

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

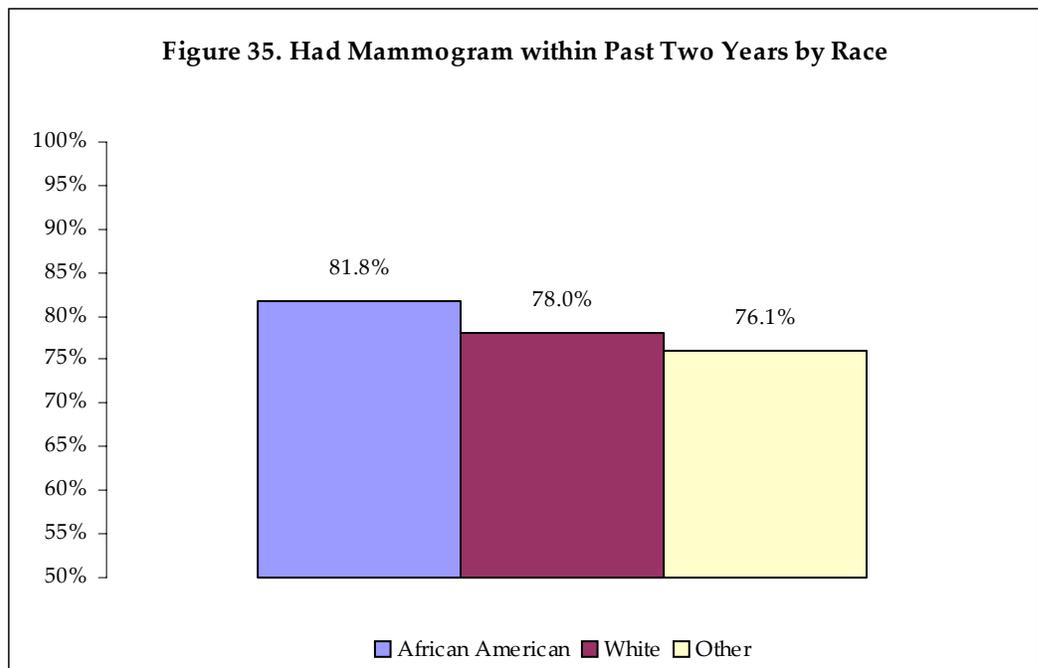
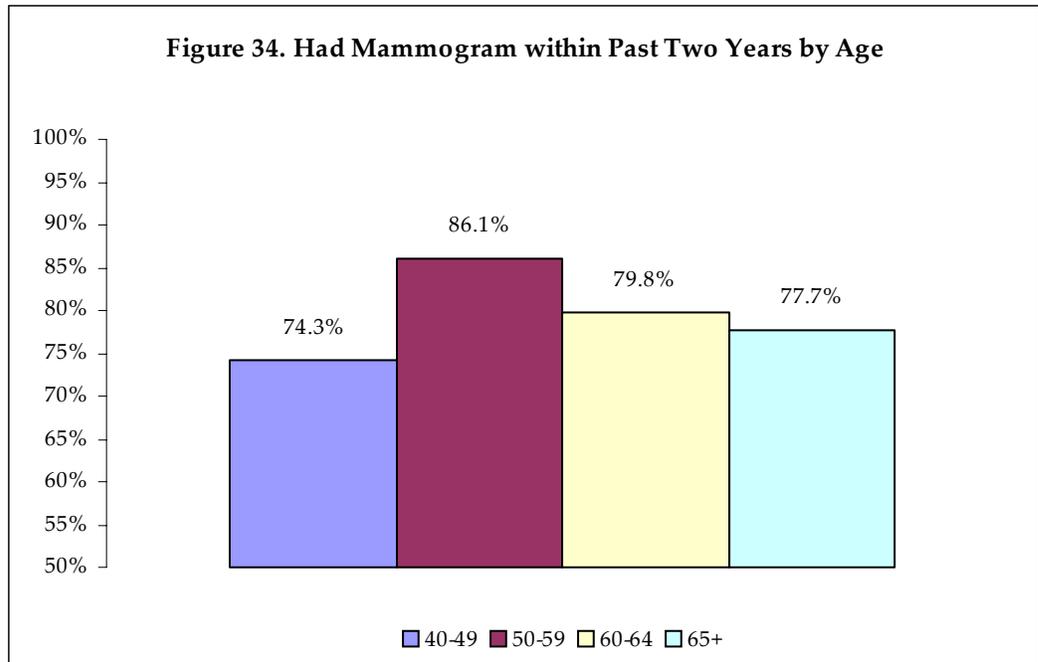
Female respondents were asked, "A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?" Respondents who answered affirmatively were asked, "How long has it been since your last mammogram?" All women were also asked, "A Pap smear is a test for cancer of the cervix.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

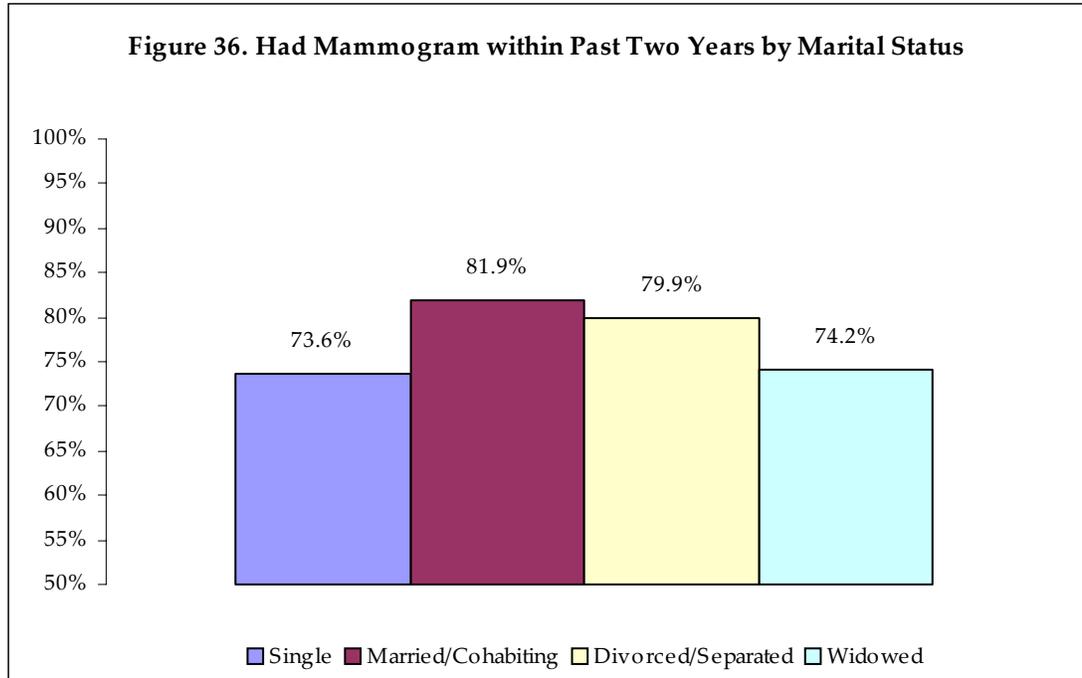
The survey items presented to male respondents were: "A digital rectal exam is when a doctor or other health professional inserts a finger in the rectum to check for prostate cancer and other health problems. Have you ever had this exam?" and "Have you ever had a blood test for prostate specific antigen,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

