

Maryland Cancer Survey, 2008

**A Population-Based Statewide Survey on
Cancer Screening and Behavioral Risk Factors**

**Funded by the
Cigarette Restitution Fund Program
Cancer Prevention, Education, Screening, and
Treatment Program**

Maryland Department of Health and Mental Hygiene

September 2009

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Dedication

We dedicate this report to the staff working at the local programs throughout Maryland. Without their tireless efforts to promote education about cancer screening and prevention among all Marylanders and their work to screen uninsured and low-income individuals, the results highlighted in this report would not be possible.

Acknowledgments

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Citation

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List of Acronyms

ACS	American Cancer Society
BMI	body mass index
BRFSS	Behavioral Risk Factor Surveillance System
CASRO	Council of American Survey Research Organizations
CATI	computer-assisted telephone interview
CBE	clinical breast examination
CCSC	Center for Cancer Surveillance and Control
CDC	Centers for Disease Control and Prevention
CI	confidence interval
CPEST	Cancer Prevention, Education, Screening, and Treatment
CRC	colorectal cancer
CRF	Cigarette Restitution Fund
DCBE	double contrast barium enema
DHMH	Department of Health and Mental Hygiene
DRE	digital rectal examination
FDR	first-degree relative
FIT	fecal immunochemical test
FOBT	fecal occult blood test
FY	fiscal year
GED	General Equivalency Diploma
GI	gastrointestinal
HCP	health care provider
HMO	health maintenance organization
HP 2010	Healthy People 2010
IRB	Institutional Review Board
MCS	Maryland Cancer Survey
MHIP	Maryland Health Insurance Plan
MRI	magnetic resonance imaging
MSG	Genesys – Marketing Systems Group
NHANES	National Health and Nutrition Examination Survey
NHIS	National Health Interview Survey
NIAAA	National Institute on Alcohol Abuse and Alcoholism
PSA	prostate-specific antigen
RDD	random-digit dialing
UMB	University of Maryland, Baltimore
US	United States
USPSTF	U.S. Preventive Services Task Force

Maryland Cancer Survey, 2008

Highlights

Maryland residents continue to make significant progress in increasing both awareness and utilization of cancer screening tests. Marylanders are, as a group, knowledgeable about cancer screening tests and are being tested at rates comparable to or better than the national targets outlined in Healthy People (HP) 2010. However, our data suggest disparities in the prevalence of some screening tests for several demographic factors, including race, age, education, employment status, and income. Other factors were also associated with cancer screening prevalence in Maryland, including health insurance status, whether people have had a recent physical examination, and whether the health care provider recommends that the test be done. Also, while Marylanders have been successful in meeting or exceeding several HP 2010 targets related to cancer screening, they have been less successful in attaining targets for some behavioral and lifestyle goals aimed at reducing risk of cancer and other chronic diseases.

Survey Sample and Demographics

- The MCS was successful in completing interviews of 5,004 Maryland residents age 40 years and older, of which 3,848 (76.9%) were White, 997 (19.9%) were African American, and 159 (3.2%) were of other races.
- Women made up 66.7% of the sample.
- Approximately 63% of the respondents were between the ages of 40 and 65 years.
- 17% of respondents reported an annual household income of less than \$25,000.
- 93% of respondents completed at least a high school education.
- The results of the survey are weighted to the Maryland population by age, sex, and race.

Comparison to HP 2010 targets

Based on results of the MCS 2008, Maryland residents **meet or exceed** the HP 2010 targets for the following cancer screening tests and other measures:

- **Ever having a colonoscopy or sigmoidoscopy:** 75% of Marylanders age 50 years and older reported ever having at least one of these procedures, compared to the HP 2010 target of 50%. (HP 2010 target based on adults age 50 years and older.)
- **Mammogram in the past 2 years:** 83% of Maryland women age 40 years and older reported having a mammogram in the past 2 years, compared to the HP 2010 target of 70%. (HP 2010 target based on women age 40 years and older.)
- **Ever having a Pap test:** 98% of Maryland women age 40 years and older reported ever having a Pap test, compared to the HP 2010 target of 97%. (HP 2010 target based on women age 18 years and older.)
- **Oral cancer screening in the past year:** 40% of Marylanders age 40 years and older reported having had an oral cancer screening in the past year, compared to the HP 2010 target of 20%. (HP 2010 target based on adults age 40 years and older.)
- **Physical Activity:** 57% of Marylanders age 40 years and older reported engaging in regular physical activity – either 20 minutes of vigorous activity 3 or more days per week or 30 minutes of moderate activity 5 or more days a week, compared to a target of 50%.

Almost half (45%) of Marylanders reported engaging in regular vigorous physical activity, exceeding the HP 2010 target of 30%. (HP 2010 targets based on adults age 18 years and older.)

Marylanders **approach** the HP 2010 targets for the following cancer screening tests and cancer risk factors:

- **Fecal Occult Blood Test (FOBT) in the past 2 years:** 28% of Marylanders age 50 years and older reported having a recent FOBT, compared to the HP 2010 target of 33%. (HP 2010 target based on adults age 50 years and older.)
- **Pap test in the past 3 years:** 88% of Maryland women age 40 years and older (with an intact uterus) said they had a Pap test in the past 3 years, compared to the target of 90%. (HP target based on women age 18 years and older.)
- **Current smoking:** 15% of Marylanders age 40 years and older reported current cigarette use, compared to the target of 12%. (HP 2010 target based on adults age 18 years and older.)

Marylanders **do not** meet the 2010 targets for the following measures:

- **Health insurance coverage:** 94% of Marylanders age 40 years and older reported having health insurance, compared to the HP 2010 target of 100%. (HP 2010 target based on adults under the age of 65 years.)
- **Fruit and vegetable consumption:** Only 29% of Marylanders age 40 years and older reported eating the recommended 3 or more servings of vegetables per day, compared to the target of 50%; only 64% reported eating 2 or more daily servings of fruit, compared to the target of 75%. (HP 2010 targets based on persons age 2 years and older.)
- **Body mass index (BMI):** Only 30% of Marylanders age 40 years and older were in the healthy weight category compared to the HP 2010 target of 60%. Among Marylanders age 40 years and older, 29% are considered obese (based on self-reported height and weight), almost double the HP 2010 target of 15%. (HP 2010 targets based on adults age 20 years and older.)
- **Attempted smoking cessation in the past year:** About half (51%) of all current smokers in Maryland reported they had at least one smoking cessation attempt during the past year, below the HP 2010 target of 75%. (HP 2010 target based on adults age 18 years and older.)

Additional Comparisons

There are no HP 2010 objectives related to routine prostate cancer screening for men. However, the prevalence of prostate cancer screening among age-eligible Maryland men (African American men age 45 years and older and all other men age 50 years and older) surveyed in the MCS 2008 compared favorably with national averages for prostate-specific antigen (PSA) testing and digital rectal exam (DRE). Based on results of the MCS 2008, 56% of Maryland men had a PSA within the past year and 55% had a DRE in the past year. Nationally,

54% of men age 50 years and older had a PSA in the past year and 50% had a DRE in the past year (based on 2006 data).¹

Racial differences in prevalence were found for several types of cancer screening. Among Marylanders of an appropriate age for screening, Whites were statistically significantly more likely than African Americans to report having:

- Ever had colonoscopy or sigmoidoscopy (76% vs. 70%)
- Ever performed a home FOBT (55% vs. 47%)
- Ever had a prostate-specific antigen (PSA) test (79% vs. 63%)
- Had a PSA test in the past year (60% vs. 44%)
- Ever had a digital rectal examination (DRE) (91% vs. 84%)
- Ever had oral cancer screening (58% vs. 33%)
- Had an oral cancer exam in the past year (47% vs. 23%)

Cancer screenings among Marylanders generally increased with:

- increasing age
- higher education level
- higher income level
- having health insurance
- having a primary health care provider
- having had a physical exam in the past year

Receiving a recommendation from a health care provider for cancer screening is a very important factor in whether a cancer screening test is done. When a health care provider was reported to have recommended sigmoidoscopy or colonoscopy, or a mammogram or Pap test (women), or discussed prostate cancer screening (men), the prevalence rates of these screening tests were much higher than when no such recommendation or discussion was reported. For these and most other cancer screening tests examined in the MCS 2008, the lack of a doctor's recommendation was often a prominent reason cited by respondents for not having the test.

Comparison between MCS 2002, 2004, 2006, and 2008

- Overall, it appears that a smaller proportion of Marylanders are reporting having CRC screening by FOBT and sigmoidoscopy, while the proportion reporting having colonoscopy is increasing.
 - While the percentage of Marylanders age 50 years and older who reported ever performing an FOBT has remained fairly steady, the proportion who reported having the test in the past 2 years continues to decline (44% in MCS 2002, 36% in 2004, 32% in 2006, and 28% in 2008).

¹ American Cancer Society. Cancer Prevention and Early Detection Facts & Figures 2008. Atlanta, GA; 2007. Available at http://www.cancer.org/downloads/STT/CPED_2008.pdf. Last accessed July 28, 2009.

- An increasing percentage of people age 50 years and older are reporting to have ever had a sigmoidoscopy or colonoscopy (58% in 2002, 63% in 2004, 69% in 2006, and 75% in 2008).
- As a result of the increases in prevalence of colonoscopy, the proportion of people age 50 years and older never tested for CRC has dropped from 26% in 2002 to 18% in 2008.
- The prevalence of up-to-date colonoscopy (colonoscopy within the past 10 years) has increased from 41% in 2002 to 66% in 2008 among Marylanders age 50 years and older.
- Screening prevalence for prostate cancer (PSA or DRE), breast cancer (mammography), and cervical cancer (Pap test) did not change significantly between the 2002 and 2008 surveys.
- A significant increase occurred in the prevalence of ever having oral cancer screening among persons age 40 years and older, rising from 43% in both 2002 and 2004 to 50% in 2008. The percent of Marylanders reporting to have had an oral cancer exam in the past year has also increased steadily over time, to a high of 40% in 2008.
- The prevalence of being overweight in the Maryland population age 40 years and older increased from 35% in 2002 to 41% in 2008; the prevalence of obesity increased from 25% to 29% over the same time period.
- The prevalence of current cigarette smoking among Maryland adults age 40 years and older has declined from 18% in 2002 to 15% in 2008.

Strengths and Limitations of the MCS 2008

Strengths of the MCS include:

- The MCS is a population-based sample, weighted to the Maryland population using methods similar to the national Behavioral Risk Factor Surveillance System.
- The MCS has a large sample size, with a focus on Marylanders age 40 years and older.

Limitations of the MCS include:

- The MCS is a telephone survey using only land-line numbers; it does not include cellular telephones.
- Only persons who lived in residences were included in the survey; the institutionalized population was not included in the survey.
- The survey was administered in English. However, less than 0.5% of the telephone sample was excluded because of a language barrier.

Chapter 1. Introduction

This document contains the results of the fourth Maryland Cancer Survey (MCS), conducted in 2008. The Surveillance and Evaluation Unit of the Center for Cancer Surveillance and Control (CCSC), Maryland Department of Health and Mental Hygiene (DHMH), commissioned the MCS as part of an ongoing surveillance project to provide information on cancer screening rates, knowledge of cancer and cancer screening, and lifestyle factors related to cancer risk behaviors among Maryland residents age 40 years and older. The Department of Epidemiology and Preventive Medicine at the University of Maryland, Baltimore (UMB), School of Medicine, conducted the survey under contract to DHMH. In addition to overall cancer screening prevalence, the MCS reports the percentage of respondents up-to-date with certain screening tests. These estimates are based on screening intervals recommended by the American Cancer Society, where available. Prevalence of ever having a particular type of cancer screening and of up-to-date screening are compared to results obtained in the MCS 2002, MCS 2004, and MCS 2006¹; national targets established in Healthy People 2010 (HP 2010)²; and other national estimates or baselines (e.g., the National Health Interview Survey or the Behavioral Risk Factor Surveillance System).

In 2000, the Maryland State Legislature established the Cigarette Restitution Fund (CRF) with monies received from the tobacco settlement, which in turn led to the establishment of the Cancer Prevention, Education, Screening, and Treatment (CPEST) Program. Under this program, the Surveillance and Evaluation Unit is charged with collecting, analyzing, and monitoring data related to the seven cancers (lung, colorectal, breast, prostate, oral, melanoma of the skin, and cervical) targeted by DHMH and with measuring and evaluating the results of cancer prevention and education in Maryland. The MCS helps to meet this need by providing information on the prevalence of factors associated with primary and secondary prevention of cancer.

The State of Maryland has made great headway in its fight against cancer, dropping from third highest cancer mortality rate in the nation for the time period 1986-1990 to 20th for the period 2002-2006.³ Even with these improvements, over 26,000 cases of cancer (excluding non-melanoma skin cancer) were reported in 2003 and cancer remains the second leading cause of death, accounting for 23% of all deaths in Maryland.⁴

Gaining knowledge about the factors that are associated with cancer screening and cancer risk behaviors will allow policies to be developed and programs to be implemented that promote cancer prevention and screening among populations currently at risk. With a greater emphasis on cancer prevention and screening, the age-adjusted cancer mortality rates are anticipated to decline in Maryland.

¹ Maryland Department of Health and Mental Hygiene. Maryland Cancer Survey Reports. Baltimore, MD. Available at http://www.fha.state.md.us/cancer/surv_data-reports.cfm. Last accessed July 27, 2009.

² U.S. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Washington, DC; November 2000. Available at <http://www.healthypeople.gov>. Last accessed July 27, 2009.

³ Horner MJ et al. (eds). *SEER Cancer Statistics Review, 1975-2006*, National Cancer Institute. Bethesda, MD. Available at http://seer.cancer.gov/csr/1975_2006/sections.html. Last accessed July 27, 2009.

⁴ Maryland Department of Health and Mental Hygiene. Cigarette Restitution Fund Program Cancer Report 2008. Baltimore, MD; September 2008. Available at http://www.fha.state.md.us/pdf/cancer/2008-CRF_Can_Rpt.pdf. Last accessed July 27, 2009.

Chapter 2. Methods for Survey Design, Data Collection, and Analysis

Sample Design

The MCS 2008 was conducted as a population-based, random-digit-dial (RDD) computer-assisted telephone interview (CATI) using list-assisted disproportionate stratified sampling. This method is similar to the Behavioral Risk Factor Surveillance System (BRFSS) survey conducted annually in each state and funded by the Centers for Disease Control and Prevention (CDC).¹ The MCS respondents were limited to persons age 40 years and older residing in private households in the state of Maryland. People not eligible for the survey included those who were less than 40 years of age, those who were unable to communicate because of a physical or mental impairment, those who could not respond in English, and those living in group homes or institutions.

Maryland was divided into two geographic strata: urban (consisting of Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and Prince George's counties) and rural (consisting of the remaining 16 counties in Western and Southern Maryland and the Eastern Shore of Maryland). Genesys - Market Systems Group (MSG) provided a pool of over 97,000 random telephone numbers. The rural area was oversampled, making up 40% of the telephone number pool, whereas the rural population represents only 21.8% of the Maryland population.

Each geographic stratum has two types of telephone number "blocks": "listed one-plus" and "not listed one-plus" blocks. Each one-plus block contains 100 consecutive phone numbers, at least one of which is known to be a residential phone number. The "listed one-plus" blocks contain all the listed telephone numbers from the one-plus block of numbers and is known as the high-density stratum. The "not listed one-plus" blocks are the remaining one-plus numbers after the listed numbers are removed and constitute the medium-density block. "Not listed one-plus" phone numbers were sampled at two-thirds the rate of the listed one-plus telephone numbers.

MCS 2008 Questionnaire

The MCS 2008 questionnaire was based on the MCS 2002, 2004, and 2006 questionnaires, with validated questions from national and state surveys such as the BRFSS, the National Health Interview Survey (NHIS), the National Health and Nutrition Examination Survey (NHANES) and the DHMH Oral Health Survey, as well as some questions newly developed for the MCS. Using these questionnaires as the basis for the 2008 survey, staff from DHMH and the UMB revised, added, and deleted some questions. While the majority of questions remained the same to allow comparison between the previous surveys and the MCS 2008, we based the decisions to modify some questions on the results of the previous analyses and changes in focused subject matter areas. Institutional Review Board (IRB) approval was received from the UMB School of Medicine IRB and from the DHMH IRB. The MCS 2008 questionnaire is included at the end of this report.

¹ Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System, User Guide, Version 3.0. Atlanta, GA; 2005. Available at <http://www.cdc.gov/brfss/pdf/userguide.pdf>. Last accessed July 27, 2009.

Data Collection

As in previous years, the MCS 2008 was conducted by REDA International, Inc., a survey and research firm located in Wheaton, Maryland, using CATI technology. To reach a final disposition for each telephone number, 15 calling attempts were made on various days of the week and at different times of the day. If someone answered the telephone, the number was confirmed to be a residential phone number. (Cell phones and non-residential numbers were ineligible.) If REDA determined that there was at least one person age 40 years or older living in the household, he or she was invited to participate in the survey. If two or more age-eligible persons lived there, one was randomly selected to be interviewed. An anonymous questionnaire was administered, lasting an average of 20 minutes. Interviewers asked questions about demographics, cancer screening behaviors, health risk factors, and access to health care.

Ninety-seven thousand one hundred forty (97,140) telephone numbers were screened or called. Of these, 5.2% (5,041 phone numbers) resulted in completed interviews; 39.5% were non-working numbers; 13.4% were phone numbers of a business or institution; 8.1% were telephone answering machines; 3.5% were cellular phone numbers; and 3.2% were a dedicated fax/modem. Approximately 0.5% of the numbers were ineligible due to a language barrier. The remaining phone numbers were ineligible for a variety of reasons (e.g., no eligible respondent, no answer, hang up/termination of call). The Council of American Survey Research Organizations (CASRO) response rate, defined as Completed Interviews/Known Eligible + Presumed Eligible), was 40%. The completion rate, defined as Completed Interviews/Known Eligible, was 70.8%.

Data Analysis

A final weight was assigned to each respondent according to the BRFSS weighting protocol.² Respondents who refused to report race (n=37) were omitted from the analysis, since race (in addition to age and gender) was required for weighting. The final analytic sample consisted of 5,004 persons. For 49 respondents who did not report their age, we imputed an age based on the mean age of other respondents in the same geographic stratum who had the same race and gender. Pre-stratification weighting was based on the sampling probability by geographic region (urban vs. rural), residential telephone sampling among the two density strata of phone numbers (“listed one-plus” and “not listed one-plus”), the number of adults age 40 years and older in the respondent’s household, and the inverse of the number of residential telephone numbers in each household. Post-stratification weighting was calculated as the number of adults age 40 years and older in an age-race-gender category in the population of the urban or rural region divided by the sum of the pre-stratification weights for the respondents in that same age-race-gender category. Respondents were asked to report their race as one of the following: White; Black or African American; Asian; Native Hawaiian or Other Pacific Islander; American Indian or Alaska Native; or Other. Because of small numbers of respondents in some race groups, people who reported their race as something different from White or Black/African American were grouped together as people of Other Races. The age strata consisted of

² Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. Technical Information and Data. BRFSS Weighting Formula. Atlanta, GA. Available at http://www.cdc.gov/brfss/technical_infodata/weighting.htm. Last accessed July 27, 2009.

5-year age groups (e.g., 40-44, 45-49, etc.) ranging from 40 through 69 years of age. Persons age 70 years and older were combined into one age stratum because of small sample size in the older age-race-gender strata. A final weight was calculated based on the pre- and post-stratification weights. We did not age adjust the data to the 2000 United States standard population.

For all demographic variables except income, there was a small number of responses of “don’t know/not sure” and “refused”; these responses were set to “missing” and do not contribute to the tabulated frequencies. An exception is for reported annual household income, where the categories of “don’t know/not sure” and “refused” are included in the tabulations. For purposes of the tabular analyses, groupings were made for the following categorical variables. Marital status was grouped into four categories: married or a partner in an unmarried couple; divorced or separated; widowed; and never married. Education levels were combined into five categories: less than high school; high school graduate or General Equivalency Diploma (GED); some college (1-3 years); college graduate; and advanced degree. Employment was grouped into four categories: employed for wages; self-employed; retired; and “other” employment status. (Unemployed persons, homemakers, students, and those unable to work were all combined in the “other” category.) Reported annual household income categories were grouped into five categories: <\$25,000; \$25,000-<\$35,000; \$35,000-<\$50,000; \$50,000-<\$75,000; and \$75,000 or greater. Results in the tables are based on the number of respondents that answered a question.

