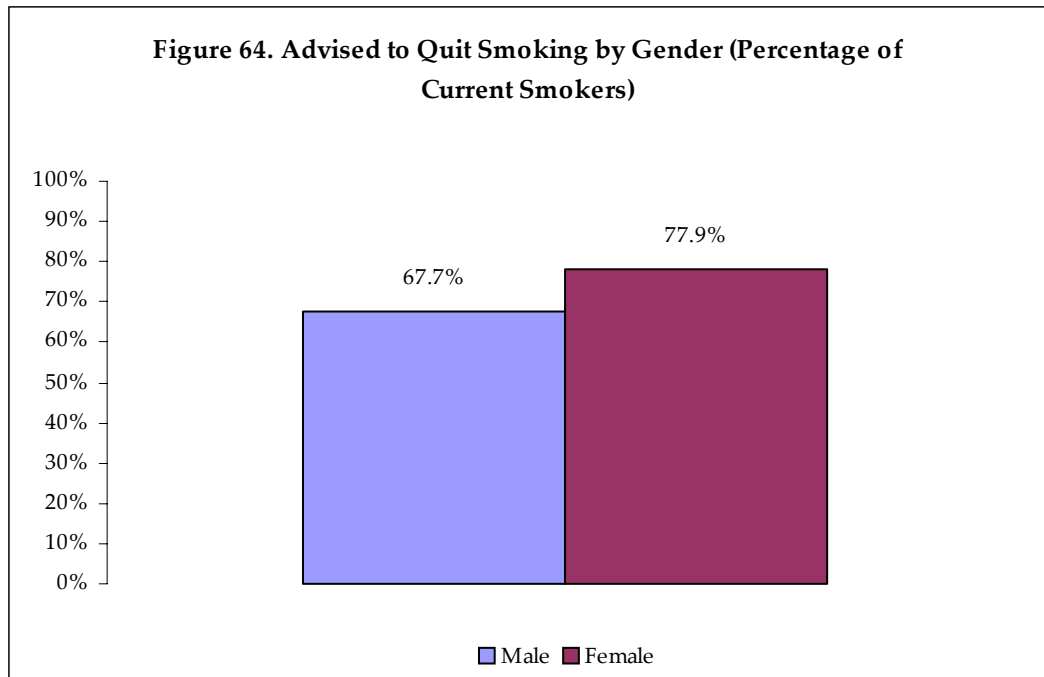
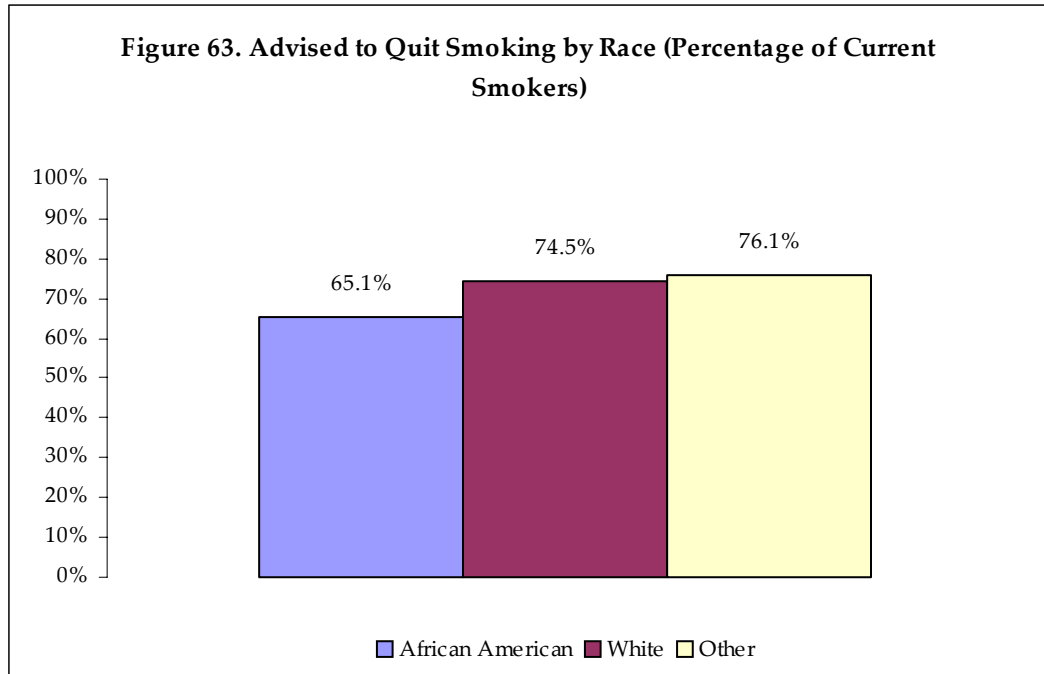
- Uninsured persons were almost twice as likely as insured persons to be current smokers. (Figure 61)



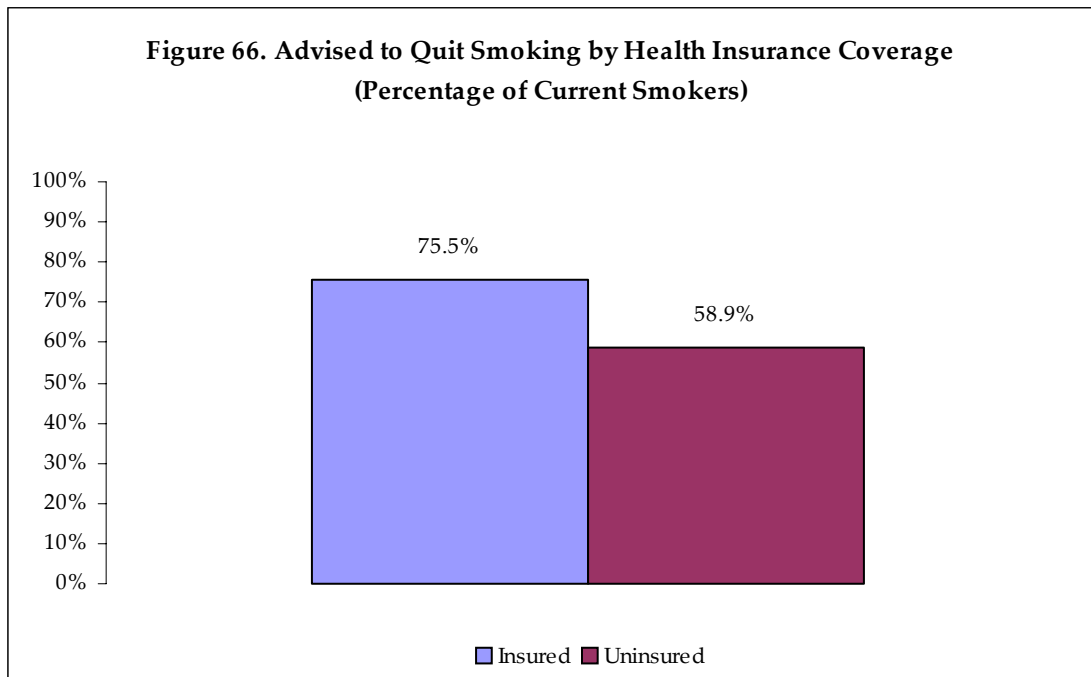
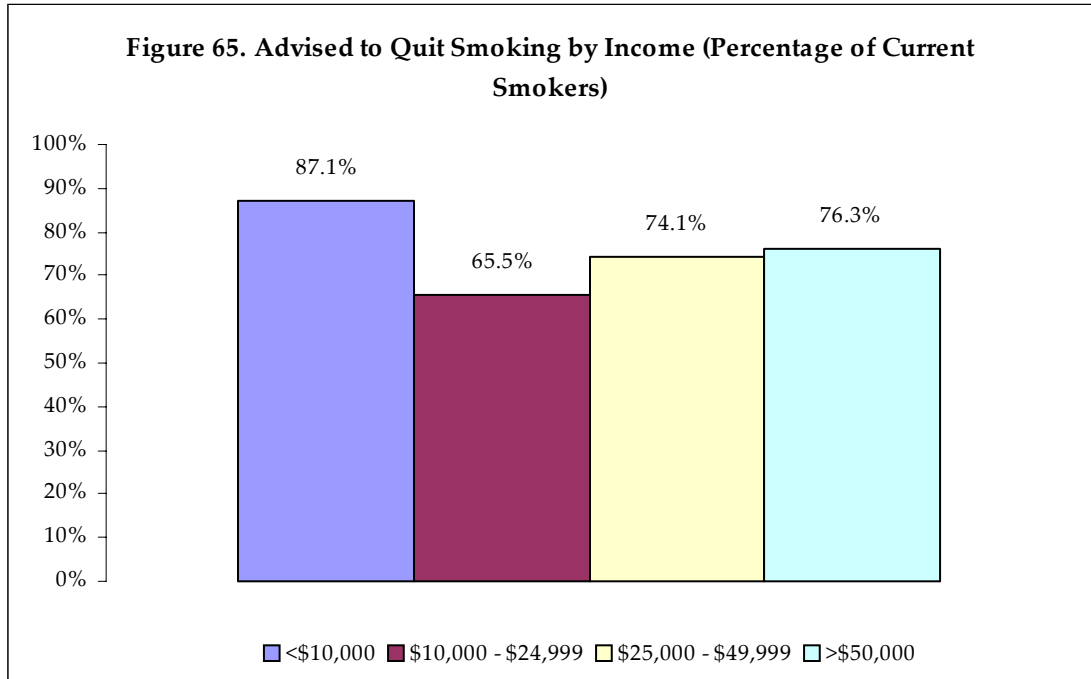
- Nearly three quarters (72.7%, 95% confidence interval 70.9 - 75.1) of current smokers had been advised to quit smoking by a doctor or other health professional.
- Older smokers were more likely than younger ones to have been advised to quit smoking. (Figure 62)



- African Americans were less likely than either Whites or Others to have been advised to quit smoking. (Figure 63)
- Male smokers were more likely than females to have been advised to quit smoking. (Figure 64)

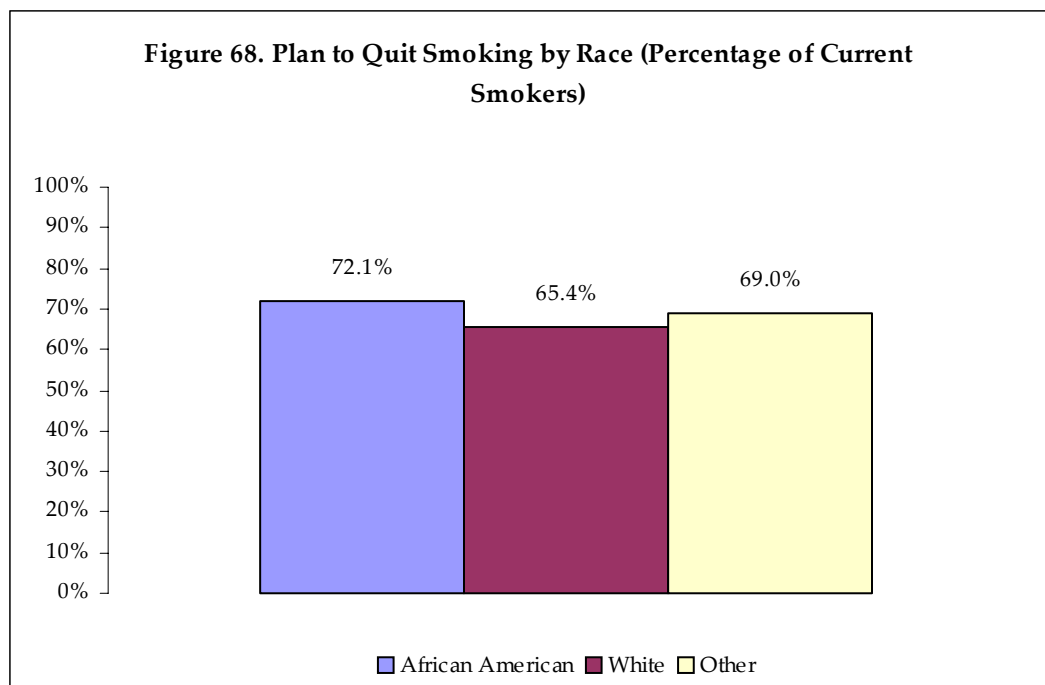
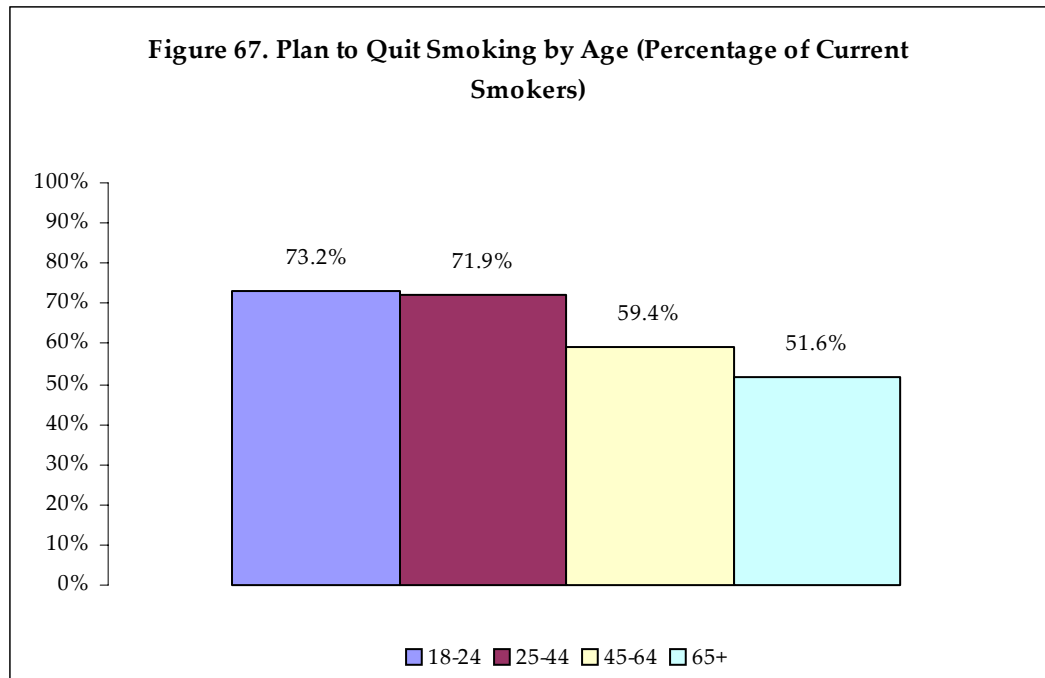


- Smokers with annual household incomes under \$10,000 were most likely to report having been advised to quit smoking. (Figure 65)
- Smokers with health insurance were more likely than uninsured smokers to have been advised to quit smoking.(Figure 66)

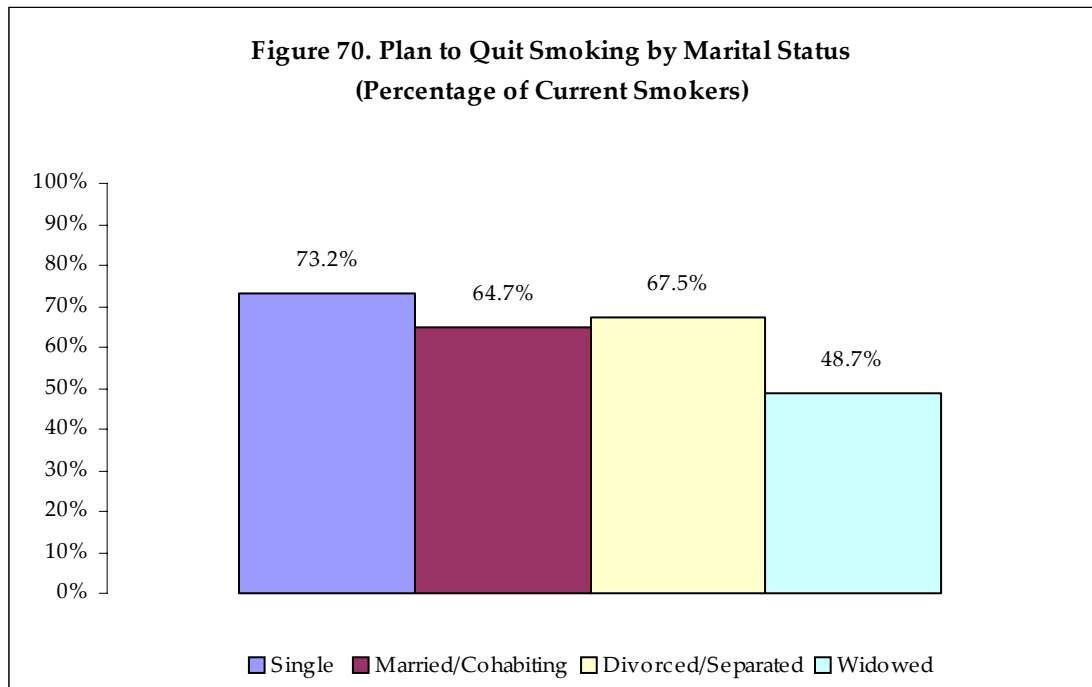
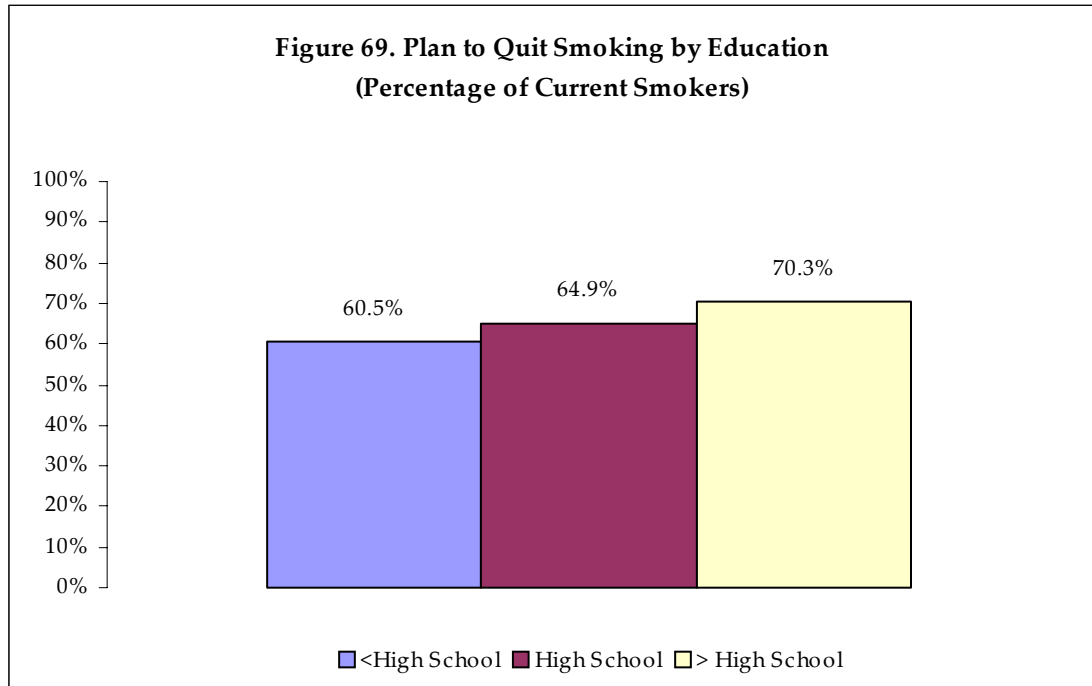


Plan to Quit

- Of current smokers, 66.9% (95% confidence interval, 64.9 – 69.1) said they planned to quit smoking.
- Younger smokers were more likely than older ones to say they planned to quit. (Figure 67)
- African American smokers were the most likely to say they planned to quit. White smokers were least likely. (Figure 68)

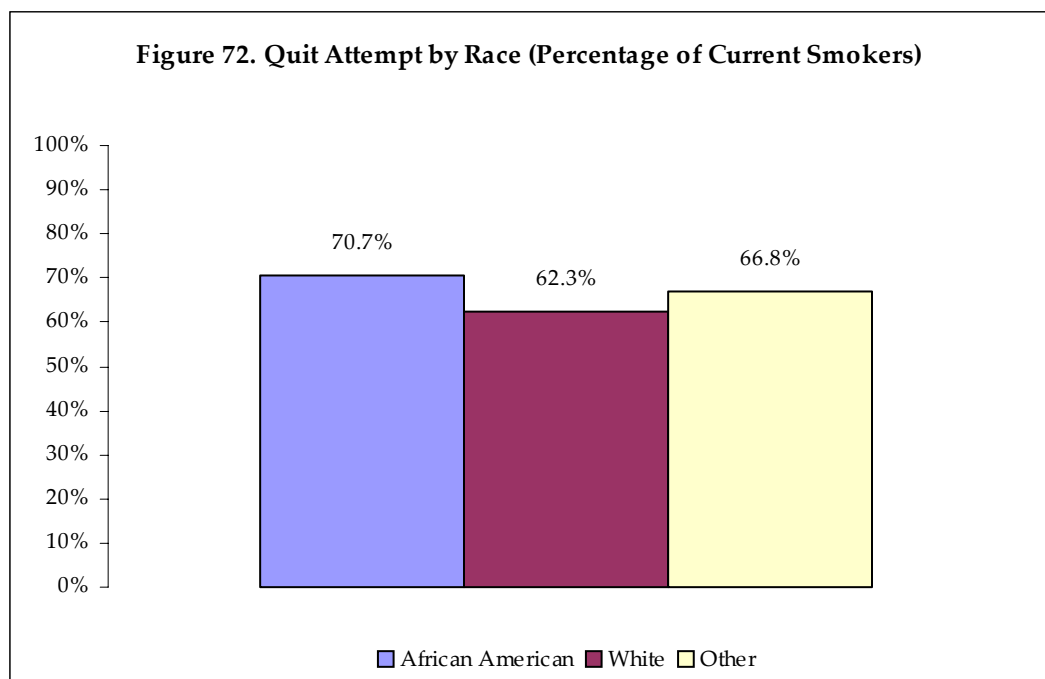
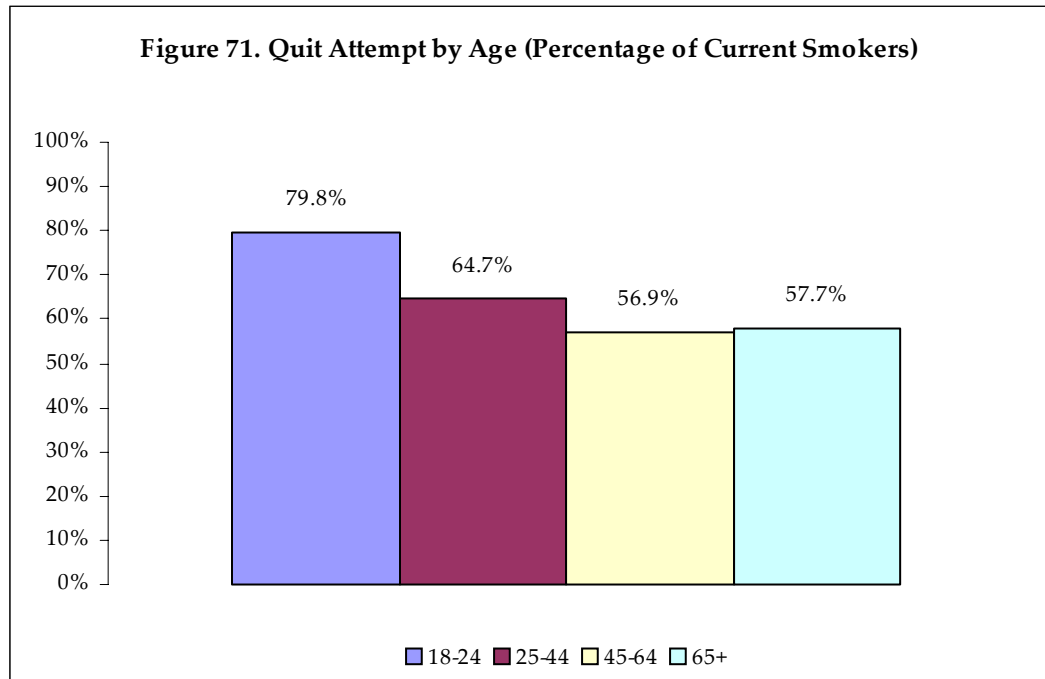


- Respondents with education past high school were more likely to say they planned to quit smoking. (Figure 69)
- Divorced smokers were most likely to say they planned to quit, and widowed smokers were least likely. (Figure 70)



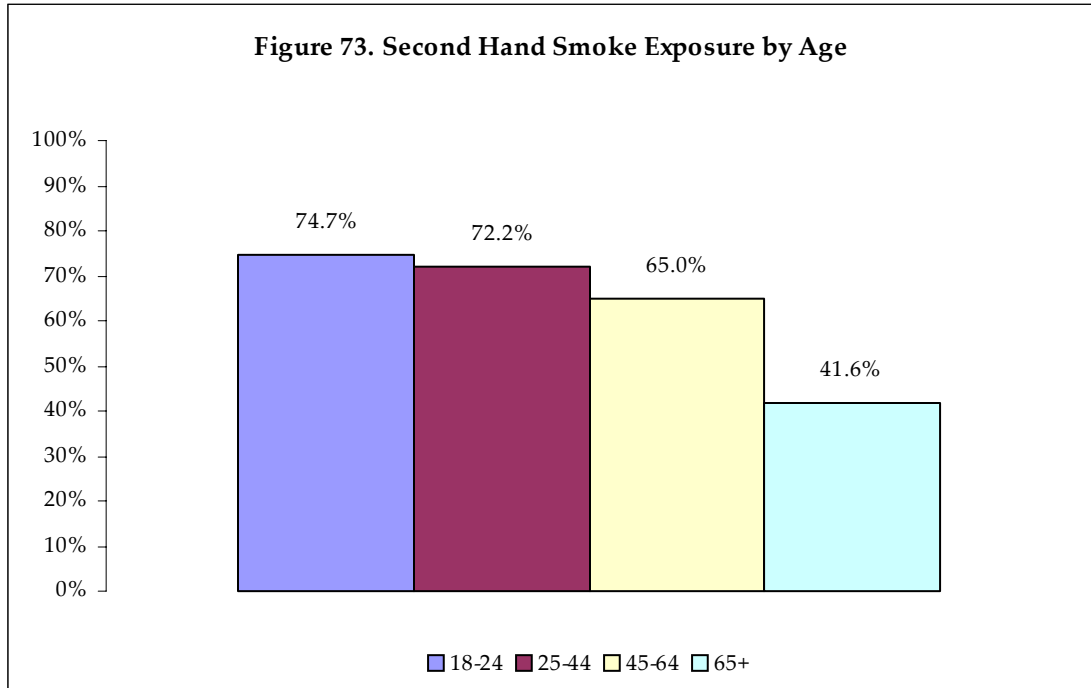
Attempted to Quit (Current smokers who reported they had quit smoking for a day or more in the past year)

- 64.2% (95% confidence interval 61.2 – 66.8) of current smokers said they had quit for a day or more in the past year.
- Current smokers 18-24 years of age were most likely to report an attempt to quit smoking, followed by those age 25-40. (Figure 71)
- African Americans were the most likely to report an attempt to quit in the past year. Whites were least likely. (Figure 72)