Results

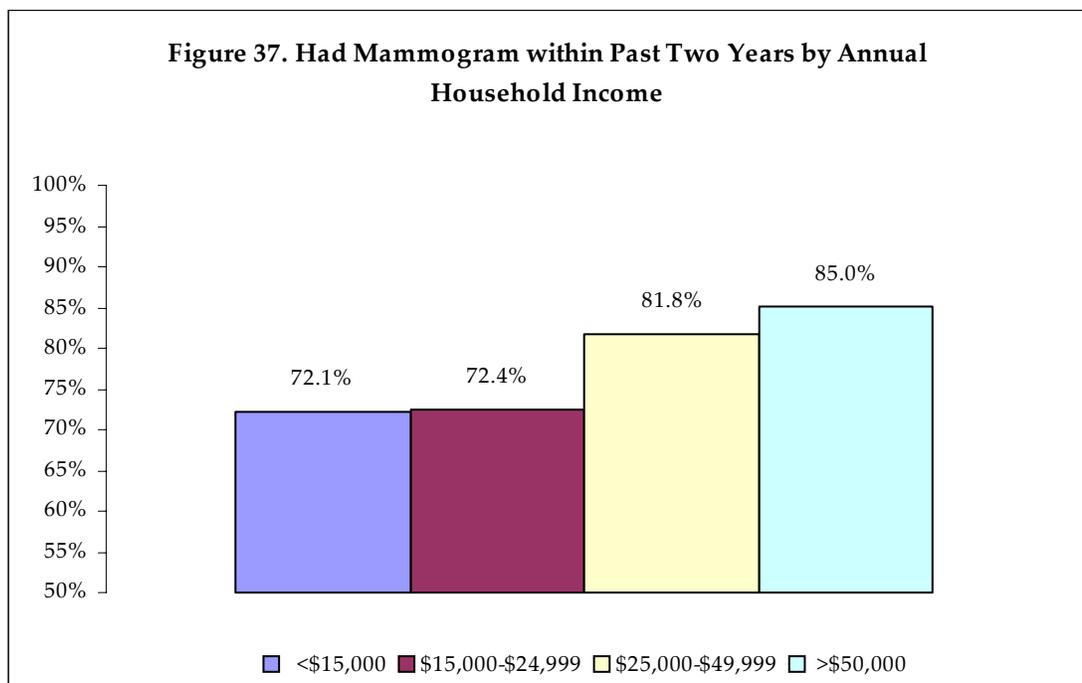
Mammography

- 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)

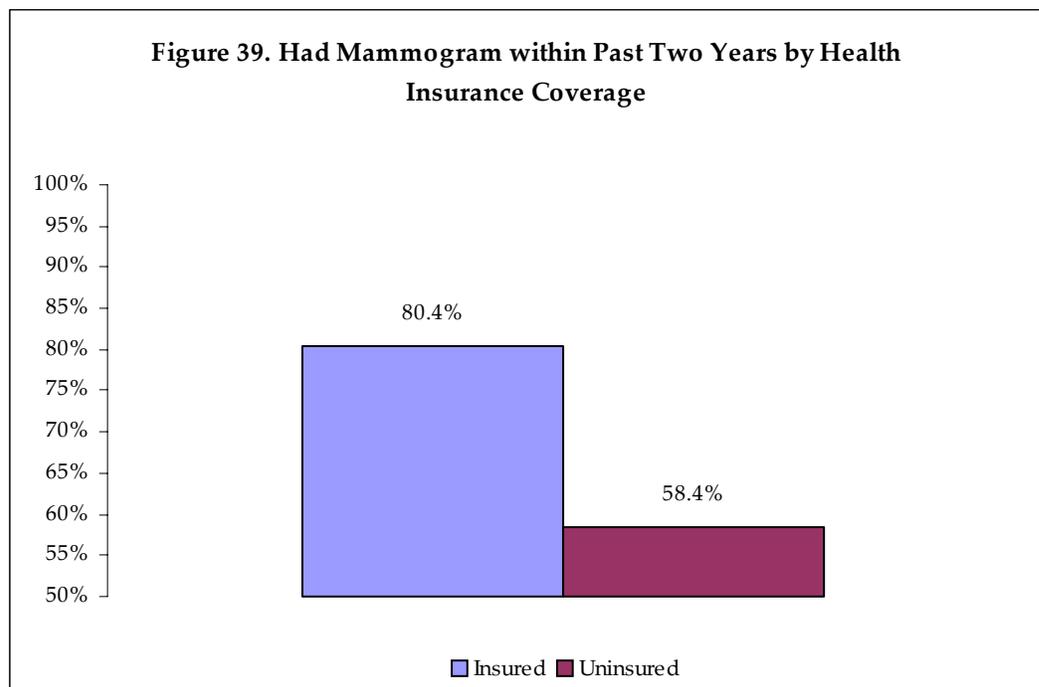
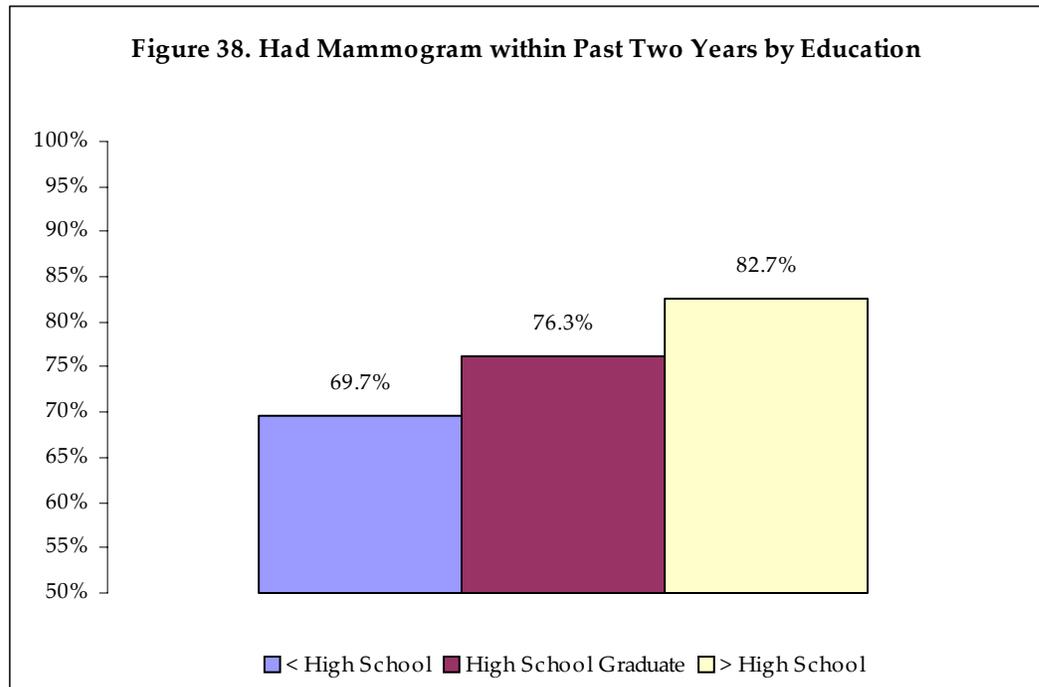