Respondents were asked whether they had ever received various tests for cancer screening. The results in this report are based on responses that the test was performed, whether or not it was specifically done for cancer screening. For instance, an asymptomatic woman can have a mammogram for screening, or a symptomatic woman can have a diagnostic mammogram because she feels a lump in her breast. In both cases, the answer to the question “have you ever had a mammogram?” is “yes” and both answers would be reported in the same manner. The time period since the last screening event was asked for each screening test so we could determine whether respondents were up-to-date with screening recommendations. If the respondent did not report the length of time since the last screening or refused to answer, that respondent was considered to be not up-to-date with screening.

“Current smokers” were defined as those who smoked at least 100 cigarettes or more in their entire life and, at the time of the survey, smoked every day or some days. “Former smokers” were those who smoked at least 100 cigarettes in their life but were not smoking cigarettes at the time of the survey. “Non-smokers” were those who smoked less than 100 cigarettes in their life or who had never smoked. Alcohol consumption was categorized according to use in the last 30 days: no alcohol use (in the last 30 days); low-risk drinking; and high-risk drinking. Binge drinking is defined as five or more drinks on the same occasion at least one day in the past 30 days.³ For women, low-risk drinking was defined as having no more than seven drinks a week and not engaging in binge drinking. Low-risk drinking for men was defined as having no more than 14 drinks a week and not engaging in binge drinking. High-risk

³ U.S. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Vol. II. Substance Abuse. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/document/HTML/Volume2/26Substance.htm>. Last accessed July 27, 2009.

drinking was defined as engaging in binge drinking or consuming more than 14 drinks a week for men and more than seven drinks a week for women. Daily fruit and vegetable intake was calculated by summing the responses from questions about daily or weekly consumption of fruits, fruit juice, leafy salad greens, and vegetables.

The following table describes the specific segment of the sample for which questions on the different survey topics were analyzed.

Table 2-1. Target Populations, by Maryland Cancer Survey 2008 Topic

Survey topic/question	Men	Women	Age category
Oral cancer screening	✓	✓	40 years and older
Breast cancer screening		✓	40 years and older
Cervical cancer screening		✓ (only women who did not report having a hysterectomy)	40 years and older
Colorectal cancer (CRC) screening	✓	✓	50 years and older
Knowledge of CRC screening	✓	✓	40 years and older
Prostate cancer screening	✓		<ul style="list-style-type: none"> • Black or African American men age 45 years and older • All other men age 50 years and older
Discussed prostate screening with health professional	✓		40 years and older

Statistical analyses (population-based numbers and percentages) were performed with weighted data using SAS Version 9.1. Unless otherwise stated, results in the tables of the report have the following values:

- “N” is the number of people in the sample who responded to a survey question;
- “n” represents the number of persons in the survey answering “yes” to that question or the number of people who had that characteristic;
- “wt %” (weighted percent) is the percent of the Maryland population based on the weighted sample who answered “yes” to the question or had that characteristic; and
- “95% CI” is the 95% confidence interval around the weighted percent.

All percentages are based on the number of respondents answering the question, and exclude missing, “don’t know/not sure,” and “refused” answers (except for income and time since last screening episode, as previously described). No results are suppressed in this report because of the small number of respondents in some sub-groups. Prevalence estimates derived from samples with less than 50 observations are included in the tables, but may be unreliable due to

small numbers. Caution should be exercised when making comparisons based on a small number of respondents.

In the tables, the heading “Stat Sig” stands for statistical significance. Statistical significance for the differences in a question (such as a screening test) by a selected characteristic (such as education) is explained by the symbol appearing in the “Stat Sig” column opposite the specific survey question. The symbol “***” in this column shows that there is a statistically significant difference with a p-value ≤ 0.05 for the selected characteristic. The symbol “*” indicates a marginally significant difference with a p-value >0.05 and ≤ 0.1 . The symbol “^” shows that the differences were not statistically significant (i.e., p-value > 0.1). If a statistically significant difference is present by a given characteristic and there are more than two levels of that characteristic (for instance, the five levels of education), a statistically significant difference is present between at least two levels of that characteristic, but not necessarily between every pairwise comparison among the levels. When reviewing the tables, it is important to remember that, while a difference may be statistically significant, the clinical or practical importance of the difference may not be significant.

Throughout the report, comparisons are made between MCS results and national targets established in Healthy People (HP) 2010 and to other national estimates or baselines (e.g., the NHIS or the BRFSS). Comparisons to HP 2010 have been revised, where necessary, to reflect changes found in the HP 2010 midcourse review (December 2006).⁴ These HP 2010 targets are included in this report as a basis for general comparison with the MCS results, which reflect Maryland adults age 40 years and older. Table 2-2 presents the HP 2010 objectives and quantitative targets cited in this report, and the relevant chapters of the MCS 2008 where they are discussed.

⁴ U.S. Department of Health and Human Services. Healthy People 2010 Midcourse Review. Washington, DC; 2006. Available at <http://www.healthypeople.gov/data/midcourse/default.htm#pubs>. Last accessed July 27, 2009.

Table 2-2. Healthy People 2010 Goals for Cancer Screening and Cancer Risk Behaviors, and Relevant Chapters of the Maryland Cancer Survey, 2008

Healthy People 2010			Relevant chapter(s) in MCS 2008 Report
Focus Area	Objective	Quantitative Target	
Colorectal Cancer (CRC) Screening	Increase the proportion of adults age 50 years and older who have received a fecal occult blood test (FOBT) within the preceding 2 years.	33%	Chapter 4
	Increase the proportion of adults age 50 years and older who have ever received a sigmoidoscopy.	50%	Chapter 4
Breast Cancer Screening	Increase the proportion of women age 40 years and older who have received a mammogram within the preceding 2 years.	70%	Chapter 6 (Section 6.1)
Cervical Cancer Screening	Increase the proportion of women age 18 years and older who have ever received a Pap test.	97%	Chapter 6 (Section 6.2)
	Increase the proportion of women age 18 years and older who received a Pap test within the preceding 3 years.	90%	Chapter 6 (Section 6.2)
Oral Health	Increase the proportion of adults age 40 years and older who, in the past 12 months, report having had an examination to detect oral and pharyngeal cancers.	20%	Chapter 7
	Increase the proportion of children and adults (age 2 years and older) who use the oral health care system each year.	56%	Chapter 7
Tobacco Use	Reduce cigarette smoking by adults age 18 years and older.	12%	Chapter 9 (Section 9.1)
	Increase smoking cessation attempts by adults age 18 years and older.	75%	Chapter 9 (Section 9.1)
Substance Abuse (Alcohol consumption)	Reduce the proportion of adults age 18 years and older engaging in binge drinking during the past month.	13.4%	Chapter 9 (Section 9.2)
	Reduce the proportion of adults age 21 years and older exceeding guidelines for low-risk drinking.	50%	Chapter 9 (Section 9.2)

Table 2-2. Healthy People 2010 Goals for Cancer Screening and Cancer Risk Behaviors, and Relevant Chapters of the Maryland Cancer Survey, 2008 (continued)

Healthy People 2010			Relevant chapter(s) in MCS 2008 Report
Focus Area	Objective	Quantitative Target	
Access to Quality Health Services	Increase the proportion of persons under age 65 years with health insurance.	100%	Chapter 8
	Increase the proportion of adult smokers age 18 years and older who have been counseled by a physician in the past year about smoking cessation.	72%	Chapter 9 (Section 9.1)
	Increase the proportion of persons age 18 years and older who have been counseled by a physician in the past year about physical activity or exercise.	54%	Chapter 10 (Section 10.3)
Nutrition and Overweight	Increase the proportion of adults age 20 years and older who are at a healthy weight.	60%	Chapter 10 (Section 10.1)
	Reduce the proportion of adults age 20 years and older who are obese.	15%	Chapter 10 (Section 10.1)
	Increase the proportion of persons age 2 years and older who consume at least two daily servings of fruit.	75%	Chapter 10 (Section 10.2)
	Increase the proportion of persons age 2 years and older who consume at least three daily servings of vegetables.	50%	Chapter 10 (Section 10.2)
	Increase the proportion of persons age 2 years and older who consume less than 10% of calories from saturated fats.	75%	Chapter 10 (Section 10.2)
Physical Activity and Fitness	Increase the proportion of adults age 18 years and older who engage in moderate physical activity for at least 30 minutes per day 5 or more days per week, or vigorous physical activity for at least 20 minutes per day 3 or more days per week.	50%	Chapter 10 (Section 10.3)
	Increase the proportion of adults age 18 years and older who engage in vigorous physical activity for at least 20 minutes per day 3 or more days per week.	30%	Chapter 10 (Section 10.3)

Chapter 3. The Survey Sample

A total of 5,041 people were interviewed for the survey. The records for 37 people who refused to give their race were omitted from the dataset for analysis, leaving 5,004 respondents in the analytic dataset. We weighted the sample to match the Maryland population by age, race, gender, and area of residence (urban vs. rural). Table 3-1 shows the sample and weighted percentages for the respondents in the MCS 2008 by area of residence; 59.7% of the survey respondents lived in urban areas of Maryland and 40.3% lived in rural areas. Urban respondents were weighted to 78.2% of the Maryland population and rural respondents were weighted to 21.8%.

Table 3-1. Sample percentage and weighted percentage of the urban and rural strata for the Maryland Cancer Survey, 2008.

	Sample N	Sample %	Weighted %
Total	5,004	100.0%	100.0%
Urban	2,985	59.7%	78.2%
Rural	2,019	40.3%	21.8%

Table 3-2 shows the demographics of the sample and the demographics after being weighted to the Maryland population. The term “African American” is used in the report to represent people who called their race African American or Black. In the analysis, “Other” race refers to people who called their race something different from White or African American, and includes Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and any other responses to the race question. Whites comprised 76.9% of the sample, Blacks or African Americans made up 19.9%, and other races comprised 3.2% of the sample (Asians comprised 1.2%, Native Hawaiians or Other Pacific Islanders made up 0.2%, American Indians or Alaska Natives made up 0.6%, and other responses comprised 1.2% of the sample). Whites are weighted to 68.8%, African Americans are weighted to 26.1%, and people of other races are weighted to 5.1%, reflecting the percents by race of the Maryland population age 40 years and older. Women made up 66.7% of the sample and are weighted to 53.8%, the percent of women age 40 years and older in the Maryland population.

Charts 3-1 and 3-2 compare the race/gender groups and the age of the survey respondents to the Maryland population, which equals their final weighted percents. White women made up 50.5% of the sample, whereas they account for 36.3% of the Maryland population (Chart 3-1). African American men made up 5.7% of the sample and are weighted to match 11.4% of the population. People age 65 years and older made up 37.3% of the sample, and are weighted to 25.5% of the population (Chart 3-2).

The number of people who were surveyed in each jurisdiction, by gender and race, based on self-report of their jurisdiction of residence, is shown in Table 3-3.

**TABLE 3-2. DEMOGRAPHICS OF THE SURVEY SAMPLE, AGE 40 YEARS AND OLDER, WEIGHTED TO THE MARYLAND POPULATION,
AGE 40 YEARS AND OLDER**

Selected Characteristic	TOTAL				URBAN				RURAL			
	Sample N	Sample %	wt %	95% CI	Sample N	Sample %	wt %	95% CI	Sample N	Sample %	wt %	95% CI
Gender												
Male	1666	33.3%	46.2%		990	33.2%	45.9%	43.6-48.1%	676	33.5%	47.5%	44.8-50.2%
Female	3338	66.7%	53.8%		1995	66.8%	54.1%	51.9-56.3%	1343	66.5%	52.5%	49.8-55.2%
Age												
40-49 years	1111	22.2%	34.7%		666	22.3%	34.8%	32.6-37.1%	445	22.0%	34.3%	31.5-37.1%
50-64 years	2029	40.5%	39.8%		1237	41.4%	40.3%	38.2-42.4%	792	39.2%	38.1%	35.5-40.6%
65 -74 years	1010	20.2%	14.0%		576	19.3%	13.6%	12.4-14.9%	434	21.5%	15.3%	13.7-16.8%
75 years and older	854	17.1%	11.5%		506	17.0%	11.3%	10.2-12.4%	348	17.2%	12.4%	10.9-13.8%
Race												
White	3848	76.9%	68.8%		2069	69.3%	64.1%	61.9-66.3%	1779	88.1%	85.6%	83.4-87.7%
African American or Black	997	19.9%	26.1%		799	26.8%	29.9%	27.8-32.0%	198	9.8%	12.8%	10.7-14.8%
Asian	60	1.2%	2.4%		51	1.7%	2.9%	2.0-3.8%	9	0.4%	0.4%	0.1-0.7%
Native Hawaiian/Other Pacific Islander	8	0.2%	0.2%		5	0.2%	0.3%	0.0-0.5%	3	0.1%	0.1%	0.0-0.2%
American Indian/Alaska Native	29	0.6%	0.8%		20	0.7%	0.9%	0.4-1.4%	9	0.4%	0.4%	0.1-0.7%
Other	62	1.2%	1.7%		41	1.4%	1.9%	1.2-2.7%	21	1.0%	0.8%	0.4-1.2%
Gender and Race												
White male	1322	26.4%	32.5%		723	24.2%	30.2%	28.1-32.3%	599	29.7%	40.8%	38.1-43.5%
African American male	284	5.7%	11.4%		226	7.6%	12.9%	11.1-14.6%	58	2.9%	6.0%	4.2-7.8%
Other male	60	1.2%	2.3%		41	1.4%	2.8%	1.9-3.8%	19	0.9%	0.7%	0.3-1.0%
White female	2526	50.5%	36.3%		1346	45.1%	33.9%	32.0-35.8%	1180	58.4%	44.7%	42.2-47.3%
African American female	713	14.2%	14.8%		573	19.2%	17.0%	15.5-18.6%	140	6.9%	6.7%	5.5-8.0%
Other female	99	2.0%	2.7%		76	2.5%	3.2%	2.4-4.1%	23	1.1%	1.0%	0.5-1.5%
Hispanic Ethnicity												
Yes	85	1.7%	2.4%	1.7-3.0%	53	1.8%	2.5%	1.6-3.3%	32	1.6%	2.0%	1.2-2.8%
No	4914	98.3%	97.6%	97.0-98.3%	2929	98.2%	97.5%	96.7-98.4%	1985	98.4%	98.0%	97.2-98.8%
Marital Status												
Married	2756	55.3%	65.6%	64.0-67.3%	1555	52.4%	64.1%	62.1-66.2%	1201	59.7%	70.8%	68.5-73.2%
Divorced	719	14.4%	11.0%	9.9-12.0%	454	15.3%	11.3%	10.0-12.6%	265	13.2%	9.7%	8.3-11.1%
Widowed	902	18.1%	10.2%	9.4-11.0%	536	18.0%	10.3%	9.3-11.3%	366	18.2%	9.8%	8.6-11.1%
Separated	127	2.5%	2.6%	2.0-3.2%	89	3.0%	2.8%	2.1-3.5%	38	1.9%	1.9%	1.1-2.7%
Never married	420	8.4%	9.3%	8.2-10.3%	302	10.2%	10.2%	8.8-11.5%	118	5.9%	6.0%	4.6-7.5%
Partner of unmarried couple	57	1.1%	1.4%	0.9-1.8%	34	1.1%	1.3%	0.7-1.8%	23	1.1%	1.7%	0.9-2.4%

Sample N - respondents in the sample with that characteristic

Sample % - percent in the sample with that characteristic

Maryland Cancer Survey, 2008

TABLE 3-2. DEMOGRAPHICS OF THE SURVEY SAMPLE, AGE 40 YEARS AND OLDER, WEIGHTED TO THE MARYLAND POPULATION, AGE 40 YEARS AND OLDER

Selected Characteristic	TOTAL				URBAN				RURAL			
	Sample N	Sample %	wt %	95% CI	Sample N	Sample %	wt %	95% CI	Sample N	Sample %	wt %	95% CI
Education												
Kindergarten or less	1	0.0%	0.1%	0-0.3%	1	0.0%	0.1%	0.0-0.4%	0	0.0%	0.0%	0.0%
Grades 1-8	90	1.8%	1.5%	1.1-1.9%	45	1.5%	1.3%	0.8-1.7%	45	2.2%	2.2%	1.5-3.0%
Grades 9-11	281	5.6%	5.0%	4.2-5.7%	154	5.2%	4.7%	3.8-5.6%	127	6.3%	5.9%	4.7-7.2%
High school grad or GED	1375	27.6%	24.9%	23.3-26.4%	669	22.5%	22.4%	20.5-24.2%	706	35.1%	33.8%	31.3-36.3%
College 1-3 years	1148	23.0%	22.2%	20.7-23.7%	658	22.1%	21.7%	19.9-23.5%	490	24.4%	24.0%	21.8-26.3%
College grad	1189	23.8%	25.9%	24.4-27.5%	803	27.0%	27.4%	25.4-29.3%	386	19.2%	20.9%	18.6-23.1%
Master's degree	630	12.6%	14.1%	12.8-15.4%	441	14.8%	15.3%	13.7-16.9%	189	9.4%	9.9%	8.3-11.5%
Doctoral or advanced professional degree	274	5.5%	6.3%	5.4-7.2%	205	6.9%	7.2%	6.1-8.3%	69	3.4%	3.2%	2.4-4.1%
Employment Status												
Employed for Wages	1972	39.6%	48.5%	46.7-50.3%	1239	41.7%	49.7%	47.6-51.9%	733	36.4%	44.0%	41.3-46.7%
Self Employed	361	7.2%	7.9%	6.9-8.9%	207	7.0%	7.8%	6.6-9.0%	154	7.6%	8.1%	6.7-9.6%
Unemployed > 1 year	104	2.1%	2.4%	1.8-3.0%	69	2.3%	2.5%	1.8-3.2%	35	1.7%	2.1%	1.2-2.9%
Unemployed < 1 year	73	1.5%	2.0%	1.3-2.6%	46	1.5%	2.1%	1.3-2.9%	27	1.3%	1.5%	0.8-2.1%
Homemaker	272	5.5%	5.0%	4.2-5.7%	145	4.9%	4.7%	3.8-5.5%	127	6.3%	6.1%	4.9-7.2%
Student	6	0.1%	0.2%	0.0-0.4%	5	0.2%	0.2%	0.0-0.5%	1	0.0%	0.0%	0.0-0.1%
Retired	1937	38.9%	28.2%	26.8-29.6%	1121	37.7%	27.5%	25.7-29.2%	816	40.5%	30.9%	28.7-33.2%
Unable to work	260	5.2%	5.9%	4.9-6.8%	139	4.7%	5.4%	4.4-6.5%	121	6.0%	7.4%	5.7-9.1%
Household Income												
Less than \$10,000	111	2.2%	2.0%	1.5-2.4%	59	2.0%	1.9%	1.4-2.5%	52	2.6%	2.0%	1.3-2.8%
\$10,000-<\$15,000	168	3.4%	2.5%	2.0-3.0%	78	2.6%	2.2%	1.6-2.9%	90	4.5%	3.4%	2.3-4.5%
\$15,000-<\$20,000	235	4.7%	3.9%	3.2-4.6%	133	4.5%	3.9%	3.0-4.8%	102	5.1%	4.0%	3.1-4.9%
\$20,000-<\$25,000	342	6.8%	5.4%	4.7-6.1%	176	5.9%	5.0%	4.2-5.9%	166	8.2%	6.6%	5.4-7.8%
\$25,000-<\$35,000	437	8.7%	7.2%	6.3-8.1%	239	8.0%	6.8%	5.8-7.9%	198	9.8%	8.5%	7.1-9.9%
\$35,000-<\$50,000	550	11.0%	9.5%	8.6-10.5%	289	9.7%	8.7%	7.6-9.9%	261	12.9%	12.5%	10.8-14.3%
\$50,000-<\$75,000	638	12.7%	13.5%	12.2-14.7%	382	12.8%	13.3%	11.8-14.8%	256	12.7%	14.1%	12.2-15.9%
\$75,000 or greater	1583	31.6%	39.5%	37.7-41.3%	1048	35.1%	41.3%	39.2-43.5%	535	26.5%	33.1%	30.5-35.7%
Don't know/not sure	263	5.3%	4.5%	3.8-5.2%	157	5.3%	4.5%	3.7-5.4%	106	5.3%	4.6%	3.6-5.6%
Refused	677	13.5%	12.0%	10.9-13.1%	424	14.2%	12.2%	10.9-13.5%	253	12.5%	11.1%	9.5-12.7%