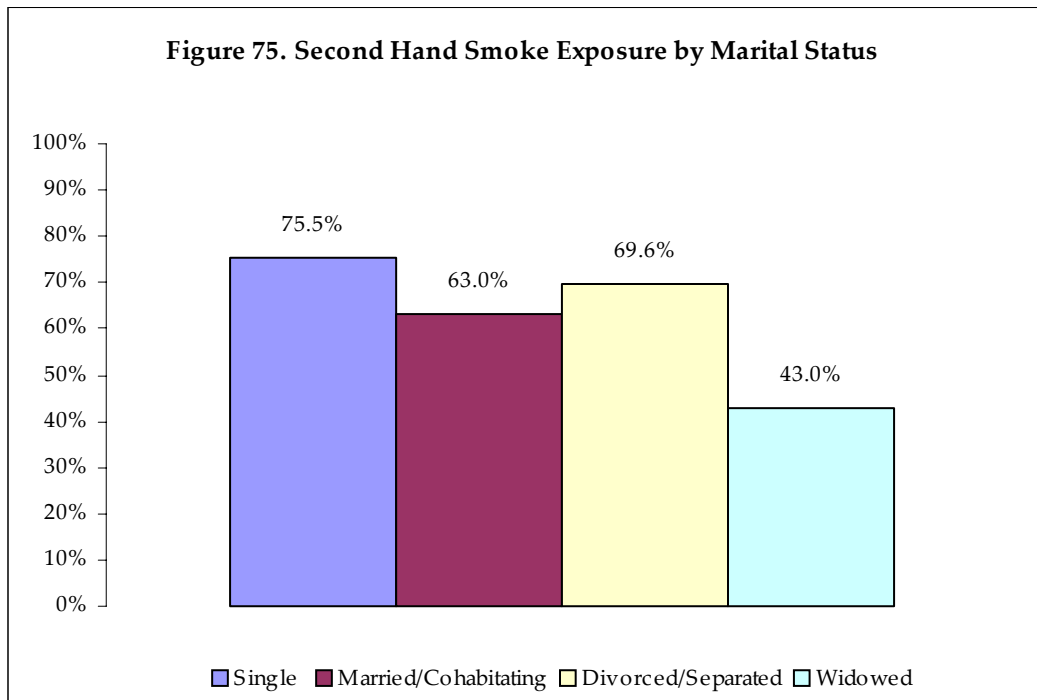
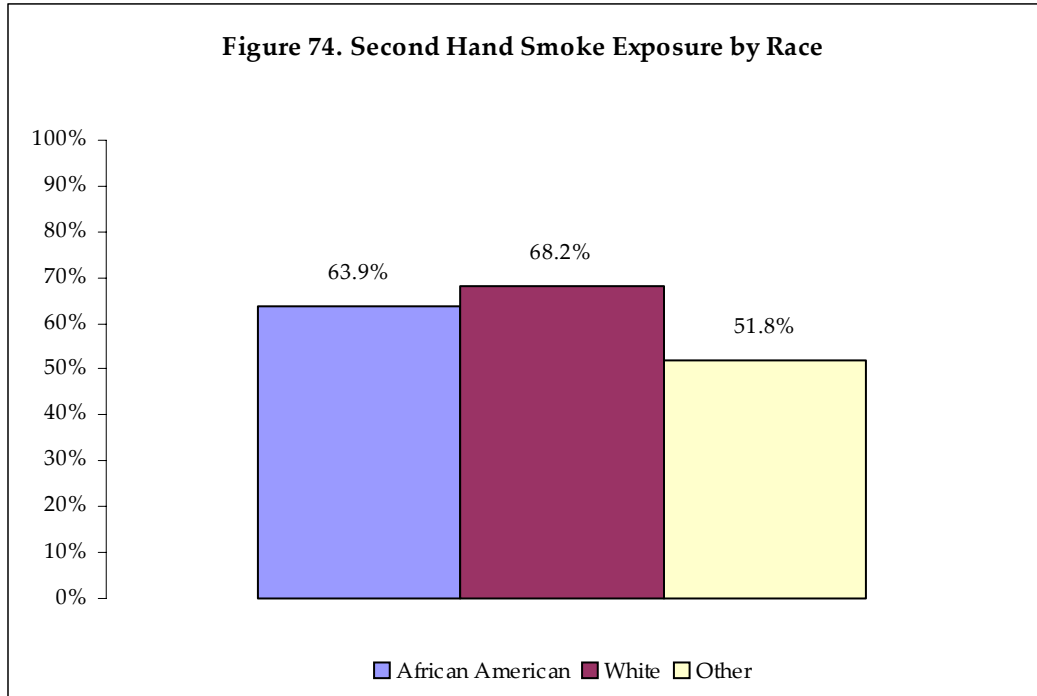


Second Hand Smoke Exposure

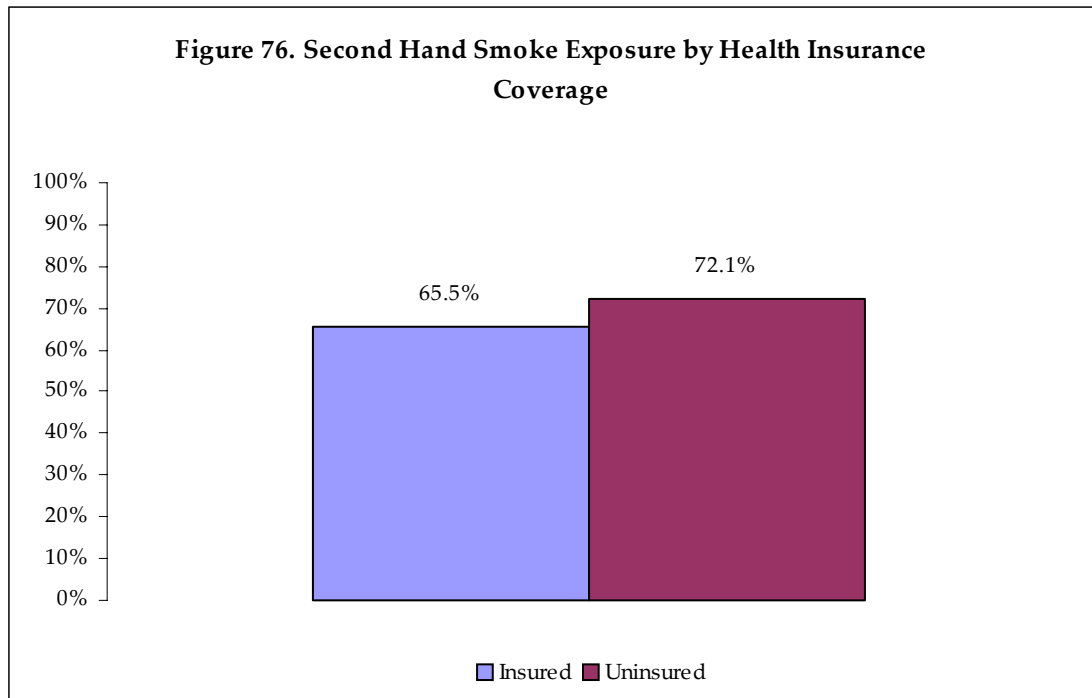
- 66.2% (95% confidence interval 65.2 – 67.2) of all respondents said they had been exposed to second hand smoke in the past 30 days.
- Nonsmokers reported having been exposed to environmental tobacco smoke at a rate of 59.4% (95% confidence interval, 58.1 - 60.7).
- Respondents age 65 and over were least likely to report second hand smoke exposure in the past 30 days. (Figure 73)



- Whites were more likely than African Americans or Other races to report second hand smoke exposure. (Figure 74)
- Single (never married) respondents were most likely to report being exposed to second hand smoke. (Figure 75)

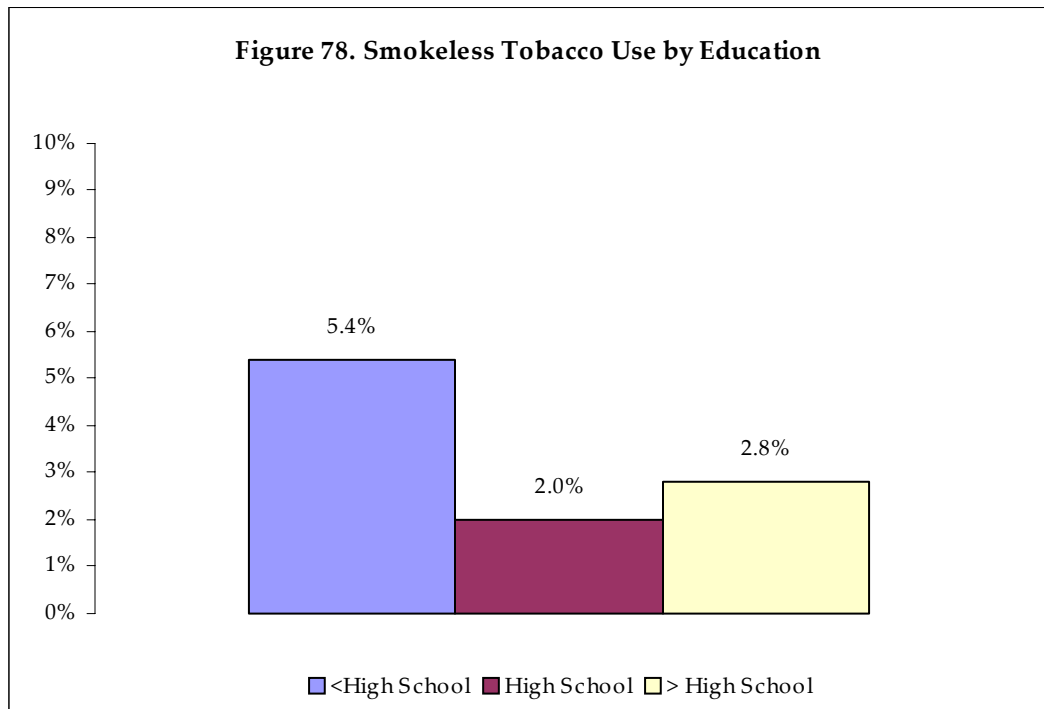
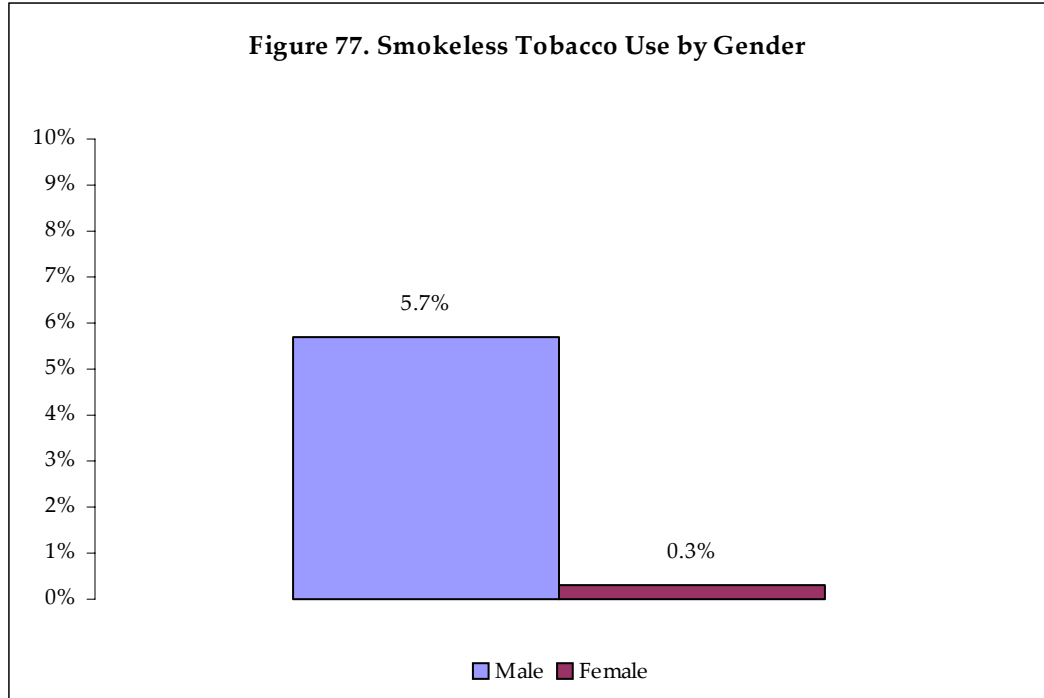


- Uninsured respondents were more likely than those with health insurance to report second hand smoke exposure. (Figure 76)

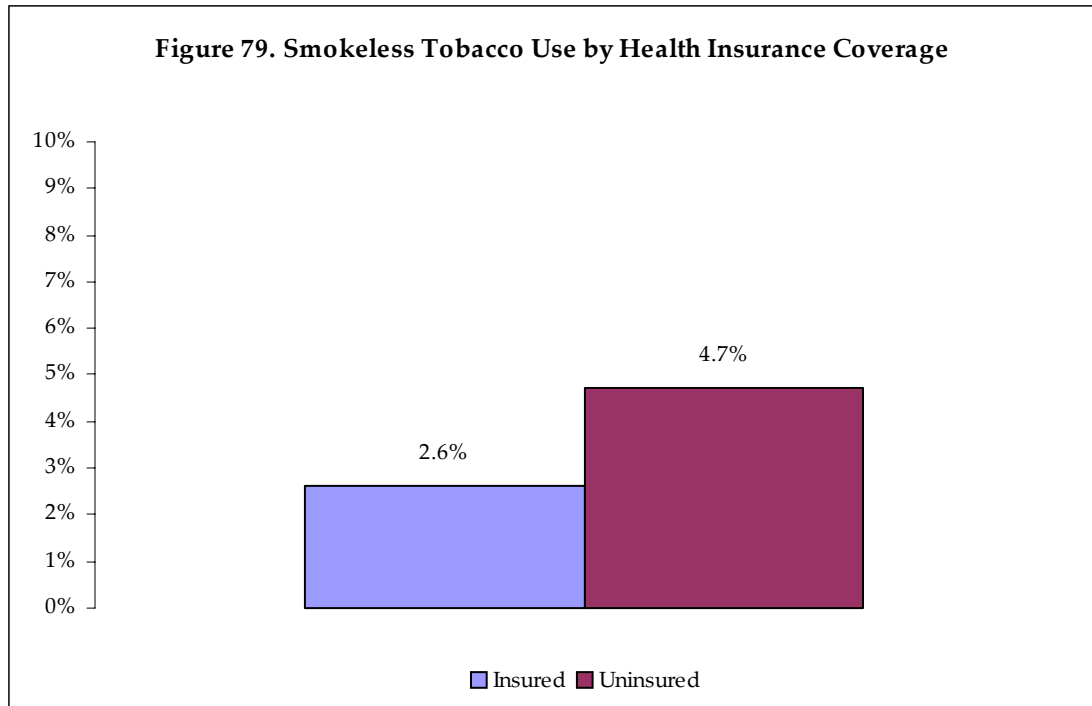


Smokeless Tobacco

- Less than three percent (2.9%, 95% confidence interval, 2.5 - 3.2) of survey respondents said they used some form of smokeless tobacco (snuff, chewing tobacco, etc.).
- Smokeless tobacco users are most likely to be males. Ninety-five percent of smokeless tobacco users were male. Only 0.3% (95% confidence interval, 0.0 - 0.5) of female respondents used smokeless tobacco, compared to 5.7% (95% confidence interval, 4.8 - 6.6) of males. (Figure 77)
- Respondents with less than a high school education were most likely to use smokeless tobacco products. (Figure 78)



- Uninsured respondents were more likely to use smokeless tobacco than those with health insurance. (Figure 79)



References

1. Tobacco Use Among US Racial/Ethnic Minority Groups – African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A report of the Surgeon General. *MMWR Mortality and Morbidity Weekly Report Recommendations and Reports* October 9, 1998 47 (RR-18); 1-16.
2. State-Specific Prevalence of Current Cigarette Smoking Among Adults, and Policies and Attitudes About Secondhand Smoke, United States, 2000. *Morbidity and Mortality Weekly Report* 50(49): 1101-07.
3. Blizzard, L., Ponsonby, A., Dweyer, T., Venn, A., Cockrane, J. (2003). Parental Smoking and Infant Respiratory Infection: How important is not smoking in the same room with the baby? *American Journal of Public Health* 93 (3): 482-488.

Table 7a. Tobacco Use Characteristics: Current Smokers, Advised to Quit, and Plan to Quit. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Current Smokers</u> | <u>Advised to Quit</u> | <u>Plan to Quit</u> |
|---------------------------|------------------------|------------------------|---------------------|
| <u>Total</u> | 26.1% (25.1 - 27.0) | 72.7% (70.9-75.1) | 66.8% (64.9-69.1) |
| <u>Age</u> | | | |
| 18-24 | 26.2% (22.7 - 29.6) | 59.9% (52.5-67.5) | 73.2% (65.9-80.1) |
| 25-44 | 28.9% (27.3 - 30.4) | 70.8% (68.1-73.9) | 71.9% (68.9-75.1) |
| 45-64 | 28.1% (26.2 - 30.1) | 81.6% (78.9-85.1) | 59.4% (54.7-63.3) |
| 65+ | 13.6% (11.7 - 15.4) | 76.2% (69.3-82.60) | 51.6% (43.8-60.1) |
| | | | |
| <u>Race</u> | | | |
| African American | 22.6% (20.6 - 24.6) | 65.1% (60.3-69.7) | 72.1% (67.4-76.6) |
| White | 27.6% (26.4 - 28.8) | 74.5% (72.7-77.2) | 65.4% (62.4-67.6) |
| Other | 21.4% (15.9 - 27.0) | 76.1% (63.1-88.9) | 69.0% (54.5-83.5) |
| | | | |
| <u>Sex</u> | | | |
| Male | 27.8% (26.1 - 29.5) | 67.7% (65.3-70.7) | 66.3% (63.1-68.9) |
| Female | 24.5% (23.2 - 25.7) | 77.9% (75.1-80.9) | 67.7% (64.5-71.5) |
| | | | |
| <u>Income</u> | | | |
| < \$10,000 | 32.5% (27.1 - 37.9) | 87.1% (80.4-93.6) | 69.1% (59.4-78.6) |
| \$10,000 - \$24,999 | 30.6% (28.5 - 32.8) | 65.5% (61.9-70.1) | 66.1% (61.7-70.3) |
| \$25,000 - \$49,999 | 27.7% (25.9 - 29.4) | 74.1% (70.7-77.3) | 68.1% (64.4-71.7) |
| > \$50,000 | 20.6% (18.7 - 22.5) | 76.3% (71.6-80.4) | 70.1% (65.1-74.9) |
| | | | |
| <u>Education</u> | | | |
| < High School | 38.0% (34.8 - 41.2) | 71.8% (66.9-77.1) | 60.5% (54.3-65.7) |
| High School | 33.3% (31.2 - 35.4) | 71.5% (67.4-74.6) | 64.9% (61.1-68.9) |
| > High School | 20.9% (19.7 - 22.1) | 74.2% (70.7-77.3) | 70.4% (69.9-73.1) |
| | | | |
| <u>Marital Status</u> | | | |
| Single | 26.8% (25.2 - 28.3) | 64.2% (59.7-68.3) | 73.2% (69.4-77.1) |
| Married/Cohabiting | 23.0% (20.7 - 25.2) | 73.9% (70.2-77.8) | 64.7% (61.2-68.2) |
| Divorced/Separated | 35.3% (33.2 - 37.4) | 80.3% (76.5-83.5) | 67.5% (63.3-71.7) |
| Widowed | 20.6% (17.9 - 23.4) | 77.3% (70.3-83.7) | 48.7% (40.7-56.6) |
| | | | |
| <u>Insurance Coverage</u> | | | |
| Insured | 24.2% (23.2 - 25.3) | 75.5% (72.6-77.4) | 67.4% (64.1-69.9) |
| Uninsured | 41.4% (38.7 - 44.1) | 58.9% (53.9-64.1) | 65.2% (60.2-69.8) |

Table 7b. Tobacco Use Characteristics: Quit One Day or More in Past Year, Use Smokeless Tobacco, and Exposed to Second Hand Smoke in the Past Month. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Quit One Day or More in Past Year</u> | <u>Use Smokeless Tobacco</u> | <u>Exposed to Second Hand Smoke in the Past Month</u> |
|---------------------------|--|------------------------------|---|
| <u>Total</u> | 64.2% (61.2-66.8) | 2.9% (2.5 - 3.2) | 66.2% (65.2 - 67.2) |
| <u>Age</u> | | | |
| 18-24 | 79.8% (73.8-86.1) | 2.7% (1.4 - 3.9) | 74.7% (71.3 - 78.1) |
| 25-44 | 64.7% (61.9-68.1) | 3.3% (2.7 - 3.9) | 72.2% (70.7 - 73.8) |
| 45-64 | 56.9% (52.9-61.0) | 2.0% (1.4 - 2.6) | 65.0% (62.9 - 67.1) |
| 65+ | 57.7% (50.3-65.7) | 3.4% (2.4 - 4.4) | 41.6% (38.9 - 44.3) |
| <u>Race</u> | | | |
| African American | 70.7% (66.5-75.5) | 2.2% (1.5 - 2.9) | 63.9% (61.6 - 66.2) |
| White | 62.3% (59.5-64.5) | 2.9% (2.5 - 3.4) | 68.2% (67.0 - 69.5) |
| Other | 66.8% (52.8-81.2) | 4.5% (1.7 - 7.3) | 51.8% (45.1 - 58.6) |
| <u>Gender</u> | | | |
| Male | 62.9% (60.2-65.8) | 5.7% (4.8 - 6.6) | 69.1% (63.4 - 70.9) |
| Female | 65.5% (62.6-69.4) | 0.3% (0.0 - 0.5) | 63.5% (62.2 - 64.9) |
| <u>Income</u> | | | |
| <\$10,000 | 60.9% (51.4-70.6) | 4.2% (1.9 - 6.5) | 63.2% (57.7 - 68.8) |
| \$10,000-\$24,999 | 67.1% (62.9-71.1) | 2.3% (1.6 - 3.0) | 66.0% (63.8 - 68.2) |
| \$25,000-\$49,999 | 65.0% (61.4-68.6) | 2.9% (2.3 - 3.6) | 69.9% (68.2 - 71.7) |
| \$50,000 or more | 62.5% (57.9-68.1) | 2.9% (2.1 - 3.7) | 67.0% (64.8 - 69.2) |
| <u>Education</u> | | | |
| < High School | 59.7% (54.5-65.5) | 5.4% (3.9 - 6.9) | 65.7% (62.5 - 68.8) |
| High School | 63.4% (60.2-67.8) | 2.0% (1.4 - 2.7) | 66.3% (64.2 - 68.4) |
| > High School | 66.2% (62.9-69.1) | 2.8% (2.3 - 3.3) | 66.3% (64.9 - 67.7) |
| <u>Marital Status</u> | | | |
| Single | 72.5% (69.0-77.0) | 2.8% (2.2 - 3.4) | 75.5% (73.9 - 77.0) |
| Married/Cohabiting | 59.8% (55.9-64.3) | 3.2% (2.3 - 4.1) | 63.0% (60.4 - 65.5) |
| Divorced/Separated | 63.3% (59.4-66.6) | 2.8% (2.1 - 3.5) | 69.6% (67.6 - 71.7) |
| Widowed | 53.5% (46.1-61.9) | 1.5% (0.7 - 2.3) | 43.0% (39.6 - 46.3) |
| <u>Insurance Coverage</u> | | | |
| Insured | 64.6% (62.1-67.9) | 2.6% (2.2 - 3.0) | 65.5% (64.3 - 66.6) |
| Uninsured | 61.8% (58.0-66.0) | 4.7% (3.5 - 5.8) | 72.1% (69.6 - 74.6) |

Alcohol Use and Binge Drinking

Health Risks of Excessive Alcohol Consumption

Alcohol use among adults in the United States is a topic of considerable public health importance.¹ The harm associated with the consumption of large amounts of alcohol has been well documented. However, at the same time, there are some reports that suggest that the intake of small or moderate amounts of alcohol may be beneficial to health.² Problem drinking causes medical damage including pancreatitis, nutritional deficiencies, malignancies, fetal alcohol syndrome, and cirrhosis.^{3,4} Prenatal exposure to alcohol is one of the leading preventable causes of birth defects, mental retardation, and neuro-developmental disorders in the United States.⁵

National and State Prevalence

The National and State BRFSS item concerning amount and frequency of alcohol consumption in the past month is structured and reported differently from the similar item in the Nashville Community Health Behavior Survey, so the data cannot be compared.

The BRFSS does report binge drinking (having five or more drinks on one occasion) in the same manner as the Nashville Community Health Behavior Survey. Twenty-five percent of the respondents from Tennessee reported binge drinking at least once during the past month. Males in Tennessee tended to binge drink more than females; 34.2% of males and 11.1% of females reported having five or more drinks on one occasion in the past month. Nationwide, 27.8% of respondents admitted binge drinking at least one time during the past month in 2001. By gender, 36.5% of males and 15.5% of females reported binge drinking at least once during the past month in 2001.⁶

Healthy People 2010

There are no Healthy People 2010 objectives specifying changes in drinking behavior.

Description of Measures

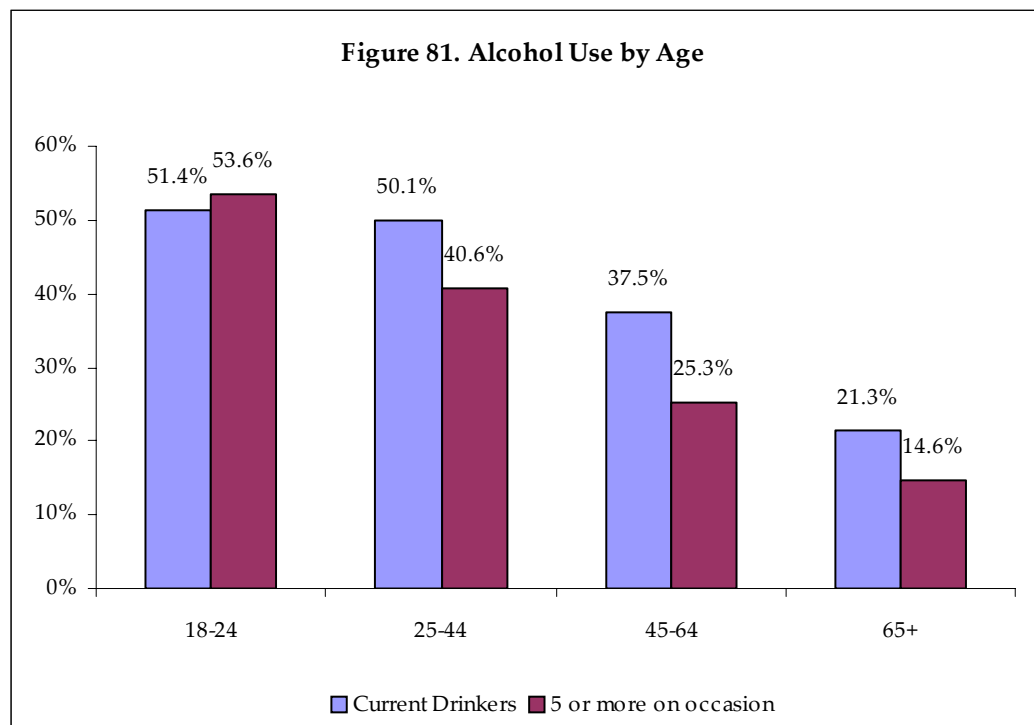
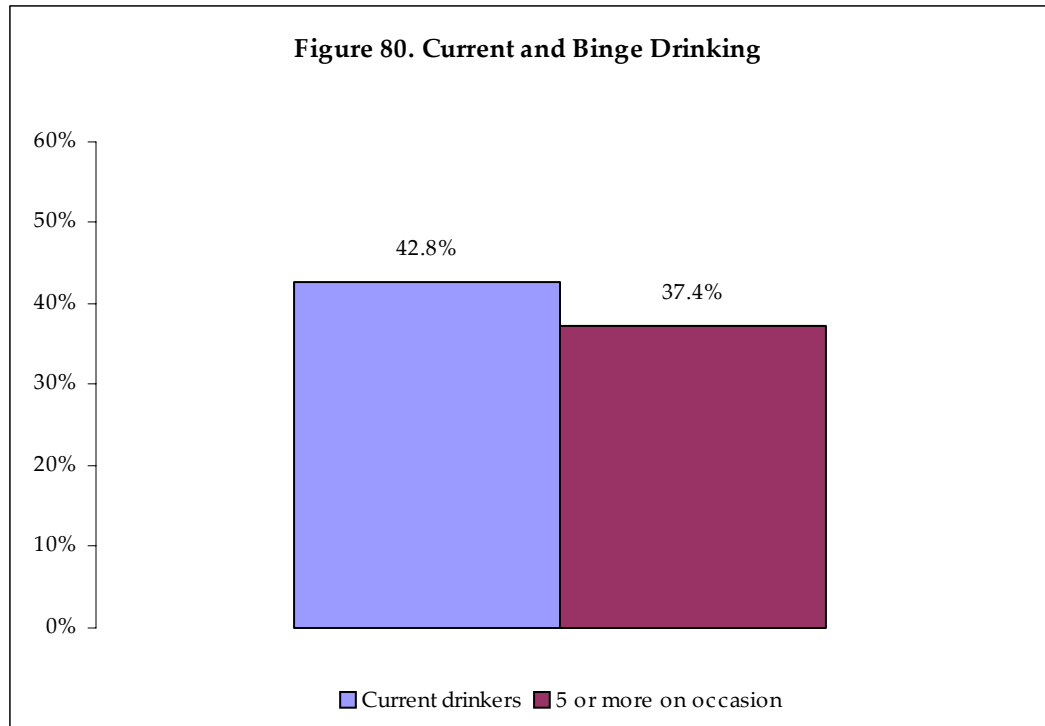
The questionnaire item measuring current drinking was: "A drink is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past month, how many alcoholic drinks did you have in an average week?" For analysis, respondents were divided into two categories – those who reported one or more drinks in an average week, and those who reported none.