- African American women were more likely than White or Other races to report they had a mammogram within the past two years; however, the 95% confidence intervals overlapped slightly. Women of all races were nearly equally likely to report ever having had a mammogram. (Figure 35)
- Widows were least 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)

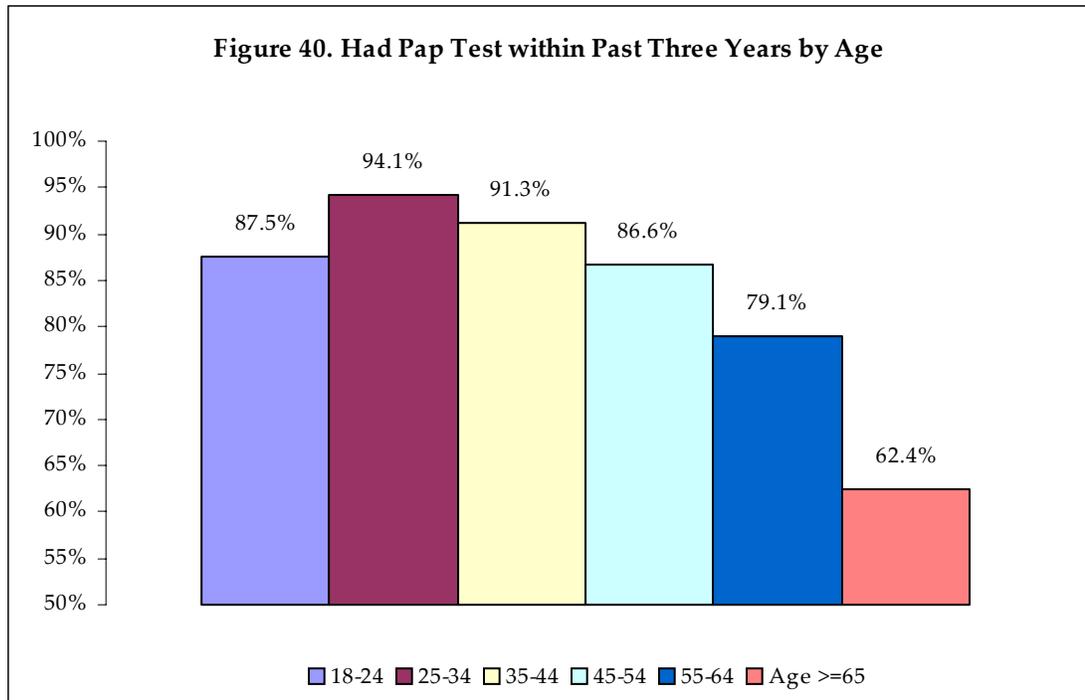


- The percentages of women who said they had mammograms increased with increasing education; however, the confidence intervals overlapped slightly. (Figure 38)
- There was a substantial difference between women who had health insurance and those who did not in likelihood of having ever had a mammogram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