The "wt %" for gender, age, race, and gender/race is equal to the actual population percent because the sample was weighted to match the Maryland population by these characteristics

Sample N - respondents in the sample with that characteristic

Sample % - percent in the sample with that characteristic

Maryland Cancer Survey, 2008

Chart 3-1. Comparison of the 2008 survey sample to Maryland's population by race and gender

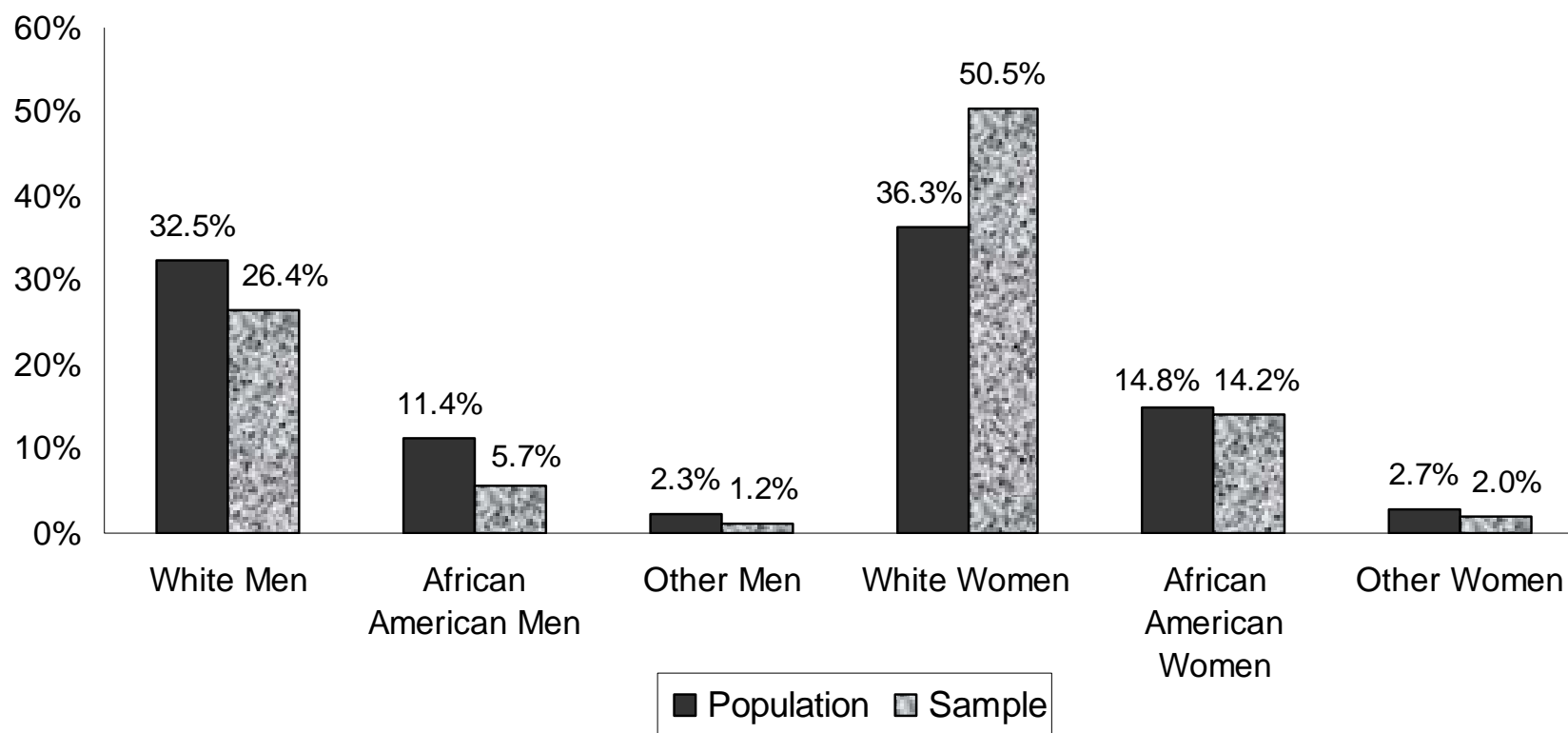


Chart 3-2. Comparison of the 2008 survey sample to Maryland's population by age

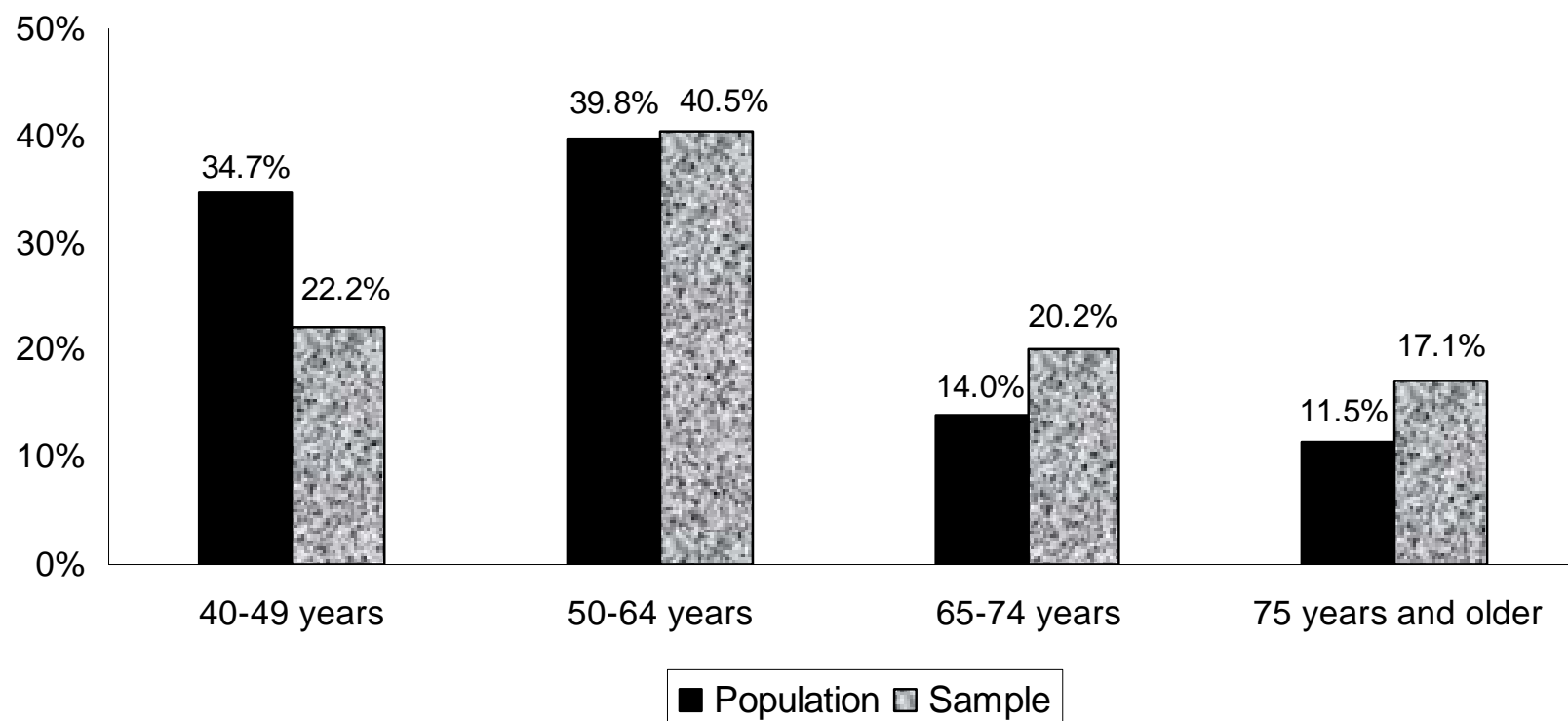


TABLE 3-3. TOTAL NUMBER AND PERCENT OF PEOPLE INTERVIEWED IN EACH JURISDICTION, BY GENDER AND RACE

	Males		Females		Whites		African Americans/ Blacks		Other Race		Total	
Jurisdiction	n	%	n	%	n	%	n	%	n	%	n	% of sample
Allegany	54	34.8%	101	65.2%	153	98.7%	1	0.7%	1	0.7%	155	3.1%
Anne Arundel	113	35.1%	209	64.9%	281	87.3%	27	8.4%	14	4.4%	322	6.4%
Baltimore City	98	28.9%	241	71.1%	118	34.8%	210	62.0%	11	3.2%	339	6.8%
Baltimore	187	30.7%	423	69.3%	478	78.4%	119	19.5%	13	2.1%	610	12.2%
Calvert	52	35.6%	94	64.4%	123	84.3%	19	13.0%	4	2.7%	146	2.9%
Caroline	16	33.3%	32	66.7%	40	83.3%	6	12.5%	2	4.2%	48	1.0%
Carroll	48	38.1%	78	61.9%	123	97.6%	2	1.6%	1	0.8%	126	2.5%
Cecil	58	38.4%	93	61.6%	143	94.7%	5	3.3%	3	2.0%	151	3.0%
Charles	49	29.7%	116	70.3%	117	70.9%	41	24.9%	7	4.2%	165	3.3%
Dorchester	19	37.3%	32	62.8%	38	74.5%	13	25.5%	0	0.0%	51	1.0%
Frederick	111	33.6%	219	66.4%	301	91.2%	20	6.1%	9	2.7%	330	6.6%
Garrett	24	31.2%	53	68.8%	75	97.4%	1	1.3%	1	1.3%	77	1.5%
Harford	48	31.4%	105	68.6%	143	93.5%	7	4.6%	3	2.0%	153	3.1%
Howard	70	34.5%	133	65.5%	171	84.2%	16	7.9%	16	7.9%	203	4.1%
Kent	9	25.0%	27	75.0%	28	77.8%	8	22.2%	0	0.0%	36	0.7%
Montgomery	254	36.7%	438	63.3%	567	81.9%	79	11.4%	46	6.7%	692	13.8%
Prince George's	161	31.0%	358	69.0%	175	33.7%	329	63.4%	15	2.9%	519	10.4%
Queen Anne's	26	31.3%	57	68.7%	77	92.8%	4	4.8%	2	2.4%	83	1.7%
St. Mary's	44	30.6%	100	69.4%	130	90.3%	12	8.3%	2	1.4%	144	2.9%
Somerset	20	39.2%	31	60.8%	39	76.5%	11	21.6%	1	2.0%	51	1.0%
Talbot	25	33.8%	49	66.2%	59	79.7%	15	20.3%	0	0.0%	74	1.5%
Washington	77	32.5%	160	67.5%	229	96.6%	4	1.7%	4	1.7%	237	4.7%
Wicomico	39	27.9%	101	72.1%	113	80.7%	26	18.6%	1	0.7%	140	2.8%
Worcester	47	42.0%	65	58.0%	99	88.4%	11	9.8%	2	1.8%	112	2.2%

Jurisdiction was not specified by 40 respondents.

Maryland Cancer Survey, 2008

Chapter 4. Colorectal Cancer Screening

Cancer of the colon and rectum (referred to as colorectal cancer, or CRC) was chosen as one of the seven cancers targeted for intervention by the Cigarette Restitution Fund Program (CRFP) because of its incidence and mortality in Maryland and because CRC is amenable to prevention through screening and early detection. CRC is the third most common cancer (excluding non-melanoma skin cancer) among men in Maryland, behind prostate and lung cancer, and the third most common cancer in women behind female breast and lung cancer. In 2003, there were 2,923 newly diagnosed cases of CRC in Maryland. In that year, CRC was the third leading cause of cancer deaths among both men and women in Maryland, accounting for a total of 1,015 deaths statewide. For the period 1999 – 2003, Maryland had the 13th highest mortality rate for CRC among the 50 states and the District of Columbia.¹

The most commonly used tests for detecting pre-malignant lesions (i.e., benign adenomas) and invasive CRC are the fecal occult blood test (FOBT), the fecal immunochemical test (FIT), sigmoidoscopy, and colonoscopy (sigmoidoscopy and colonoscopy are both “lower gastrointestinal [GI] endoscopies”). More recently, a DNA stool test has been developed which identifies abnormal genes in cancer cells shed in the stool.

Hidden (occult) blood in the stool is often an early warning sign of colorectal disease, including CRC. There are two types of home kits used to detect small amounts of blood in the stool. The older FOBT is a guaiac-based test that detects peroxidase activity found in hemoglobin. However, in addition to detecting human hemoglobin, the FOBT test can also detect animal hemoglobin in the stool (from consumption of red meat), which can potentially lead to false-positive results. A newer, more sensitive test for detecting blood in the stool is the FIT, which is specific for human hemoglobin. Health care providers (HCPs) often recommend either of these home tests to their patients as an initial CRC screening measure. In the home test, a person smears a small amount of stool on a card for 2 or 3 successive days, and mails the card to a laboratory for analysis.

Sigmoidoscopy and colonoscopy are tests in which the large bowel is examined with an endoscope, a narrow, lighted tube that is inserted in the rectum. During a sigmoidoscopy, only the lower third of the colon (closest to the rectum) is examined; during a colonoscopy the entire colon is examined. These tests are generally referred to as “lower gastrointestinal (GI) endoscopy.”

For people at average risk for developing CRC, the American Cancer Society (ACS) recommends one of the following screening modalities to find both cancer and pre-cancerous lesions:

- Sigmoidoscopy every 5 years;
- Sigmoidoscopy every 5 years with annual FOBT or FIT; or

¹ Maryland Department of Health and Mental Hygiene. Cigarette Restitution Fund Program Cancer Report 2008. Baltimore, MD; September 2008. Available at http://www.fha.state.md.us/pdf/cancer/2008-CRF_Can_Rpt.pdf. Last accessed July 27, 2009

- Colonoscopy every 10 years or double contrast barium enema (DCBE) every 5 years.²

Tests that detect primarily cancerous lesions and need to be followed by a colonoscopy if the results are positive include:

- FOBT or FIT every year
- DNA stool test

Although the ACS recommendations include DCBE as a screening option for CRC, this method was not included in the MCS questionnaire or analysis.

All local health departments in Maryland, except Baltimore City, implemented CRC education and screening programs in fiscal year (FY) 2001 with funding from the Cigarette Restitution Fund Program. In FY 2004, Anne Arundel County stopped CRC screening but continued to educate its population. In summer 2006, Baltimore City began CRC screening for eligible residents under a demonstration project funded by the CDC.

Familiarity with CRC Screening Tests

All MCS participants were asked about their familiarity with screening tests for CRC.

- Ninety-three percent (93%) of Maryland adults age 40 years and older said they knew there were screening tests for CRC (Table 4-1).

After hearing a description of the FOBT, sigmoidoscopy, and colonoscopy, participants were asked whether they had heard of these specific tests (Table 4-2):

- Seventy-six percent (76%) had heard of the home kit for the FOBT.
- Ninety-two percent (92%) had heard of sigmoidoscopy or colonoscopy as a means of examining the colon.
- Familiarity with CRC screening tests was statistically significantly lower among males, younger persons (age 40-49 years), non-Whites, and persons with a high school education or less.
- Twenty-four percent (24%) reported having heard that the local health departments had no-cost screening for low-income individuals (Table 4-3).

Prevalence of CRC Screening with FOBT

The MCS results for prevalence of CRC screening for occult blood are presented for adults age 50 years and older.

- Fifty-two percent (52%) of Marylanders have ever performed a home FOBT (Chart 4-1 and Table 4-4).

² American Cancer Society, Cancer Detection Guidelines. Available at http://www.cancer.org/docroot/PED/content/PED_2_3X_ACS_Cancer_Detection_Guidelines_36.asp?sitearea=PED
Last accessed July 27, 2009.

- Prevalence of screening with FOBT was significantly higher among persons age 65 years and older (61%), compared to those age 50 to 64 years (47%).
- Whites (55%) were more likely to have ever had an FOBT than African-Americans (47%) or persons of other races (40%).
- The proportion of people that have ever had an FOBT generally increased as level of education increased.

According to the ACS, if the home FOBT is the primary test being used for CRC screening, the test should be performed each year.

- Twenty percent (20%) of Maryland adults age 50 years and older said they have performed a home FOBT in the last year. (Data not shown in tables.)

Persons who had never performed a home FOBT or had not done one in the past year were asked to give the most important reason(s). While there were differences in the reasons reported between the two groups, those frequently cited by both included (Table 4-5; more than one response could be given per respondent):

- The doctor had not ordered the test or didn't say they needed it
- No reason or the respondent never thought about the test
- The respondent did not know he/she needed this type of test
- The respondent had another type of CRC screening test
- The respondent reported he/she wasn't having any problems

The HP 2010 goal is for 33% of people age 50 years and older to have an FOBT in the past 2 years.³

- Twenty-eight percent (28%) of Marylanders age 50 years and older reported having an FOBT within the preceding 2 years (Chart 4-1 and Table 4-6). Significant differences were noted by age, area of residence (urban vs. rural), education level, and employment status.
- People age 65 years and older were significantly more likely to have performed a home FOBT in the past 2 years than those age 50 to 64 years (32% vs. 25%; Table 4-6).

Prevalence of CRC Screening with Lower GI Endoscopy

HP 2010 has set a goal of increasing to 50% the proportion of adults age 50 years and older who ever had a sigmoidoscopy (from a 1998 baseline of 37%).⁴ There is no equivalent HP 2010 target for colonoscopy; however, if a colonoscopy is performed, the procedure meets the

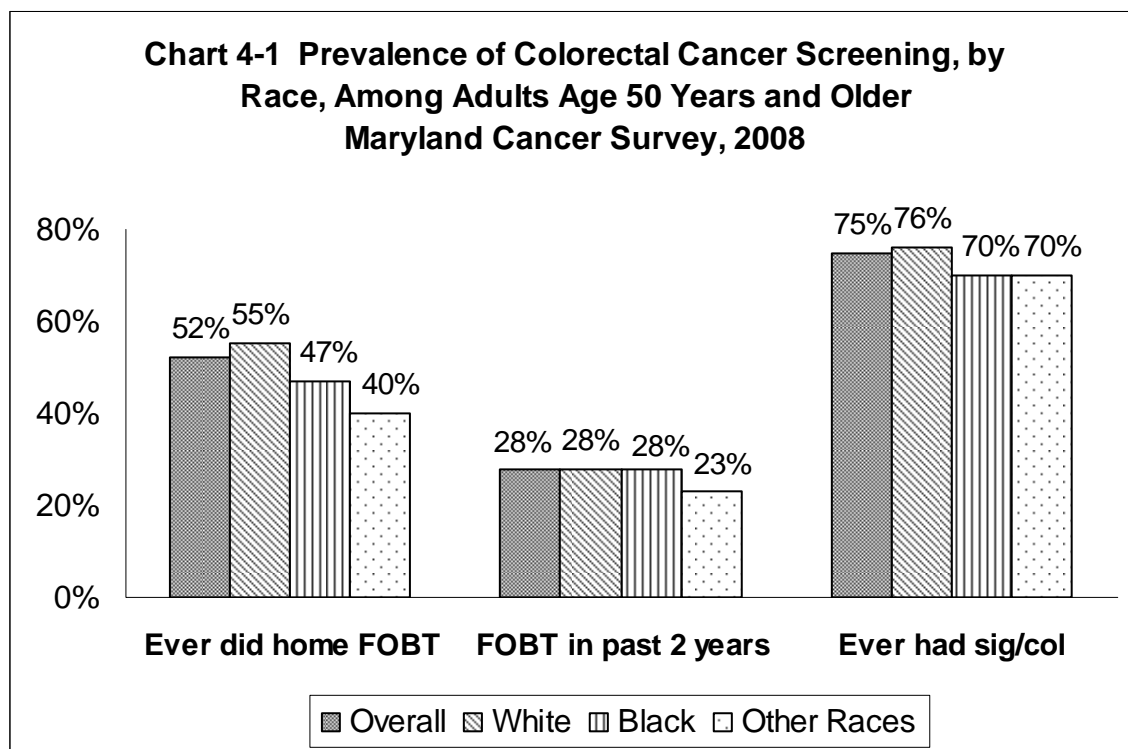
³ U.S. Department of Health and Human Services. Healthy People 2010 Midcourse Review: Cancer. Washington, DC; 2006. Available at <http://www.healthypeople.gov/data/midcourse/default.htm#pubs>. Last accessed July 27, 2009.