Respondents who had one or more drinks in an average week were asked the item measuring binge drinking: "Considering all types of alcoholic beverages, how many times during the past month did you have five or more drinks on an occasion?" As with the previous item, this was treated as a dichotomous variable, dividing responses into two categories, those who reported binge drinking behavior and those who did not.

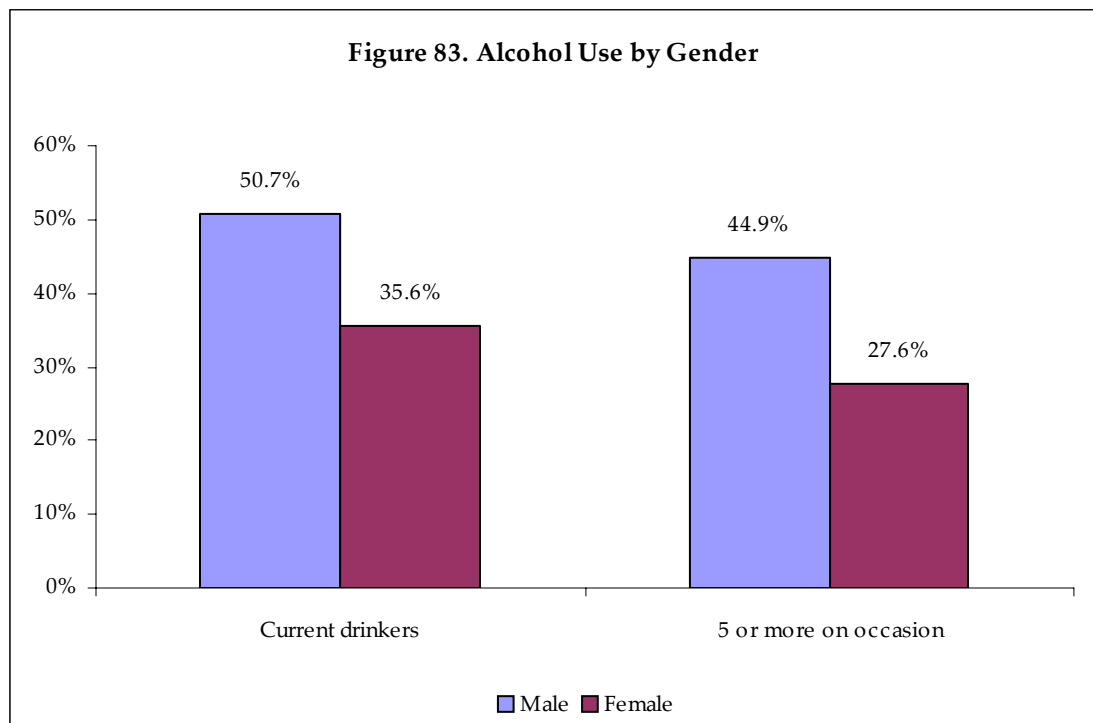
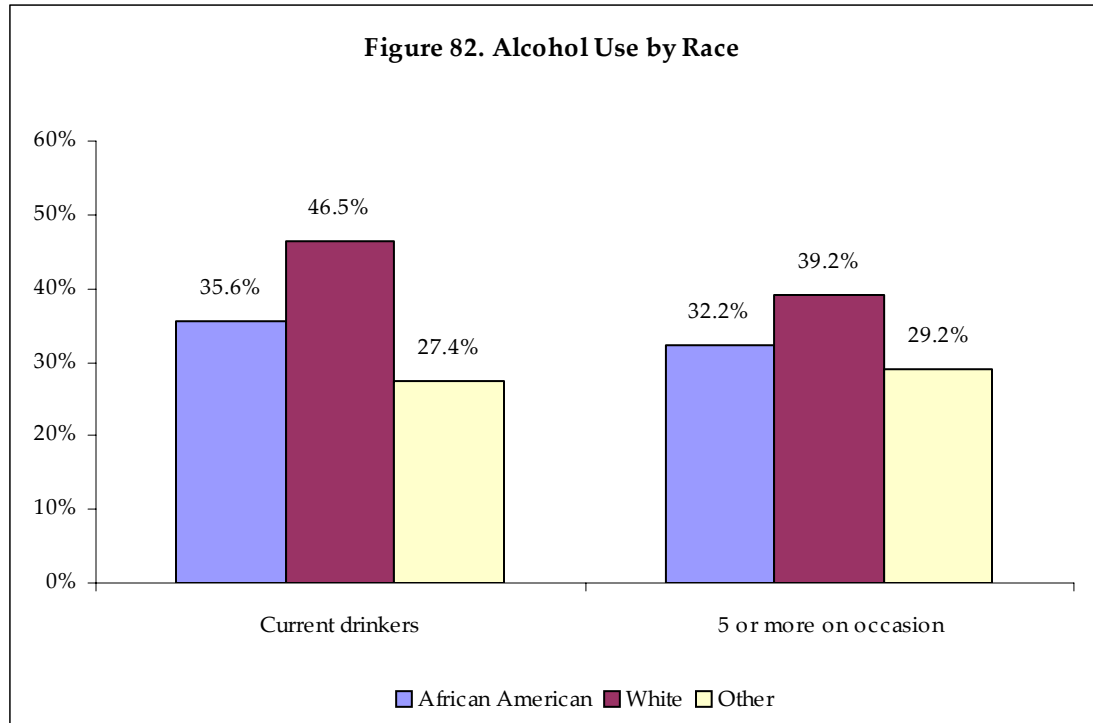
Results

- Overall, 42.8% (95% confidence interval 41.7 – 43.9) reported having a drink in an average week during the past month (were current drinkers).

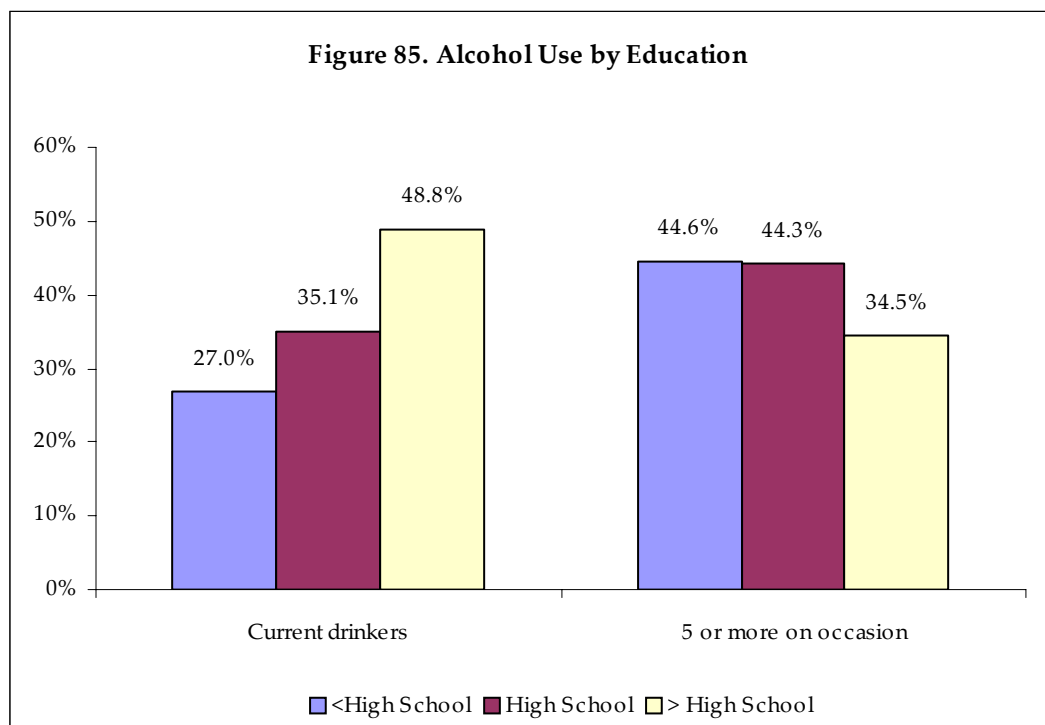
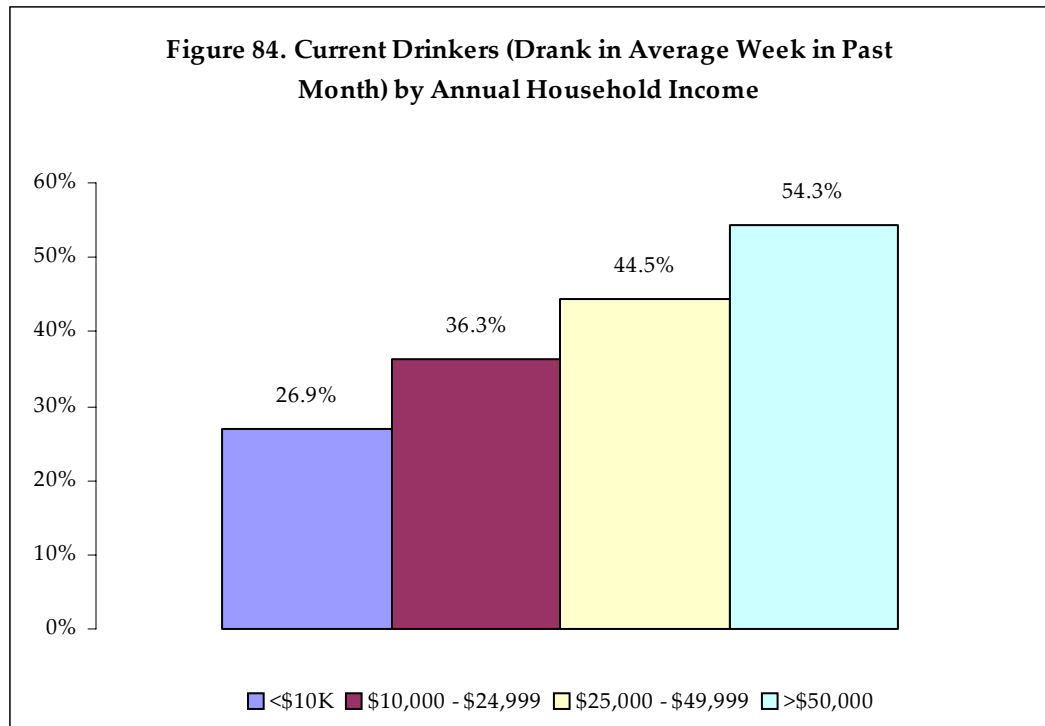
- Of those who reported current drinking in the first question, 37.4% (95% confidence interval 35.2 – 38.7) reported binge drinking (had 5 or more drinks on one occasion) in the past month. (Figure 80)
- Younger age was associated with both current drinking and risk of binge drinking. (Figure 81)



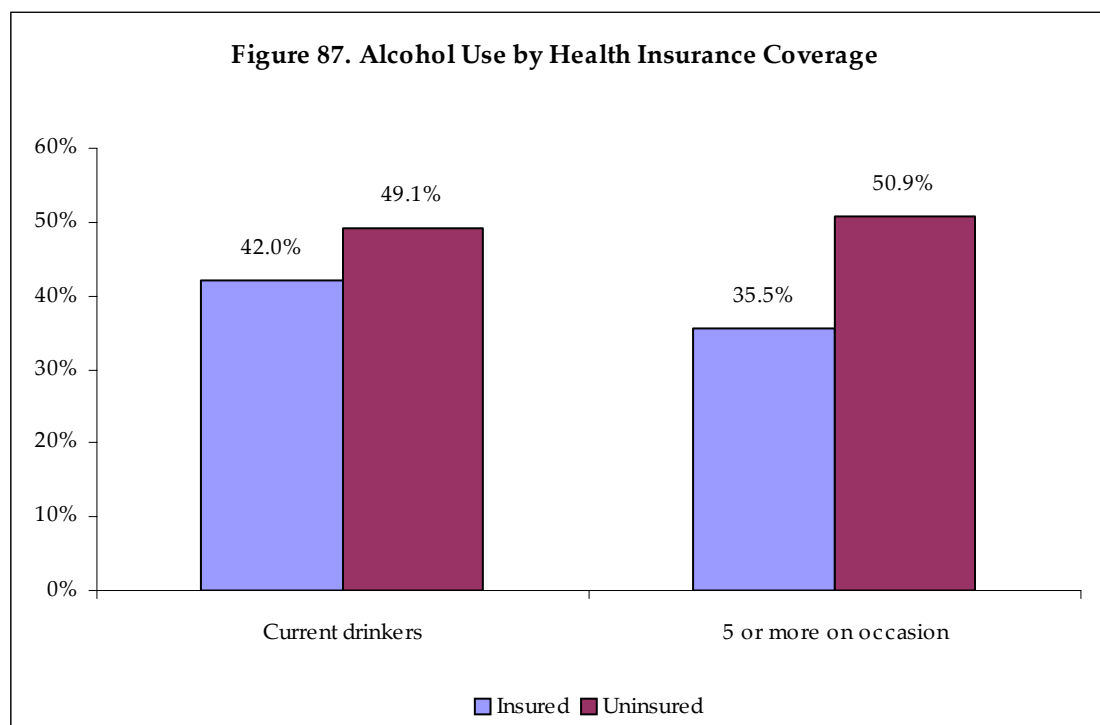
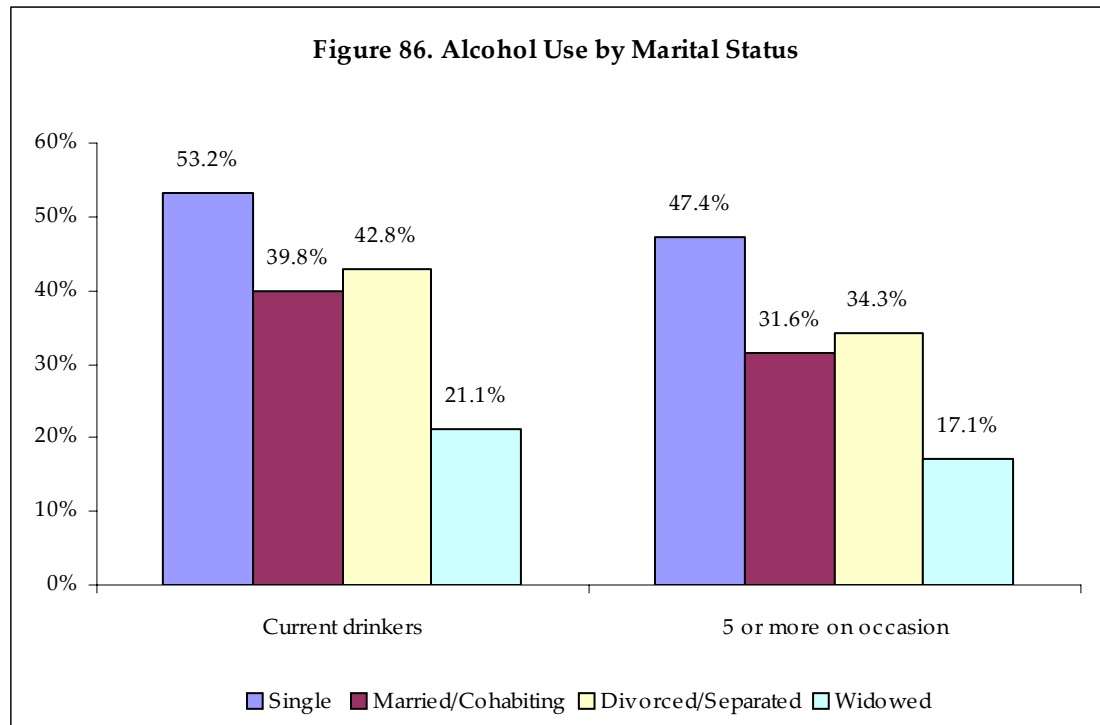
- Whites were more likely than African Americans or Other races to be current drinkers and to be binge drinkers. (Figure 82)
- Men were more likely than women to be current drinkers and to be binge drinkers. (Figure 83)



- Higher income was associated with higher percentages of current drinkers. There was no substantial difference between income groups in binge drinking. (Figure 84)
- Respondents with education past high school were more likely to be current drinkers but less likely to binge. (Figure 85)



- Never-married singles were more likely to be current drinkers than married, cohabiting, divorced, or separated persons. Widowed persons were least likely to report being current drinkers. Of current drinkers, single persons were most likely, and widowed persons least likely, to have five or more drinks on one occasion. (Figure 86)
- Persons without health insurance coverage were more likely to be current drinkers and to be binge drinkers. (Figure 87)



References

1. Schoenborn, C.A. & Adams, P.F. (2002). Alcohol Use Among Adults: United States, 1997-1998. *Advance Data – From Vital and Health Statistics*. 324: 1-20.
2. Moore R.D. & Pearson T.A. (1986). Moderate Alcohol Consumption and Coronary Artery Disease. A Review. *Medicine*. 65(4): 242-267.
3. National Center for Health Statistics. *Vital Statistics of the United States: Volume II*. Hyattsville, Maryland: National Center for Health Statistics, (Vol I and Vol II for each year, covering the years 1945-1980).
4. CDC (1986). "Trends in mortality from Cirrhosis and Alcoholism—United States, 1945-1983). *MMWR Morbidity and Mortality Weekly Report* 35(45): 703-5.
5. CDC (2002). "Alcohol use among women of childbearing age—United States, 1991-1999). *MMWR Morbidity and Mortality Weekly Report* 50(49): 273-6.
6. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/display.asp>. Accessed June 19, 2003.

Table 8. Alcohol Use. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District, Age, Sex, and Race (95% Confidence Interval)

| <i>Demographics</i> | <u>Current Drinking (Had a Drink in Average Week in Past Month)</u> | <u>Binge Drink in Past Month (Had Five or More Drinks on One Occasion)</u> |
|---------------------------|---|--|
| <u>Total</u> | 42.8% (41.7 - 43.9) | 37.4% (35.2-38.7) |
| <u>Age</u> | | |
| 18-24 | 51.4% (47.5 - 55.3) | 53.6% (48.5-59.5) |
| 25-44 | 50.1% (48.3 - 51.8) | 40.6% (38.6-43.4) |
| 45-64 | 37.5% (35.4 - 39.6) | 25.3% (21.9-28.1) |
| 65 and older | 21.3% (19.1 - 23.6) | 14.6% (10.2-19.8) |
| <u>Race</u> | | |
| African American | 35.6% (33.3 - 37.9) | 32.2% (28.3-36.1) |
| White | 46.5% (45.1 - 47.8) | 39.2% (37.2-41.2) |
| Other | 27.4% (21.4 - 33.4) | 29.2% (17.5-40.9) |
| <u>Gender</u> | | |
| Male | 50.7% (48.7 - 52.6) | 44.9% (42.2-47.6) |
| Female | 35.6% (34.2 - 37.0) | 27.6% (25.4-30.8) |
| <u>Income</u> | | |
| <\$10,000 | 26.9% (21.7 - 32.0) | 38.9% (27.2-50.7) |
| \$10,000-\$24,999 | 36.3% (34.1 - 38.5) | 41.0% (36.9-45.1) |
| \$25,000-\$49,999 | 44.5% (42.5 - 46.4) | 39.8% (36.8-42.7) |
| \$50,000 or more | 54.3% (51.9 - 56.7) | 34.8% (31.7-37.9) |
| <u>Education</u> | | |
| < High School | 27.0% (24.0 - 29.9) | 44.6% (37.5-51.6) |
| High School | 35.1% (33.0- 37.2) | 44.3% (40.4-48.3) |
| > High School | 48.8% (47.3 - 50.3) | 34.5% (32.5-36.6) |
| <u>Marital Status</u> | | |
| Single | 53.2% (51.4 - 55.0) | 47.4% (44.3-50.5) |
| Married/Cohabiting | 39.8% (37.2 - 42.4) | 31.6% (28.9-34.3) |
| Divorced/Separated | 42.8% (40.6 - 45.0) | 34.3% (30.3-38.3) |
| Widowed | 21.1% (18.3 - 23.8) | 17.1% (10.8-23.4) |
| <u>Insurance Coverage</u> | | |
| Insured | 42.0% (40.8 - 43.2) | 35.5% (33.7-37.4) |
| Uninsured | 49.1% (46.3 - 51.8) | 50.9% (45.4-56.4) |

HIV/AIDS Risk (Sexual Risk Behavior)

In Nashville in 2000, HIV-related disease, including AIDS, was the tenth among leading causes of death in males, and seventh leading cause of death for African Americans.¹ While the growth of the HIV epidemic has slowed since its rapid growth in the mid-1980's, and the numbers of AIDS diagnoses and deaths have declined due to more effective therapy, the HIV epidemic continues to spread. Fewer deaths due to HIV disease mean more people are living longer with HIV infection, which results in more opportunity for the infection to spread.^{2,3}

Risk Factors for HIV/AIDS

HIV infection is transferred through body fluids, especially blood, semen, and vaginal fluids. Sexual activity is therefore one of the principal methods of transmission of the HIV virus. Having multiple partners increases the risk of having an HIV-infected partner and contracting the virus. Use of a latex condom has been found to be highly effective in preventing the transmission of HIV.⁴

National and State Prevalence

These questions were selected from an optional sexual behavior module and not the core BRFSS survey. Therefore, statewide and nationwide data, and data for Nashville for previous years, are not available for comparison.

Healthy People 2010

A goal of Healthy People 2010 is to “prevent HIV infection and its related illness and death.” Objective 13.6 is to increase the proportion of sexually active persons who use condoms to 50%.⁵

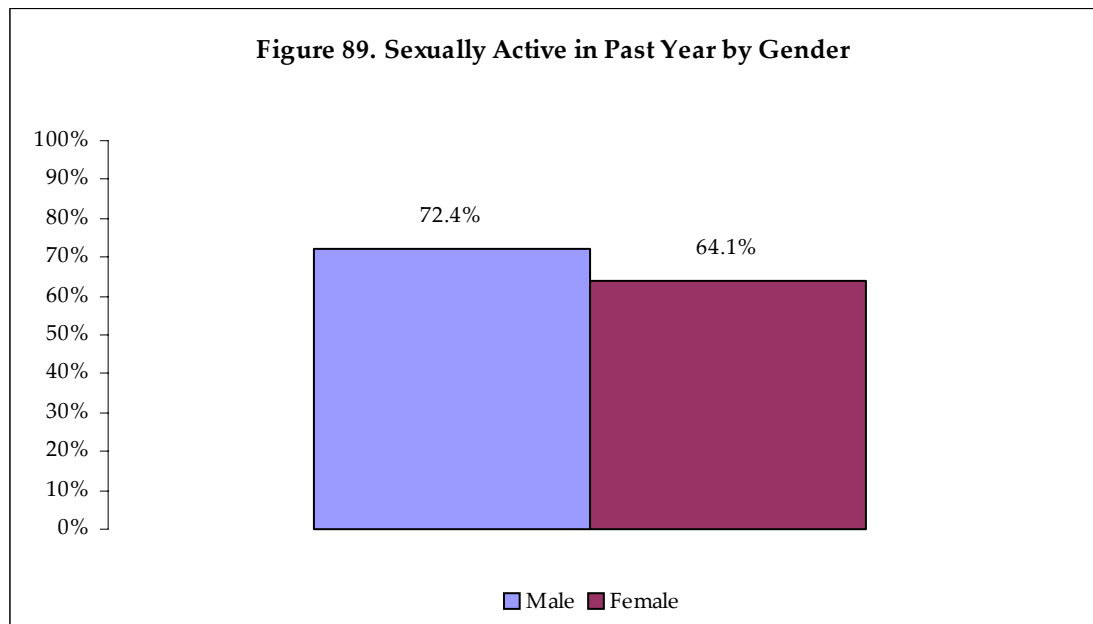
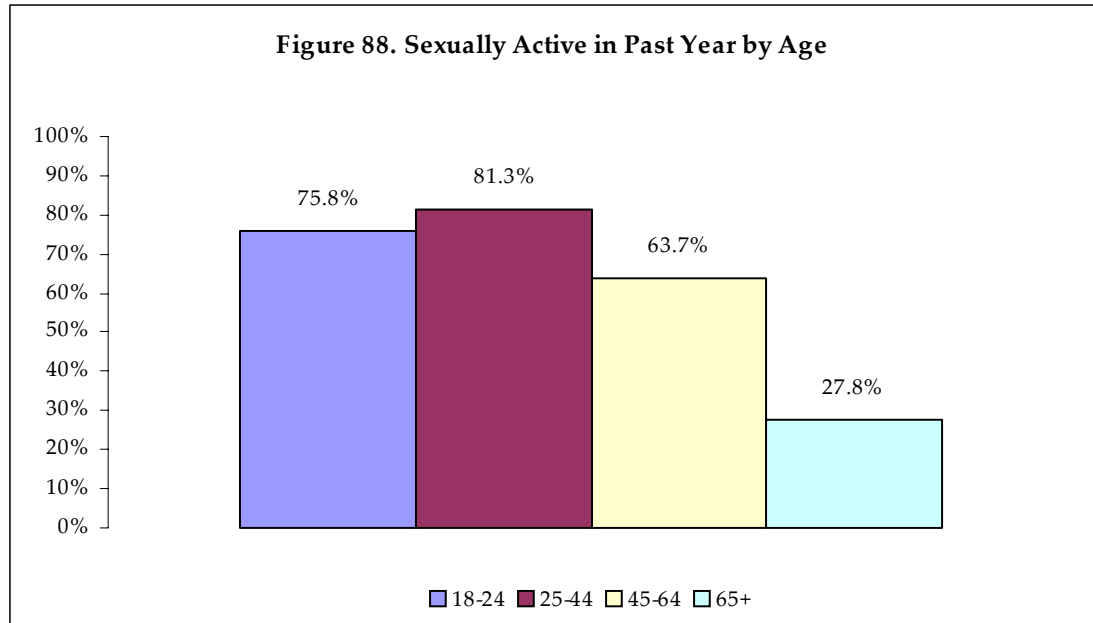
Description of Measures

The Community Health Survey focused on sexual activity, multiple partners, and condom use. The survey introduced the questions concerning HIV risk by saying “The next few questions are about the national problem of HIV, the virus that causes AIDS.” The questions that were asked were: “In the last 12 months, how many sexual partners have you had?” and “Do you now always use condoms for protection?”