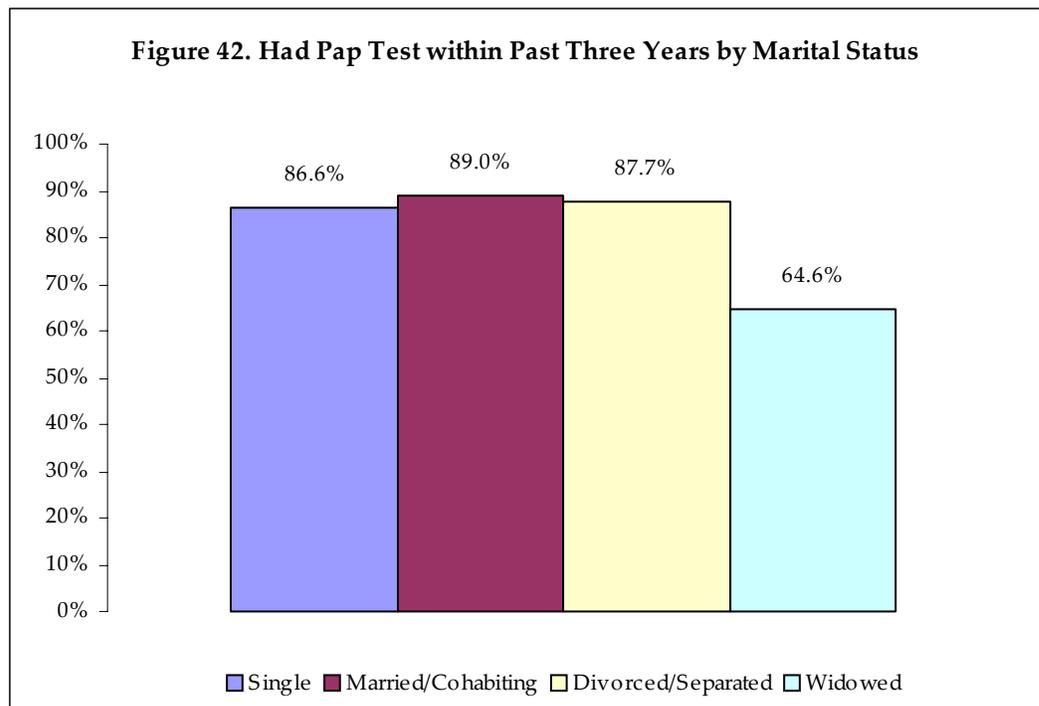
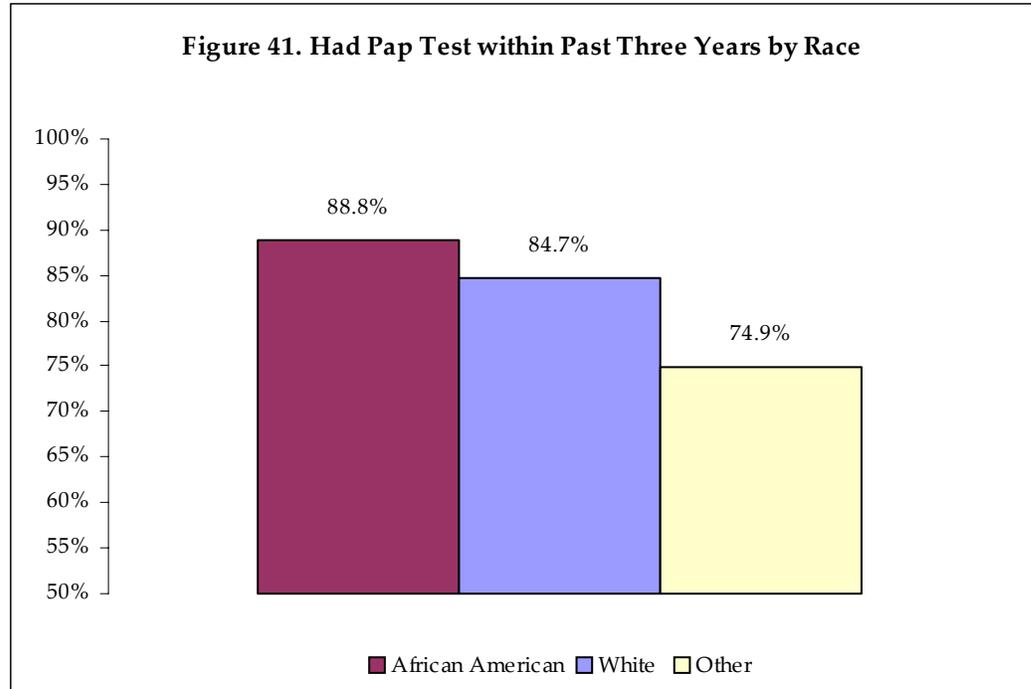


Pap Test

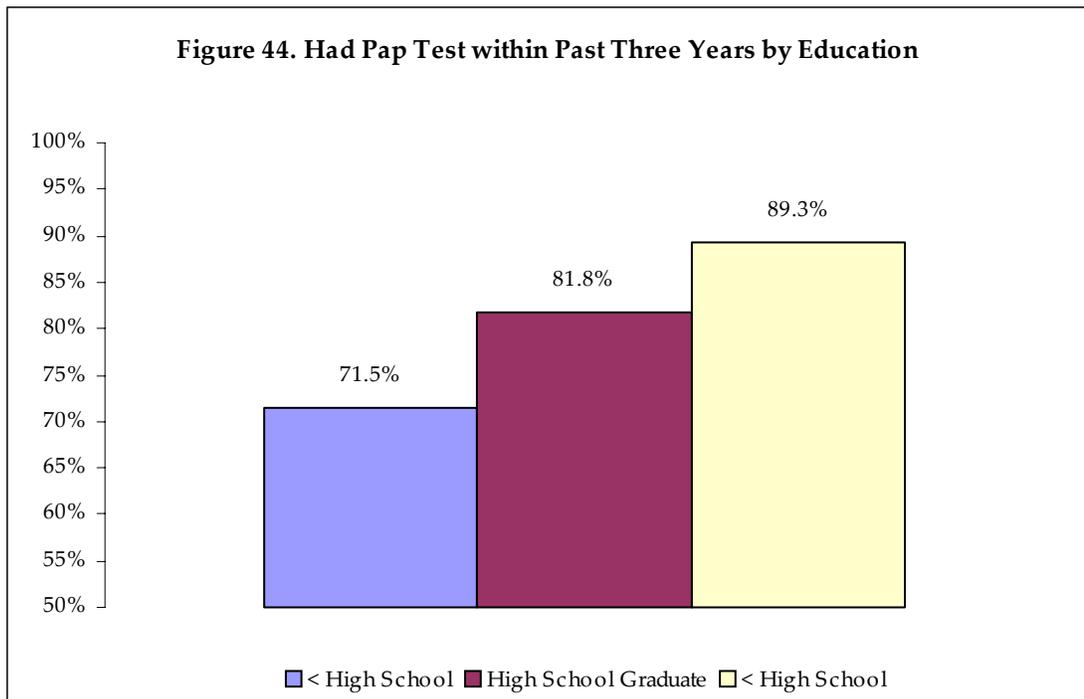
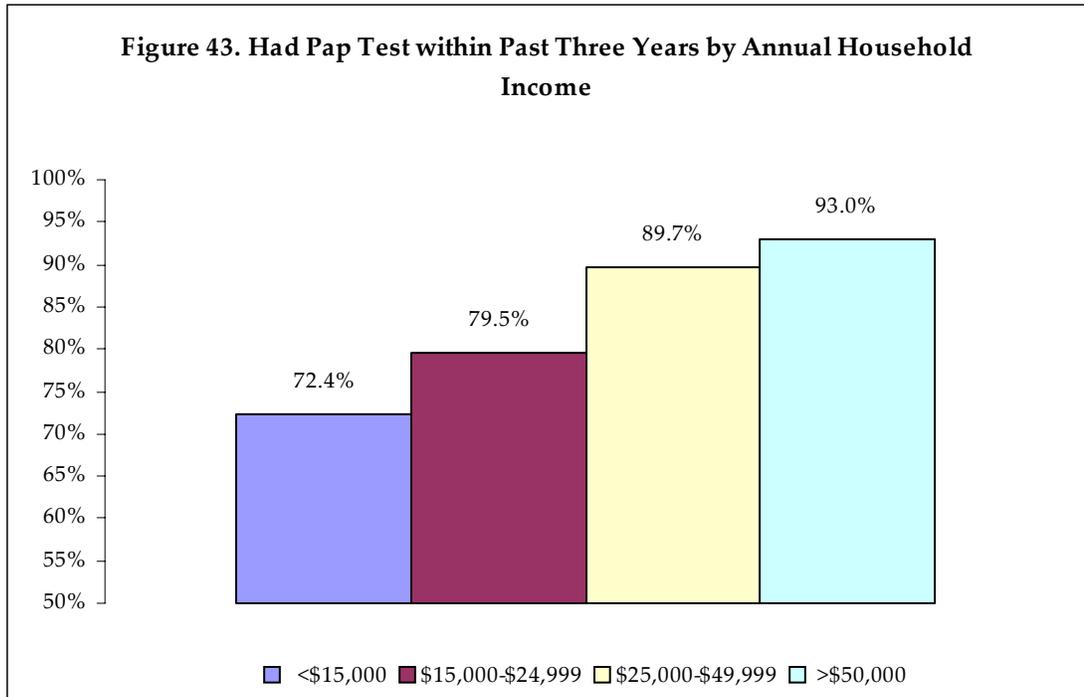
- In Nashville, 94.4% (95% confidence interval 93.5 – 94.9) of women said they had ever had a Pap test, and 87.7% (95% confidence interval 86.7 – 88.6) said they had one within 3 years.
- The youngest (18-24) and oldest (65 and over) groups were least likely to have ever had a Pap test. The age group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