⁴ U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. I. Cancer. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/Document/HTML/Volume1/03Cancer.htm>. Last accessed July 27, 2009.

HP 2010 goal because a colonoscopy examines much more of the large bowel than a sigmoidoscopy.

The MCS results for prevalence of CRC screening with lower GI endoscopy are presented for adults age 50 years and older.

- Seventy-five percent (75%) reported that they have ever had a lower GI endoscopy (Chart 4-1 and Table 4-7).
- Adults age 50 to 64 years were less likely to report ever having a lower GI endoscopic examination than those age 65 years and older (70% vs. 81%).
- Whites were significantly more likely to have ever had lower GI endoscopy (76%) than African Americans (70%).
- The proportion of adults reporting ever having a lower GI endoscopy increased with increasing educational level and with increasing annual household incomes.
- Of those reporting they had ever had lower GI endoscopy, the vast majority of people (over 99%) knew which test they had received most recently. Of those who could name their test, 7% reported their most recent exam was a sigmoidoscopy and 93% replied it was a colonoscopy. (Data not shown in tables.)



Respondents who had a lower GI endoscopy were asked what type of HCP made the recommendation that they have the exam. Eighty-three percent (83%) said the recommendation was made by their primary care physician, 8% by a gastroenterologist, and 2% by a gynecologist. Nurse or nurse practitioner, physician's assistant, and other medical specialists were named by a small proportion of respondents.

Respondents age 50 years and older who never had a lower GI endoscopy were asked the reason why (Table 4-8; more than one response could be given per respondent). The most frequently cited reasons were:

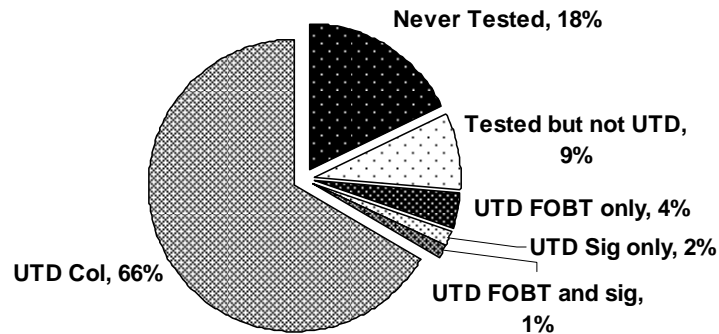
- No reason or the respondent never thought about it (20%)
- The doctor did not order the test or say it was needed (19%)
- The respondent thought he/she didn't need the test or didn't know it was needed (18%)
- The respondent has not had any problems (15%)

Compliance with CRC Screening Guidelines

The following is a summary of CRC screening frequency found in the MCS 2008. (Chart 4-2; data are not in tables.)

- Eighteen percent (18%) of Marylanders age 50 years and older reported never being screened by FOBT, sigmoidoscopy, or colonoscopy.
- Nine percent (9%) have been tested with either FOBT and/or sigmoidoscopy or colonoscopy, but are not up-to-date by ACS guidelines.
- Of those who have had CRC testing and knew the types of procedures they had and the time elapsed since the most recent tests,
 - 4% were up-to-date with FOBT only;
 - 2% were up-to-date with sigmoidoscopy only;
 - 1% had an FOBT in the last year and a sigmoidoscopy in the last 5 years; and
 - 66% had a colonoscopy within the last 10 years (with or without ever having an FOBT).

**Chart 4-2 Summary of Up-to-Date (UTD)* CRC Screening Among Respondents
Age 50 Years and Older – Maryland Cancer Survey, 2008**

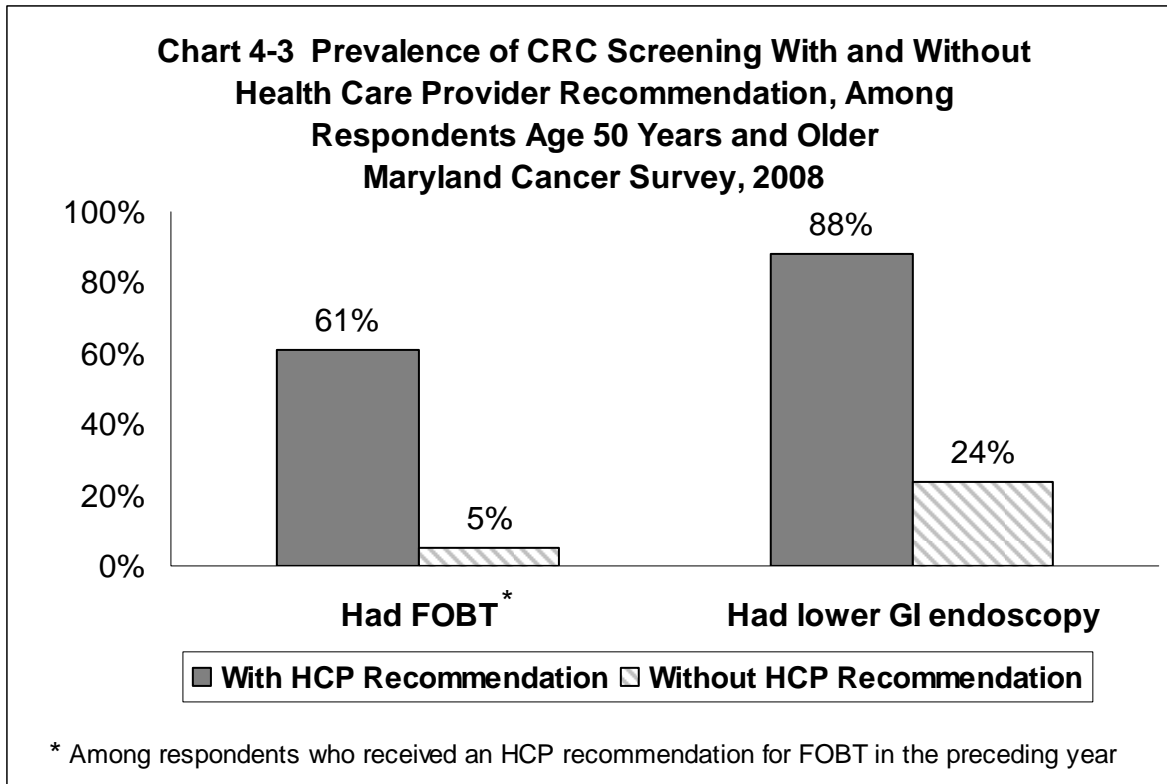


* UTD = up-to-date by American Cancer Society recommendations

HCP Recommendations and CRC Screening

Receiving a recommendation from an HCP is a critical first step in having CRC screening performed. The following is a summary of responses to questions about HCP recommendations for CRC screening among persons age 50 years and older. (Data not shown in tables.)

- Of those who had visited a doctor in the preceding 12 months, 27% reported receiving a recommendation to perform the home FOBT.
 - When in the preceding year an HCP recommended that the respondent have an FOBT, 61% had the exam, compared to only 5% having the exam when no recommendation was made (Chart 4-3).
- Eighty percent (80%) of those age 50 years and older reported having ever received a recommendation to have sigmoidoscopy or colonoscopy. Among these, 88% had the exam. Among those who said they did not receive a recommendation from an HCP, only 24% had the exam (Chart 4-3).
- Of the 25% of Marylanders age 50 years and older who have never had a lower GI endoscopy, 75% have had a routine check-up in the past year and 84% have had a routine check-up in the past 2 years.
- Of the 18% of Marylanders age 50 years and older who have never been tested by FOBT or lower GI endoscopy, 70% had a routine check-up in the past year and 80% had a routine check-up in the past 2 years.



Family History of CRC and Prevalence of Screening Compliance

Having a first-degree relative (FDR; i.e., parent, brother, sister, or child) diagnosed with CRC or adenoma puts one at increased risk for developing CRC and necessitates earlier and possibly more frequent screening with colonoscopy. The following summarizes CRC screening prevalence among MCS respondents, based on reported family history of CRC. (Data not shown in tables.)

- Eleven percent (11%) of people age 40 years and older reported they had an FDR who had been diagnosed with colon cancer. Among respondents age 50 years and older, 12% reported having an FDR with CRC.
- Among people age 50 years and older who reported having an FDR with CRC, 82% have ever had a lower GI endoscopic examination. This figure was significantly lower among people who did not have an FDR with CRC: 74% of those without an FDR of CRC reported ever having sigmoidoscopy or colonoscopy.
- Of people age 50 years and older who reported having an FDR with CRC, who have ever had sigmoidoscopy or colonoscopy, and who knew the specific type of exam, 96% said their most recent exam was a colonoscopy.
- Among people between the ages of 40 and 49 years, only 50% of those who reported having an FDR with CRC have ever had a lower GI endoscopy; of these respondents, 96% reported having a colonoscopy as their most recent exam.

TABLE 4-1. RESPONDENTS REPORTING TO KNOW THAT THERE ARE SCREENING TESTS FOR COLON CANCER, AMONG THOSE AGE 40 YEARS AND OLDER ~

Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Total Population	4985	4677	93%	92-94%	
Area of Residence					*
Urban	2972	2773	92%	91-94%	
Rural	2013	1904	94%	93-96%	
Gender					**
Male	1657	1527	91%	90-93%	
Female	3328	3150	94%	93-95%	
Age					**
40-49 years	1106	1018	91%	89-93%	
50-64 years	2022	1933	95%	93-96%	
65 years and older	1857	1726	92%	91-94%	
Race					**
White	3835	3638	94%	93-95%	
African American or Black	993	898	89%	87-92%	
Other	157	141	90%	84-95%	
Gender and Race					**
White male	1317	1225	93%	91-94%	
African American male	282	249	88%	83-93%	
Other male	58	53	91%	81-100%	
White female	2518	2413	96%	95-97%	
African American female	711	649	90%	87-93%	
Other female	99	88	89%	81-96%	
Marital Status					**
Married or partner of unmarried couple	2801	2659	94%	93-95%	
Divorced or separated	846	794	92%	90-95%	
Widowed	896	826	90%	87-93%	
Never married	419	375	86%	82-91%	
Education					**
Less than high school	371	317	78%	72-85%	
High school grad or GED	1368	1265	90%	88-93%	
College 1-3 years	1147	1094	95%	94-97%	
College grad	1183	1125	95%	93-96%	
Advanced degree	901	863	95%	93-97%	
Employment Status					**
Employed for wages	1967	1880	94%	93-96%	
Self-employed	360	331	91%	87-95%	
Retired	1931	1809	93%	92-95%	
Other	709	641	88%	84-91%	
Household Income					**
<\$25,000	856	770	86%	83-90%	
\$25,000-<\$35,000	436	402	91%	87-94%	
\$35,000-<\$50,000	549	515	92%	89-95%	
\$50,000-<\$75,000	634	608	94%	92-97%	
\$75,000 or greater	1579	1526	96%	95-97%	
Don't know/not sure	259	237	88%	82-94%	
Refused	672	619	91%	88-94%	

N = Number of people in the sample who responded to a survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 4-2. RESPONSES TO QUESTIONS ABOUT AWARENESS OF TESTS FOR COLORECTAL CANCER SCREENING,
AMONG PARTICIPANTS AGE 40 YEARS AND OLDER**

	Heard of the home kit to test for blood in the stool ~					Heard of tests called sigmoidoscopy or colonoscopy ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4972	3919	76%	74-78%		4995	4689	92%	91-93%	
Area of Residence	^					^				
Urban	2968	2348	76%	74-78%		2982	2785	92%	90-93%	
Rural	2004	1571	75%	73-78%		2013	1904	93%	92-95%	
Gender	**					**				
Male	1654	1227	72%	69-75%		1661	1521	90%	88-92%	
Female	3318	2692	80%	78-81%		3334	3168	94%	93-95%	
Age	**					**				
40-49 years	1106	741	66%	62-69%		1110	994	88%	86-91%	
50-64 years	2016	1666	81%	79-83%		2028	1953	95%	93-96%	
65 years and older	1850	1512	82%	80-84%		1857	1742	93%	92-95%	
Race	**					**				
White	3824	3079	78%	76-80%		3841	3683	96%	95-96%	
African American or Black	991	734	71%	67-75%		995	875	84%	81-88%	
Other	157	106	72%	63-81%		159	131	83%	75-91%	
Gender and Race	**					**				
White male	1313	998	74%	71-77%		1319	1242	94%	93-96%	
African American male	281	187	65%	58-71%		282	232	79%	73-85%	
Other male	60	42	71%	56-87%		60	47	77%	63-92%	
White female	2511	2081	82%	80-84%		2522	2441	97%	96-98%	
African American female	710	547	76%	72-80%		713	643	89%	86-92%	
Other female	97	64	73%	62-83%		99	84	87%	80-95%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

**TABLE 4-2. RESPONSES TO QUESTIONS ABOUT AWARENESS OF TESTS FOR COLORECTAL CANCER SCREENING,
AMONG PARTICIPANTS AGE 40 YEARS AND OLDER**

	Heard of the home kit to test for blood in the stool ~					Heard of tests called sigmoidoscopy or colonoscopy ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**				
Married or partner of unmarried couple	2795	2237	77%	75-79%		2807	2669	94%	92-95%	
Divorced or separated	839	659	75%	70-79%		845	791	90%	87-94%	
Widowed	897	713	77%	74-81%		900	835	91%	89-94%	
Never married	418	291	66%	60-72%		420	372	83%	78-89%	
Education	**					**				
Less than high school	368	251	64%	57-70%		370	310	79%	73-85%	
High school grad or GED	1363	1006	69%	65-72%		1372	1262	89%	86-91%	
College 1-3 years	1144	930	78%	75-81%		1147	1091	94%	92-96%	
College grad	1181	950	79%	77-82%		1188	1138	95%	93-97%	
Advanced degree	901	770	82%	79-86%		903	874	95%	92-97%	
Employment Status	**					**				
Employed for wages	1962	1535	75%	73-78%		1971	1864	93%	91-94%	
Self-employed	359	268	71%	65-78%		361	337	93%	89-96%	
Retired	1924	1583	83%	81-85%		1931	1830	94%	93-96%	
Other	709	520	69%	65-74%		714	640	85%	81-89%	
Household Income	**					**				
<\$25,000	849	597	65%	60-69%		854	747	82%	78-87%	
\$25,000-<\$35,000	435	320	67%	61-73%		437	413	92%	87-96%	
\$35,000-<\$50,000	548	437	76%	71-81%		550	514	90%	86-94%	
\$50,000-<\$75,000	633	500	76%	71-80%		638	614	93%	90-96%	
\$75,000 or greater	1575	1304	80%	77-82%		1581	1532	96%	95-97%	
Don't know/not sure	260	196	74%	67-82%		260	235	87%	81-93%	
Refused	672	565	82%	78-86%		675	634	93%	90-95%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 4-3. RESPONSES TO QUESTION ON AWARENESS OF NO-COST COLORECTAL CANCER SCREENING PROGRAMS, AMONG PARTICIPANTS AGE 40 YEARS AND OLDER

	Awareness of no cost colon cancer screening programs at health department ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Total Population	4948	1318	24%	23-26%	
Area of Residence					**
Urban	2950	705	23%	21-25%	
Rural	1998	613	29%	27-32%	
Gender					**
Male	1646	375	21%	19-24%	
Female	3302	943	27%	25-29%	
Age					**
40-49 years	1103	242	21%	18-24%	
50-64 years	2016	534	25%	22-27%	
65 years and older	1829	542	28%	26-31%	
Race					^
White	3803	1037	25%	23-27%	
African American or Black	991	241	22%	19-26%	
Other	154	40	25%	17-34%	
Gender and Race					**
White male	1307	294	21%	18-24%	
African American male	282	65	21%	15-27%	
Other male	57	16	29%	14-44%	
White female	2496	743	29%	26-31%	
African American female	709	176	24%	20-28%	
Other female	97	24	22%	13-32%	
Marital Status					*
Married or partner of unmarried couple	2784	750	24%	23-26%	
Divorced or separated	839	208	25%	21-30%	
Widowed	885	264	27%	24-31%	
Never married	418	89	18%	14-23%	
Education					*
Less than high school	369	115	32%	25-38%	
High school grad or GED	1360	376	24%	21-27%	
College 1-3 years	1134	318	26%	23-30%	
College grad	1181	293	23%	20-26%	
Advanced degree	890	212	22%	19-26%	
Employment Status					**
Employed for wages	1955	498	23%	21-25%	
Self-employed	359	77	18%	14-23%	
Retired	1906	550	27%	25-30%	
Other	709	191	26%	21-30%	
Household Income					*
<\$25,000	845	234	25%	21-29%	
\$25,000-<\$35,000	432	137	28%	22-33%	
\$35,000-<\$50,000	545	132	22%	18-26%	
\$50,000-<\$75,000	630	175	27%	22-31%	
\$75,000 or greater	1568	372	22%	19-24%	
Don't know/not sure	259	76	26%	19-33%	
Refused	669	192	29%	24-33%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

TABLE 4-4. PEOPLE REPORTING TO HAVE EVER PERFORMED A HOME FOBT, AMONG PARTICIPANTS AGE 50 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	3865	2097	52%	50-54%		2304	1275	53%	51-56%		1561	822	49%	46-52%	
Gender					**					^					**
Male	1251	643	50%	46-53%		743	393	51%	47-55%		508	250	44%	39-49%	
Female	2614	1454	54%	52-57%		1561	882	55%	52-57%		1053	572	53%	50-57%	
Age					**					**					**
50-64 years	2019	979	47%	44-49%		1232	620	48%	45-52%		787	359	40%	36-44%	
65 years and older	1846	1118	61%	58-64%		1072	655	61%	58-64%		774	463	61%	57-65%	
Race					**					**					^
White	3036	1689	55%	53-57%		1637	940	57%	54-59%		1399	749	50%	47-53%	
African American or Black	722	365	47%	42-51%		583	303	47%	43-52%		139	62	43%	33-53%	
Other	107	43	40%	29-51%		84	32	40%	29-52%		23	11	38%	16-61%	
Gender and Race					**					**					**
White male	1016	535	52%	49-56%		557	306	55%	50-60%		459	229	45%	40-50%	
African American male	194	91	44%	36-52%		155	76	45%	36-54%		39	15	35%	19-52%	
Other male	41	17	38%	20-56%		31	11	37%	19-56%		10	6	51%	17-85%	
White female	2020	1154	57%	54-59%		1080	634	58%	55-61%		940	520	54%	51-58%	
African American female	528	274	49%	44-54%		428	227	49%	44-55%		100	47	49%	38-60%	
Other female	66	26	42%	28-56%		53	21	43%	28-58%		13	5	32%	5-60%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 4-4. PEOPLE REPORTING TO HAVE EVER PERFORMED A HOME FOBT, AMONG PARTICIPANTS AGE 50 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					^				
Married or partner of unmarried couple	2049	1129	54%	51-56%		1150	664	56%	52-59%		899	465	48%	44-52%	
Divorced or separated	677	354	48%	43-53%		446	231	48%	42-53%		231	123	50%	42-57%	
Widowed	871	497	55%	51-59%		518	302	55%	51-60%		353	195	55%	49-61%	
Never married	250	108	39%	31-46%		179	72	37%	28-46%		71	36	48%	33-62%	
Education	**					**					^				
Less than high school	318	146	40%	33-47%		171	80	39%	30-47%		147	66	43%	33-53%	
High school grad or GED	1081	575	50%	46-54%		522	280	50%	45-55%		559	295	50%	45-55%	
College 1-3 years	895	461	50%	46-54%		521	274	50%	45-55%		374	187	48%	42-54%	
College grad	866	473	52%	48-57%		589	318	53%	48-58%		277	155	50%	43-57%	
Advanced degree	694	432	61%	57-66%		493	316	63%	58-68%		201	116	51%	42-59%	
Employment Status	**					**					**				
Employed for wages	1203	588	47%	44-51%		766	387	49%	45-53%		437	201	41%	36-47%	
Self-employed	246	109	42%	34-49%		144	65	42%	33-52%		102	44	39%	28-50%	
Retired	1903	1152	61%	58-64%		1100	676	61%	58-65%		803	476	59%	55-63%	
Other	498	241	44%	38-50%		282	141	46%	39-53%		216	100	38%	31-46%	
Household Income	**					**					**				
<\$25,000	720	340	45%	40-49%		371	177	44%	38-51%		349	163	45%	38-51%	
\$25,000-<\$35,000	361	188	51%	44-58%		200	104	51%	42-59%		161	84	52%	43-61%	
\$35,000-<\$50,000	427	238	50%	44-56%		224	121	50%	42-58%		203	117	51%	42-59%	
\$50,000-<\$75,000	468	269	54%	49-60%		285	165	55%	48-61%		183	104	53%	45-61%	
\$75,000 or greater	1080	594	53%	50-57%		719	418	55%	51-60%		361	176	43%	37-49%	
Don't know/not sure	234	124	50%	42-58%		145	72	48%	39-58%		89	52	55%	42-68%	
Refused	575	344	60%	55-65%		360	218	60%	54-66%		215	126	59%	52-66%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 4-5. RESPONSES TO THE QUESTION "WHAT WAS THE MOST IMPORTANT REASON YOU HAVE NEVER DONE/NOT DONE A HOME FOBT IN THE PAST YEAR?" *

Selected Response †	Never performed an FOBT (N=1768)	Performed an FOBT more than 1 year before (N=1363)
	wt %	wt %
Doctor didn't order it/didn't say I needed it **	20%	32%
No reason, never thought about it **	22%	16%
Didn't need it/ didn't know I needed this type of test **	17%	10%
Haven't had any problems	10%	10%
Had another type of colorectal exam**	17%	30%
Put it off/didn't get around to it	3%	2%
Never heard of the test**	9%	<1%
Had blood stool test done at doctor's office**	9%	3%
Don't have a doctor	1%	1%
Too expensive/no insurance/cost	1%	1%

* Question asked of 3131 adults age 50 years or older who reported they have never had or had not done a home blood stool test in the past year. More than one response could be given per respondent.