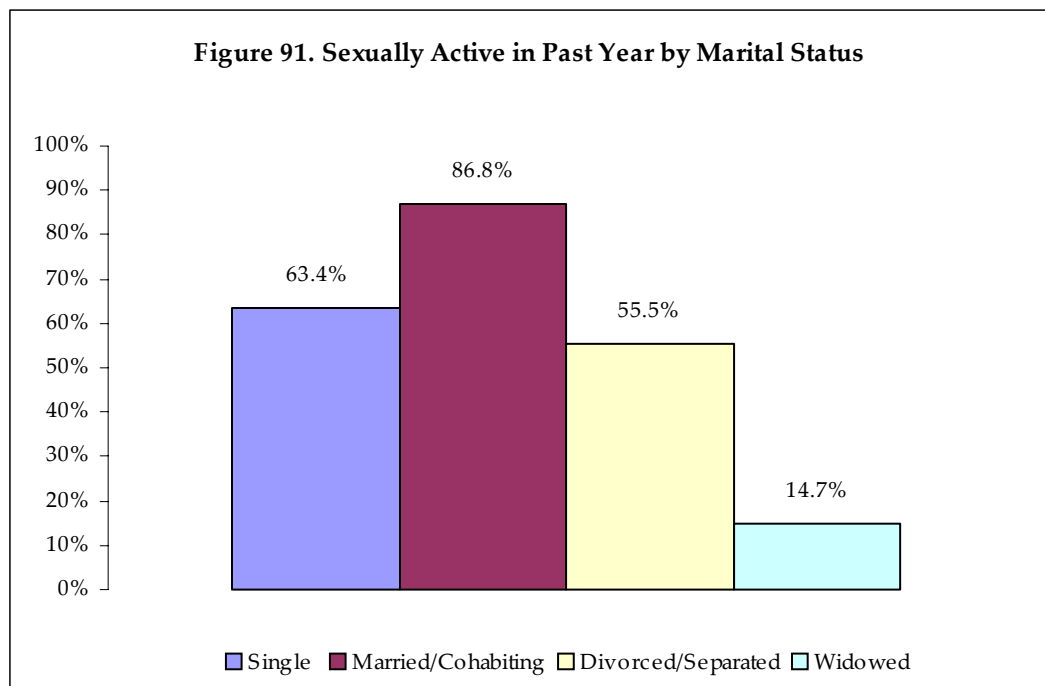
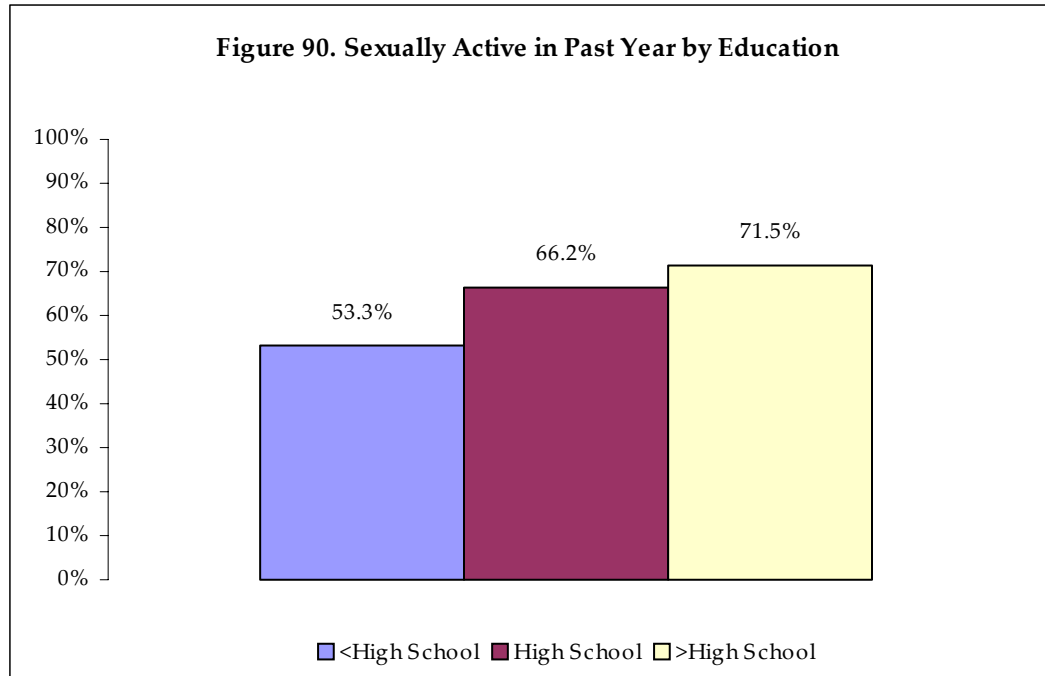
Results

Sexual activity

- Sixty-eight percent (95% confidence interval 67.0 - 69.1%) of respondents reported having one or more sexual partners in the past 12 months. Of those who reported having at least one sexual partner in the past year, 2% reported having more than one partner.
- The likelihood of sexual activity varied substantially by age. The group from 25-44 had the highest percentage reporting sexual activity, followed by 18-24, 45-64, and over 65. (Figure 88)
- There was no significant difference by race in percentages of respondents reporting a sexual partner in the past year.

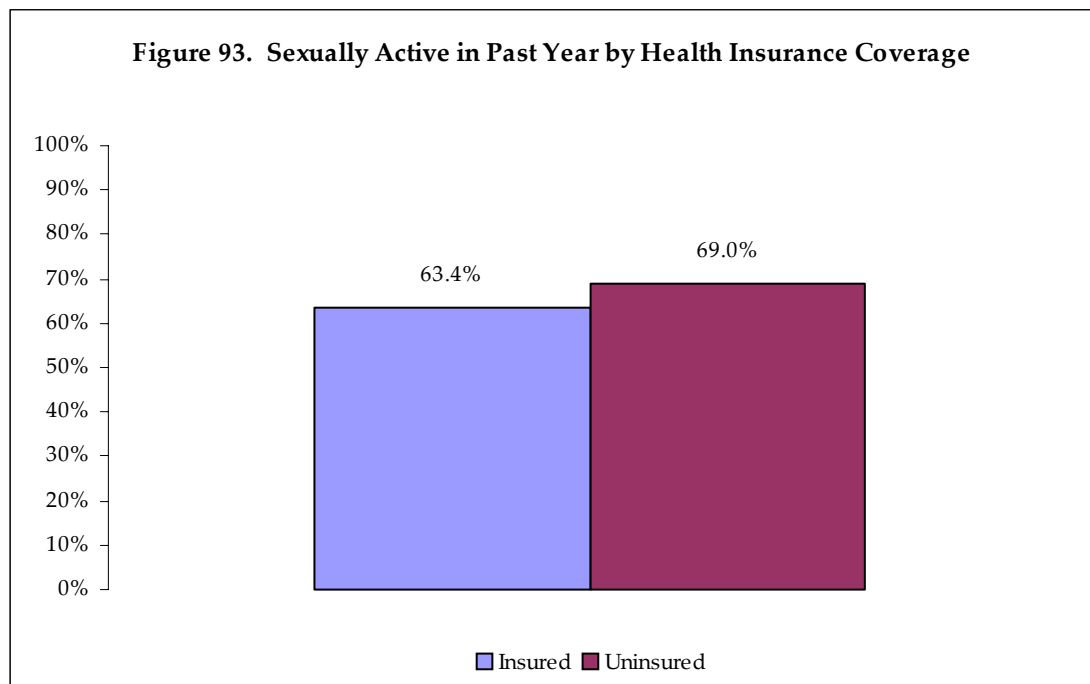
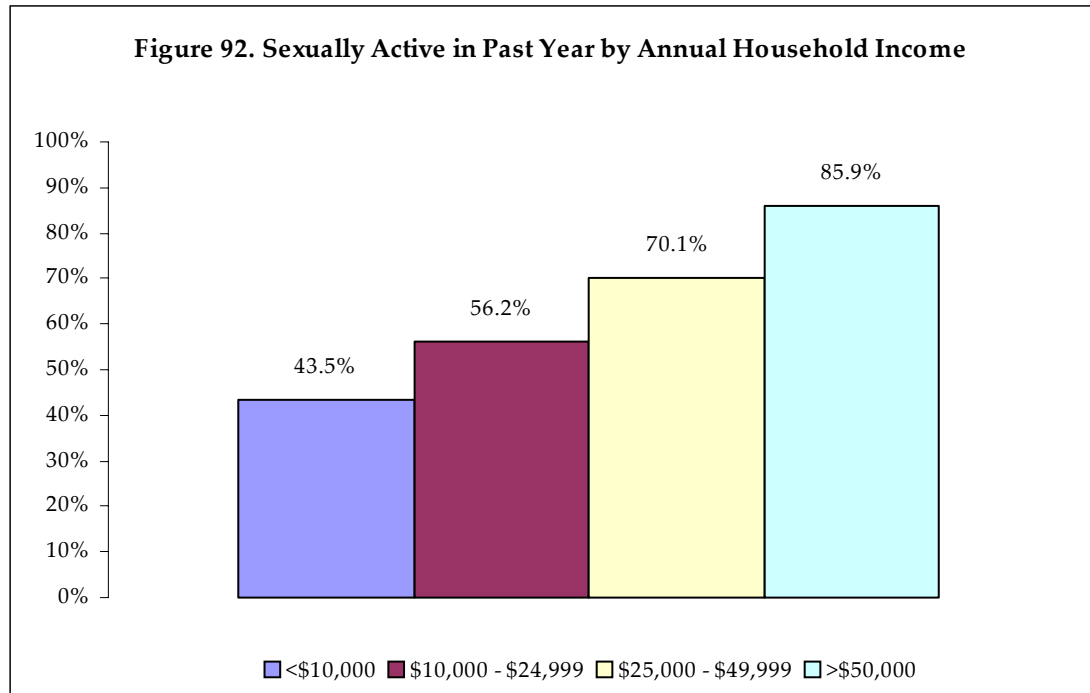


- Male respondents reported having at least one sexual partner in the past year more often than females. (Figure 89)



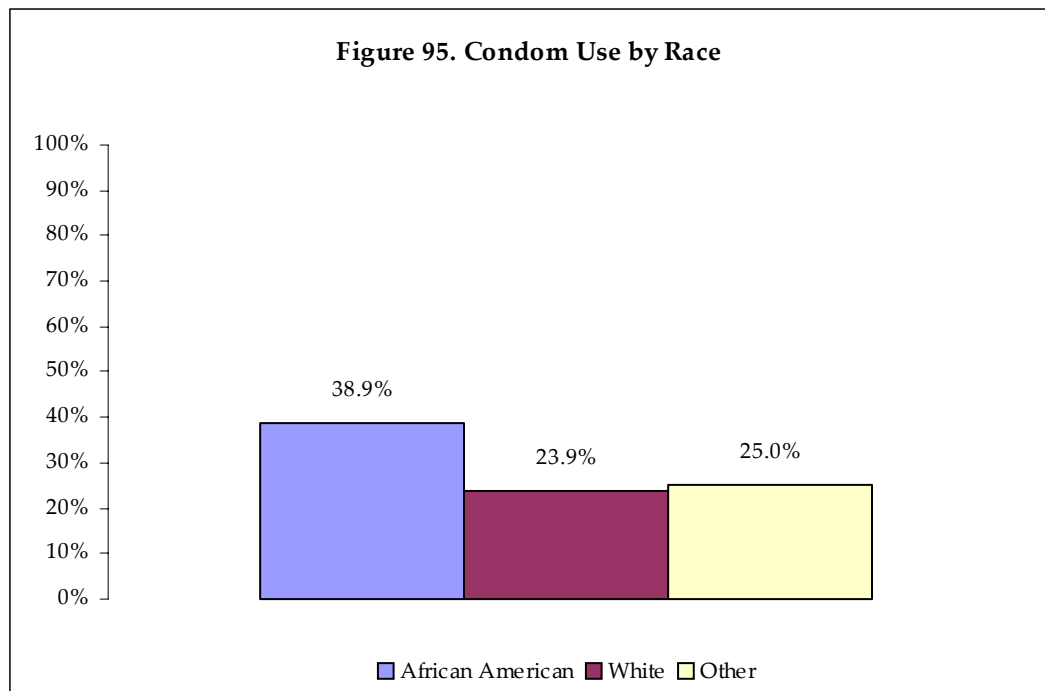
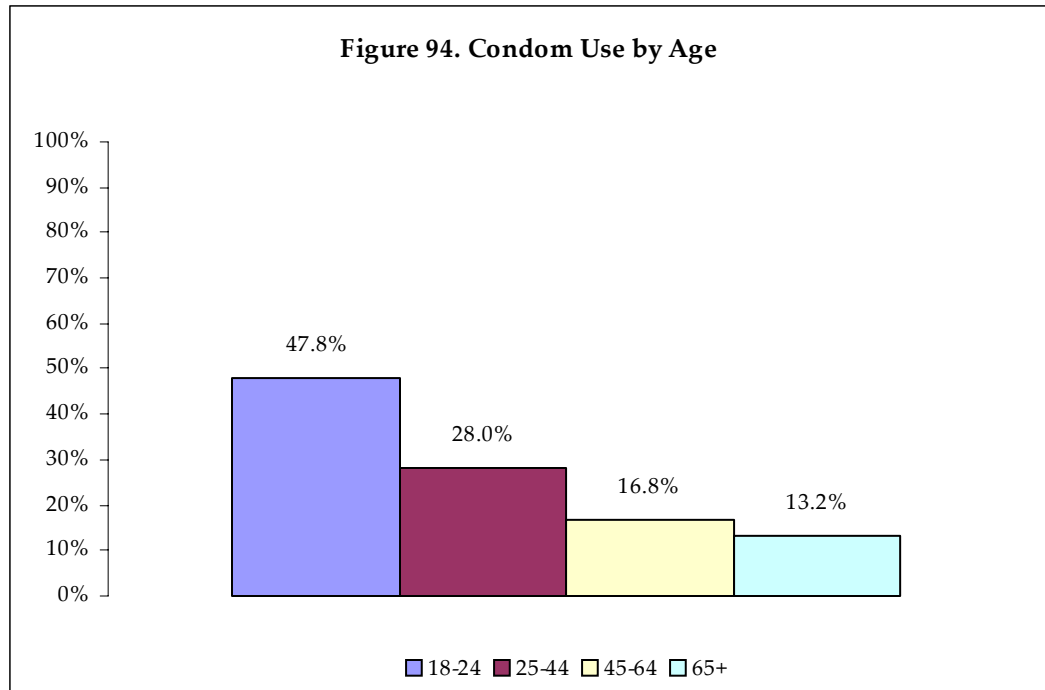
- Respondents with higher levels of educational attainment were most likely to report at least one partner in the past year. (Figure 90)
- Reported sexual activity varied substantially with marital status, as one would expect, with married or cohabiting respondents more likely to report having at least one sexual partner in the past year. However, more than half of single, divorced, and separated respondents reported being also sexually active. (Figure 91)

- Larger numbers of respondents in the higher income groups reported having a sexual partner in the past year. In interpreting this finding, it should be noted that the income reported is total household income, and that married or cohabiting respondents are more likely to belong to a two-income household. Thus, married or cohabiting respondents, who are most likely to be sexually active, are more likely to report a higher total household income. (Figure 92)
- Respondents without health insurance coverage were slightly more likely to report having a sexual partner in the past year than those having health insurance coverage. (Figure 93)

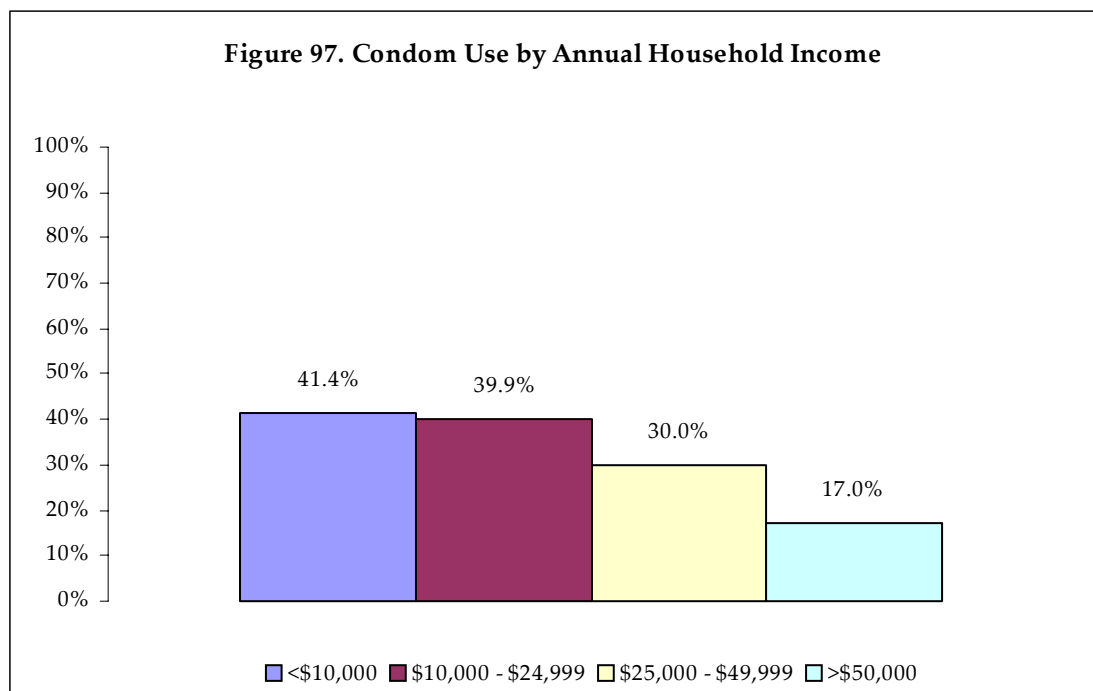
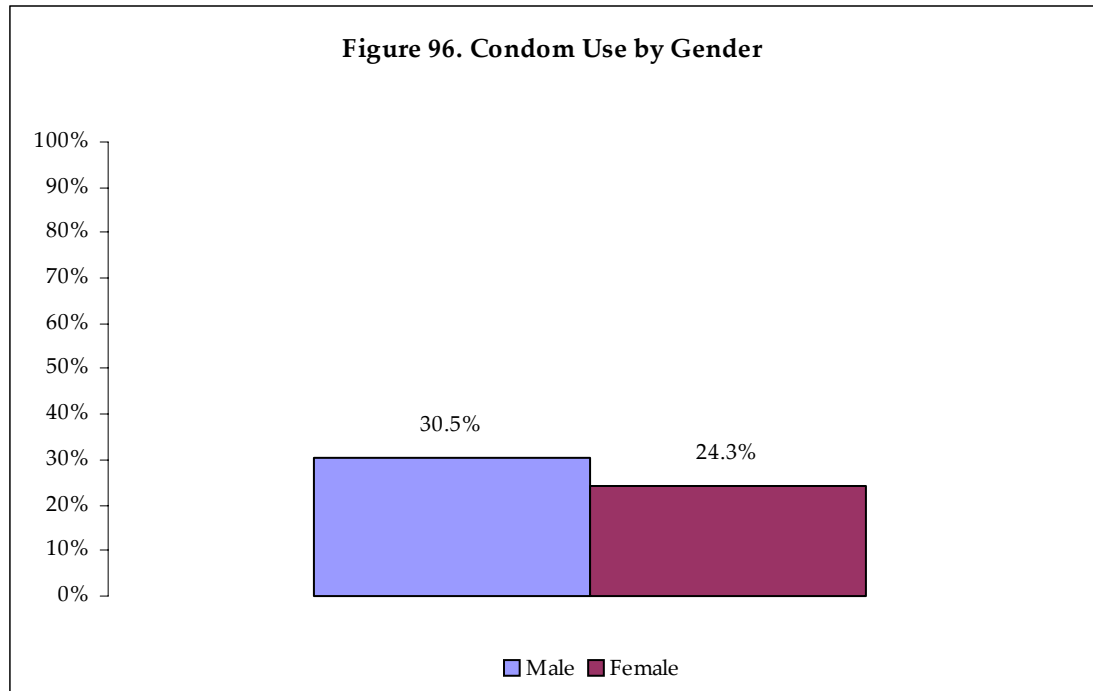


Condom use

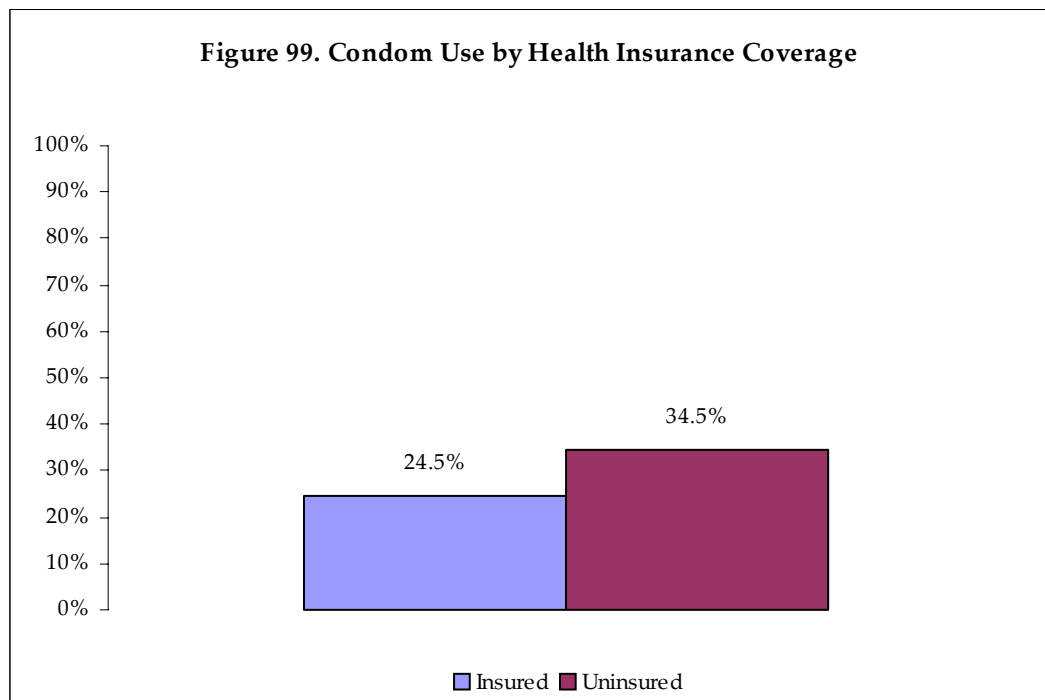
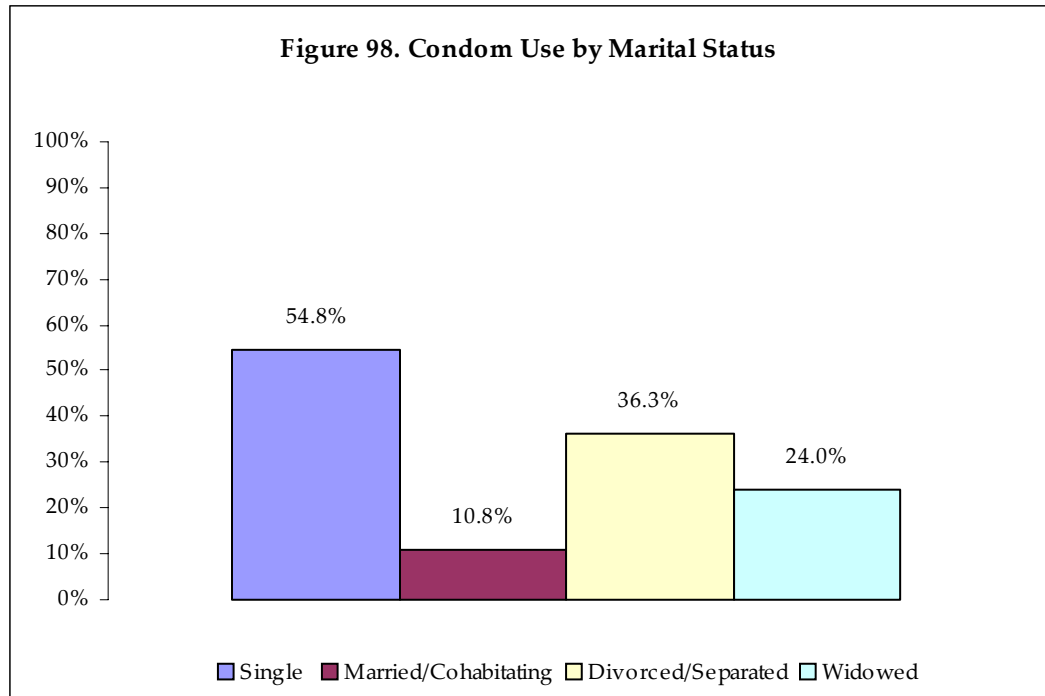
- Of sexually active respondents, 27.4% (95% confidence interval 26.1% - 28.8%) said they always used condoms for protection.
- Younger respondents were more likely to report always using condoms for protection. (Figure 94)
- African Americans were more likely than Whites to report always using condoms for protection. (Figure 95)



- Males reported condom use more frequently than females. (Figure 96)
- Those in higher income groups were less likely to use condoms for protection, although there was no substantial difference between the two lowest income groups. As with the previous question, it should be remembered that respondents in the higher income categories are more likely to be married or cohabiting, as this demographic refers to total household income. (Figure 97)



- Never-married singles and divorced or separated respondents were the most likely to report always using condoms. Married or cohabiting respondents were least likely to report using condoms for protection. (Figure 98)
- Respondents without health insurance coverage were more likely to report condom use than those having health insurance coverage. Of respondents with health coverage, 24.5% said they always used condoms for protection, compared to 34.5% of those without health coverage. (Figure 99)



References

1. Division of Epidemiology, Metro Public Health Department of Nashville and Davidson County, TN. *Health, Nashville and Davidson County, TN, 2002*. Nashville, TN, 2002.
2. Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention.. Combating Complacency in HIV Prevention. [web page]/ 7/24/1998. Available at: <http://www.cdc.gov/hiv/pubs/facts/cmbat.htm>. Accessed 5/27/2003.
3. Karon, JM, Fleming PL, Steketee RW, De cock KM. HIV in the United States at the turn of the Century: An Epidemic in Transition. *American Journal of Public Health* July 2001. 91(7): 1060 – 1068.
4. Divisions of HIV/AIDS Prevention, National Centers for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. Male Latex Condoms and Sexually Transmitted Diseases Fact Sheet [web page]. Available at <http://www.cdc.gov/hiv/pubs/facts/condoms.htm>. Accessed 5/8/2003.
5. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.