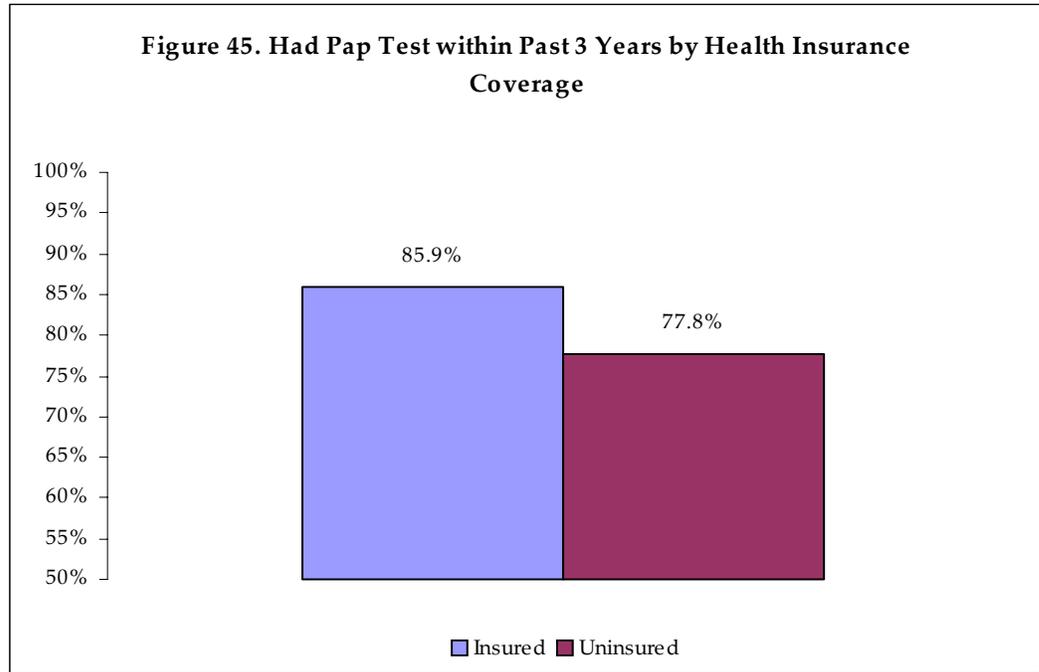
- There was no substantial difference between White and African American women in the likelihood of having a Pap test. The percentage of women of all other races who had had a Pap test was substantially less. African American women were more likely than White or Other races to have had a Pap test within 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)

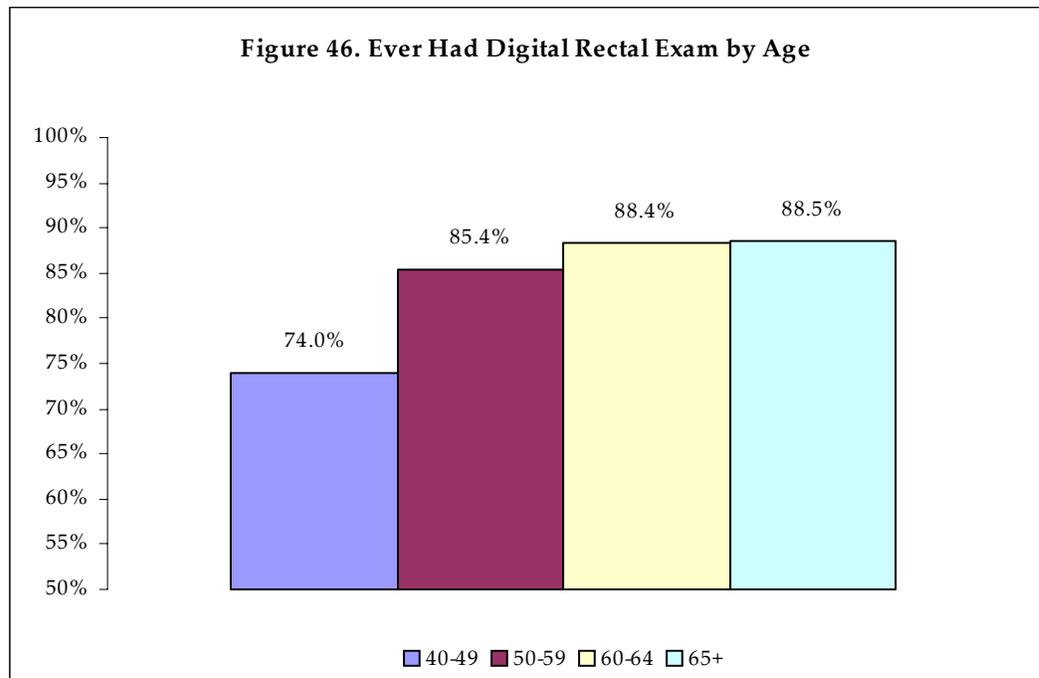


- Women with health insurance coverage were substantially more likely than uninsured women to have ever had a Pap test and to have had one in the past 3 years. (Figure 45)