† Other reasons include (but are not limited to) being at low risk for CRC or not having a family history of CRC, not having been to the doctor lately, having other health problems, and believing the test to be unreliable.

** Statistically significant difference between groups (p-value ≤ 0.05)

**TABLE 4-6. PEOPLE REPORTING TO HAVE PERFORMED A HOME FOBT WITHIN PAST 2 YEARS,
AMONG PARTICIPANTS AGE 50 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	3865	1072	28%	26-30%		2304	684	29%	27-31%		1561	388	24%	21-26%	
Gender	^					^					^				
Male	1251	348	28%	25-31%		743	221	29%	25-33%		508	127	23%	19-27%	
Female	2614	724	28%	26-30%		1561	463	29%	27-32%		1053	261	25%	22-28%	
Age	**					**					**				
50-64 years	2019	520	25%	23-28%		1232	329	26%	23-29%		787	191	21%	18-24%	
65 years and older	1846	552	32%	30-35%		1072	355	34%	31-37%		774	197	28%	24-31%	
Race	^					^					^				
White	3036	841	28%	26-30%		1637	495	30%	27-33%		1399	346	24%	21-27%	
African American or Black	722	207	28%	24-32%		583	172	28%	24-33%		139	35	23%	15-30%	
Other	107	24	23%	13-33%		84	17	23%	13-33%		23	7	22%	5-39%	
Gender and Race	^					^					^				
White male	1016	275	27%	24-31%		557	162	29%	25-33%		459	113	23%	19-27%	
African American male	194	62	29%	22-37%		155	52	30%	22-38%		39	10	21%	8-34%	
Other male	41	11	24%	8-40%		31	7	23%	7-40%		10	4	38%	6-70%	
White female	2020	566	29%	27-32%		1080	333	31%	28-34%		940	233	25%	22-28%	
African American female	528	145	27%	22-31%		428	120	27%	22-32%		100	25	24%	15-33%	
Other female	66	13	22%	10-34%		53	10	23%	10-36%		13	3	15%	0-33%	

N = Number of people in the sample who responded to the survey question
n = Number of people answering "yes" to that question or who had that characteristic
~ Some data missing for marital status, education, and employment status
** p-value ≤ 0.05
* p-value > 0.05 - 0.1
^ p-value > 0.1

**TABLE 4-6. PEOPLE REPORTING TO HAVE PERFORMED A HOME FOBT WITHIN PAST 2 YEARS,
AMONG PARTICIPANTS AGE 50 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					^				
Married or partner of unmarried couple	2049	595	29%	37-32%		1150	376	31%	28-34%		899	219	23%	20-26%	
Divorced or separated	677	169	23%	19-28%		446	104	23%	18-28%		231	65	25%	19-31%	
Widowed	871	248	30%	26-34%		518	164	31%	27-36%		353	84	25%	20-31%	
Never married	250	55	18%	13-24%		179	36	17%	11-23%		71	19	24%	12-36%	
Education	**					**					^				
Less than high school	318	77	23%	17-29%		171	45	24%	17-31%		147	32	20%	12-28%	
High school grad or GED	1081	299	27%	23-30%		522	154	27%	23-32%		559	145	26%	21-30%	
College 1-3 years	895	216	24%	21-28%		521	133	25%	20-29%		374	83	22%	17-26%	
College grad	866	247	29%	25-33%		589	175	30%	26-34%		277	72	23%	18-29%	
Advanced degree	694	228	34%	30-39%		493	173	36%	31-41%		201	55	26%	19-34%	
Employment Status	**					**					**				
Employed for wages	1203	332	27%	24-30%		766	220	28%	24-31%		437	112	24%	19-29%	
Self-employed	246	59	23%	17-30%		144	39	25%	17-33%		102	20	17%	8-26%	
Retired	1903	563	32%	29-34%		1100	353	33%	30-36%		803	210	27%	23-30%	
Other	498	117	23%	18-27%		282	71	24%	18-30%		216	46	17%	12-22%	
Household Income	^					^					^				
<\$25,000	720	181	25%	21-30%		371	100	26%	21-32%		349	81	23%	18-28%	
\$25,000-<\$35,000	361	93	29%	23-36%		200	54	31%	22-39%		161	39	26%	18-35%	
\$35,000-<\$50,000	427	126	28%	22-33%		224	66	28%	21-35%		203	60	27%	20-33%	
\$50,000-<\$75,000	468	128	25%	21-30%		285	82	26%	21-32%		183	46	22%	15-28%	
\$75,000 or greater	1080	310	28%	25-31%		719	226	30%	26-33%		361	84	22%	17-26%	
Don't know/not sure	234	67	27%	20-34%		145	37	25%	17-34%		89	30	33%	22-45%	
Refused	575	167	33%	28-38%		360	119	35%	29-41%		215	48	24%	17-30%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

**TABLE 4-7. PEOPLE REPORTING TO HAVE EVER HAD A SIGMOIDOSCOPY OR COLONOSCOPY,
AMONG PARTICIPANTS AGE 50 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	3876	2921	75%	73-76%		2311	1768	75%	73-77%		1565	1153	72%	70-75%	
Gender	^					^					^				
Male	1250	958	74%	71-77%		742	579	75%	71-79%		508	379	72%	67-76%	
Female	2626	1963	75%	73-77%		1569	1189	75%	73-78%		1057	774	73%	70-76%	
Age	**					**					**				
50-64 years	2025	1458	70%	68-73%		1236	902	71%	68-74%		789	556	68%	64-72%	
65 years and older	1851	1463	81%	79-83%		1075	866	82%	79-85%		776	597	78%	75-81%	
Race	**					**					^				
White	3050	2316	76%	74-78%		1645	1279	78%	75-80%		1405	1037	73%	70-76%	
African American or Black	719	532	70%	66-75%		582	433	71%	66-75%		137	99	66%	56-76%	
Other	107	73	70%	60-80%		84	56	70%	59-80%		23	17	76%	57-95%	
Gender and Race	**					**					*				
White male	1019	797	78%	74-81%		559	450	79%	75-83%		460	347	73%	68-78%	
African American male	190	133	65%	57-73%		152	110	66%	57-75%		38	23	55%	37-73%	
Other male	41	28	68%	51-84%		31	19	67%	49-84%		10	9	95%	85-100%	
White female	2031	1519	75%	73-77%		1086	829	76%	73-79%		945	690	73%	70-76%	
African American female	529	399	74%	70-78%		430	323	74%	69-79%		99	76	75%	65-85%	
Other female	66	45	72%	60-85%		53	37	73%	60-86%		13	8	67%	40-95%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 4-7. PEOPLE REPORTING TO HAVE EVER HAD A SIGMOIDOSCOPY OR COLONOSCOPY,
AMONG PARTICIPANTS AGE 50 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					**				
Married or partner of unmarried couple	2059	1606	77%	75-79%		1157	916	78%	75-81%		902	690	74%	71-78%	
Divorced or separated	677	479	67%	62-71%		445	320	67%	61-73%		232	159	64%	56-71%	
Widowed	873	646	74%	71-78%		520	394	75%	71-79%		353	252	71%	65-76%	
Never married	248	177	67%	59-75%		178	129	67%	58-76%		70	48	67%	53-81%	
Education	**					**					**				
Less than high school	317	183	51%	44-58%		171	91	47%	38-56%		146	92	61%	51-71%	
High school grad or GED	1083	794	70%	67-74%		522	380	70%	65-75%		561	414	72%	67-76%	
College 1-3 years	896	670	75%	72-79%		521	403	77%	73-81%		375	267	70%	64-75%	
College grad	872	693	79%	76-83%		593	479	80%	77-84%		279	214	75%	69-81%	
Advanced degree	696	573	82%	78-85%		495	409	82%	78-86%		201	164	82%	75-88%	
Employment Status	**					**					**				
Employed for wages	1209	881	72%	69-75%		770	573	74%	70-77%		439	308	67%	61-72%	
Self-employed	247	177	72%	65-79%		144	107	73%	64-81%		103	70	68%	57-78%	
Retired	1909	1519	81%	79-83%		1102	888	82%	79-84%		807	631	80%	77-83%	
Other	496	331	62%	56-67%		283	189	61%	54-68%		213	142	63%	55-71%	
Household Income	**					**					*				
<\$25,000	718	472	63%	58-68%		371	243	62%	56-68%		347	229	65%	59-71%	
\$25,000-<\$35,000	364	275	74%	68-80%		202	152	74%	66-82%		162	123	74%	66-83%	
\$35,000-<\$50,000	428	343	77%	72-83%		225	185	79%	72-86%		203	158	72%	63-80%	
\$50,000-<\$75,000	469	369	77%	72-82%		286	226	76%	71-82%		183	143	80%	74-86%	
\$75,000 or greater	1086	861	78%	75-81%		721	584	79%	76-83%		365	277	74%	68-79%	
Don't know/not sure	230	162	68%	60-76%		143	99	69%	60-78%		87	63	65%	52-78%	
Refused	581	439	77%	73-81%		363	279	78%	74-83%		218	160	73%	66-80%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 4-8. REASONS GIVEN BY PARTICIPANTS AGE 50 AND OLDER FOR NEVER HAVING SIGMOIDOSCOPY OR COLONOSCOPY FOR COLORECTAL CANCER SCREENING *

Selected Response †	Never had a sigmoidoscopy or colonoscopy (N=955)
	wt %
No reason, never thought about it	20%
Doctor didn't order it/didn't say I needed it	19%
Didn't need/didn't know I needed this type of test	18%
Haven't had any problems	15%
Put it off/didn't get around to it	12%
Too painful, unpleasant, embarrassing	6%
Too expensive/no insurance/cost of test	5%
Too young or not old enough	3%

*Question asked of 955 adults age 50 years or older who reported they have never had a sigmoidoscopy or colonoscopy. More than one response could be given per respondent.

† Other reasons cited infrequently include (but were not limited to) being at low risk for CRC or not having a family history of CRC, not having a doctor or not having been to the doctor lately, having other health problems, fear of having cancer, fear of the test itself, or lack of time.

Chapter 5. Prostate Cancer Screening

Cancer of the prostate is the most common cancer (excluding non-melanoma skin cancer) among men in Maryland, accounting for 4,201 cases in 2003. It is the second leading cause of statewide cancer deaths among men after lung cancer. In 2003, there were 537 deaths from prostate cancer reported in Maryland. Maryland had the 10th highest mortality rate for prostate cancer among the 50 states and the District of Columbia for the period 1999 to 2003.¹

Serum prostate-specific antigen (PSA) and the digital rectal exam (DRE) are the two tests most commonly used to screen for prostate cancer. Whether men should be screened for prostate cancer and at what age screening should begin are controversial issues. There is no HP 2010 objective for prostate cancer screening. At the time the MCS 2008 survey was conducted, the ACS recommended that HCPs offer the PSA test and DRE annually beginning at age 50 years to men who have a life expectancy of at least 10 years. For men at high risk (e.g., African Americans and men who have an FDR with prostate cancer), the ACS recommended that testing begin at age 45 years. They also recommended that men with more than one FDR with prostate cancer could begin testing at age 40 years.² The ACS no longer recommends routine prostate cancer screening, but suggests that HCPs discuss the pros and cons of testing so each man can decide if testing is right for him.³ If a man chooses to be tested, the ACS suggests the same age and risk guidelines be followed. According to the ACS, prostate cancer occurs more often in African American men than men of other races; African American men with the disease are also more likely to be diagnosed at an advanced stage and more than twice as likely to die of prostate cancer as White men.⁴ Prior to 2008, the U.S. Preventive Services Task Force (USPSTF) stated that there was insufficient evidence for or against routine screening for prostate cancer using PSA testing or DRE. In 2008, this was revised and the USPSTF concluded that there is insufficient evidence to assess the balance of harms and benefits of routine screening for prostate cancer in men younger than age 75 years. The USPSTF recommends against screening men age 75 years and older for prostate cancer.⁵ The USPSTF, ACS, and other groups recommend that a man and his HCP discuss the pros and cons of screening and make a shared decision before a man chooses to undergo testing.

¹ Maryland Department of Health and Mental Hygiene. Cigarette Restitution Fund Program Cancer Report 2008. Baltimore, MD; September 2008. Available at http://www.fha.state.md.us/pdf/cancer/2008-CRF_Can_Rpt.pdf. Last accessed July 27, 2009.

² Smith RA, Cokkimides V, Brawley OW. Cancer Screening in the United States, 2008: A Review of Current American Cancer Society Guidelines and Cancer Screening Issues. *CA Cancer J Clin* 2008;58:161-179. Available at <http://caonline.amcancersoc.org/cgi/content/full/58/3/161>. Last accessed July 27, 2009.

³ American Cancer Society. Overview: Prostate Cancer. "How is Prostate Cancer Found?" Available at http://www.cancer.org/docroot/CRI/content/CRI_2_2_3X_How_is_prostate_cancer_found_36.asp?sitearea=. Last accessed July 31, 2009.

⁴ American Cancer Society. Detailed guide: Prostate Cancer "What are the Risk Factors for Prostate Cancer?" Available at http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_What_are_the_risk_factors_for_prostate_cancer_36.asp?nav=crl. Last accessed July 27, 2009.

⁵ U.S. Preventive Services Task Force, 2008. Screening for Prostate Cancer. Available at <http://www.ahrq.gov/clinic/uspstf/uspstfprca.htm>. Last accessed July 27, 2009.

Familiarity with the PSA Screening Test (among all men age 40 years and older; Table 5-1)

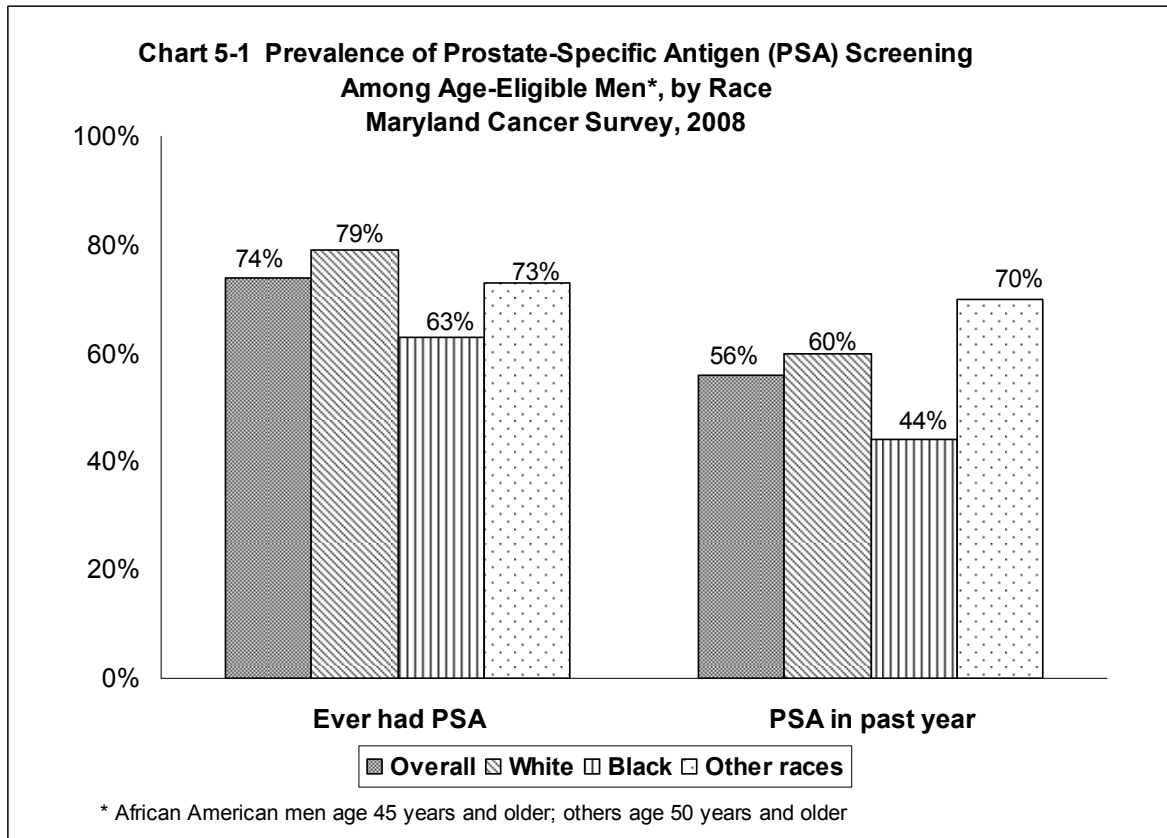
All male respondents age 40 years and older were asked about their familiarity with the PSA as a screening test for prostate cancer.

- Seventy-eight percent (78%) of Maryland men age 40 years and older reported they had heard of the PSA test for prostate cancer screening.
- A significantly higher proportion of men age 65 years and older were familiar with the PSA test (90%), compared with younger men.
- Compared with White men (81%), a statistically significantly lower proportion of African American men (70%) reported having heard of the PSA test.
- The proportion of men familiar with the PSA test generally increased with increasing level of education or income.

Prevalence of Ever Having a PSA Test (age-eligible includes African American men age 45 years and older and all other men age 50 years and older; Chart 5-1 and Table 5-2)

- Seventy-four percent (74%) of age-eligible men reported ever having the PSA test.
- Men age 65 years and older had a significantly higher prevalence of ever having a PSA test than younger men.
- White men had statistically significantly higher prevalence of ever having a PSA test (79%), compared to African American men (63%).
- The prevalence of PSA testing increased with increasing level of education.
- The percentage of men who ever had a PSA test did not differ significantly by urban vs. rural area of residence.

The prevalence of PSA testing was much lower among men (of all races) under the age of 50 years. Only 25% of all men age 40 to 44 years and 46% of men age 45 to 49 years reported having ever had a PSA test. African American men ages 45 to 49 years were no more likely than White men in the same age group to have ever had a PSA test (44% vs. 49%).



Prevalence of PSA Testing in the Past Year

- Fifty-six percent (56%) of all men in age-eligible groups reported having a PSA test within the year prior to the survey (Chart 5-1 and Table 5-3).
- The prevalence of PSA testing within the preceding year increased with age, from 51% of men age 50 to 64 years to 72% of men age 65 years and older.
- The prevalence of testing in the past year was significantly higher among Whites (60%) compared to African Americans (44%).
- PSA testing within the past year increased with increasing educational level.

Reasons for Never Having a PSA Test or Not Having a PSA Test in the Past Year (among African American men age 45 years and older and all other men age 50 years and older; Table 5-4; more than one response could be given per respondent)

Men who reported they had never had a PSA test, or had a PSA test but not in the preceding year, were asked the reason. While there were some differences (although not statistically significant) in responses between the two groups, the most commonly cited reasons were:

- The doctor did not order the test or say it was needed
- The men had no reason or said they never thought about it
- The men thought they didn't need it or didn't know they needed the test
- The men haven't had any problems

Health Care Provider Discussions and PSA Testing

Several professional groups recommend that HCPs talk with their male patients about prostate cancer screening using a shared decision-making approach to testing. To assess the extent of this practice, male respondents to the MCS were asked whether an HCP had ever discussed prostate cancer screening with them.