Table 9. Sexual Behavior: Sexually Active, More Than One Sexual Partner in Past Year, and Always Use Condoms. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Sexually Active (One or more sexual partners in past 12 months)</u> | <u>More than one sexual partner in past year (% of those who had at least one partner and responded to this question)</u> | <u>Always Use Condoms for Protection (asked sexually active respondents)</u> |
|---------------------------|--|---|--|
| <u>Total</u> | 68.1% (67.0 - 69.1) | 2.0% (1.1 - 3.1) | 27.4% (26.1 - 28.8) |
| <u>Age</u> | | | |
| 18-24 | 75.8% (72.5 - 79.2) | 5.5% (1.1 - 10.0) | 47.8% (43.3 - 52.4) |
| 25-44 | 81.3% (80.0 - 82.7) | 2.1% (0.8 - 3.3) | 28.0% (26.2 - 29.8) |
| 45-64 | 63.7% (61.6 - 65.8) | 1.1% (0.00 - 2.5) | 16.8% (14.7 - 18.9) |
| 65+ | 27.8% (25.3 - 30.2) | 0.2% (0.0 - 2.6) | 13.2% (9.1 - 17.2) |
| <u>Race</u> | | | |
| African American | 68.2% (65.9 - 70.4) | 2.8% (0.7 - 4.9) | 38.9% (25.9 - 42.0) |
| White | 68.7% (67.4 - 69.9) | 1.8% (0.7 - 2.8) | 23.9% (22.4 - 25.4) |
| Other | 60.8% (54.2 - 67.4) | 2.3% (0.0 - 7.3) | 25.0% (17.2 - 32.7) |
| <u>Gender</u> | | | |
| Male | 72.4% (70.7 - 74.2) | 2.8% (1.2 - 4.5) | 30.5% (28.3 - 32.6) |
| Female | 64.1% (62.8 - 65.5) | 1.3% (0.3 - 2.3) | 24.3% (22.6 - 26.0) |
| <u>Income</u> | | | |
| <\$10,000 | 43.5% (37.7 - 49.2) | 2.4% (0.0 - 7.9) | 41.4% (31.9 - 50.9) |
| \$10,000 - \$24,999 | 56.2% (53.9 - 58.5) | 2.8% (0.3 - 5.4) | 39.9% (36.6 - 43.3) |
| \$25,000 - 49,999 | 70.1% (68.3 - 71.9) | 2.1% (0.5 - 3.7) | 30.0% (27.8 - 32.3) |
| \$50,000 or more | 85.9% (84.3 - 87.6) | 1.4% (0.0 - 2.7) | 17.0% (15.0 - 19.0) |
| <u>Education</u> | | | |
| < High School | 53.3% (50.0 - 56.6) | 2.4% (0.0 - 5.6) | 25.4% (20.3 - 30.4) |
| High School | 66.2% (64.1 - 68.3) | 1.8% (0.1 - 3.5) | 26.2% (23.6 - 28.8) |
| > High School | 71.5% (70.2 - 72.8) | 2.1% (0.9 - 3.3) | 28.3% (26.6 - 29.9) |
| <u>Marital Status</u> | | | |
| Single | 63.4% (61.7 - 65.1) | 4.5% (1.8 - 7.2) | 54.8% (51.8 - 57.7) |
| Married/Cohabiting | 86.8% (85.0 - 88.5) | 0.6% (0.0 - 1.4) | 10.8% (9.5 - 12.0) |
| Divorced/Separated | 55.5% (53.3 - 57.8) | 2.4% (0.0 - 5.2) | 36.3% (32.7 - 39.9) |
| Widowed | 14.7% (12.3 - 17.1) | 0.3% (0.0 - 4.1) | 24.0% (15.3 - 32.6) |
| <u>Insurance Coverage</u> | | | |
| Yes | 63.4% (62.3 - 64.6) | 1.9% (0.9 - 1.0) | 24.5% (23.2 - 25.8) |
| No | 69% (66.41 - 71.49) | 3.1% (0.0 - 6.5) | 34.5% (30.3 - 38.6) |

Exercise, Nutrition, and Obesity

The proliferation of local gyms and opportunities for exercise has helped spotlight the importance of maintaining a healthy weight through adequate exercise and nutrition. In addition to local initiatives to galvanize the public, nationally, *Healthy People 2010* has set goals for physical activity and dietary counseling.¹ While some researchers and clinicians place one of these three risk factors at the forefront of their agendas, the three are intricately woven together and impact various health outcomes. For example, Nayga and Reed find that adequate intake of minerals and vitamins are essential to lowering the prevalence of degenerative diseases such as heart disease, cancer and osteoporosis.² In addition, researchers have reported that obesity, lack of physical activity, and poor food choices (nutrition) play a critical role in reducing type 2 diabetes mellitus.^{3,4}

While researchers continue to explore the relationship between risk factors and disease, an important consideration is whether or not the population at large is knowledgeable about the benefits of proper nutrition and exercise. Several researchers reported that difference in knowledge and attitude toward these risk factors influence the willingness and ability of individuals to choose activities and behaviors that will lower their risk of disease.^{5,6} According to Blumenthal et al., public health interventions aimed at decreasing obesity should take a multifaceted approach that includes emphasis on physical activity and a healthy diet.

State and National Trends

Exercise

According to reports by the Centers for Disease Control and Prevention, the period from 1990-2001 saw a decrease in the number of individuals who report that they are not involved in any type of leisure time physical activity, from 28.7% in 1990 to 25.7% in 2001. A similar trend has also occurred across the state of Tennessee over the same time period, from 38.5% in 1990 to 35.1% in 2001.⁷

Nutrition

The Food and Drug Administration recommends that individuals consume five or more servings of fruits and vegetables a day. National and state BRFSS prevalence rates are available for the years 1996, 1998, and 2000 only. In 2000, only 23.1% of respondents nationwide reported consuming the recommended amount. This is down from 23.6% in 1996 and 23.8% in 1998. At the state level, there was an increase in the number of respondents who reported that they consumed enough fruit and vegetables, from 25.8% in 1996 and 29.7% in 1998 to 34.1% in 2000. It is important to note that more than 50% of Tennessee residents reported that they did not follow the FDA recommended guidelines for fruits and vegetables.⁷

Obesity

Across the nation, the number of individuals that are classified as obese by Body Mass Index (BMI) continues to rise. In 1990, 12.0% of those surveyed across the nation and 12.1% in Tennessee were classified as obese. By 2001, these numbers had swelled to 20.9% nationwide and 22.6% at the state level.^{8,9}

Healthy People 2010

Healthy People 2010 objectives related to obesity, nutrition, and exercise are:

- Increase the proportion of adults who are at a healthy weight to 60%.
- Reduce the proportion of adults who are obese to 15%.
- Increase the proportion of persons aged 2 years and older who consume at least two daily servings of fruit to 75%.
- Increase the proportion of persons aged 2 years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or deep yellow vegetables.
- Increase the proportion of persons aged 2 years and older who consume no more than 30 percent of calories from fat to 75%.
- Reduce the proportion of adults who engage in no leisure-time physical activity to 20%.
- Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day to 30%.
- Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion to 30%.¹⁰

Description of Measures

The BRFSS module utilizes various measures to gauge the health behaviors and status of individuals. Obesity was measured by calculating the Body Mass Index (BMI) of respondents. Body Mass Index is calculated by dividing weight in kilograms by the square of height in meters. According to the National Institutes of Health and the World Health Organization, obesity is defined as having a BMI above 30. Overweight is defined as having a BMI between 25 and 29.9. Survey respondents were asked "About how tall are you without shoes?" and "About how much do you weigh without shoes?" BMI was calculated from self reported height and weight.

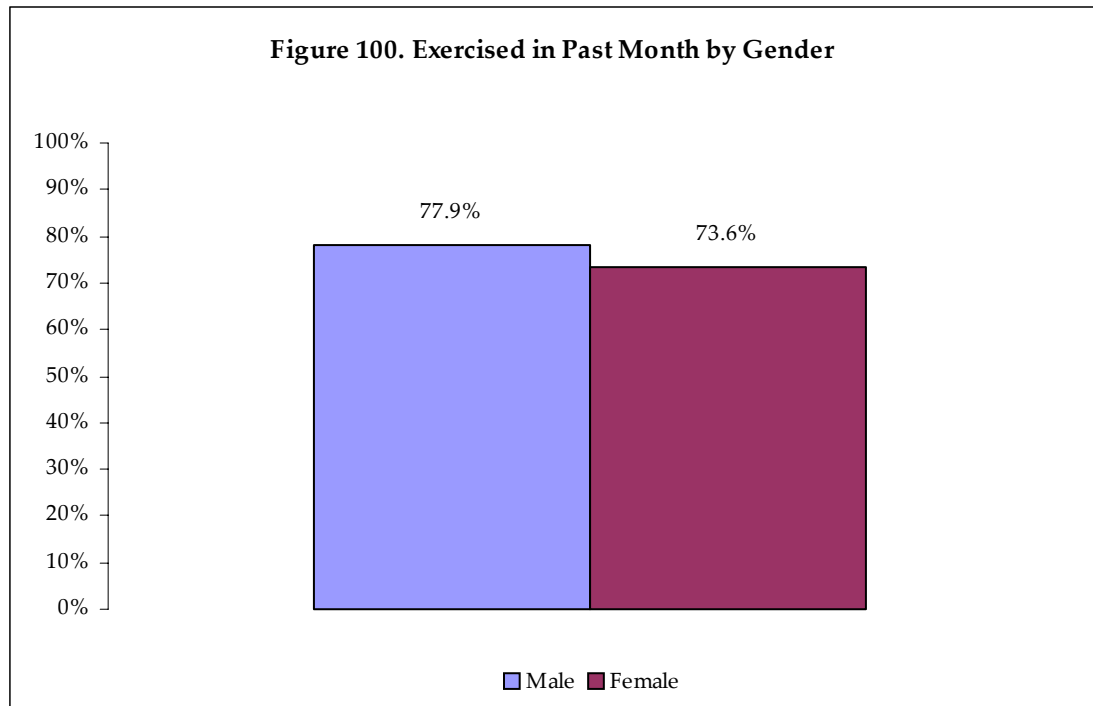
In terms of exercise, respondents reported on whether or not they exercised, how often they exercised and whether their activity was related to an attempt to lose weight. The first item related to exercise was: "During the past month, how many times did you participate in any physical activities or exercises such as running, calisthenics, or walking for exercise?" Because of low numbers for each level of exercise participation, this question was recoded and analyzed as a dichotomous, "yes or no" question, and percentages were calculated for respondents participating in exercise regardless of frequency. Nutrition was measured by asking respondents about their dietary habits. Respondents were asked, "Do you almost always eat five or more servings of fruits and vegetables each day?" followed by examples of a serving and "Do you try to avoid eating high fat foods (for example, butter, margarine, oil, salad dressing, fatty meat, fried food, and ice cream)?" Three items covered weight loss attempts: "Are you now trying to lose weight?", "Are you eating either fewer calories or less fat to lose weight?", and "Are you using physical activity or exercise to lose weight?" Finally, respondents were asked, "Do you currently take any multivitamins?"

Results

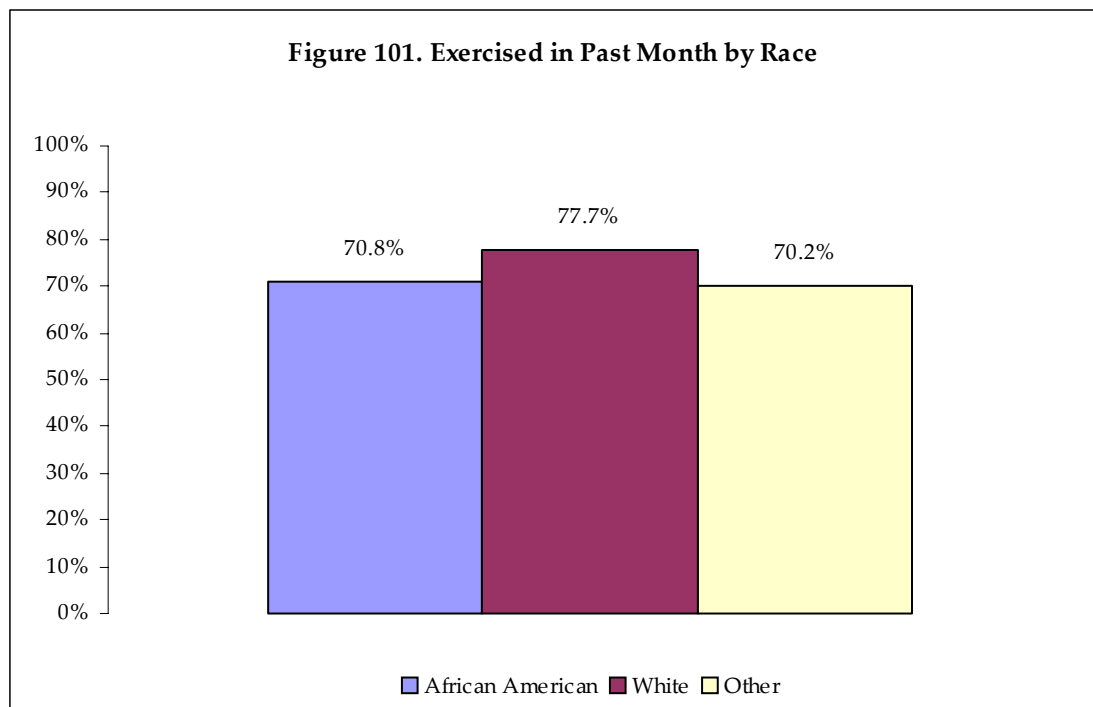
Exercise

- Overall, the majority, 75.6% (95% confidence interval 74.7 – 76.6) of respondents polled reported engaging in some physical activity or exercise in the past month.

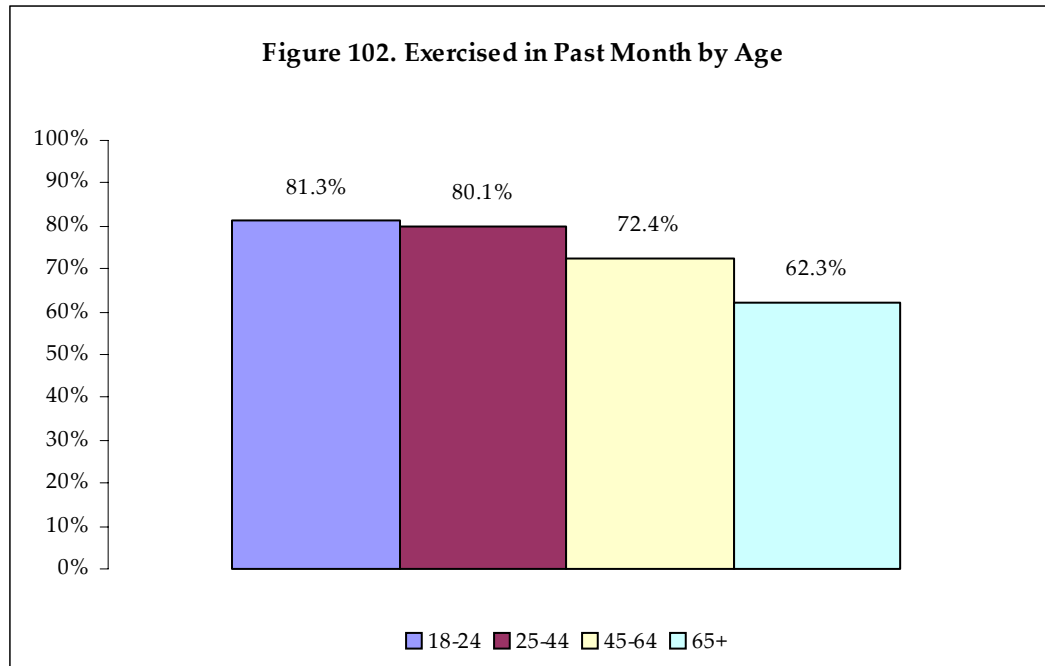
- Male respondents were more likely than females to say they had exercised in the past month. (Figure 100)



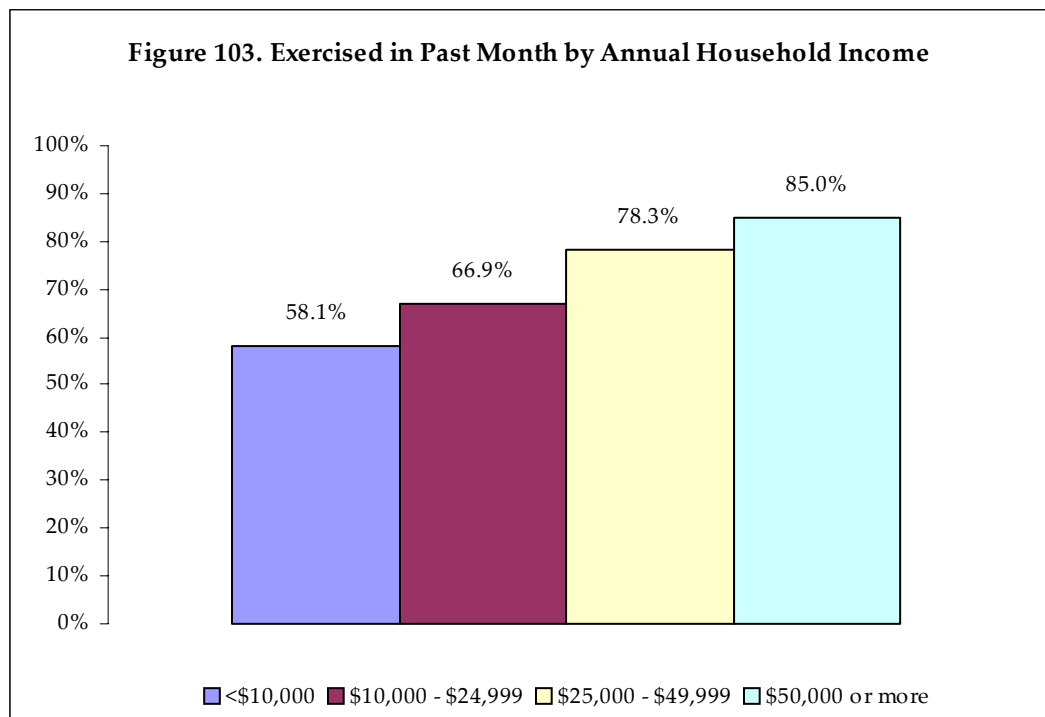
- White respondents were substantially more likely than African American or Other racial groups to have exercised in the past month. (Figure 101)



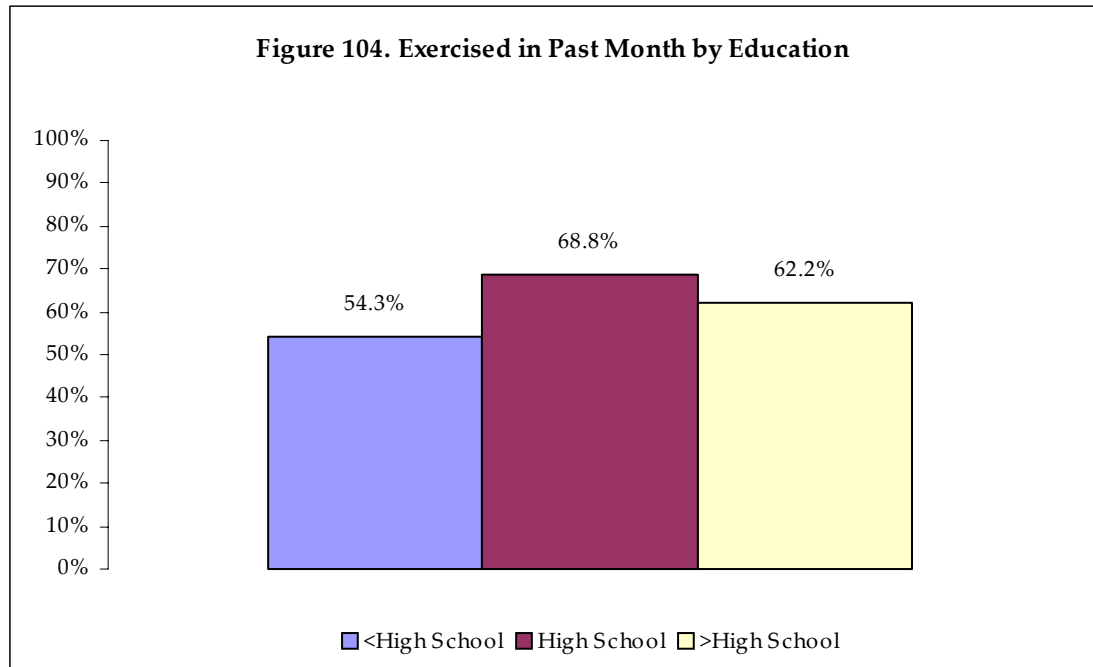
- Differences between age groups were not significant except for respondents 65 and over, who were substantially less likely to have exercised in the past month. (Figure 102)



- Respondents with annual household income of \$25,000 or more were more likely to report that they had participated in exercise in the past month. (Figure 103)

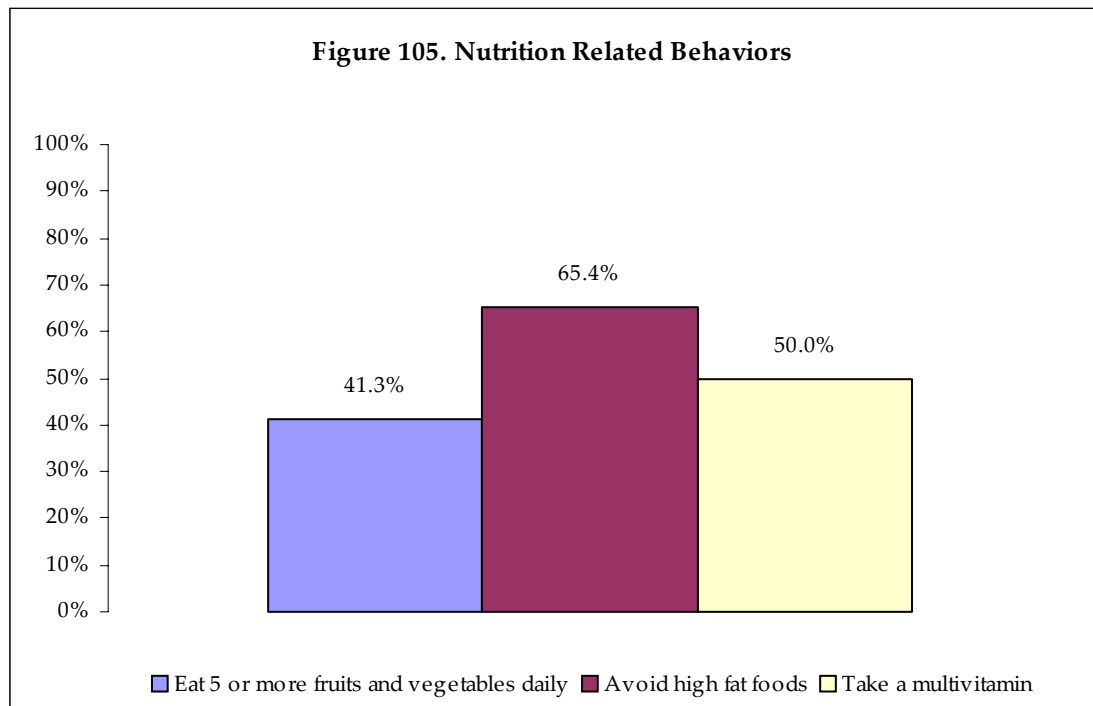


- Respondents with more education were more likely to report they had exercised in the past month. (Figure 104)

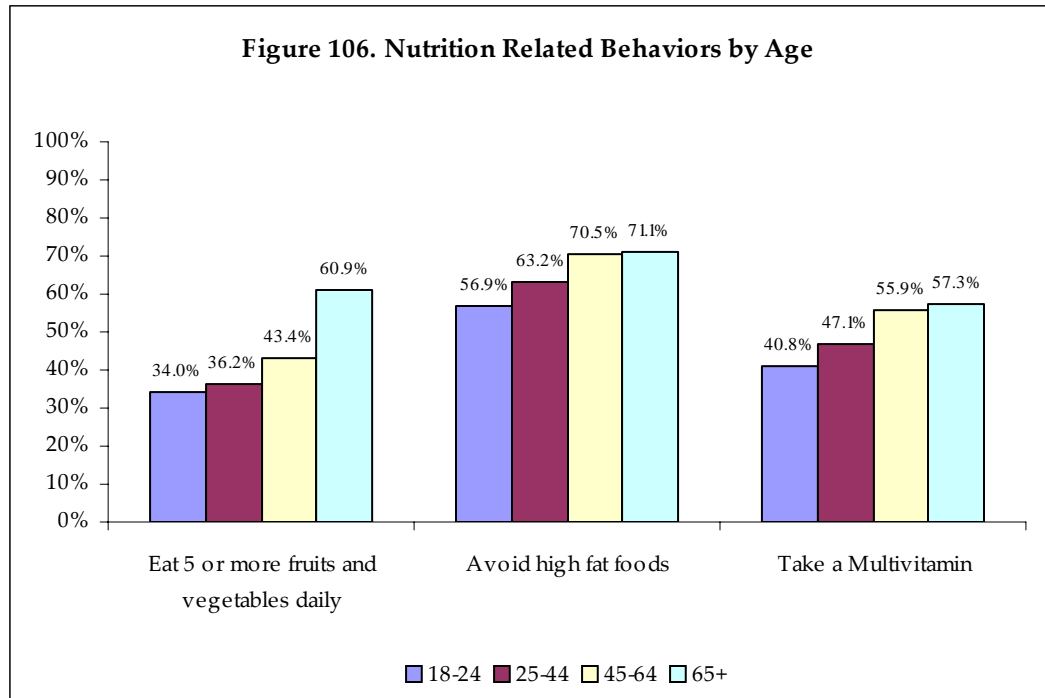


Nutrition.