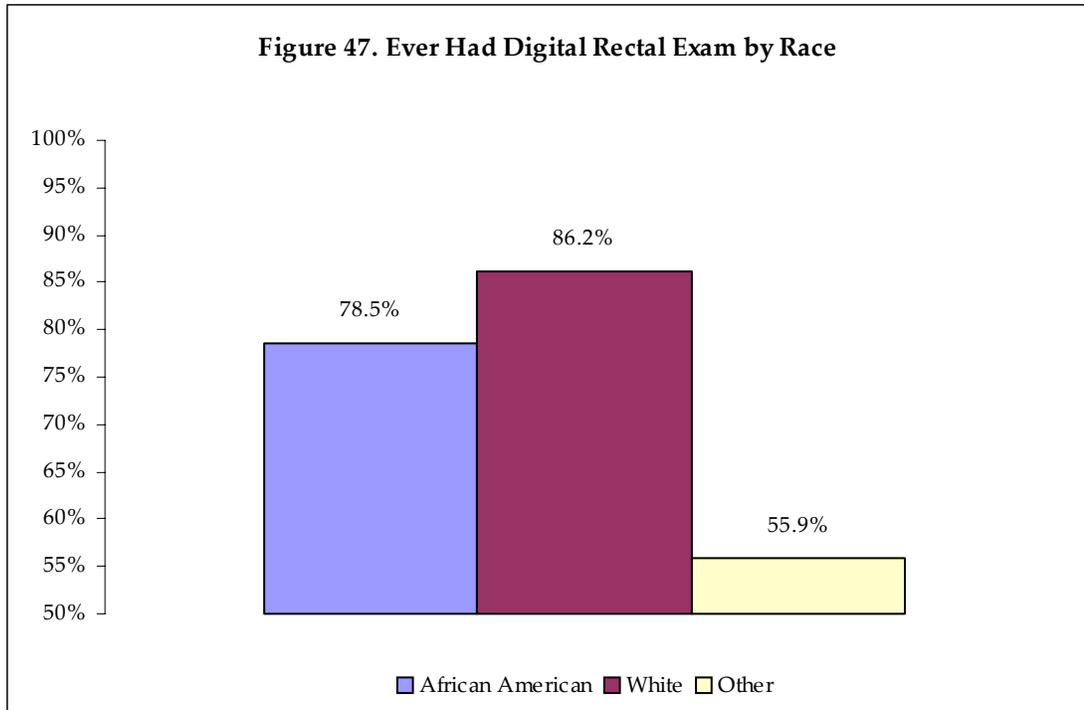


Digital Rectal Exam

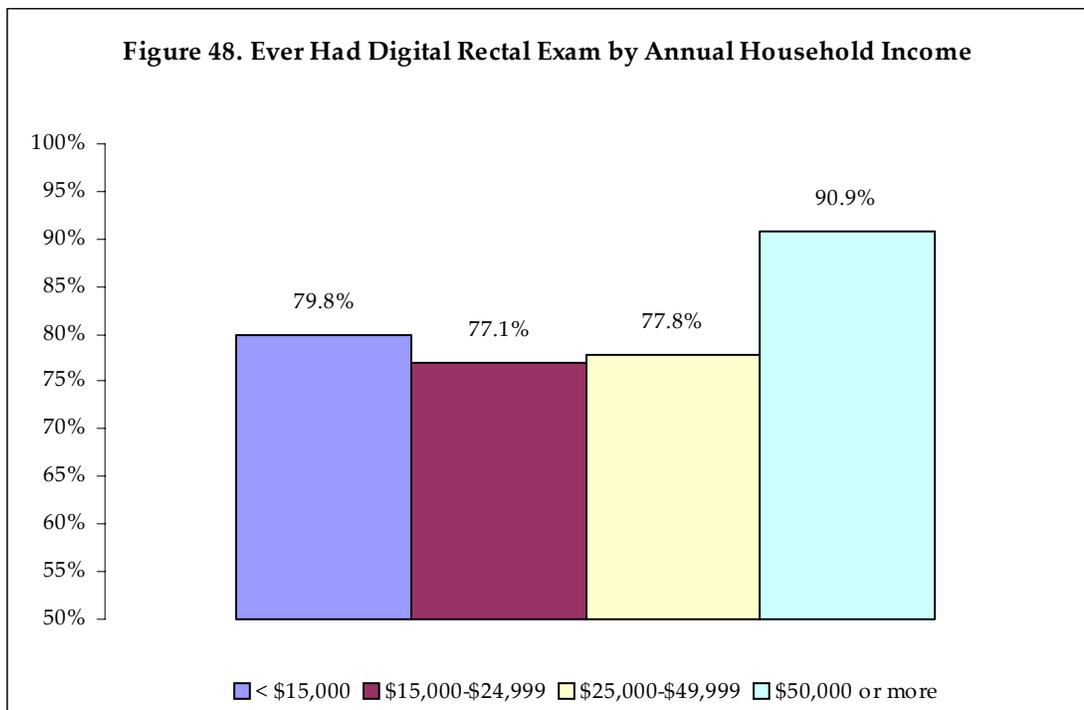
- In Nashville, 82.5% (95% confidence interval 80.5 – 84.5) of men 40 or more years of age said they had had a digital rectal examination.
- The percentage was lowest in the 40-49 age group. (Figure 46)