- Sixty-four percent (64%) of men age 40 years and older reported that a doctor or other HCP had ever discussed prostate cancer screening with them (Table 5-5).
 - This proportion was significantly lower among men age 40 to 49 years (48%) compared to men in older age categories (70% of men age 50 to 64 years and 80% of men age 65 years and older).
 - The proportion of men who reported discussing prostate cancer screening with an HCP increased with education level and household income.
- Of age-eligible men who reported discussing prostate cancer screening with their HCP, 89% reported having a PSA test, compared to only 33% of men who had not had such discussions. (Data not in tables.)

Family History of Prostate Cancer and Prevalence of PSA Testing (data not shown in tables)

- Fourteen percent (14%) of all men age 40 years and older reported having an FDR (i.e., father, brother, or son) diagnosed with prostate cancer.

Among men with an FDR with prostate cancer,

- 75% of those age 40 years and older have ever had a PSA test.
- 91% of those age 50 years and older reported ever having a PSA test. By comparison, only 74% of men age 50 years and older without an FDR with prostate cancer reported ever having a PSA test.

Prevalence of Prostate Cancer Screening by DRE (Table 5-6)

- Among Maryland men in the age groups examined for prostate cancer screening in this report, 88% reported ever having a DRE.
- A higher proportion of men age 65 years and older reported ever having a DRE (90%) compared to men in younger age groups (88% of men ages 50 to 64 and 80% of African American men age 45 to 49 years), but the differences between groups were not statistically significant.
- The prevalence of ever having DRE screening was lower among African American men (84%) and men of other races (72%) compared with White men (91%).
- The prevalence of screening by DRE increased with increasing level of education and increasing annual household income.

Prevalence of DRE in the Past Year (Table 5-7)

Among age-eligible men (African American men age 45 years and older and all other men age 50 years and older),

- 55% reported having a DRE in the past year.
- a higher prevalence of screening by DRE was found among men age 65 years and older (compared to younger men), men who are married or partnered (compared to men who are divorced or never married), men with higher levels of education, and men with higher annual household income.
- only 42% reported they had received both a PSA and DRE in the past year. (Data not shown in tables.)

TABLE 5-1. RESPONDENTS REPORTING HAVING HEARD OF PROSTATE-SPECIFIC ANTIGEN (PSA) TEST, AMONG MEN AGE 40 YEARS AND OLDER

	Ever heard of the Prostate-Specific Antigen test ~			
Selected Characteristic	N	n	wt %	95% CI
Male Population	1632	1344	78%	75-80%
Area of Residence				^
Urban	978	799	77%	74-80%
Rural	654	545	81%	77-85%
Age				**
40-49 years	400	265	66%	61-72%
50-64 years	630	533	81%	77-85%
65 years and older	602	546	90%	88-93%
Race				**
White	1293	1088	81%	78-84%
African American or Black	279	212	70%	63-77%
Other	60	44	72%	57-87%
Marital Status				**
Married or partner of unmarried couple	1099	923	80%	77-83%
Divorced or separated	242	201	77%	70-85%
Widowed	134	115	85%	77-92%
Never married	153	102	59%	49-69%
Education				**
Less than high school	108	65	54%	41-66%
High school grad or GED	385	294	70%	64-76%
College 1-3 years	341	279	76%	70-82%
College grad	432	374	81%	76-86%
Advanced degree	360	328	89%	84-93%
Employment Status				**
Employed for wages	683	537	75%	71-79%
Self-employed	163	129	77%	69-85%
Retired	648	589	89%	86-93%
Other	131	85	61%	50-71%
Household Income				**
<\$25,000	211	144	63%	54-72%
\$25,000-<\$35,000	136	112	76%	66-86%
\$35,000-<\$50,000	180	147	71%	61-80%
\$50,000-<\$75,000	243	205	80%	73-86%
\$75,000 or greater	656	563	81%	77-85%
Don't know/not sure	38	29	70%	51-89%
Refused	168	144	85%	78-91%

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 5-2. MEN REPORTING TO HAVE EVER HAD A PROSTATE-SPECIFIC ANTIGEN (PSA) TEST, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Male Population	1244	995	74%	71-77%		751	599	73%	69-77%		493	396	77%	72-81%	
Age					**					**					**
45-49 (AA only)	42	20	44%	28-60%		37	16	39%	23-56%		5	4	78%	39-100%	
50-64 years	612	454	70%	66-75%		361	268	70%	65-76%		251	186	70%	63-76%	
65 years and older	590	521	88%	84-91%		353	315	88%	83-92%		237	206	87%	83-92%	
Race					**					**					^
White	979	811	79%	76-82%		539	453	80%	75-84%		440	358	77%	73-82%	
African American or Black	226	157	63%	55-70%		183	126	61%	53-70%		43	31	73%	58-89%	
Other	39	27	73%	56-89%		29	20	73%	56-90%		10	7	62%	29-95%	
Marital Status					**					**					**
Married or partner of unmarried couple	827	686	77%	73-81%		499	407	76%	72-81%		328	279	80%	75-86%	
Divorced or separated	196	145	62%	52-72%		112	85	63%	51-75%		84	60	59%	45-74%	
Widowed	125	104	83%	75-91%		78	67	84%	74-93%		47	37	80%	68-93%	
Never married	93	59	58%	45-72%		61	39	56%	41-72%		32	20	67%	46-88%	
Education					**					**					**
Less than high school	90	48	42%	29-54%		44	19	35%	19-50%		46	29	60%	43-77%	
High school grad or GED	290	205	61%	53-69%		137	97	60%	50-70%		153	108	63%	54-73%	
College 1-3 years	245	196	73%	65-80%		131	100	69%	60-79%		114	96	82%	74-90%	
College grad	327	277	81%	75-86%		221	184	79%	73-86%		106	93	87%	79-94%	
Advanced degree	287	265	90%	85-94%		214	196	90%	85-95%		73	69	90%	82-99%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-2. MEN REPORTING TO HAVE EVER HAD A PROSTATE-SPECIFIC ANTIGEN (PSA) TEST, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	416	301	67%	62-73%		277	199	66%	60-73%		139	102	70%	62-79%	
Self-employed	108	87	79%	69-88%		70	59	81%	71-92%		38	28	67%	49-85%	
Retired	624	551	88%	85-91%		346	309	88%	84-92%		278	242	88%	83-92%	
Other	90	52	49%	36-61%		53	28	46%	31-61%		37	24	57%	35-78%	
Household Income	**					**									
<\$25,000	181	113	55%	45-64%		93	59	54%	41-66%		88	54	57%	44-71%	
\$25,000-<\$35,000	112	93	78%	68-89%		63	53	78%	65-92%		49	40	79%	65-94%	
\$35,000-<\$50,000	145	118	71%	60-81%		76	59	69%	55-82%		69	59	77%	62-91%	
\$50,000-<\$75,000	171	142	75%	66-84%		105	83	72%	62-83%		66	59	86%	75-96%	
\$75,000 or greater	460	386	79%	74-84%		304	255	78%	73-84%		156	131	80%	73-88%	
Don't know/not sure	32	28	82%	65-99%		25	21	80%	61-99%		7	7	100%		
Refused	143	115	77%	67-86%		85	69	76%	64-88%		58	46	78%	66-91%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-3. MEN REPORTING TO HAVE HAD A PROSTATE-SPECIFIC ANTIGEN (PSA) TEST IN THE PAST YEAR, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Male Population	1244	765	56%	53-60%		751	464	56%	52-60%		493	301	56%	51-62%	
Age	**					**					**				
45-49 (AA only)	42	11	24%	11-37%		37	8	21%	7-35%		5	3	44%	0-90%	
50-64 years	612	327	51%	46-55%		361	193	51%	46-57%		251	134	47%	40-54%	
65 years and older	590	427	72%	68-77%		353	263	73%	67-78%		237	164	71%	65-78%	
Race	**					**					^				
White	979	625	60%	56-64%		539	351	61%	56-66%		440	274	59%	53-64%	
African American or Black	226	114	44%	37-52%		183	94	44%	36-52%		43	20	44%	25-62%	
Other	39	26	70%	53-87%		29	19	70%	53-88%		10	7	62%	29-95%	
Marital Status	**					**					**				
Married or partner of unmarried couple	827	551	61%	57-65%		499	328	60%	55-65%		328	223	62%	56-68%	
Divorced or separated	196	105	40%	31-49%		112	62	41%	30-51%		84	43	38%	26-50%	
Widowed	125	71	56%	46-66%		78	48	57%	45-69%		47	23	52%	37-68%	
Never married	93	37	35%	23-47%		61	25	37%	23-51%		32	12	28%	8-47%	
Education	**					**					**				
Less than high school	90	34	30%	19-42%		44	13	25%	11-39%		46	21	44%	28-60%	
High school grad or GED	290	162	46%	39-53%		137	79	46%	36-56%		153	83	46%	36-55%	
College 1-3 years	245	148	54%	46-62%		131	77	53%	44-63%		114	71	57%	46-67%	
College grad	327	214	61%	54-67%		221	138	58%	51-66%		106	76	71%	61-81%	
Advanced degree	287	203	69%	63-75%		214	154	70%	63-77%		73	49	63%	50-76%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

Maryland Cancer Survey, 2008

TABLE 5-3. MEN REPORTING TO HAVE HAD A PROSTATE-SPECIFIC ANTIGEN (PSA) TEST IN THE PAST YEAR, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	416	222	49%	43-55%		277	148	49%	43-56%		139	74	48%	39-58%	
Self-employed	108	64	58%	47-69%		70	46	61%	48-74%		38	18	46%	28-64%	
Retired	624	436	68%	64-73%		346	244	68%	62-74%		278	192	70%	63-76%	
Other	90	41	39%	27-52%		53	24	41%	26-56%		37	17	33%	15-52%	
Household Income	*					^					**				
<\$25,000	181	87	42%	32-51%		93	47	43%	31-55%		88	40	38%	26-51%	
\$25,000-<\$35,000	112	68	55%	43-67%		63	37	52%	37-67%		49	31	64%	48-80%	
\$35,000-<\$50,000	145	94	58%	47-68%		76	50	58%	45-72%		69	44	57%	42-72%	
\$50,000-<\$75,000	171	105	54%	45-63%		105	58	51%	40-62%		66	47	66%	53-79%	
\$75,000 or greater	460	302	60%	54-65%		304	201	60%	54-66%		156	101	60%	51-69%	
Don't know/not sure	32	21	62%	41-83%		25	17	64%	42-87%		7	4	42%	0-85%	
Refused	143	88	59%	49-69%		85	54	60%	47-72%		58	34	56%	41-70%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

TABLE 5-4. RESPONSES TO THE QUESTION "WHAT WAS THE MOST IMPORTANT REASON YOU HAVE NEVER HAD A PSA TEST OR HAVE NOT HAD A PSA TEST IN THE LAST 12 MONTHS?" *

Selected Response †	Never had a PSA test (N=249)	Had a PSA test more than 1 year before (N=230)
	wt %	wt %
Doctor didn't order it/didn't say I needed it	31%	29%
No reason/never thought about it	28%	18%
Didn't need it, didn't know I needed the test	18%	11%
Haven't had any problems	9%	11%
Never heard of the test	11%	0%
Put it off / Didn't get around to it	5%	9%
Too expensive/no insurance /cost of test	4%	4%
Don't have a doctor	2%	3%

*Question asked of 479 men who (a) were age 50 years or older or age 45 to 49 years and African American and (b) reported they had either never had a PSA test or had not had a PSA test in the last 12 months. More than one response could be given per respondent.

† Other reasons infrequently cited include (but are not limited to) lack of time, having other health problems, had a digital rectal exam only, and not being the correct age for the test (either too young or too old.)

TABLE 5-5. RESPONDENTS REPORTING HAVING DISCUSSED PROSTATE CANCER SCREENING WITH A HEALTH CARE PROVIDER, AMONG MEN AGE 40 YEARS AND OLDER

	Has had a health care provider discussed prostate cancer screening ~			
Selected Characteristic	N	n	wt %	95% CI
Male Population	1642	1130	64%	61-67%
Area of Residence				^
Urban	980	687	64%	61-68%
Rural	662	443	64%	60-68%
Age				**
40-49 years	403	192	48%	42-54%
50-64 years	638	462	70%	66-74%
65 years and older	601	476	80%	76-84%
Race				**
White	1302	914	67%	64-70%
African American or Black	280	185	61%	53-68%
Other	60	31	48%	32-64%
Marital Status				**
Married or partner of unmarried couple	1100	781	67%	64-71%
Divorced or separated	248	161	59%	49-68%
Widowed	135	104	79%	72-87%
Never married	155	80	42%	33-51%
Education				**
Less than high school	110	48	42%	30-54%
High school grad or GED	388	231	53%	47-60%
College 1-3 years	347	234	62%	55-69%
College grad	435	322	69%	63-74%
Advanced degree	356	290	78%	72-83%
Employment Status				**
Employed for wages	686	438	62%	57-66%
Self-employed	165	102	53%	44-62%
Retired	651	513	80%	76-83%
Other	133	72	49%	38-59%
Household Income				**
<\$25,000	214	120	53%	44-62%
\$25,000-<\$35,000	137	90	59%	48-70%
\$35,000-<\$50,000	179	121	58%	49-68%
\$50,000-<\$75,000	243	176	64%	55-72%
\$75,000 or greater	657	480	69%	64-73%
Don't know/not sure	40	21	48%	29-67%
Refused	172	122	70%	61-79%

N = Number of people in the sample who responded to a survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-6. MEN REPORTING TO HAVE EVER HAD A DIGITAL RECTAL EXAM (DRE), AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Male Population	1293	1156	88%	86-90%		781	704	88%	85-91%		512	452	87%	84-91%	
Age	^					^					^				
45-49 (AA only)	44	37	80%	66-94%		39	33	80%	66-95%		5	4	78%	39-100%	
50-64 years	645	576	88%	85-91%		379	345	89%	85-93%		266	231	86%	82-91%	
65 years and older	604	543	90%	87-93%		363	326	90%	86-93%		241	217	90%	85-94%	
Race	**					**					*				
White	1016	923	91%	89-93%		557	510	92%	89-94%		459	413	89%	86-92%	
African American or Black	236	203	84%	78-90%		193	171	85%	78-91%		43	32	78%	64-93%	
Other	41	30	72%	55-89%		31	23	72%	54-90%		10	7	74%	45-100%	
Marital Status	**					**					**				
Married or partner of unmarried couple	851	784	91%	88-93%		512	467	90%	87-93%		339	317	92%	88-95%	
Divorced or separated	204	174	82%	73-90%		119	108	85%	75-95%		85	66	67%	53-82%	
Widowed	133	117	87%	81-94%		83	76	90%	83-98%		50	41	77%	63-91%	
Never married	102	78	73%	61-86%		66	52	72%	58-87%		36	26	79%	64-94%	
Education	**					**					**				
Less than high school	95	67	65%	51-78%		49	33	63%	46-80%		46	34	69%	53-86%	
High school grad or GED	309	265	83%	77-89%		146	129	85%	77-93%		163	136	80%	71-88%	
College 1-3 years	256	235	91%	86-96%		136	124	89%	83-96%		120	111	95%	91-98%	
College grad	336	312	92%	89-96%		228	210	92%	87-96%		108	102	95%	91-99%	
Advanced degree	292	274	93%	89-97%		218	205	93%	89-97%		74	69	92%	85-99%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-6. MEN REPORTING TO HAVE EVER HAD A DIGITAL RECTAL EXAM (DRE), AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	429	382	89%	85-92%		287	261	89%	85-94%		142	121	85%	78-91%	
Self-employed	114	101	88%	81-96%		73	66	89%	80-98%		41	35	85%	71-99%	
Retired	645	590	92%	89-94%		360	328	91%	88-95%		285	262	93%	90-96%	
Other	99	77	72%	60-84%		56	44	72%	57-86%		43	33	74%	56-91%	
Household Income	**					**									
<\$25,000	192	147	74%	66-83%		97	78	77%	66-88%		95	69	68%	55-81%	
\$25,000-<\$35,000	118	105	85%	76-95%		67	59	84%	71-96%		51	46	90%	79-100%	
\$35,000-<\$50,000	150	134	86%	77-94%		79	69	84%	73-95%		71	65	90%	81-98%	
\$50,000-<\$75,000	183	171	94%	90-98%		111	103	94%	88-99%		72	68	95%	90-100%	
\$75,000 or greater	467	440	93%	90-96%		310	296	94%	90-97%		157	144	92%	87-97%	
Don't know/not sure	33	28	84%	70-99%		26	21	82%	66-99%		7	7	100%		
Refused	150	131	82%	74-91%		91	78	82%	71-92%		59	53	86%	74-97%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-7. MEN REPORTING TO HAVE HAD A DIGITAL RECTAL EXAM (DRE) IN THE PAST YEAR, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Male Population	1293	735	55%	52-59%		781	469	57%	53-61%		512	266	51%	46-56%	
Age	**					**					^				
45-49 (AA only)	44	14	30%	16-45%		39	12	30%	15-45%		5	2	33%	0-76%	
50-64 years	645	354	55%	50-60%		379	225	57%	51-62%		266	129	49%	42-56%	
65 years and older	604	367	62%	57-66%		363	232	64%	58-69%		241	135	56%	49-63%	
Race	**					**					^				
White	1016	584	58%	54-62%		557	342	60%	55-65%		459	242	52%	47-57%	
African American or Black	236	134	53%	45-60%		193	115	54%	46-62%		43	19	43%	25-61%	
Other	41	17	37%	19-54%		31	12	36%	18-54%		10	5	43%	11-76%	
Marital Status	**					**					**				
Married or partner of unmarried couple	851	515	59%	55-63%		512	322	59%	55-64%		339	193	56%	50-62%	
Divorced or separated	204	100	46%	37-55%		119	64	48%	37-60%		85	36	38%	25-50%	
Widowed	133	74	57%	48-67%		83	51	61%	50-72%		50	23	43%	28-58%	
Never married	102	43	38%	26-50%		66	31	42%	28-56%		36	12	23%	7-38%	
Education	**					**					**				
Less than high school	95	37	37%	24-49%		49	19	37%	21-52%		46	18	37%	21-53%	
High school grad or GED	309	157	48%	41-56%		146	81	51%	42-61%		163	76	42%	33-51%	
College 1-3 years	256	142	55%	47-62%		136	79	55%	45-65%		120	63	54%	44-65%	
College grad	336	216	65%	59-71%		228	147	65%	58-72%		108	69	65%	54-75%	
Advanced degree	292	180	59%	52-65%		218	140	59%	52-67%		74	40	53%	39-66%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 5-7. MEN REPORTING TO HAVE HAD A DIGITAL RECTAL EXAM (DRE) IN THE PAST YEAR, AMONG MEN OF ALL RACES AGE 50 YEARS AND OLDER AND AFRICAN AMERICAN MEN AGE 45-49 YEARS

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					^					**				
Employed for wages	429	232	53%	47-58%		287	162	54%	47-60%		142	70	48%	39-57%	
Self-employed	114	70	60%	49-71%		73	49	62%	49-75%		41	21	53%	35-70%	
Retired	645	383	61%	57-66%		360	225	63%	57-68%		285	158	57%	51-64%	
Other	99	46	44%	32-56%		56	30	47%	33-62%		43	16	32%	15-49%	
Household Income	**					**					**				
<\$25,000	192	77	38%	29-46%		97	45	41%	30-52%		95	32	29%	18-40%	
\$25,000-<\$35,000	118	69	56%	44-68%		67	39	53%	39-68%		51	30	63%	47-78%	
\$35,000-<\$50,000	150	84	53%	42-63%		79	45	54%	41-67%		71	39	49%	35-63%	
\$50,000-<\$75,000	183	105	57%	49-66%		111	63	57%	47-67%		72	42	58%	46-71%	
\$75,000 or greater	467	299	62%	57-67%		310	211	63%	57-70%		157	88	56%	47-64%	
Don't know/not sure	33	21	59%	39-80%		26	17	62%	40-85%		7	4	35%	0-73%	
Refused	150	80	51%	41-61%		91	49	51%	39-63%		59	31	54%	39-68%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Chapter 6. Women's Health: Breast and Cervical Cancer Screening