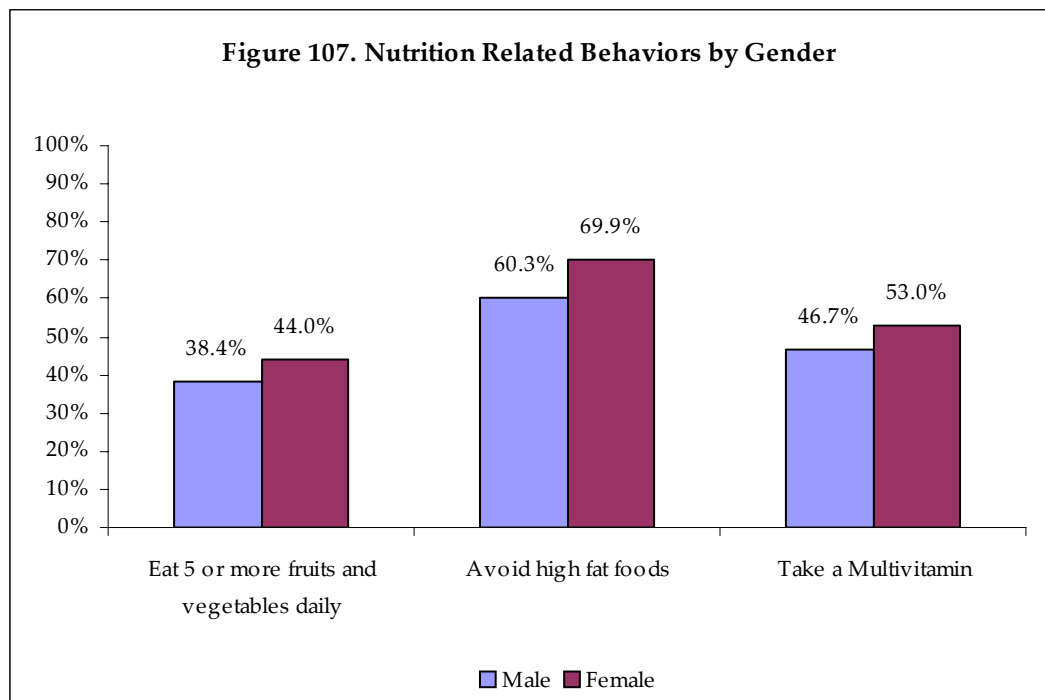
- Less than half (41.3%, 95% confidence interval 40.2 – 42.2) reported that they ate the recommended daily amount of fruit and vegetables. However, more than half (65.4%, 95% confidence interval 64.4 – 66.5) reported that they tried to avoid eating foods that were high in fat. In addition, half (50.0%, 95% confidence interval 48.9 – 51.1) reported taking a multivitamin. (Figure 105)



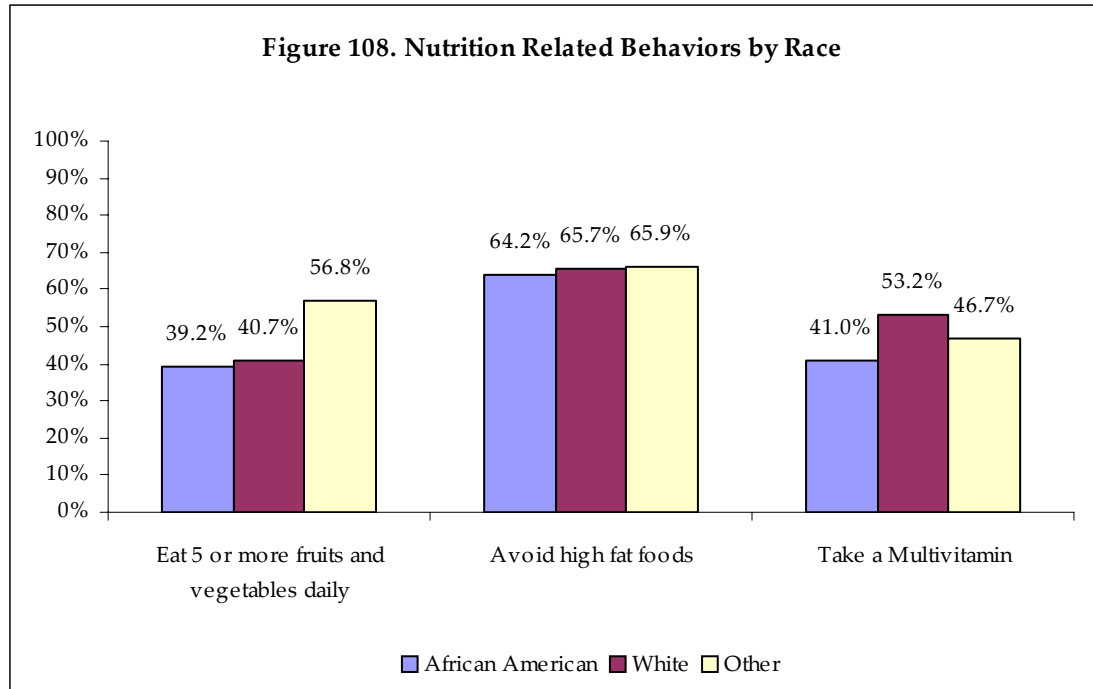
- Older respondents were more likely than younger ones to eat five servings of fruits or vegetables daily. Respondents 45 and older were more likely than respondents under 45 to avoid fat and to take a multivitamin. (Figure 106)



- Women were more likely to eat the recommended daily servings of fruit and vegetables, avoid foods high in fat, and take a multivitamin. (Figure 107)



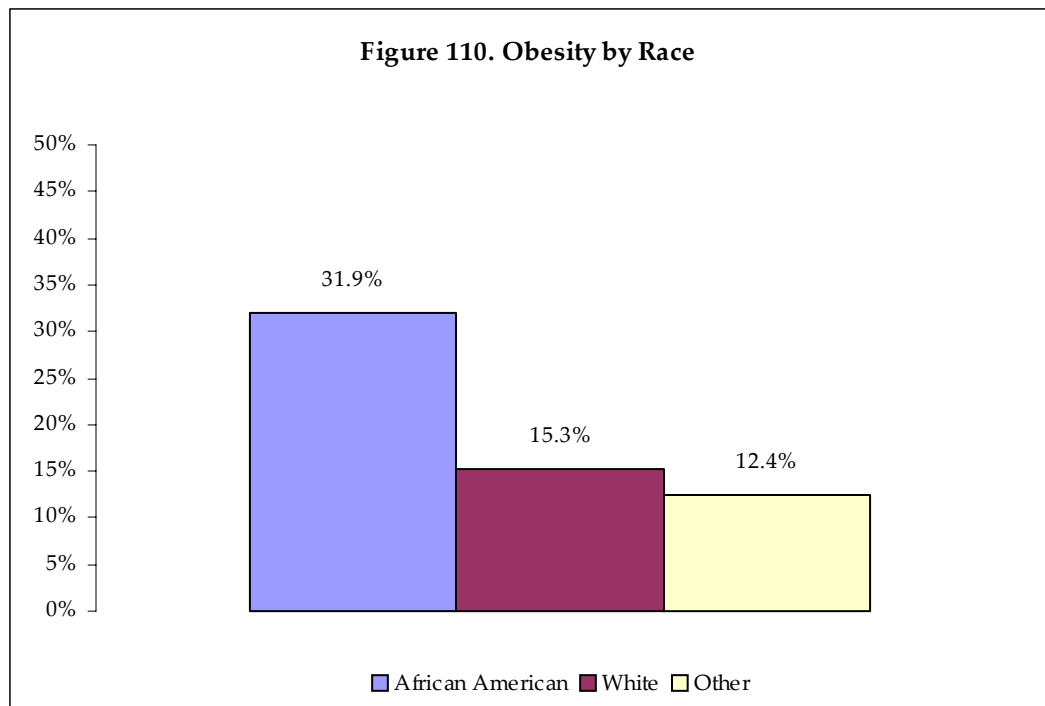
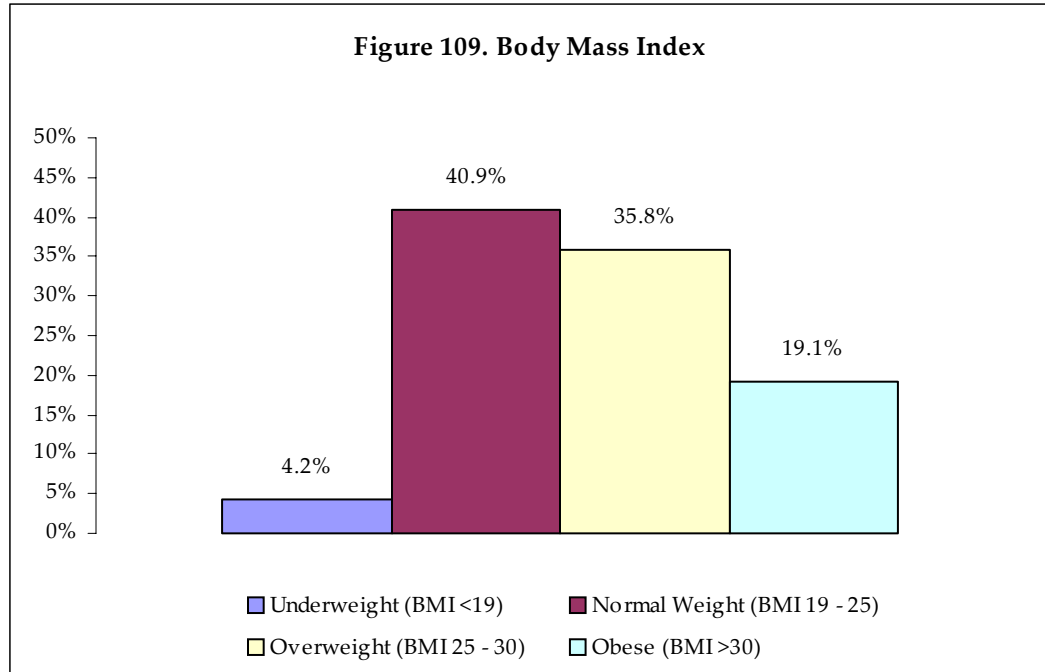
- Racial differences were also apparent, with those identifying their race as either White or African American eating fewer fruits and vegetables than Other races. On the other hand, those who identified themselves as White were more likely to report taking a multivitamin. Respondents across racial categories reported that they tried to avoid eating foods that were high in fat. (Figure 108)

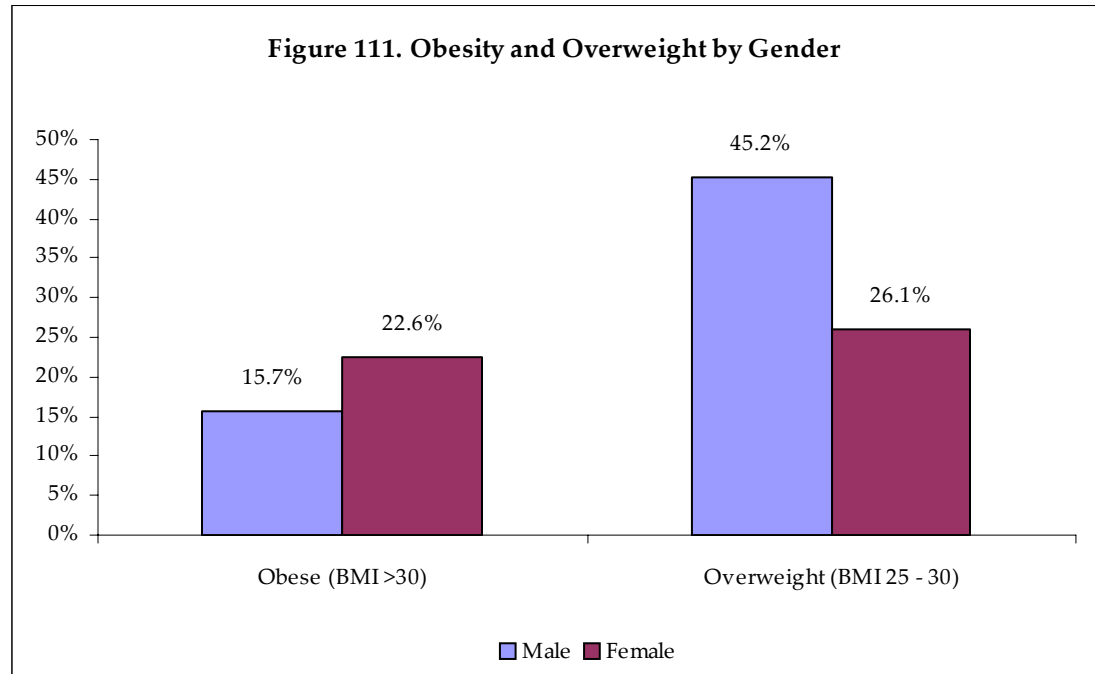


Obesity

Nineteen percent of respondents (19.1%, 95% confidence interval 18.2 – 20.0) were classified obese based on the information they provided. An additional 33% were considered overweight. (Figure 109)

- African Americans were more likely than White or Other races to be classified as obese. (Figure 110)
- Males and females were equally likely to be characterized as obese. In addition to respondents who were obese, 42% of men and 28% of women were considered overweight. (Figure 111)





References

1. Wilcox, Sara, Deborah Parra-Medina, Melva Thompson-Robinson, and Julie Will. 2001. Nutrition and Physical Activity Interventions to Reduce Cardiovascular Disease Risk in Health Care Setting: A Quantitative Review with a Focus on Women. *Nutrition Reviews* 59:197-214.
2. Nayga, Rodolfo M. and Debra B. Reed. 1999. Factors associated with the intake of dietary supplements. *Family Economics and Nutrition Review* 12: 43-48.
3. Manson, JoAnn E. and Shari S. Bassuk. 2003. Obesity in the United States: A Fresh Look at its High Toll. *Journal of the American Medical Association* 289: 229-230.
4. Mann, J.I. 2002. Diet and Risk of Coronary Heart Disease and Type 2 Diabetes. *The Lancet* 360:783-789.
5. Blumenthal, Susan J. 2002. "A Public Health Approach to Decreasing Obesity. *Journal of the American Medical Association* 288: 2178.
6. Gates, Gail and Mary McDonald. 1997. Comparison of Dietary Risk Factors for Cardiovascular Disease in African American and White Women. *Journal of the American Dietetic Association* 97:1394-1400.
7. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [Web page]. June 12, 2003. Available at: <http://apps.nccd.cdc.gov/brfss/>. Accessed June 19, 2003.
8. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 1991-2001 Prevalence of Obesity Among U.S. Adults, by Characteristics: Behavioral Risk Factor Surveillance System (1991 – 2001); Self-reported data. April 22, 2003. Available at: http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev_char.htm. Accessed 11/4/03.
9. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 1991-2001 Prevalence of Obesity Among U.S. Adults, by State: Behavioral Risk Factor Surveillance System (1991 – 2001); Self-reported data. March 18, 2003. Available at: http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev_reg.htm. Accessed 11/4/03.
10. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.

Table 10a. Exercise, Nutrition, and Obesity: Overweight, Obesity, and Exercised in Past Month. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Overweight</u> (BMI 25 - 29.9) | <u>Obesity</u> (BMI >=30) | <u>Exercised in Past Month</u> |
|---------------------------|--------------------------------------|------------------------------|--------------------------------|
| <u>Total</u> | 35.8% (34.8 - 36.9) | 19.1% (18.2 - 20.0) | 75.6% (74.7 - 76.6) |
| <u>Age</u> | | | |
| 18-24 | 28.4% (24.9 - 31.9) | 13.7% (11.0 - 16.4) | 81.3% (78.56 - 85.44) |
| 25-44 | 35.2% (33.5 - 36.9) | 19.9% (18.5 - 21.3) | 80.1% (72.46 - 87.54) |
| 45-64 | 35.2% (33.2 - 37.3) | 22.3% (20.5 - 24.1) | 72.4% (69.66 - 74.34) |
| 65+ | 45.6% (42.9 - 48.3) | 17.8% (15.7 - 19.9) | 62.3% (57.49 - 64.51) |
| <u>Race</u> | | | |
| African American | 35.8% (33.6 - 38.1) | 31.9% (29.7 - 34.1) | 70.8% (68.6 - 73.0) |
| White | 35.7% (34.4 - 37.0) | 15.3% (14.3 - 16.3) | 77.7% (76.6 - 78.8) |
| Other | 36.8% (30.3 - 43.3) | 12.4% (7.9 - 16.9) | 70.2% (64.0 - 76.4) |
| <u>Gender</u> | | | |
| Male | 45.2% (43.3 - 47.1) | 15.7% (14.3 - 17.1) | 77.9% (76.3 - 79.5) |
| Female | 26.1% (24.9 - 27.4) | 22.6% (21.4 - 23.8) | 73.6% (72.3 - 74.8) |
| <u>Income</u> | | | |
| < \$10,000 | 24.2% (19.3 - 29.2) | 29.7% (24.4 - 35.0) | 58.1% (52.4 - 63.8) |
| \$10,000 - \$24,999 | 35.1% (32.9 - 37.4) | 22.5% (20.6 - 24.4) | 66.9% (64.7 - 69.1) |
| \$25,000 - \$49,999 | 37.8% (35.9 - 39.7) | 20.4% (18.8 - 22.0) | 78.3% (76.7 - 79.9) |
| > \$50,000 | 36.3% (34.1 - 36.6) | 17.6% (15.8 - 19.4) | 85.0% (83.3 - 86.7) |
| <u>Education</u> | | | |
| < High School | 35.6% (32.4 - 38.8) | 22.4% (19.6 - 25.2) | 54.3% (49.1 - 58.9) |
| High School | 38.0% (35.9 - 40.2) | 24.4% (22.5 - 26.3) | 68.8% (65.4 - 70.6) |
| > High School | 35.2% (33.8 - 36.6) | 16.5% (15.4 - 17.6) | 62.2% (60.8 - 63.6) |
| <u>Marital Status</u> | | | |
| Single | 36.7% (34.5 - 38.8) | 17.4% (15.7 - 19.1) | 80.8% (79.1 - 82.6) |
| Married/Cohabiting | 41.3% (38.7 - 43.9) | 20.0% (17.9 - 22.1) | 76.1% (73.9 - 78.4) |
| Divorced/Separated | 30.4% (28.8 - 32.0) | 18.2% (16.8 - 19.6) | 72.3% (70.7 - 73.9) |
| Widowed | 40.2% (36.9 - 43.5) | 21.7% (18.9 - 24.5) | 61.0% (57.7 - 64.3) |
| <u>Insurance Coverage</u> | | | |
| Insured | 35.4% (34.3 - 36.6) | 19.5% (18.6 - 20.5) | 76.0% (73.9 - 76.0) |
| Uninsured | 38.9% (36.3 - 41.6) | 15.8% (13.8 - 17.8) | 72.2% (69.7 - 74.7) |

Table 10b. Exercise, Nutrition, and Obesity: Avoid High Fat Foods, Takes a Multivitamin, and Eats Five or More Fruits and Vegetables Daily. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | <u>Avoid high fat foods</u> | <u>Takes a Multivitamin</u> | <u>Eats Five or More Fruits and Vegetables Daily</u> |
|---------------------------|-----------------------------|-----------------------------|--|
| <u>Total</u> | 65.4% (64.4 - 66.5) | 50.0% (48.9 - 51.1) | 41.3% (40.2 - 42.4) |
| <u>Age</u> | | | |
| 18-24 | 56.9% (53.1 - 60.8) | 40.8% (36.9 - 49.1) | 34.0% (30.3 - 37.7) |
| 25-44 | 63.2% (61.5 - 64.8) | 47.1% (45.5 - 50.5) | 36.2% (34.5 - 37.9) |
| 45-64 | 70.5% (68.5 - 72.5) | 55.9% (53.1 - 58.9) | 43.4% (41.3 - 45.6) |
| 65+ | 71.1% (68.6 - 73.6) | 57.3% (56.5 - 63.6) | 60.9% (58.2 - 63.6) |
| | | | |
| <u>Race</u> | | | |
| African American | 64.2% (61.9 - 66.5) | 41.0% (39.0 - 47.0) | 39.2% (36.9 - 41.5) |
| White | 65.7% (64.4 - 67.0) | 53.2% (53.2 - 56.8) | 40.7% (39.4 - 42.0) |
| Other | 65.9% (59.5 - 72.3) | 46.7% (33.7 - 54.3) | 56.8% (50.1 - 63.5) |
| | | | |
| <u>Gender</u> | | | |
| Male | 60.3% (58.4 - 62.2) | 46.7% (44.8 - 48.6) | 38.4% (36.5 - 40.3) |
| Female | 69.9% (68.6 - 71.2) | 53.0% (51.6 - 54.4) | 44.0% (42.6 - 45.4) |
| | | | |
| <u>Income</u> | | | |
| < \$10,000 | 65.0% (59.5 - 70.5) | 43.7% (37.9 - 49.4) | 40.3% (34.6 - 46.0) |
| \$10,000 - \$24,999 | 65.5% (63.3 - 67.7) | 43.2% (40.9 - 45.5) | 42.1% (39.8 - 44.4) |
| \$25,000 - \$49,999 | 64.1% (62.2 - 66.0) | 50.6% (48.7 - 52.6) | 39.0% (37.1 - 40.9) |
| > \$50,000 or more | 67.1% (64.9 - 69.3) | 54.8% (52.5 - 57.2) | 41.7% (39.4 - 44.0) |
| | | | |
| <u>Education</u> | | | |
| <High School | 61.8% (58.6 - 65.0) | 37.4% (34.2 - 40.6) | 44.8% (41.5 - 48.1) |
| High School | 62.4% (60.2 - 64.6) | 44.7% (42.5 - 46.9) | 38.8% (36.6 - 41.0) |
| > High School | 67.3% (65.9 - 68.7) | 54.2% (52.7 - 55.7) | 41.6% (40.2 - 43.1) |
| | | | |
| <u>Marital Status</u> | | | |
| Single | 62.4% (60.3 - 64.6) | 46.3% (44.1 - 48.5) | 32.8% (20.7 - 34.9) |
| Married/Cohabiting | 65.7% (63.2 - 68.2) | 50.9% (48.3 - 53.5) | 45.7% (43.1 - 48.3) |
| Divorced/Separated | 66.6% (64.9 - 68.3) | 51.8% (50.0 - 53.6) | 38.8% (37.1 - 40.5) |
| Widowed | 70.8% (67.7 - 73.9) | 54.1% (50.7 - 57.5) | 55.1% (51.7 - 58.5) |
| | | | |
| <u>Insurance Coverage</u> | | | |
| Insured | 66.5% (65.4 - 67.6) | 51.4% (50.2 - 52.6) | 41.9% (42.1 - 56.8) |
| Uninsured | 55.8% (53.1 - 58.5) | 38.8% (36.1 - 41.5) | 36.0% (33.4 - 38.6) |

Risk Factors for Cardiovascular Disease

Heart disease and stroke, two components of cardiovascular disease, together account for nearly 40% of all deaths nationwide.¹ Heart disease is the leading cause of death nationwide. In 2000, heart disease was also the leading cause of death in Nashville, accounting for 1,412 deaths, an age adjusted rate of 275.78 per 100,000 population.² Stroke is the third leading cause of death nationwide,¹ as well as in Nashville. In 2000, stroke was responsible for 406 deaths in Nashville/Davidson County, or a rate of 79.83 per 100,000. In addition to being leading causes of death, heart disease and stroke are also leading causes of permanent disability and hospitalization.²

Mortality due to cardiovascular disease has historically been higher in men than in women.² However, in recent years the gender advantage for women has been offset by increasing incidence of obesity and diabetes.⁴

Minorities bear a disproportionate burden from these illnesses.² Cardiovascular diseases, mostly hypertension, account for one third of the disparity in mortality between African Americans and Whites.⁵

Risk factors for cardiovascular disease include high blood pressure and high cholesterol, as well as obesity, diabetes, smoking, inactivity, and poor nutrition,⁴ which are discussed elsewhere in this report. The first four of these factors – high blood pressure, high cholesterol, obesity, and diabetes – have been found to cluster in a small percentage of individuals, and are sometimes referred to as the “deadly quartet” or metabolic cardiovascular syndrome.⁶

Cardiovascular disease is largely preventable through healthy lifestyle, proper nutrition, and physical activity. Preventive behaviors of physical exercise and avoiding high fat foods are discussed in the section on weight, nutrition, and activity. The Community Health Behavior Survey also measured preventive counseling by health professionals to their patients to exercise more and/or avoid high fat foods.

National and State Prevalence

Nationwide in 2001, 25.6% of BRFSS respondents (median percentage of all states) reported having been diagnosed with high blood pressure, and 30.2% with high cholesterol. In Tennessee that same year, the percentage was 29.3% for high blood pressure, and 33.2% for high cholesterol.⁷

Healthy People 2010

The relevant Healthy People 2010 objectives are:

- Reduce the proportion of adults with high blood pressure (target: 16%).
- Increase the proportion of adults with high blood pressure whose blood pressure is under control (target 50%).
- Increase the proportion of adults with high blood pressure who are taking action (for example, losing weight, increasing physical activity, and reducing sodium intake) to help control their blood pressure (target 95%).
- Reduce the proportion of adults with high total blood cholesterol levels (target 17%).³

Description of Measures

The Community Health Behavior Survey measured both risk factors and preventive counseling for cardiovascular disease. The risk factors measured were high blood pressure and high cholesterol. Survey respondents were asked, “Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?” and “Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?”

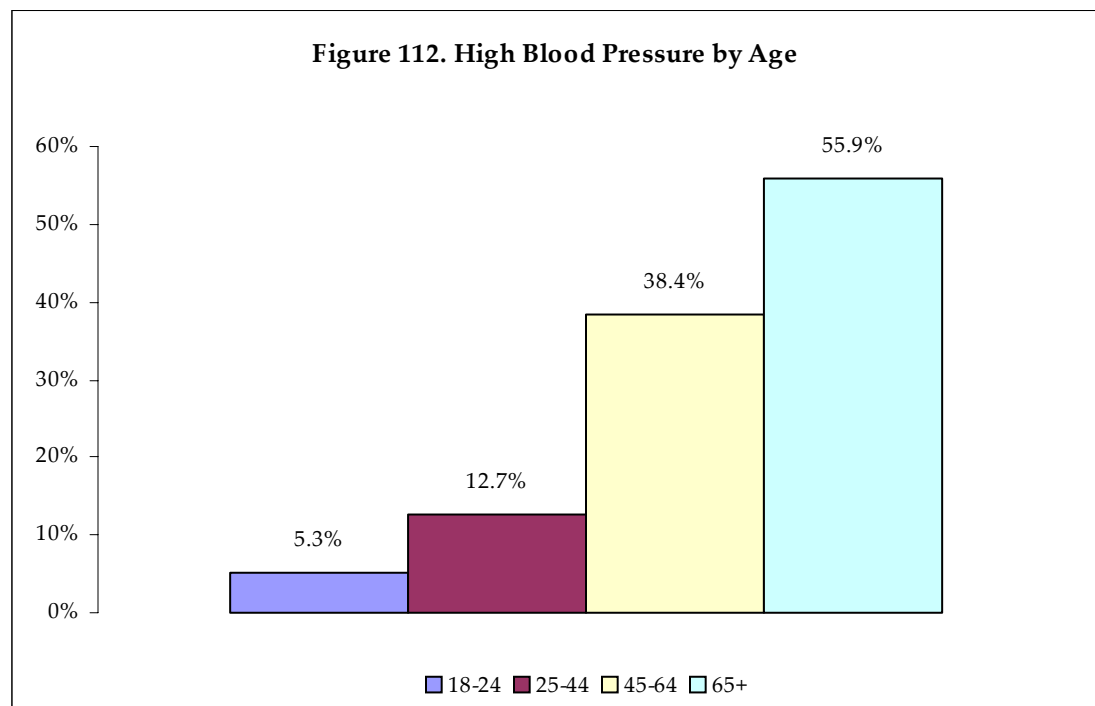
The preventive counseling measured concerned eating fewer high fat foods and exercising more. The questions asked were: “To lower your risk of developing heart disease or stroke, has a doctor advised you to (a) eat fewer high fat or high cholesterol foods (b) exercise more?”