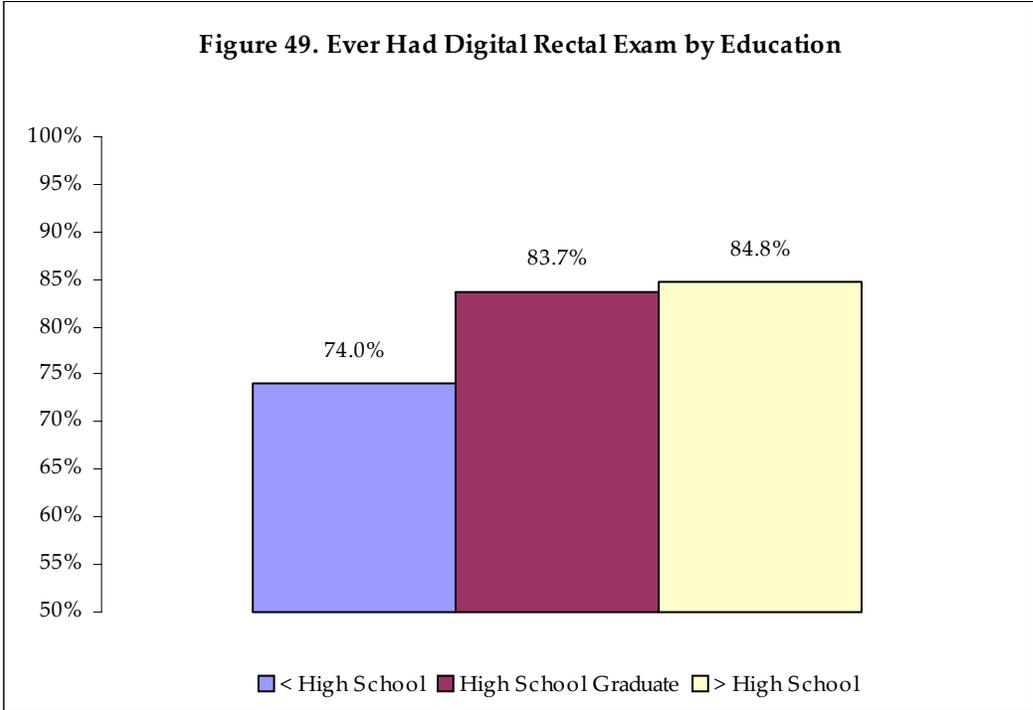
- A higher percentage of white men said they had had the exam. However, the 95% confidence intervals overlapped slightly, so it is possible that this difference is due to sampling error. The percentage for other races was substantially lower, with nonoverlapping confidence intervals. (Figure 47)



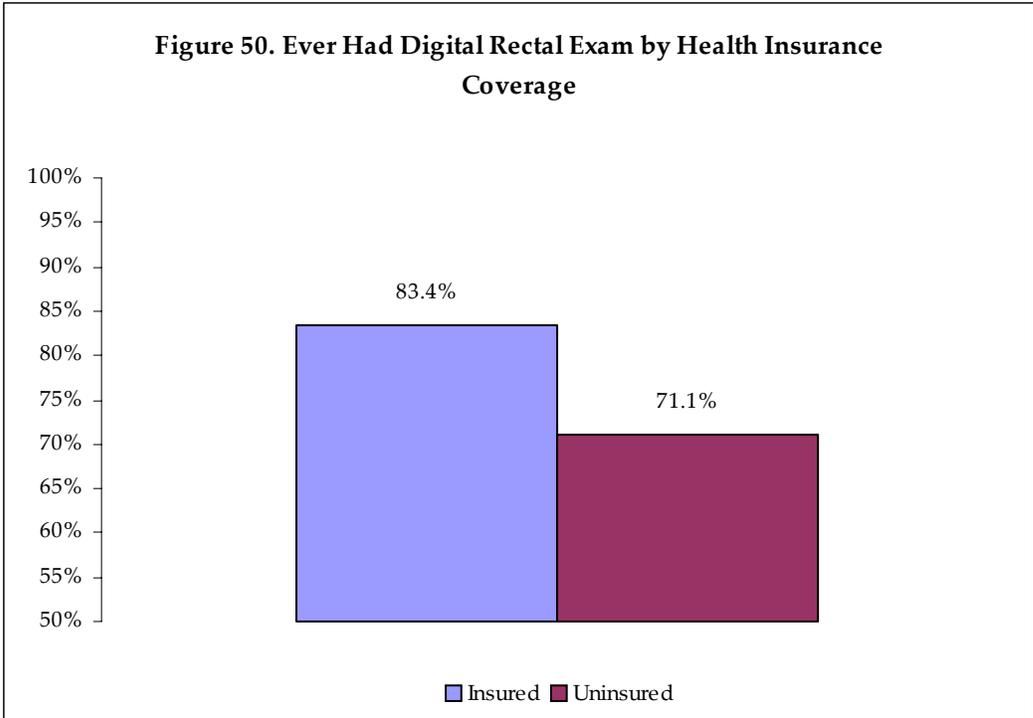
- Men with household incomes of \$50,000 or more were more likely to have had the exam. (Figure 48)



- 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)