Female breast cancer is the most common reportable cancer and the second leading cause of cancer deaths (after lung cancer) among Maryland women. In 2003, breast cancer accounted for 4,058 newly diagnosed cases and 820 deaths among Maryland women. Among the 50 states and the District of Columbia, Maryland women ranked 6th highest in breast cancer mortality for the period 1999-2003.¹

In 2003, there were 275 new cases and 63 deaths from cervical cancer in Maryland. During the period 1999-2003, Maryland ranked 29th highest in mortality rate for cervical cancer among the 50 states and the District of Columbia. Cervical cancer incidence and mortality rates in Maryland, as a whole, are higher among African American women than White women.¹

6.1 Breast cancer screening

Mammography and clinical breast exam (CBE) are the recommended tests to screen for breast cancer. The USPSTF recommends screening mammography every 1-2 years for women age 40 years and older.² The ACS guidelines recommend that women begin having a yearly mammogram and a CBE at age 40 years, and that women between the ages of 20 and 39 years undergo a CBE every 3 years.³ In 2007, the ACS began recommending that women at increased risk for breast cancer (based on specific criteria related to family history, genetic tendency, and clinical history) undergo additional breast screening with magnetic resonance imaging (MRI) as an adjunct to mammography.⁴

Prevalence of Mammography Screening

Among Maryland women age 40 years and older,

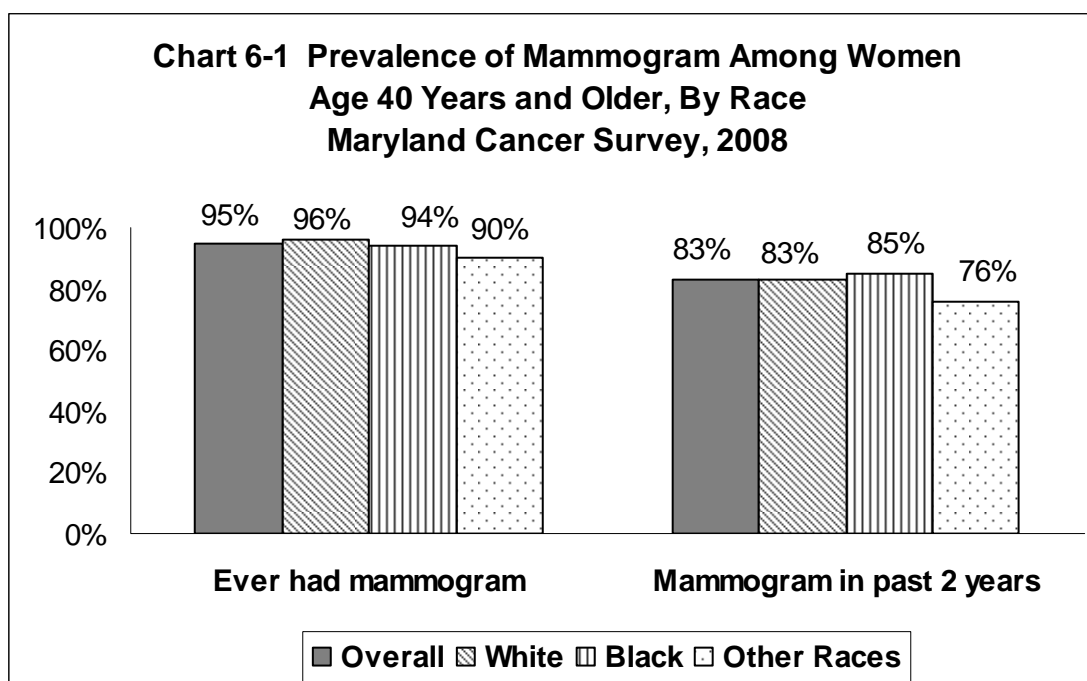
- 95% have ever had a mammogram (Chart 6-1 and Table 6-1). Although overall prevalence of breast cancer screening is high, the proportion of women ever having a mammogram was statistically significantly lower among those age 40 to 49 years compared to older age groups.
- women of other races were significantly less likely to have ever had a mammogram than White women (90% compared to 96%); African American women reported slightly lower prevalence (94%; marginally significant.)
- 70% reported having a mammogram in the past year. (Data not shown in tables.)

¹ Maryland Department of Health and Mental Hygiene. Cigarette Restitution Fund Program Cancer Report 2008. Baltimore, MD; September 2008. Available at http://www.fha.state.md.us/pdf/cancer/2008-CRF_Can_Rpt.pdf. Last accessed July 27, 2009.

² U.S. Preventive Services Task Force. Screening for Breast Cancer. February 2002. Available at <http://www.ahrq.gov/clinic/uspstf/uspsbrca.htm>. Last accessed July 27, 2009.

³ Smith RA, Cokkinides V, Brawley OW. Cancer Screening in the United States, 2008: A Review of Current American Cancer Society Guidelines and Cancer Screening Issues. CA Cancer J Clin 2008;58:161-179. Available at <http://caonline.amcancersoc.org/cgi/content/full/58/3/161>. Last accessed July 27, 2009.

⁴ Saslow D, Boetes C, Burke W et al. American Cancer Society Guidelines for Breast Screening with MRI as an Adjunct to Mammography. CA Cancer J Clin 2007;57:75-89. Available at <http://caonline.amcancersoc.org/cgi/reprint/57/2/75>. Last accessed July 27, 2009.



HP 2010 has established a target of increasing to 70% the proportion of women age 40 years and older who have received a mammogram within the preceding 2 years.⁵

- Eighty-three percent (83%) of women surveyed reported having a mammogram in the past 2 years, surpassing the HP 2010 target of 70% (Chart 6-1 and Table 6-2).
- Statistically significantly lower rates of mammogram screening within the past 2 years were found among:
 - women age 40 to 49 years (77%) and women age 75 years and older (80%), compared to women age 50 to 74 years (88-89%);
 - women who were divorced or separated compared to women who were married or partnered (77% vs. 86%); and
 - women who reported their employment status as “other” (76%), compared to those employed for wages (85%) or retired (86%).
- Women in the highest household income bracket (\$75,000 or more) reported significantly higher rates of mammogram screening within the past 2 years compared to women with household incomes of less than \$35,000.

Women who have never had a mammogram or have not had one in the past 2 years were asked to name the most important reason(s) for lack of screening (Table 6-3). Reasons most frequently cited included:

- No reason or never thought about it

⁵ U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. I. Cancer. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/Document/HTML/Volume1/03Cancer.htm>. Last accessed July 27, 2009.

- They put it off or didn't get around to it
- The doctor didn't order the test or didn't say it was needed
- The test was too expensive or respondent didn't have health insurance

HCP Recommendations and Mammography Screening

Among Maryland women age 40 years and older who had seen a physician in the past year, 85% reported that within the past year they had received a recommendation from their HCP to have a mammogram (Table 6-4).

The following groups were more likely to report receiving a mammogram recommendation from their HCP:

- Women between the ages of 40 and 74 years (compared to women age 75 years and older); and
- Those with advanced degrees (compared to women with less education).

Among the women who reported that a HCP recommended a mammogram in the past year, 79% reported having the test within the past year. Among women who did not report an HCP recommendation, only 26% reported having a mammogram within the past year. (Data not shown in tables.) Eighty-six percent (86%) of women with a family history of breast cancer reported receiving an HCP recommendation to have mammography within the past year. (Data not shown in tables.)

Family History of Breast Cancer and Mammography Screening Compliance

Having an FDR (i.e., mother, sister, or daughter) diagnosed with breast cancer increases a woman's risk for developing breast cancer. In the MCS 2008, 17% of women age 40 years and older reported they had an FDR who had been diagnosed with breast cancer. (Data not shown in tables.)

- Among these women with an FDR with breast cancer, 97% reported ever having a mammogram. This figure was significantly higher than the mammography rate of 94% among women without an FDR with breast cancer.
- When looking at mammography in the preceding year, 72% of women with an FDR with breast cancer reported having the test compared to 69% of women without that history, but this was not a statistically significant difference.

6.2 Cervical cancer screening

Cervical cytology (or the Pap test) is the screening test that is recommended for the early detection of pre-malignant and malignant changes of the cervix. The ACS recommends that women begin cervical cancer screening 3 years after becoming sexually active and no later than age 21 years, and that screening should be done every year with the regular Pap test or every 2 years using the newer liquid-based Pap test.³ Beginning at age 30 years, women who have had three negative Pap test results in a row and have no other risk factors may get screened every 2 to

3 years. Also, according to ACS guidelines, women age 70 years or older who have had three or more negative Pap tests in a row and no abnormal Pap test results in the past 10 years may choose to stop having cervical cancer screening. The USPSTF strongly recommends screening for cervical cancer in women who have been sexually active and have a cervix. They recommend against routinely screening women older than age 65 years for cervical cancer if they have had adequate recent screening with normal Pap smears and are not otherwise at high risk for cervical cancer.⁶ Screening is not helpful in women who do not have a cervix as a result of a hysterectomy (removal of the uterus and cervix) for a benign condition. Women who have had a hysterectomy but still have an intact cervix are advised to continue being screened according to the guidelines.

HP 2010 has established the following targets for cervical cancer screening among women age 18 years and older⁵:

- Increase to 97% the proportion of women who have ever had a Pap test; and
- Increase to 90% the proportion of women who received a Pap test within the preceding 3 years.

Prevalence of Pap Test Screening

The following section highlights findings related to cervical cancer screening among Maryland women age 40 years and older who have not had a hysterectomy.

- Ninety-eight percent (98%) of Maryland women reported ever having a Pap test (Chart 6-2 and Table 6-5).
- Women age 75 years and older reported lower prevalence of ever having a Pap test (95%) compared to women age 50 to 64 years (99%; Table 6-5).
- Sixty-eight percent (68%) of women had a Pap test within the past year. (Data not shown in tables.)
- Eighty-eight percent (88%) of Maryland women age 40 years and older had a Pap test within the past 3 years (Chart 6-2 and Table 6-6), slightly below the HP 2010 target of 90%. However, the HP 2010 target was written before the guidelines were changed to allow longer intervals under certain circumstances.

The prevalence of having a Pap test in the past 3 years was significantly lower among the following groups of women (Table 6-6):

- Women age 65 years and older (compared to younger women), which is consistent with USPSTF recommendations;
- Those with less than a college degree (compared to women with a college degree or higher); and
- Those with an annual household income less than \$35,000 (compared to women with household incomes of \$50,000 or more).

⁶ US Preventive Services Task Force, 2003. Screening for Cervical Cancer. Available at <http://www.ahrq.gov/CLINIC/uspstf/uspscerv.htm>. Last accessed July 27, 2009.

No significant differences by race were found in prevalence of ever having a Pap test or being up-to-date with Pap test screening.

Among women who reported having a Pap test in the preceding 3 years, 93% reported having their previous Pap test no more than 3 years prior. Of all women surveyed, 81% were following the recommendation to have repeat Pap testing at least as frequently as 3 year intervals. (Data not shown in tables.)

Women who said they never had a Pap test or have not had a Pap test in the past 3 years were asked to name the most important reason(s) for lack of screening (Table 6-7). The most frequently cited reasons included:

- No reason or they never thought about having the test (18%)
- Haven't had any problems (15%)
- The doctor didn't order it or didn't say the test was needed (14%)
- The test was too expensive or the respondent didn't have health insurance (13%)
- The respondent didn't have a doctor or hadn't visited the doctor recently (12%)

HCP Recommendations and Pap Test Screening

- Among Maryland women age 40 years and older who had seen a physician in the past year, 77% reported they received a recommendation to have a Pap test (Table 6-8). Such recommendations were less prevalent among women age 65 years and older, those with less than a high school education, retirees, and those with a household income less than \$75,000.
- Among women who said that an HCP had recommended a Pap test in the past year, 85% reported having the test within the past year. By comparison, only 19% of women who did not receive an HCP recommendation reported having a Pap test within the past year. (Data not shown in tables.)

TABLE 6-1. WOMEN REPORTING TO HAVE EVER HAD A MAMMOGRAM, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Female Population	3334	3193	95%	94-96%		1992	1914	95%	94-96%		1342	1279	94%	93-96%	
Age	**					**					**				
40-49 years	706	629	89%	86-92%		424	382	90%	86-93%		282	247	88%	83-92%	
50-64 years	1379	1346	97%	96-98%		855	835	97%	96-99%		524	511	98%	97-99%	
65-74 years	669	653	98%	97-99%		382	375	99%	97-100%		287	278	97%	96-99%	
75 years and older	580	565	98%	97-99%		331	322	98%	97-99%		249	243	98%	96-100%	
Race	**					**					^				
White	2523	2421	96%	95-97%		1344	1300	96%	95-98%		1179	1121	94%	92-96%	
African American or Black	712	682	94%	91-96%		572	545	93%	90-96%		140	137	97%	94-100%	
Other	99	90	90%	84-97%		76	69	91%	84-98%		23	21	88%	70-100%	
Marital Status	**					**					^				
Married or partner of unmarried couple	1696	1632	95%	94-97%		929	900	96%	94-97%		767	732	94%	92-96%	
Divorced or separated	598	559	92%	90-95%		403	378	92%	89-96%		195	181	94%	90-97%	
Widowed	760	739	97%	96-99%		449	440	98%	96-99%		311	299	95%	92-98%	
Never married	261	246	92%	88-97%		198	185	92%	87-97%		63	61	96%	89-100%	
Education	^					^					**				
Less than high school	259	247	94%	90-98%		141	133	94%	89-98%		118	114	95%	90-100%	
High school grad or GED	979	942	95%	93-97%		486	464	94%	92-97%		493	478	97%	95-99%	
College 1-3 years	796	751	93%	91-96%		472	452	94%	91-97%		324	299	92%	88-95%	
College grad	751	718	94%	92-97%		512	493	95%	93-97%		239	225	91%	86-96%	
Advanced degree	541	528	98%	96-99%		376	368	98%	96-100%		165	160	97%	95-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 6-1. WOMEN REPORTING TO HAVE EVER HAD A MAMMOGRAM, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	1280	1224	95%	93-96%		800	768	95%	93-97%		480	456	95%	92-97%	
Self-employed	193	184	96%	92-99%		107	102	96%	92-100%		86	82	95%	90-100%	
Retired	1271	1242	98%	98-99%		748	734	99%	98-99%		523	508	97%	96-99%	
Other	579	533	90%	86-93%		328	302	90%	86-94%		251	231	90%	85-95%	
Household Income	**					**					^				
<\$25,000	638	593	90%	86-94%		339	311	89%	84-93%		299	282	94%	91-97%	
\$25,000-<\$35,000	295	272	92%	89-96%		159	147	93%	89-97%		136	125	91%	85-97%	
\$35,000-<\$50,000	367	355	95%	92-98%		199	194	95%	91-100%		168	161	94%	89-99%	
\$50,000-<\$75,000	392	376	93%	89-97%		238	230	94%	89-98%		154	146	93%	87-98%	
\$75,000 or greater	918	899	98%	97-99%		610	599	98%	97-99%		308	300	97%	94-99%	
Don't know/not sure	222	213	96%	92-100%		127	124	97%	92-100%		95	89	92%	86-99%	
Refused	502	485	95%	93-98%		320	309	95%	92-98%		182	176	96%	92-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 6-2. WOMEN REPORTING TO HAVE HAD A MAMMOGRAM IN THE LAST TWO YEARS, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Female Population	3334	2798	83%	81-85%		1992	1668	83%	81-85%		1342	1130	83%	81-86%	
Age	**					**					**				
40-49 years	706	538	77%	73-80%		424	327	77%	73-82%		282	211	74%	68-80%	
50-64 years	1379	1209	88%	86-90%		855	750	88%	85-90%		524	459	88%	85-91%	
65-74 years	669	585	89%	86-92%		382	332	88%	85-92%		287	253	90%	87-94%	
75 years and older	580	466	80%	76-84%		331	259	79%	74-84%		249	207	83%	77-88%	
Race	^					^					^				
White	2523	2114	83%	81-85%		1344	1118	83%	80-85%		1179	996	83%	81-86%	
African American or Black	712	609	85%	82-88%		572	492	85%	82-89%		140	117	84%	76-91%	
Other	99	75	76%	66-86%		76	58	76%	65-87%		23	17	74%	53-95%	
Marital Status	**					**					*				
Married or partner of unmarried couple	1696	1472	86%	84-88%		929	809	86%	84-89%		767	663	85%	82-88%	
Divorced or separated	598	470	77%	72-81%		403	312	76%	71-81%		195	158	81%	74-87%	
Widowed	760	629	82%	78-86%		449	376	83%	78-87%		311	253	80%	75-85%	
Never married	261	211	78%	72-85%		198	161	79%	72-86%		63	50	72%	55-88%	
Education	**					**					**				
Less than high school	259	208	78%	72-85%		141	112	78%	70-86%		118	96	79%	69-89%	
High school grad or GED	979	816	82%	79-85%		486	396	81%	77-85%		493	420	85%	81-89%	
College 1-3 years	796	640	79%	76-83%		472	380	79%	75-84%		324	260	80%	74-85%	
College grad	751	641	84%	81-87%		512	439	85%	81-88%		239	202	80%	74-86%	
Advanced degree	541	486	90%	87-93%		376	337	90%	86-93%		165	149	91%	86-96%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 6-2. WOMEN REPORTING TO HAVE HAD A MAMMOGRAM IN THE LAST TWO YEARS, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	1280	1102	85%	83-87%		800	688	85%	82-88%		480	414	86%	82-89%	
Self-employed	193	158	80%	72-87%		107	89	80%	71-89%		86	69	79%	69-88%	
Retired	1271	1086	86%	84-88%		748	634	86%	83-88%		523	452	88%	85-91%	
Other	579	445	76%	71-80%		328	252	77%	71-82%		251	193	73%	66-80%	
Household Income	**					**					^				
<\$25,000	638	499	77%	72-81%		339	263	76%	70-81%		299	236	79%	74-85%	
\$25,000-<\$35,000	295	234	81%	76-86%		159	128	84%	78-89%		136	106	74%	65-82%	
\$35,000-<\$50,000	367	309	80%	74-86%		199	164	79%	72-86%		168	145	82%	75-89%	
\$50,000-<\$75,000	392	338	82%	77-87%		238	203	82%	76-88%		154	135	83%	75-91%	
\$75,000 or greater	918	807	88%	85-90%		610	536	88%	85-91%		308	271	87%	83-91%	
Don't know/not sure	222	182	80%	72-87%		127	100	77%	68-87%		95	82	87%	79-94%	
Refused	502	429	86%	82-90%		320	274	86%	82-90%		182	155	85%	80-91%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 6-3. RESPONSES TO THE QUESTION "WHAT WAS THE MOST IMPORTANT REASON YOU HAVE NEVER HAD/NOT HAD A MAMMOGRAM IN THE LAST TWO YEARS?" *

Selected Response †	Never had a mammogram (N=141)	Had a mammogram more than 2 years before (N=395)
	wt %	wt %
No reason, never thought about it	17%	18%
Put it off/didn't get around to it	13%	18%
Doctor didn't order it/didn't say I needed it	14%	12%
Too expensive/no insurance/cost of test	12%	14%
Didn't need/ didn't know I needed this type of test	7%	7%
Haven't had any problems	8%	6%
Too painful, unpleasant, or embarrassing	3%	6%
Don't have a doctor	2%	3%
Didn't want to know I had cancer**	5%	1%

*Question asked of 536 female respondents, age 40 years or older, who reported they have never had a mammogram (n=141) or have not had a mammogram in the last 2 years (n=395). More than one response could be given per respondent.