Results

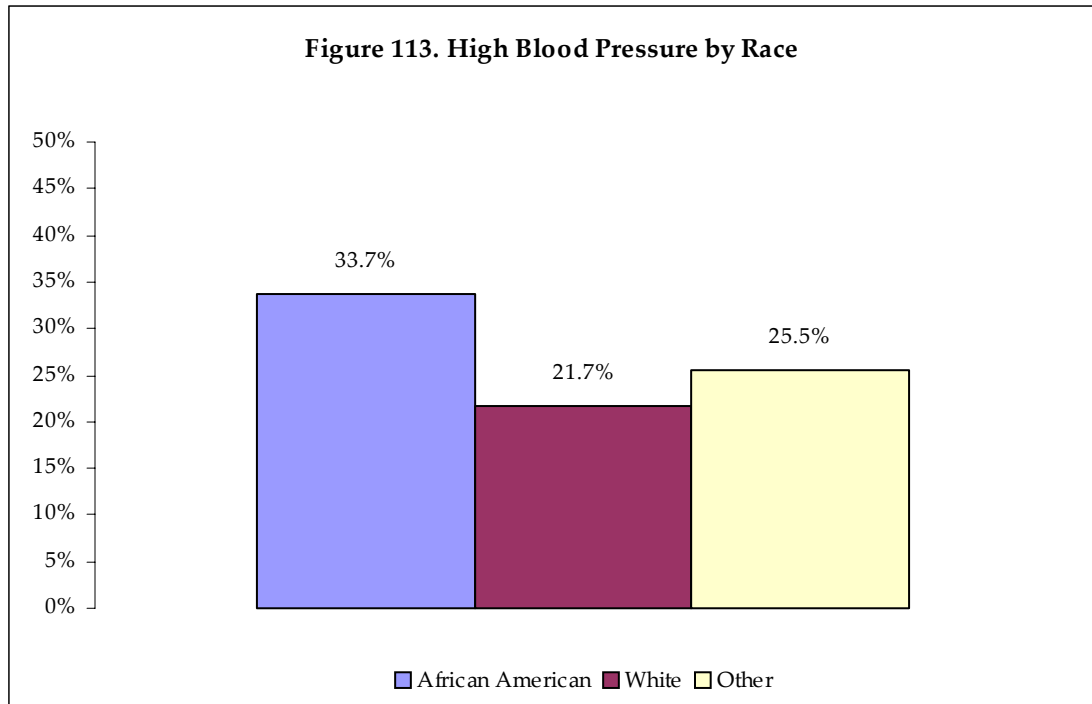
Risk factors

High Blood Pressure

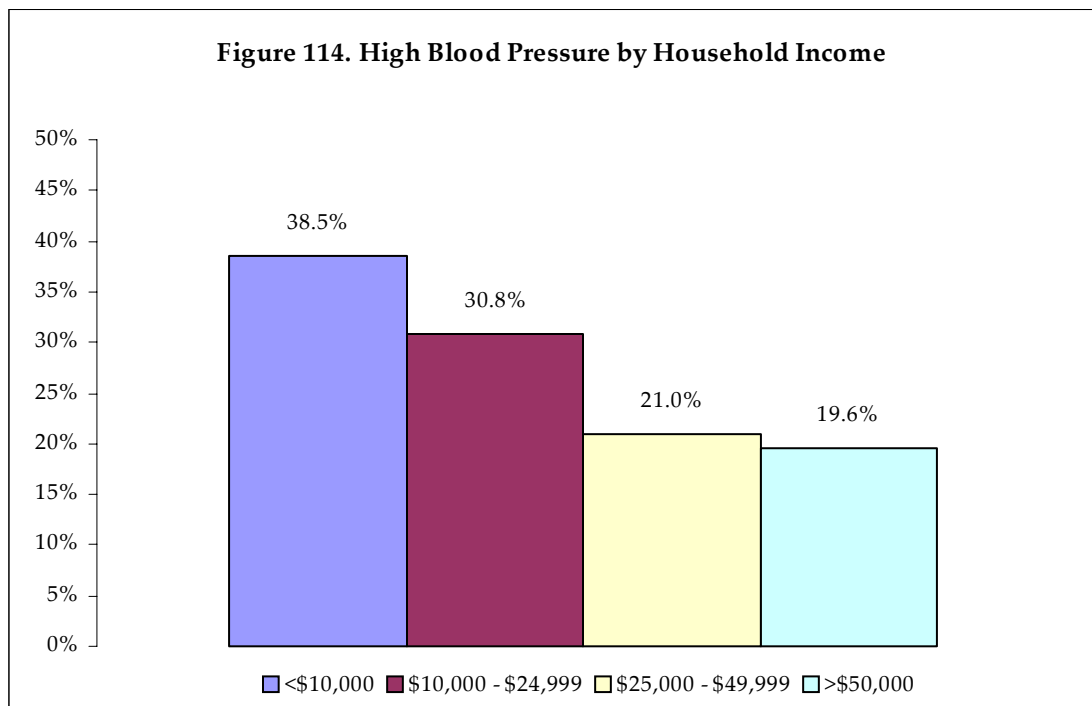
- Overall, 28.2% (95% confidence interval 27.2 – 29.2) of respondents said that they had been told by a health professional that they had high blood pressure (weighted percentage). This is lower than the nationwide and the Tennessee percentage.
- Age was significantly related to high blood pressure. Older persons were substantially more likely to have high blood pressure than younger persons. Percentages of respondents with high blood pressure ranged from 5.3% in the 18-24 age group, to 55.9% of those 65 and over. (Figure 112)



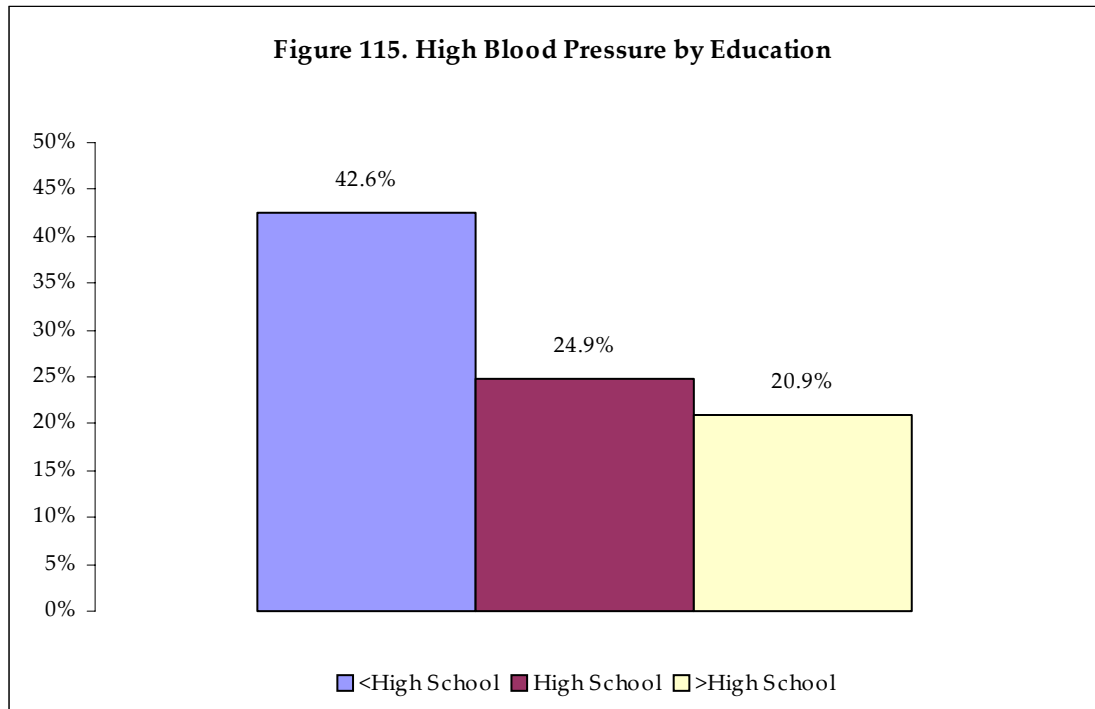
- African Americans were more likely than Whites to have high blood pressure; 33.7% of African Americans compared to 21.6% of Whites had high blood pressure. (Figure 113)



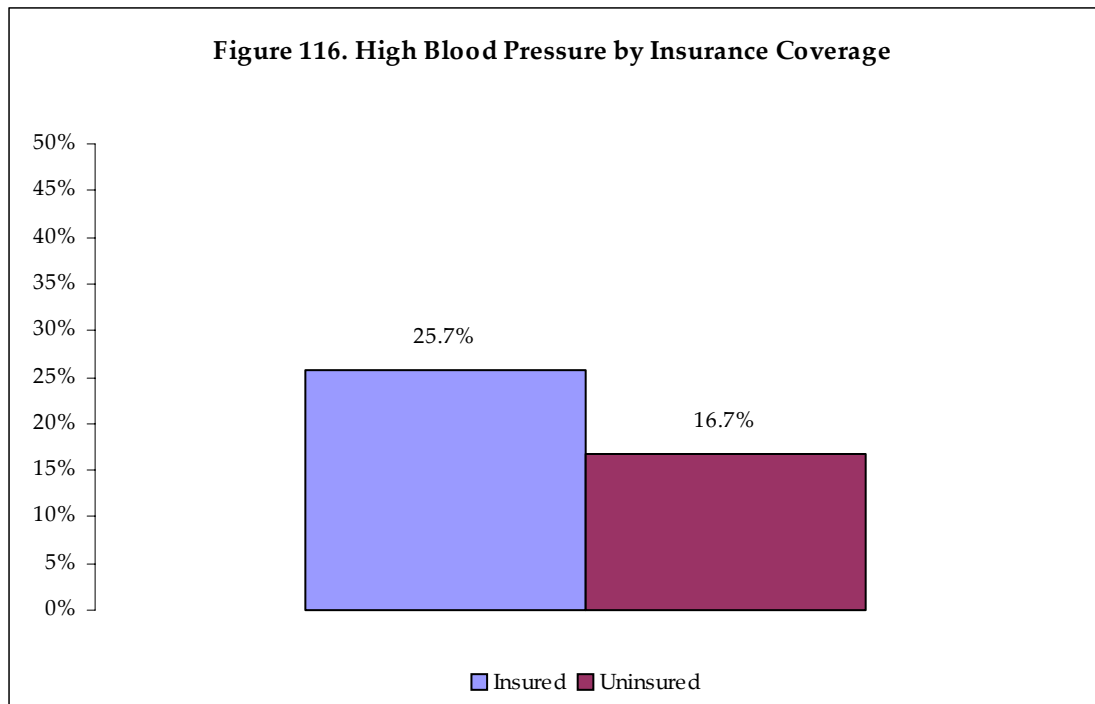
- Respondents with household incomes of \$25,000 and above were substantially less likely to have high blood pressure than those whose income was below this level. (Figure 114)



- Respondents with higher levels of educational attainment were less likely to have high blood pressure. (Figure 115)

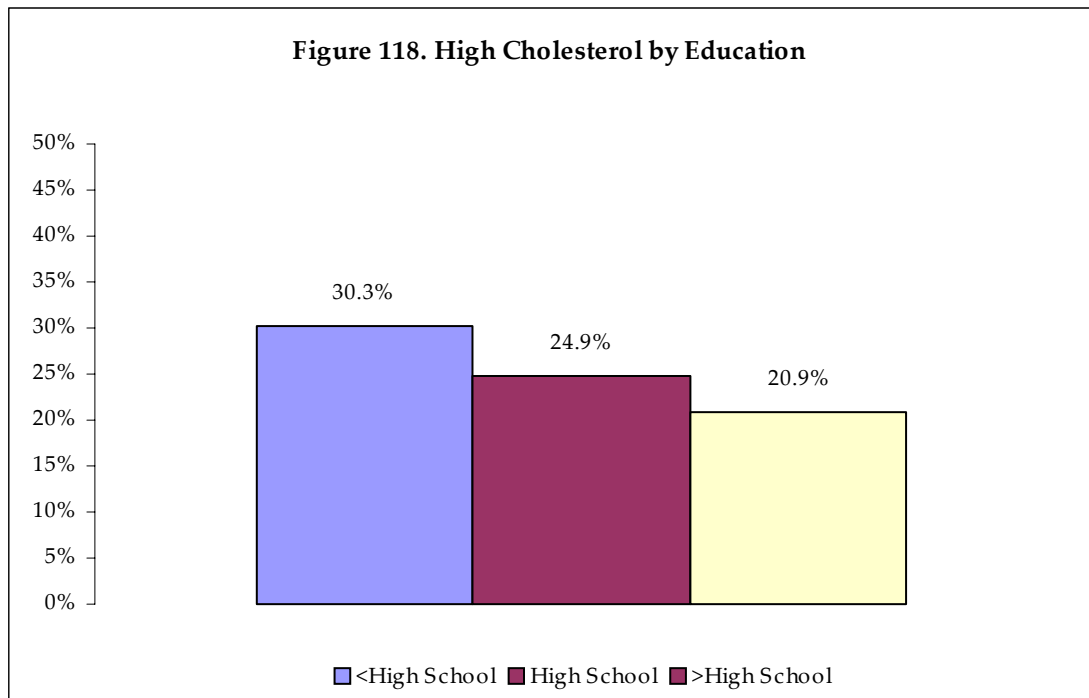
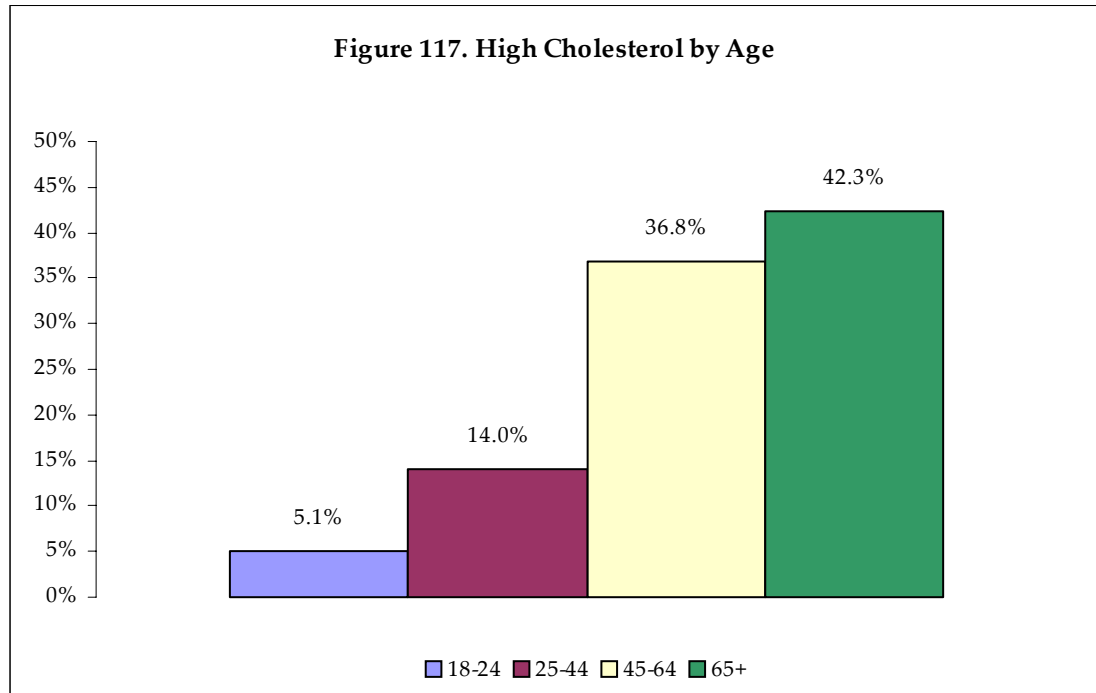


- The percentage of persons with health insurance diagnosed with high blood pressure was higher (25.7%) than the percentage of uninsured persons (16.7%) This may indicate undiagnosed high blood pressure among uninsured. [Insert (Figure 116)]

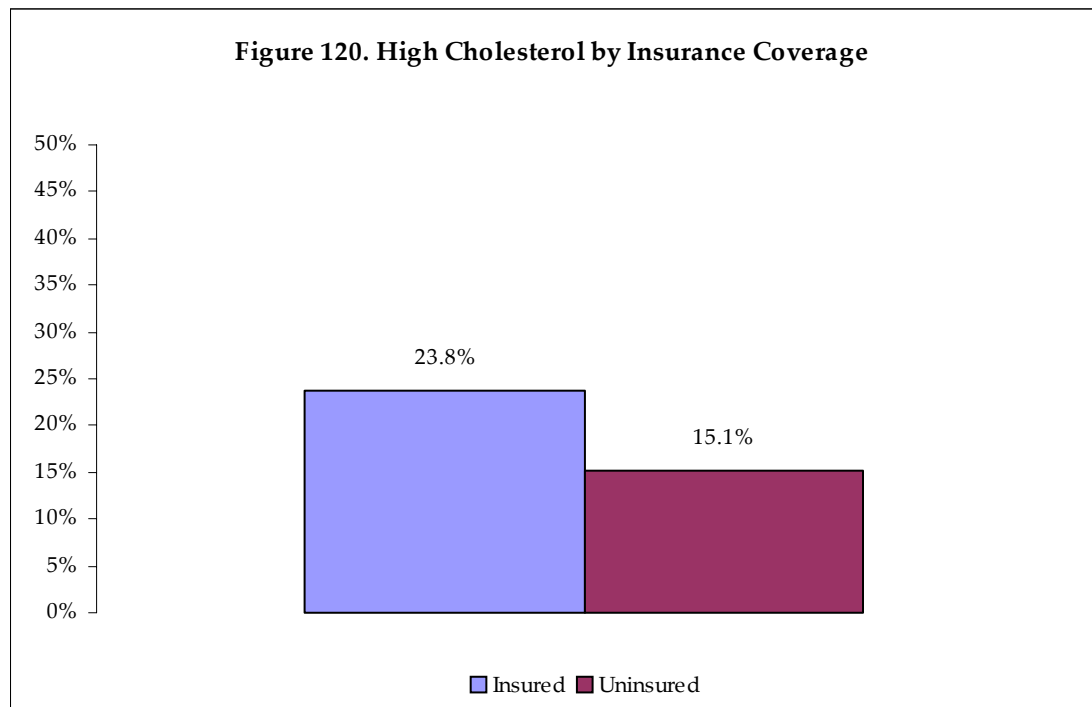
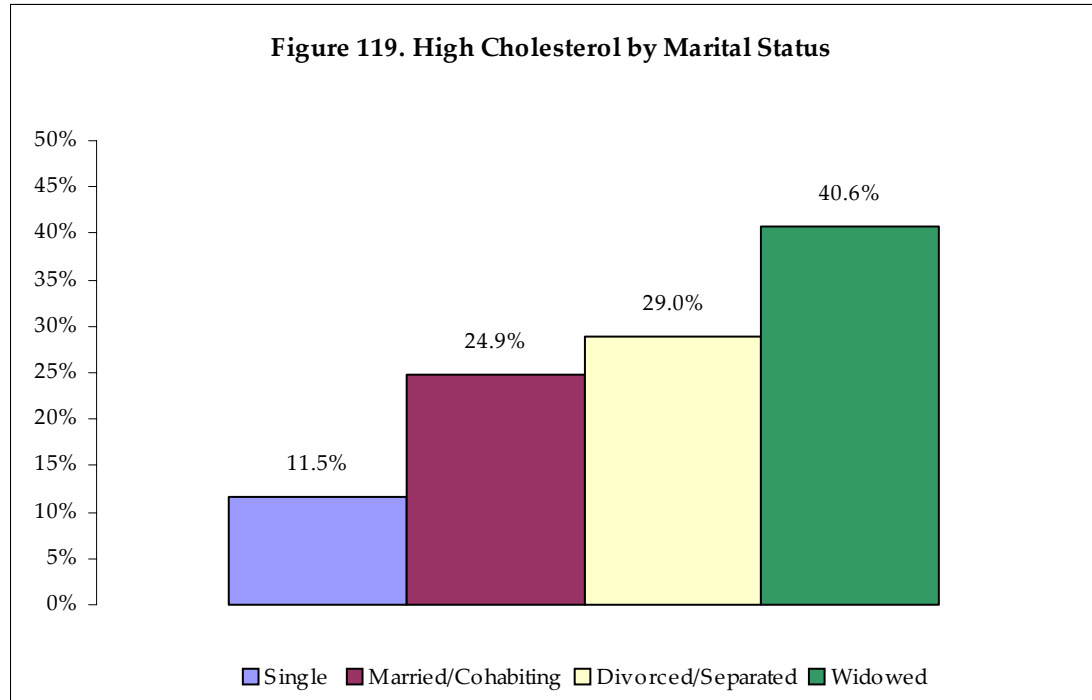


High Cholesterol

- Overall, 24.6% (95% confidence interval 22.6 – 26.6) of respondents said they had been told they had high cholesterol.
- Older persons were more likely than younger ones to have high cholesterol. (Figure 117)
- Respondents with higher levels of education had lower percentages of high cholesterol. (Figure 118)



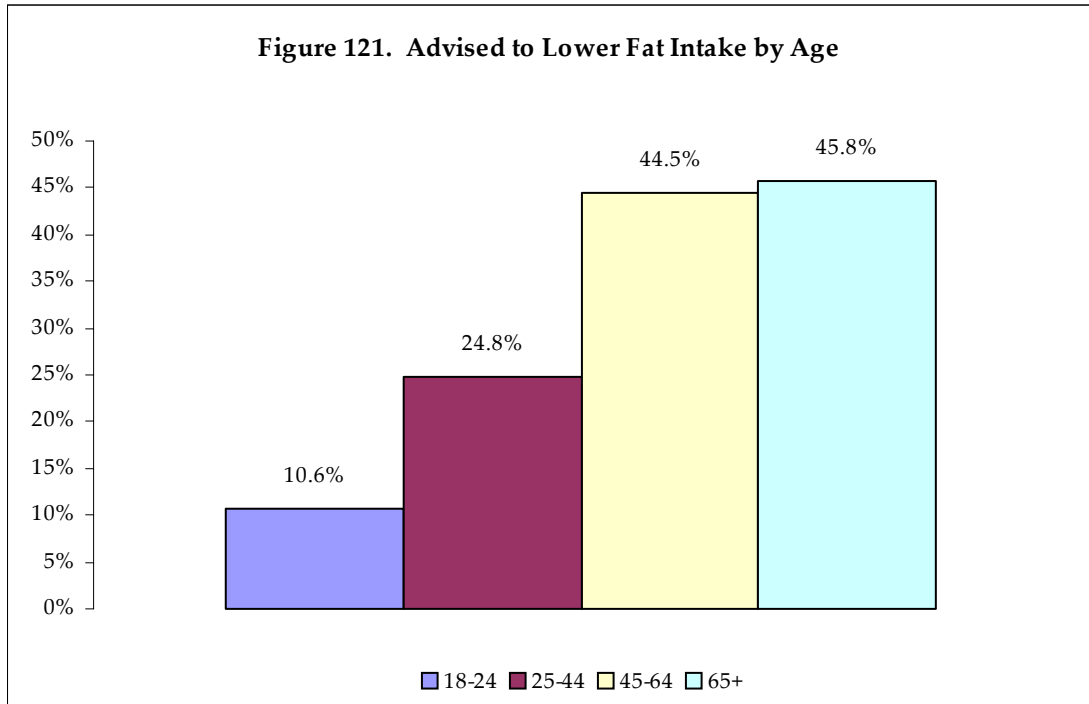
- Never-married respondents were least likely to have high cholesterol. Widowed respondents were most likely to have high cholesterol. (Figure 119)
- A higher percentage of respondents with health insurance were diagnosed with high cholesterol; 24.9% compared to 15.1% of uninsured. (Figure 120)



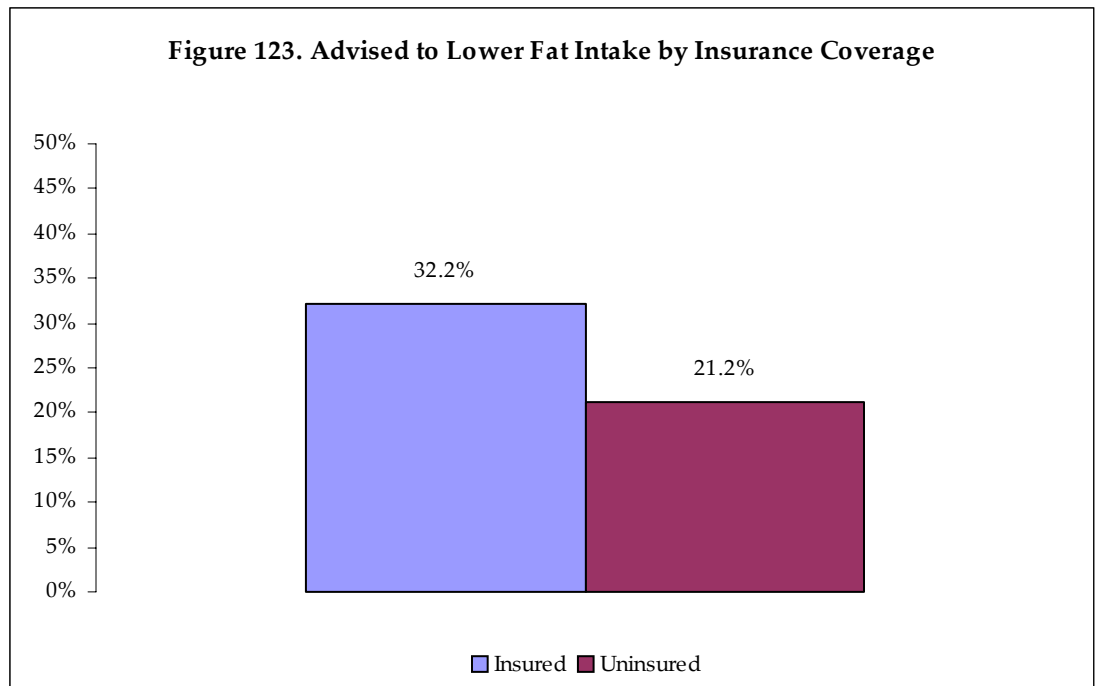
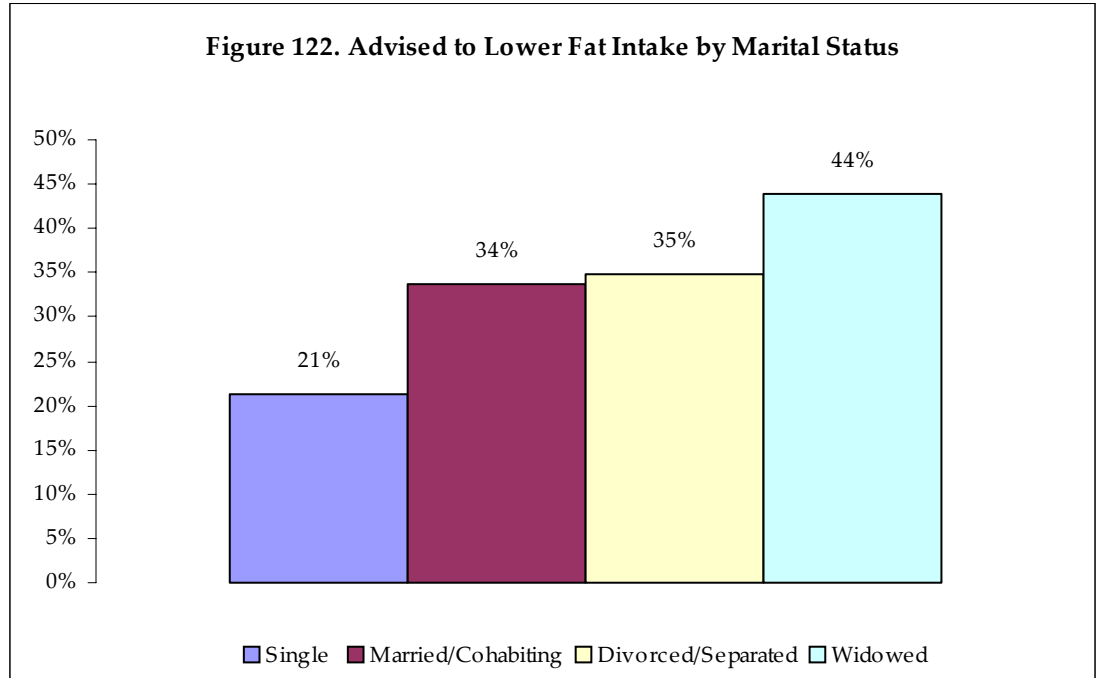
Preventive Counseling

Eating fewer high fat foods

- Nearly one third (31.0%, 95% confidence interval 32.7 – 34.7) of survey respondents said they had been advised to eat fewer high fat foods.
- Higher proportions of older respondents had been counseled to reduce intake of fat. (Figure 121)