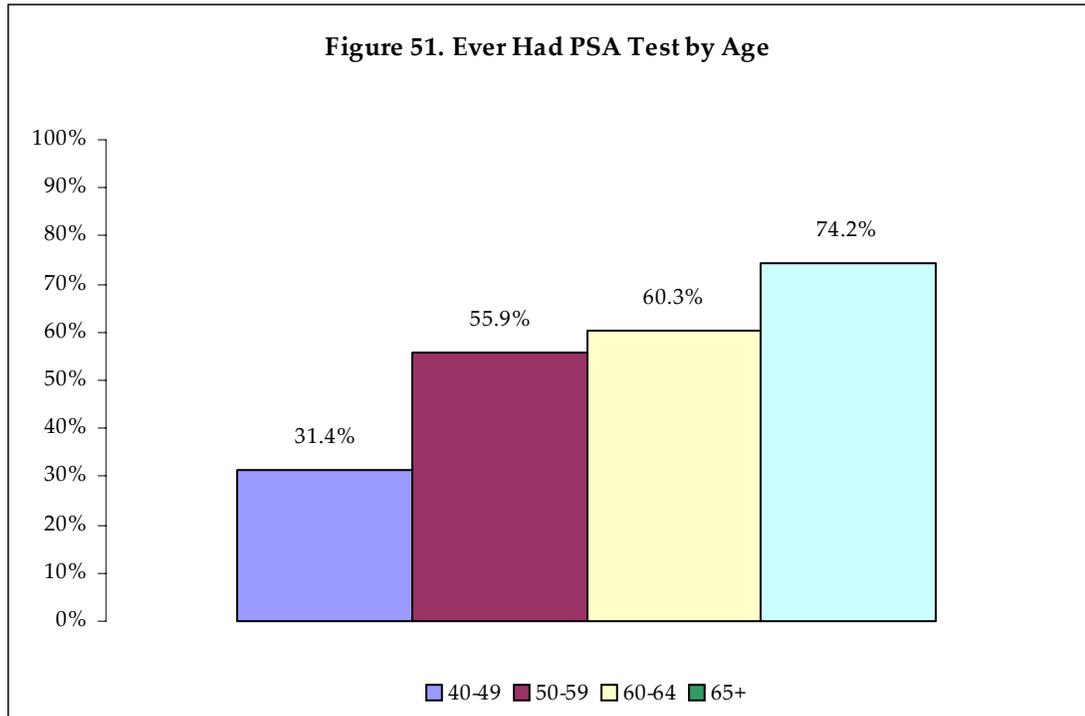


- Men with health insurance coverage were substantially more likely than uninsured men to have had the exam. (Figure 50)

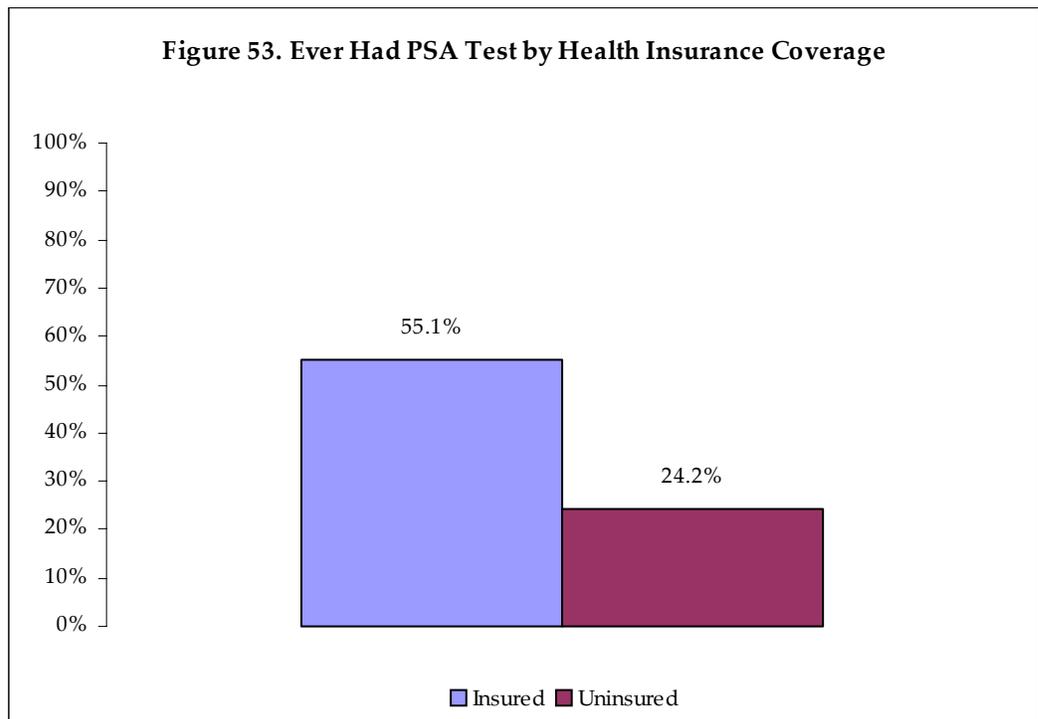
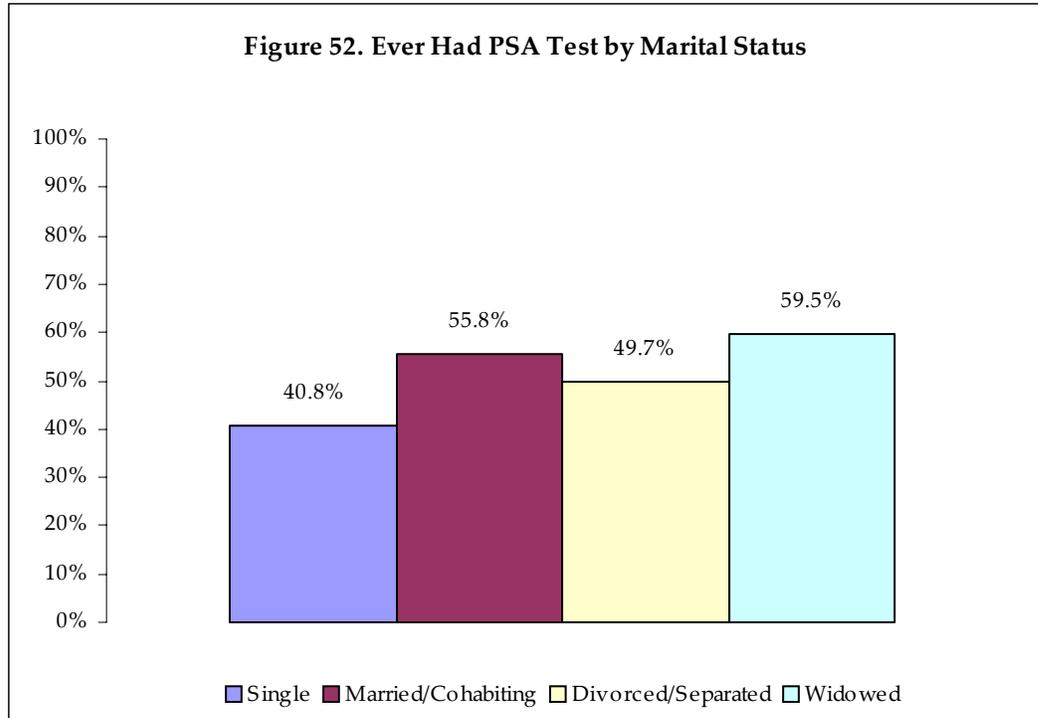


- **Prostate Specific Antigen Test**

- 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)



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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)