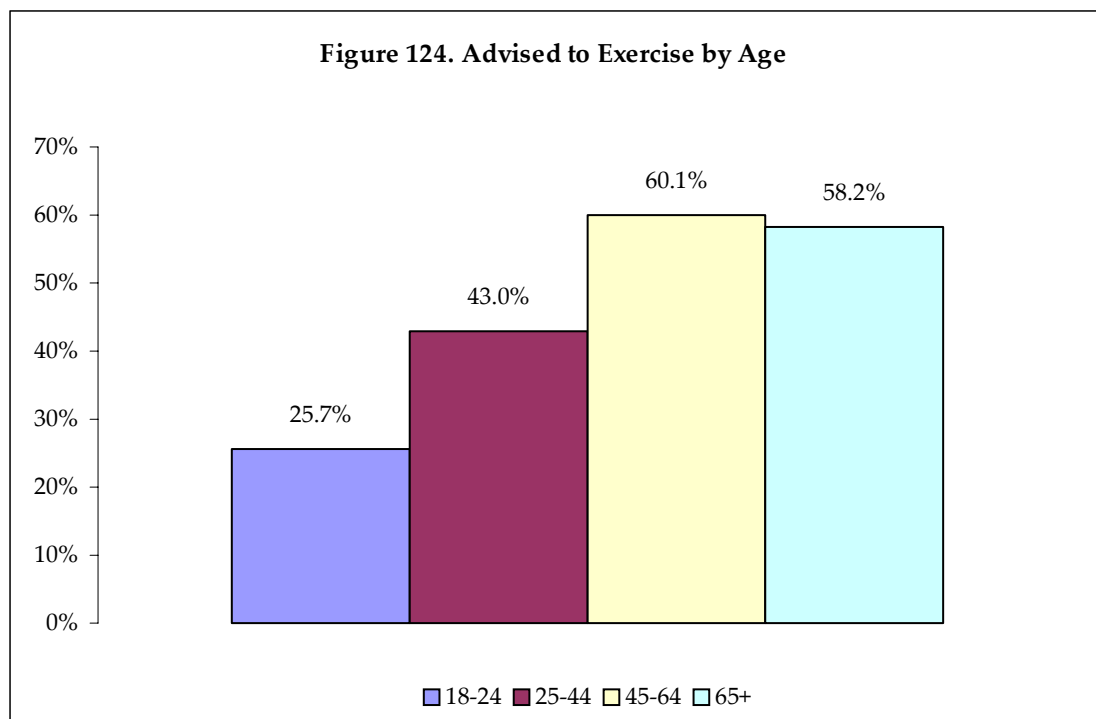


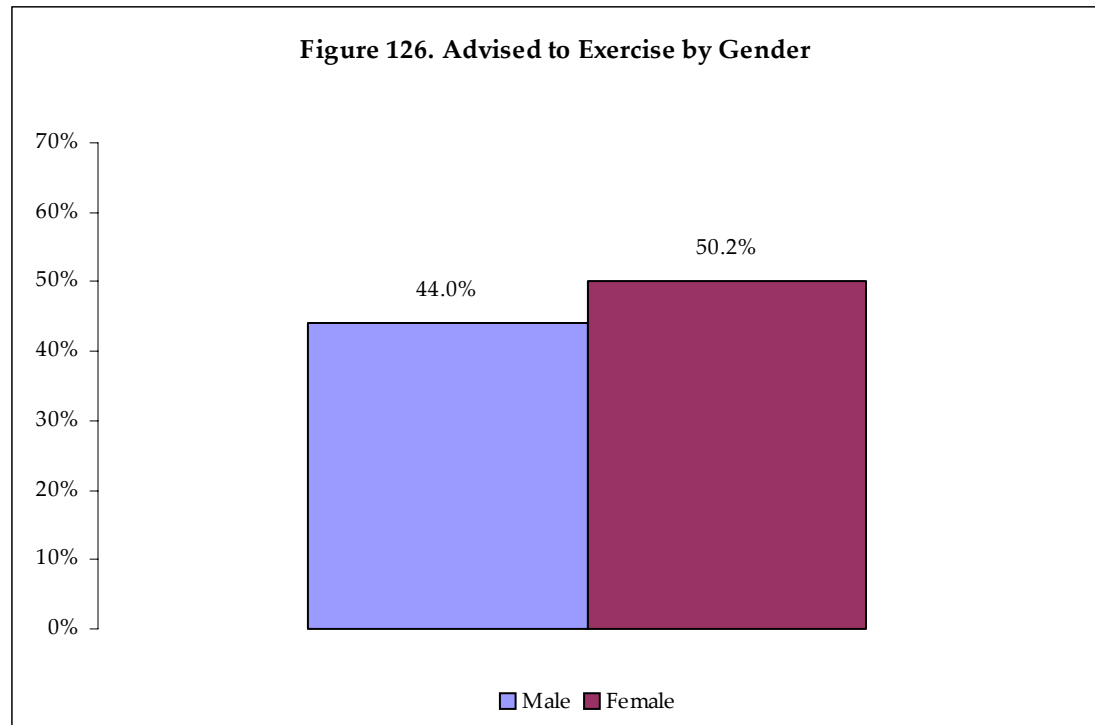
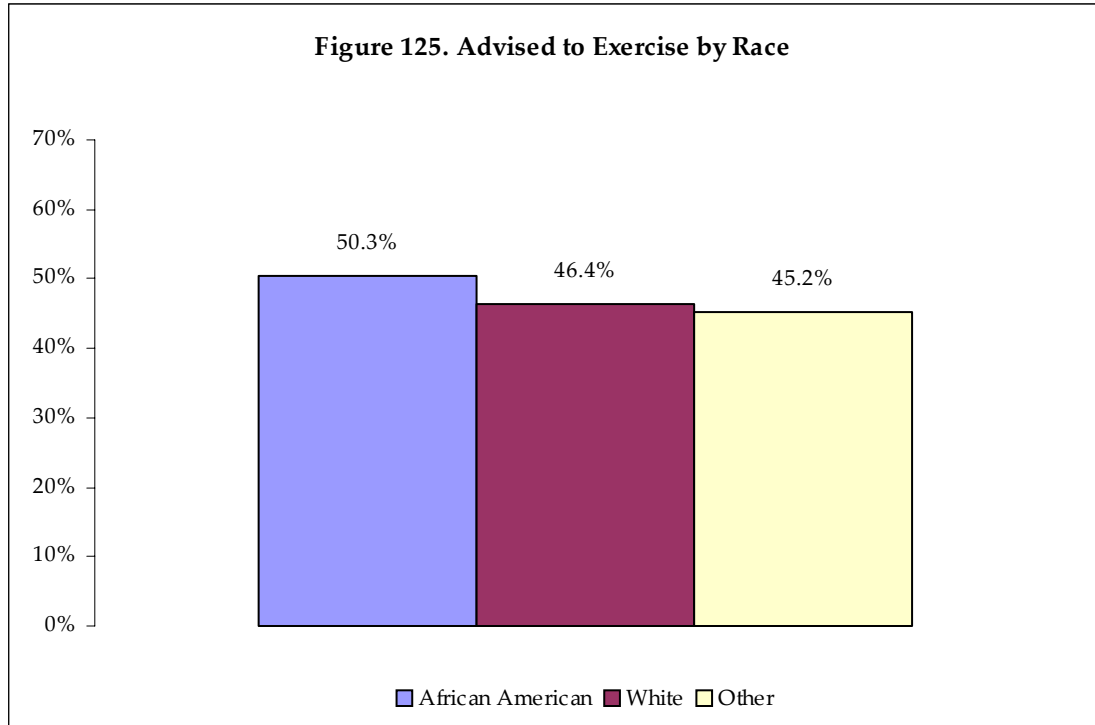
- Widowed persons were most likely to have been advised to lower their fat intake. Never-married persons were least likely to have received this advice. (Figure 122)
- A lower percentage of respondents without health insurance had been advised to lower fat consumption compared to those with insurance. (Figure 123)



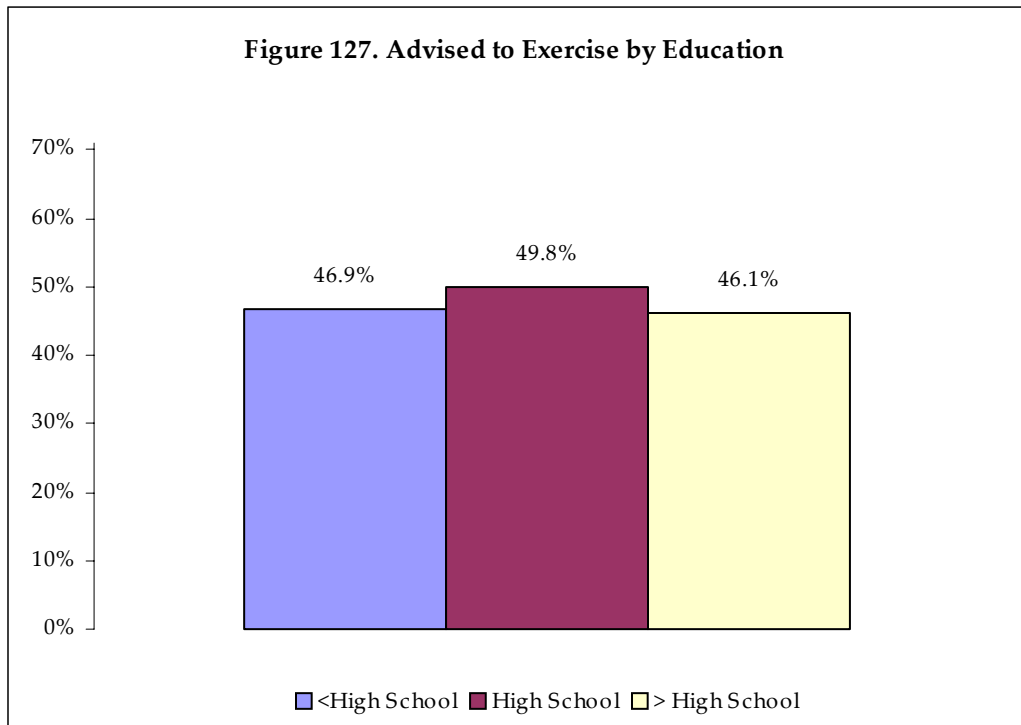
Exercise

- Half the survey respondents (50.0%, 95% confidence interval 49.0 – 51.0) said they had been advised by a doctor or health professional to exercise more to lower their risk of heart disease or stroke.
- Respondents age 45 or older were more likely to report being advised to exercise more. (Figure 124)
- More African American than White reported that they had been advised to exercise more. (Figure 125)
- More women than men had been advised to exercise more. (Figure 126)





- Respondents with a high school diploma or GED were most likely to say they had been advised to exercise more. (Figure 127)



References

1. Centers for Disease Control and Prevention. Preventing Heart Disease and Stroke: Addressing the Nation’s Leading Killers [web page]. April 3, 2003. Available at: http://www.cdc.gov/nccdphp/aag/aag_cvd.htm. Accessed June 23, 2003
2. Division of Epidemiology, Metropolitan Public Health Department of Nashville and Davidson County, TN. *Health, Nashville and Davidson County, TN, 2002*. Nashville, TN: 2002.
3. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.
4. Pradhan, A.D., P.J. Skerret, et al. (2002). Obesity, diabetes, and coronary risk in women. *Journal of Cardiac Risk* 9(6): 323-30.
5. Wong, M.D., M.F. Shapiro, et al. (2002). Contribution of major diseases to disparities in mortality. *New England Journal of Medicine*
6. Centers for Disease Control and Prevention. About Cardiovascular Disease [web page]. November 5, 2002. Available at: <http://cdc.gov/cvh/aboutcardio.htm>. Accessed June 23, 2003.
7. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence Data [web page]. February 18, 2003. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>. Accessed June 24, 2003.

| Table 11a. Cardiovascular Disease Risk Factors: Have High Blood Pressure and Have High Blood Cholesterol. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval) | | |
|--|-----------------------------------|--------------------------------------|
| <i>Demographics</i> | Told You Have High Blood Pressure | Told You Have High Blood Cholesterol |
| <u>Total</u> | 28.2% (27.2 - 29.2) | 24.6% (22.6 - 26.6) |
| <u>Age</u> | | |
| 18-24 | 5.3% (3.5 - 7.0) | 5.1% (3.4 - 6.9) |
| 25-44 | 12.7% (11.5 - 13.9) | 14.0% (12.8 - 15.2) |
| 45-64 | 38.4% (36.3 - 40.5) | 36.8% (34.7 - 38.9) |
| 65+ | 55.9% (53.2 - 58.6) | 42.3% (39.6 - 45.0) |
| <u>Race</u> | | |
| African American | 33.7% (31.5 - 36.0) | 21.3% (19.3 - 23.2) |
| White | 21.7% (20.5 - 22.8) | 23.4% (22.3 - 24.6) |
| Other | 25.5% (19.6 - 31.4) | 23.0% (17.3 - 28.7) |
| <u>Gender</u> | | |
| Male | 23.6% (22.0 - 25.3) | 24.0% (22.4 - 25.7) |
| Female | 25.7% (24.0 - 27.4) | 21.8% (20.2 - 23.4) |
| <u>Income</u> | | |
| <\$10,000 | 38.5% (32.9 - 44.1) | 28.3% (23.0 - 33.5) |
| \$10,000-\$24,999 | 30.8% (28.7 - 32.9) | 23.9% (22.0 - 25.9) |
| \$25,000-\$49,999 | 21.0% (19.4 - 22.6) | 20.7% (19.1 - 22.3) |
| \$50,000 or more | 19.6% (17.7 - 21.5) | 22.8% (20.8 - 24.7) |
| <u>Education</u> | | |
| <High School | 42.6% (39.3 - 45.9) | 30.3% (27.2 - 33.3) |
| High School | 24.9% (23.0 - 26.8) | 24.9% (23.0 - 26.8) |
| > High School | 20.9% (19.9 - 22.1) | 20.9% (19.7 - 22.1) |
| <u>Marital Status</u> | | |
| Single | 13.3% (11.8 - 14.8) | 11.5% (10.1 - 13.0) |
| Married/Cohabiting | 24.0% (22.5 - 25.6) | 24.9% (23.4 - 26.4) |
| Divorced/Separated | 30.7% (28.3 - 33.1) | 29.0% (26.6 - 31.4) |
| Widowed | 57.3% (54.0 - 60.7) | 40.6% (37.3 - 44.0) |
| <u>Insurance Coverage</u> | | |
| Insured | 25.7% (24.7 - 26.8) | 23.8% (22.8 - 24.9) |
| Uninsured | 16.7% (14.7 - 18.7) | 15.1% (13.2 - 17.1) |

Table 11b. Cardiovascular Disease Risk Factors: Advised to Eat Less Fat and Advised to Exercise More. Results of the 2001 Community Health Behavior Survey in Davidson County, Tennessee Weighted by Council District (95% Confidence Interval)

| <i>Demographics</i> | Advised to Eat Less Fat | Advised to Exercise More |
|---------------------------|-------------------------|--------------------------|
| <u>Total</u> | 33.7% (32.7 - 34.7) | 50.0% (49.0 - 51.0) |
| <u>Age</u> | | |
| 18-24 | 10.6% (8.2 - 13.0) | 25.7% (22.3 - 29.1) |
| 25-44 | 24.8% (23.9 - 26.3) | 43.0% (41.3 - 44.7) |
| 45-64 | 44.5% (42.3 - 46.7) | 60.1% (58.0 - 62.2) |
| 65+ | 45.8% (43.1 - 48.5) | 58.2% (55.5 - 60.9) |
| <u>Race</u> | | |
| African American | 33.5% (31.3 - 35.8) | 50.3% (47.9 - 52.7) |
| White | 30.6% (29.4 - 31.9) | 46.4% (45.0 - 47.7) |
| Other | 25.8% (19.9 - 31.8) | 45.2% (38.5 - 51.9) |
| <u>Gender</u> | | |
| Male | 29.3% (27.6 - 31.1) | 44.0% (42.1 - 45.9) |
| Female | 32.5% (30.7 - 34.3) | 50.2% (48.2 - 52.1) |
| <u>Income</u> | | |
| <\$10,000 | 36.5% (30.9 - 42.1) | 44.9% (39.2 - 50.7) |
| \$10,000-\$24,999 | 31.3% (29.1 - 33.4) | 46.7% (44.4 - 49.0) |
| \$25,000-\$49,999 | 29.1% (27.3 - 30.9) | 47.7% (45.8 - 49.7) |
| \$50,000 or more | 31.9% (29.7 - 34.2) | 47.4% (45.1 - 49.8) |
| <u>Education</u> | | |
| <High School | 34.9% (31.8 - 38.1) | 46.9% (43.6 - 50.2) |
| High School | 32.1% (30.0 - 34.1) | 49.8% (47.6 - 52.0) |
| > High School | 29.9% (28.6 - 31.3) | 46.1% (44.6 - 47.5) |
| <u>Marital Status</u> | | |
| Single | 21.4% (19.5 - 23.2) | 38.4% (36.1 - 40.6) |
| Married/Cohabiting | 33.6% (32.0 - 35.3) | 48.6% (46.8 - 50.4) |
| Divorced/Separated | 34.8% (32.3 - 37.4) | 52.9% (50.2 - 55.5) |
| Widowed | 43.8% (40.5 - 47.2) | 60.5% (57.2 - 63.8) |
| <u>Insurance Coverage</u> | | |
| Insured | 32.2% (31.0 - 33.3) | 48.6% (47.4 - 49.8) |
| Uninsured | 21.2% (19.0 - 23.5) | 48.2% (45.5 - 51.0) |

Appendices

Glossary

Community Health Behavior Survey 2001 Questions

Glossary

Access “According to the Institute of Medicine, ‘The timely use of personal health services to achieve the best possible health outcomes.’³ This definition includes both the use and effectiveness of health services. The concept of access also encompasses physical accessibility of facilities.”⁴

Advisory Committee on Immunization Practices (ACIP): “Federally chartered advisory committee with the goals of providing advice to the CDC Director on decreasing disease through the use of vaccines and other biological products and on improving the safety of their use.”⁴

AIDS: “Acquired immunodeficiency syndrome, the most severe phase of infection with the human immunodeficiency virus (HIV).”⁴

Asthma: “A lung disease characterized by airway constriction, mucus secretion, and chronic inflammation, resulting in reduced airflow and wheezing, coughing, chest tightness, and difficulty breathing.”⁴

Body Mass Index (BMI): “A number that indicates a person’s body weight relative to height. BMI is a useful indirect measure of body composition, because it correlates highly with body fat in most people.”⁴ BMI is calculated by dividing the weight in kilograms by the square of height in meters. A BMI of 20-25 is usually considered normal, 25-30 overweight or pre-obese, and 30 and above obese.

Cancer Screening: “Checking for changes in tissue, cells, or fluids that may indicate the possibility of cancer when there are no symptoms.”⁴

Cardiovascular Disease (CVD): “Includes a variety of diseases of the heart and blood vessels, coronary heart disease (coronary artery disease, ischemic heart disease), stroke (brain attack), high blood pressure (hypertension), rheumatic heart disease, congestive heart failure, and peripheral artery disease.”⁴

Cholesterol: “A waxy substance that circulates in the bloodstream. When the level of cholesterol in the blood is too high, some of the cholesterol is deposited in the walls of the blood vessels. Over time, these deposits can build up until they narrow the blood vessels, causing atherosclerosis, which reduces the blood flow. The higher the blood cholesterol level, the greater is the risk of getting heart disease. Lowering blood cholesterol reduces the risk of heart disease.”⁴

Confidence Interval: A range of values which we can assume, with a specified degree of confidence, includes the actual value in the population. A sample gives an imperfect picture of the population; if we drew many random samples from the same population, the values or point estimates for any given variable would be slightly different each time. This report uses 95% confidence intervals, which means that if we drew many samples, 95% of the time the results would be within the confidence interval. If we say, for example, that 89.3% of respondents had health insurance and the 95% confidence interval is 88.6% – 90.0%, this means that there is a 95% probability that between 88.6% and 90.0% of people in the population have health insurance. When 95% confidence intervals for two or more demographic subgroups of the population are non-overlapping, then it is 95% probable that the difference between the groups that we observe in the sample also exists in the population.

Glossary

Diabetes: “A chronic, metabolic disease characterized by high blood glucose levels caused by a deficiency of insulin production, an impairment of insulin action, or both.”¹

Digital Rectal Exam: “An examination of the lower rectum in which the clinician uses a lubricated, gloved finger to evaluate the prostate gland in men and check for other abnormalities or blood in both men and women.”¹

High Blood Pressure: “A systolic blood pressure of 140 mmHg or greater or a diastolic pressure of 90 mmHg or greater. With high blood pressure, the heart has to work harder, resulting in an increased risk of a heart attack, stroke, heart failure, kidney and eye problems, and peripheral vascular disease.”⁴

HIV: “Human Immunodeficiency Virus, the virus that causes acquired immunodeficiency syndrome (AIDS).”¹

Mammogram or Mammography: “An X-ray technique for the breast with the purpose of early detection of breast problems, including cancer.”¹

Mortality: “Death, the irreversible cessation of all of the following: (1) total cerebral function, (2) spontaneous function of respiratory system, and (3) spontaneous function of the circulatory system.”¹

Nicotine Dependency: “Highly controlled or compulsive use, use despite harmful effects, withdrawal upon cessation of use, and recurrent drug craving.”⁴

Nutrition: “The set of processes by which nutrients and other food components are taken in by the body and used.”⁴

Obesity: “A condition characterized by excessive body fat.”⁴

Overweight: “Excess body weight.”⁴

Pap Smear/Pap Test: “A screening test for cervical cancer in which cells scraped from a woman’s cervix are examined microscopically.”¹

Physical activity: “Bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure.”⁴

PSA (prostate-specific antigen) test: “A test that measures the level of an enzyme (PSA) in the blood that increases due to diseases of the prostate gland, including prostate cancer.”⁴

Prevalence: “The number of existing cases of a condition or disease in a population during a specific period of time. Prevalence measures the burden of a disease/condition.”¹

Primary Care: “According to the Institute of Medicine, ‘The provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.’”²

Glossary

Risk: “The probability that an event will occur, e.g. that an individual will become ill or die within a stated period of time or age. Also, a nontechnical term encompassing a variety of measures of the probability of a generally unfavorable outcome.”¹

Risk Factor: “Something that increases a person’s chance of developing a disease.”⁴

Secondhand Smoke: “A mixture of the smoke exhaled by smokers and the smoke that comes from the burning end of the tobacco product.”⁴

Stroke: “An interruption of the flow of blood to the brain. Stroke includes a group of diseases that affect the arteries of the central nervous system. Stroke results when an artery in the brain is either ruptured or clogged by a blood clot (thrombus), a wandering clot (embolus), or atherosclerotic plaque. Nerve cells in the affected part of brain die within minutes, often resulting in neurologic impairment.”¹

Usual Source of Care: “A particular doctor’s office, clinic, health center, or other health care facility to which an individual usually would go to obtain health care services. Having a usual source of care is associated with improved access to preventive services and follow-up care.”⁴

Vaccine: “A product that consists of weakened or killed microorganisms (bacterium or virus) given for the prevention or treatment of infectious diseases. Vaccines may be administered by injection or by mouth. In the future, vaccines may be given by nasal spray, an aerosol that is received simply by breathing, or by a needle-less injection system.”¹

References

1. Division of Epidemiology, Metro Public Health Department of Nashville and Davidson County, TN. *Health, Nashville and Davidson County, TN, 2002*. Nashville, TN: 2002.
2. Donaldson, M.S.; Yordy, K.D., Lohr, K.N. (eds). Institute of Medicine. *Primary Care: America’s Health in a New Era*. Washington, DC: National Academy Press, 1996. in U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.
3. Millman, M., ed. Institute of Medicine. *Access to Health Care in America*. Washington, DC: National Academy Press, 1993. in U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.
4. U.S. Department of Health and Human Services. *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000.

Community Health Behavior Survey 2001 Questions

1. Would you say that in general your overall health is: Excellent, Very Good, Good, Fair, Poor?*
2. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMO's, or government plans such as Medicare?*
3. Do you have one person you think of as your personal doctor or health care provider?*
4. Did a doctor ever tell you that you had asthma?*
5. Do you still have asthma?*
6. Have you ever been told by a doctor that you have diabetes?*
7. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?*
8. Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?*
9. Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?*
10. To lower your risk of developing heart disease or stroke, has a doctor advised you to
 - a. Eat fewer high fat or high cholesterol foods?***
 - b. Exercise more?***
11. Indicate sex of respondent.*
12. A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?*
13. How long has it been since you had your last mammogram?*
14. A Pap smear is a test for cancer of the cervix. Have you ever had a Pap smear?*
15. How long has it been since you had your last Pap smear?*
16. To your knowledge, are you now pregnant?*
17. A digital rectal exam is when a doctor or other health professional inserts a finger in the rectum to check for prostate cancer and other health problems. Have you ever had this exam?*
18. Have you ever had a blood test for prostate specific antigen, also known as a PSA test?***

Community Health Behavior Survey 2001 Questions

19. About how tall are you without shoes?*
20. About how much do you weigh without shoes?*
21. During the past 12 months, have you had a flu shot?*
22. Have you ever had a pneumonia vaccination?***
23. Have you ever smoked at least 100 cigarettes in your entire life? ***
 - a. Do you now smoke cigarettes everyday, some days, or not at all?*
 - b. On the average, about how many cigarettes a day do you now smoke?****
 - c. On the average, when you smoked during the past 30 days, about how many cigarettes did you smoke a day?****
 - d. Has a doctor or other health professional ever advised you to quit smoking?***
 - e. During the past 12 months, have you quit smoking for 1 day or longer?***
 - f. Do you plan to quit smoking?****
 - g. Do you intend to in the next 6 months?****
 - h. Do you intend to in the next 30 days?****
24. Do you currently use any smokeless tobacco products such as chewing tobacco or snuff?***
25. During the past 30 days, have you been exposed to second hand smoke?****
 - a. Have you been exposed to second hand smoke at work?****
 - b. Have you been exposed to second hand smoke at home?****
 - c. Have you been exposed to second hand smoke at a restaurant?****
 - d. Have you been exposed to second hand smoke in any other places?****
26. What is your age in years?***
27. Are you of Spanish or Hispanic origin?***
28. Would you describe yourself as 1) White, 2) Black or African American, 3) Asian or Pacific Islander, 4) American Indian or Alaska Native, or 5) Some other race?***

Community Health Behavior Survey 2001 Questions

29. What is your marital status?***
30. How many children live in your household who are less than 18 years old?***
31. What is the highest grade or year of school you completed?***
32. Are you currently ... (Employed for wages; Self-employed; Out of work for more than 1 year; Out of work for less than 1 year; Homemaker; Student; Retired; Unable to work)?***
33. Is your annual household income from all sources...*
- a. Less than \$25,000
 - b. Less than \$20,000
 - c. Less than \$15,000
 - d. Less than \$10,000
 - e. Less than \$35,000
 - f. Less than \$50,000
 - g. Less than \$75,000
34. The health department is interested in addressing health concerns through efforts targeting entire neighborhoods. So that we can determine in what neighborhood you live, would you please tell me either the name of your city council representative, the number of the council district you are in, or the closest street intersection to you?****
35. What is your zip code?****
36. During the past month, how many times did you participate in any physical activities or exercises such as running, calisthenics, or walking for exercise?***
- a. Have you been participating in any physical activities or exercises for more than 6 months or less than 6 months?****
 - b. Do you intend to start participating in physical activities or exercises in the next 6 months?****
 - c. Do you intend to start participating in physical activities or exercises in the next 30 days?****
37. Do you almost always eat five or more servings of fruits and vegetables each day? For example 1 serving is equal to 1 cup fresh vegetables, 1 cup cooked vegetables, 1 medium size fruit or ¾ cup juice.**

Community Health Behavior Survey 2001 Questions

- a. Have you been eating five or more servings of fruits and vegetables for more than 6 months or less than 6 months?****
 - b. Do you plan to begin eating five or more servings of fruits and vegetables in the next 6 months?****
 - c. Do you intend to begin eating five or more servings of fruits and vegetables in the next thirty days?****
38. Do you try to avoid eating high fat foods (for example, butter, margarine, oil, salad dressing, fatty meat, fried food, and ice cream)?****
- a. Have you been avoiding eating high fat foods for more than 6 months or less than 6 months?****
 - b. Do you intend to avoid eating high fat foods in the next 6 months?****
 - c. Do you intend to avoid eating high fat foods in the next thirty days?****
39. Are you now trying to lose weight?*
40. Are you eating either fewer calories or less fat to lose weight?*
41. Are you using physical activity or exercise to lose weight?*
42. Do you currently take any multivitamins?*
43. A drink is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past month, how many alcoholic drinks did you have in an average week?*
44. During the past month did you have 5 or more drinks on an occasion?*
45. There are situations where people provide regular care or assistance to a family member or friend who is elderly or has a long-term illness or disability. During the past month, did you provide any such care or assistance to a family member or friend who is 60 years of age or older?*
- a. Have you assisted with personal care needs such as eating or bathing?*
 - b. Have you assisted with activities such as transportation, shopping, or housekeeping?*
46. In the last 12 months, how many sexual partners have you had?*
47. Do you now always use condoms for protection?*

Community Health Behavior Survey 2001 Questions

48. During the last 4 weeks, to what extent have you accomplished less than you would like in your work or other daily activities as a result of emotional problems such as feeling depressed or anxious?****
49. Do you have friends or family with whom you can share problems or get help when needed?****
50. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life. During the past 12 months, did you ever seriously consider attempting suicide?****
51. During the past 12 months, have you been emotionally or physically abused by your partner or someone important in your life?****
52. How safe from crime do you consider your neighborhood to be?****
53. Spirituality may be defined in a variety of ways including connection to a higher power or a sense of being religious. How would you rate your spirituality?****
54. Do you have enough money to buy essentials including food, clothing, or housing?****
55. Do you use the internet to access health information?****

* From CDC BRFSS questionnaire

**Adapted from CDC Behavioral Risk Factor Surveillance System questionnaire

*** From CDC National Health Information Survey

****Added by Metro Public Health Department