† Other reasons infrequently cited include (but are not limited to) lack of time, having other health problems, believes the test is harmful or unreliable, or does the breast self-exam

** Statistically significant difference between groups (p-value ≤ 0.05)

TABLE 6-4. WOMEN REPORTING THAT A HEALTH CARE PROVIDER RECOMMENDED BREAST CANCER SCREENING WITH MAMMOGRAM IN THE PAST YEAR, AMONG THOSE AGE 40 YEARS AND OLDER WHO SAW A PROVIDER IN THE PAST YEAR

Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Female Population	3285	2798	85%	84-87%	
Area of Residence					[^]
Urban	1966	1680	85%	84-87%	
Rural	1319	1118	84%	82-87%	
Age					**
40-49 years	684	575	84%	81-87%	
50-64 years	1360	1200	88%	86-90%	
65-74 years	661	580	88%	85-91%	
75 years and older	580	443	75%	71-80%	
Race					[^]
White	2483	2115	85%	83-87%	
African American or Black	704	608	87%	84-90%	
Other	98	75	78%	68-88%	
Marital Status					**
Married or partner of unmarried couple	1672	1466	88%	86-89%	
Divorced or separated	589	487	82%	78-86%	
Widowed	751	617	81%	77-84%	
Never married	255	210	82%	76-88%	
Education					**
Less than high school	255	200	79%	73-85%	
High school grad or GED	967	816	84%	81-87%	
College 1-3 years	783	657	84%	80-87%	
College grad	734	633	86%	83-89%	
Advanced degree	538	485	91%	88-94%	
Employment Status					**
Employed for wages	1254	1119	89%	87-91%	
Self-employed	189	155	82%	75-89%	
Retired	1264	1052	83%	80-85%	
Other	569	465	81%	77-86%	
Household Income					**
<\$25,000	626	510	84%	80-87%	
\$25,000-<\$35,000	288	238	83%	77-88%	
\$35,000-<\$50,000	358	307	82%	77-88%	
\$50,000-<\$75,000	387	348	88%	84-92%	
\$75,000 or greater	910	800	88%	85-90%	
Don't know/not sure	220	174	78%	71-85%	
Refused	496	421	85%	81-89%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

****** p-value \leq 0.05

***** p-value > 0.05 - 0.1

[^] p-value > 0.1

**TABLE 6-5. WOMEN REPORTING TO HAVE EVER HAD A PAP TEST, AMONG THOSE AGE 40 YEARS AND OLDER
WHO HAVE NOT HAD A HYSTERECTOMY**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Female Population	2185	2148	98%	97-99%		1326	1300	98%	97-99%		859	848	99%	98-100%	
Age	**					^									
40-49 years	588	580	98%	96-100%		353	349	98%	95-100%		235	231	98%	97-100%	
50-64 years	949	941	99%	98-100%		601	593	99%	98-100%		348	348	100%	100%	
65-74 years	366	360	99%	97-100%		206	201	98%	97-100%		160	159	100%	99-100%	
75 years and older	282	267	95%	93-98%		166	157	95%	92-98%		116	110	96%	92-99%	
Race	^					^									
White	1690	1661	99%	98-99%		929	910	99%	98-99%		761	751	99%	98-100%	
African American or Black	424	420	98%	94-100%		344	340	97%	94-100%		80	80	100%	100%	
Other	71	67	96%	92-100%		53	50	96%	92-100%		18	17	98%	94-100%	
Marital Status	**					**									
Married or partner of unmarried couple	1193	1182	99%	99-100%		662	656	99%	99-100%		531	526	99%	98-100%	
Divorced or separated	395	390	99%	98-100%		272	267	99%	97-100%		123	123	100%	100%	
Widowed	393	381	97%	95-99%		238	231	97%	95-99%		155	150	97%	95-100%	
Never married	191	182	93%	85-100%		145	137	92%	83-100%		46	45	99%	97-100%	
Education	**					**									
Less than high school	138	134	97%	93-100%		73	69	95%	90-100%		65	65	100%	100%	
High school grad or GED	572	557	96%	93-100%		278	268	95%	90-100%		294	289	99%	98-100%	
College 1-3 years	505	499	99%	98-100%		307	305	100%	99-100%		198	194	97%	94-100%	
College grad	540	531	99%	98-100%		368	360	99%	98-100%		172	171	100%	99-100%	
Advanced degree	428	425	100%	99-100%		299	297	100%	99-100%		129	128	100%	99-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

**TABLE 6-5. WOMEN REPORTING TO HAVE EVER HAD A PAP TEST, AMONG THOSE AGE 40 YEARS AND OLDER
WHO HAVE NOT HAD A HYSTERECTOMY**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status															
Employed for wages	962	954	99%	99-100%		607	600	99%	99-100%		355	354	100%	100%	
Self-employed	146	146	100%	100%		86	86	100%	100%		60	60	100%	100%	
Retired	675	655	97%	96-99%		399	386	97%	96-99%		276	269	98%	97-100%	
Other	395	386	96%	92-100%		228	222	96%	91-100%		167	164	98%	95-100%	
Household Income					**					**					
<\$25,000	348	336	94%	88-100%		188	178	93%	86-100%		160	158	99%	98-100%	
\$25,000-<\$35,000	184	179	97%	94-100%		110	105	96%	92-100%		74	74	100%	100%	
\$35,000-<\$50,000	236	229	98%	95-100%		128	125	98%	96-100%		108	104	96%	91-100%	
\$50,000-<\$75,000	264	262	100%	99-100%		157	156	100%	99-100%		107	106	100%	99-100%	
\$75,000 or greater	704	701	100%	100%		474	472	100%	100%		230	229	100%	99-100%	
Don't know/not sure	124	120	98%	95-100%		63	61	98%	95-100%		61	59	97%	93-100%	
Refused	325	321	99%	98-100%		206	203	99%	98-100%		119	118	100%	99-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

TABLE 6-6. WOMEN REPORTING TO HAVE HAD A PAP TEST IN THE LAST THREE YEARS, AMONG THOSE AGE 40 YEARS AND OLDER WHO HAVE NOT HAD A HYSTERECTOMY

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Female Population	2185	1855	88%	86-89%		1326	1135	88%	86-90%		859	720	85%	83-88%	
Age	**					**					**				
40-49 years	588	540	92%	90-95%		353	328	93%	89-96%		235	212	90%	87-94%	
50-64 years	949	855	91%	88-93%		601	542	91%	88-93%		348	313	90%	87-94%	
65-74 years	366	295	82%	78-87%		206	164	83%	77-88%		160	131	82%	75-89%	
75 years and older	282	165	60%	53-67%		166	101	62%	54-70%		116	64	52%	41-62%	
Race	^					^					^				
White	1690	1425	87%	85-89%		929	788	88%	86-90%		761	637	85%	82-88%	
African American or Black	424	372	89%	85-93%		344	302	89%	85-93%		80	70	89%	82-96%	
Other	71	58	85%	76-95%		53	45	86%	76-96%		18	13	79%	61-98%	
Marital Status	**					**					**				
Married or partner of unmarried couple	1193	1075	91%	90-93%		662	605	92%	90-94%		531	470	88%	85-91%	
Divorced or separated	395	323	82%	77-87%		272	220	81%	76-87%		123	103	85%	78-92%	
Widowed	393	288	76%	72-81%		238	178	78%	72-83%		155	110	71%	63-79%	
Never married	191	156	84%	76-93%		145	123	85%	76-94%		46	33	76%	63-90%	
Education	**					**					**				
Less than high school	138	99	76%	68-84%		73	52	78%	68-87%		65	47	71%	59-84%	
High school grad or GED	572	463	84%	79-88%		278	223	83%	77-89%		294	240	85%	81-89%	
College 1-3 years	505	409	83%	79-87%		307	250	83%	78-88%		198	159	82%	76-88%	
College grad	540	485	92%	90-95%		368	332	93%	90-95%		172	153	89%	83-94%	
Advanced degree	428	397	95%	92-97%		299	277	95%	92-97%		129	120	94%	90-98%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 6-6. WOMEN REPORTING TO HAVE HAD A PAP TEST IN THE LAST THREE YEARS, AMONG THOSE AGE 40 YEARS AND OLDER WHO HAVE NOT HAD A HYSTERECTOMY

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Employment Status	**					**					**				
Employed for wages	962	893	94%	92-96%		607	565	94%	92-96%		355	328	93%	90-96%	
Self-employed	146	129	92%	87-96%		86	78	93%	88-99%		60	51	84%	74-94%	
Retired	675	504	76%	73-80%		399	298	77%	72-81%		276	206	76%	70-81%	
Other	395	322	83%	78-88%		228	188	84%	77-90%		167	134	81%	74-87%	
Household Income	**					**					**				
<\$25,000	348	254	77%	70-83%		188	140	78%	70-86%		160	114	70%	62-78%	
\$25,000-<\$35,000	184	138	77%	70-84%		110	82	78%	70-87%		74	56	71%	59-83%	
\$35,000-<\$50,000	236	201	86%	80-92%		128	113	88%	81-95%		108	88	81%	72-89%	
\$50,000-<\$75,000	264	237	89%	85-94%		157	134	87%	81-92%		107	103	97%	94-100%	
\$75,000 or greater	704	667	95%	94-97%		474	448	95%	93-97%		230	219	96%	93-98%	
Don't know/not sure	124	90	77%	67-86%		63	46	77%	65-89%		61	44	75%	63-87%	
Refused	325	268	87%	83-91%		206	172	87%	82-92%		119	96	86%	79-92%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 6-7. RESPONSES TO THE QUESTION "WHAT WAS THE MOST IMPORTANT REASON YOU HAVE NEVER HAD/NOT HAD A PAP TEST IN THE LAST THREE YEARS?" *

Selected Response	wt %
No reason, never thought about it	18%
Haven't had any problems	15%
Doctor didn't order it/didn't say I needed it	14%
Too expensive/no insurance/cost of test	13%
Don't have a doctor/ Have not visited a doctor recently	12%
Put it off/didn't get around to it	10%
Didn't need/ didn't know I needed this type of test	8%
Too painful, unpleasant, or embarrassing	5%
Did not want to know if I had cancer	2%

*Question asked of 330 female respondents, age 40 years or older (who have not had a hysterectomy), who reported they have never had a Pap test (n=37) or have not had a Pap test in the last 3 years (n=293). More than one response could be given per respondent.

Because of the small number of women who reported never having a Pap test, these results are not presented separately for the two groups (never had a pap test and have not had a pap test in the past 3 years).

TABLE 6-8. WOMEN REPORTING THAT A HEALTH CARE PROVIDER RECOMMENDED CERVICAL CANCER SCREENING WITH PAP TEST IN THE PAST YEAR, AMONG THOSE AGE 40 YEARS AND OLDER WHO HAVE NOT HAD A HYSTERECTOMY AND WHO SAW A PROVIDER IN THE PAST YEAR

Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Female Population	2145	1603	77%	75-79%	
Area of Residence					[^]
Urban	1298	979	77%	74-80%	
Rural	847	624	76%	73-80%	
Age					**
40-49 years	571	475	81%	77-85%	
50-64 years	930	749	81%	78-84%	
65-74 years	359	248	72%	66-77%	
75 years and older	285	131	47%	40-54%	
Race					[^]
White	1662	1241	77%	75-80%	
African American or Black	413	310	76%	70-81%	
Other	70	52	80%	70-91%	
Marital Status					**
Married or partner of unmarried couple	1170	944	82%	80-85%	
Divorced or separated	385	275	71%	66-77%	
Widowed	392	242	61%	55-67%	
Never married	185	131	71%	61-80%	
Education					**
Less than high school	135	77	59%	48-70%	
High school grad or GED	558	401	72%	67-77%	
College 1-3 years	497	361	75%	70-80%	
College grad	529	420	81%	76-85%	
Advanced degree	424	342	84%	80-88%	
Employment Status					**
Employed for wages	936	789	84%	81-87%	
Self-employed	144	112	78%	70-87%	
Retired	669	415	63%	59-68%	
Other	390	282	73%	67-79%	
Household Income					**
<\$25,000	341	220	65%	57-73%	
\$25,000-<\$35,000	175	118	73%	66-81%	
\$35,000-<\$50,000	230	172	72%	64-80%	
\$50,000-<\$75,000	260	200	74%	67-81%	
\$75,000 or greater	692	584	86%	83-89%	
Don't know/not sure	125	74	67%	57-77%	
Refused	322	235	76%	71-82%	

N = Number of people in the sample who responded to a survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

****** p-value ≤ 0.05

***** p-value $> 0.05 - 0.1$

[^] p-value > 0.1

Chapter 7. Oral Cancer Screening

Oral cancer develops in the oral cavity or pharynx. Tobacco use (smoking cigarettes, pipes, or cigars and using smokeless tobacco) and heavy alcohol use are the greatest risk factors for developing oral cancer. In 2003, there were 652 new cases and 131 deaths from oral cancer among Maryland residents. Among the 50 states and the District of Columbia, Maryland ranked 18th highest for oral cancer mortality during 1999-2003. Maryland men had higher oral cancer incidence and mortality than women; rates for African Americans and Whites in Maryland were similar.¹

The screening examination for oral cancer consists of visual inspection of the oral cavity and pharynx (mouth and throat) for lesions or discolorations, and feeling the oral structures (such as the tongue) for masses. This exam is usually performed by a dentist or dental hygienist during a routine dental examination or by a physician, nurse practitioner, or physician's assistant during a physical exam.

Prevalence of Oral Cancer Screening

- Among Marylanders age 40 years and older, half (50%) report that they have ever had an oral cancer screening exam (Chart 7-1 and Table 7-1).

Statewide, a significantly lower prevalence of ever having an oral cancer screening exam was seen among the following groups:

- Persons age 40 to 49 years (46%) and 65 years and older (46%) compared to those age 50 to 64 years (56%);
- Non-White residents (33% among African Americans and 38% among those of other races compared to 58% among Whites);

Prevalence of oral cancer screening increased with increasing levels of education and annual household income.

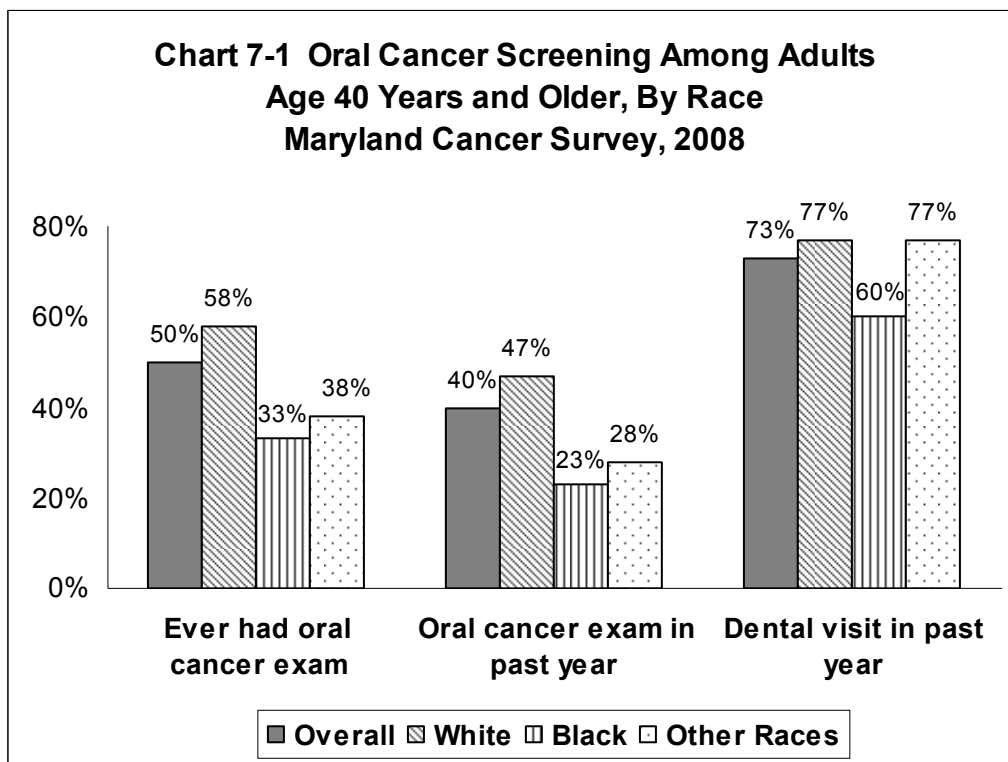
Eighty-four percent (84%) of those who have ever had oral cancer screening reported that the examination was performed by a dentist or dental specialist, 11% by a dental hygienist, and 5% by a physician. (Data not shown in tables.)

One target of the HP 2010 program is to increase to 20% the proportion of adults age 40 years and older who have had an oral cancer screening exam in the past 12 months.²

¹ Maryland Department of Health and Mental Hygiene. Cigarette Restitution Fund Cancer Report 2008. Baltimore, MD; September 2008. Available at http://www.fha.state.md.us/pdf/cancer/2008-CRF_Can_Rpt.pdf. Last accessed July 27, 2009.

² U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. II. Oral Health. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/document/HTML/Volume2/21Oral.htm>. Last accessed July 27, 2009.

- Forty percent (40%) of Marylanders age 40 years and older had an oral cancer exam within the preceding year (Chart 7-1 and Table 7-2), exceeding the HP 2010 target. Differences in the prevalence of having oral cancer screening within the preceding year were seen based on race, level of education, and income level (Table 7-2).
- Only 23% of African Americans and 28% of persons of other non-White races had been screened for oral cancer in the past year, compared to 47% of Whites.
- Persons with less than a high school education (16%) and high school graduates (27%) had significantly lower prevalence of oral cancer screening in the past year than persons with higher education.
- Oral cancer screening in the past year was less common among persons with an annual household income of less than \$35,000 compared to respondents with higher income levels.



Access to Dental Care and Oral Cancer Screening

A high percentage (94%) of Marylanders age 40 years or older who had been screened for oral cancer reported that their screening tests were performed by a dentist or dental hygienist. (Data not shown in tables.) This highlights the importance of routine dental visits as a predictor of oral cancer screening. The HP 2010 has set a target to increase to 56% the proportion of children and adults (all ages) who use the oral care system each year.²

Among Marylanders age 40 years and older,

- 73% reported that they had visited a dentist or dental clinic in the past year for any reason (Chart 7-1 and Table 7-3).
- dental visits in the past year were less frequently reported among African Americans and persons with a high school education or less.
- the percentage reporting to have had a dental visit in the past year increased with increasing level of household income.

While 73% of Marylanders have visited a dentist in the past year (for any reason) and 84% saw an HCP for a routine check-up in the past year, only 40% of MCS respondents reported having an oral cancer screening exam in that time. It is not known whether these dental visits in the past year were for acute care or for preventive care (visits which are more likely to include an oral cancer exam). Alternatively, dental providers may be performing oral cancer screening and not making a point of discussing the exam with their patients.

The percentage of people who ever had an oral cancer screening exam fell dramatically as the number of years since the last dental visit increased. (Data not shown in tables.)

- Sixty percent (60%) of people who visited a dentist in the past year reported they have ever had an oral cancer screening exam, compared to 24% who saw a dentist 1 or more years before
- Of the people who visited a dentist in the past year for any reason, only 54% reported receiving an oral cancer exam in the past year.

TABLE 7-1. PEOPLE REPORTING THEY HAVE EVER HAD AN ORAL CANCER SCREENING EXAM, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4804	2463	50%	48-52%		2859	1478	50%	48-53%		1945	985	49%	46-52%	
Gender	^					^					*				
Male	1585	814	50%	47-53%		940	505	51%	47-55%		645	309	46%	42-51%	
Female	3219	1649	50%	48-52%		1919	973	50%	47-52%		1300	676	52%	48-55%	
Age	**					**					**				
40-49 years	1080	520	46%	43-50%		647	311	46%	42-51%		433	209	46%	41-52%	
50-64 years	1950	1106	56%	53-59%		1189	684	56%	53-60%		761	422	55%	50-59%	
65 years and older	1774	837	46%	44-49%		1023	483	47%	43-50%		751	354	45%	41-49%	
Race	**					**					**				
White	3697	2114	58%	56-60%		1981	1184	59%	57-62%		1716	930	54%	51-56%	
African American or Black	957	303	33%	29-37%		767	257	34%	30-38%		190	46	23%	16-30%	
Other	150	46	38%	27-48%		111	37	39%	28-50%		39	9	18%	6-30%	
Gender and Race	**					**					**				
White male	1253	700	56%	53-60%		683	405	58%	54-62%		570	295	52%	47-56%	
African American male	275	93	35%	28-41%		218	84	38%	30-45%		57	9	15%	5-24%	
Other male	57	21	40%	24-56%		39	16	41%	23-58%		18	5	27%	5-48%	
White female	2444	1414	59%	56-61%		1298	779	60%	57-63%		1146	635	55%	52-59%	
African American female	682	210	31%	27-36%		549	173	31%	27-36%		133	37	31%	22-41%	
Other female	93	25	36%	22-49%		72	21	38%	23-52%		21	4	13%	0-26%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 7-1. PEOPLE REPORTING THEY HAVE EVER HAD AN ORAL CANCER SCREENING EXAM, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					**				
Married or partner of unmarried couple	2713	1528	55%	53-58%		1528	893	56%	53-59%		1185	635	52%	49-55%	
Divorced or separated	808	379	42%	38-47%		519	244	43%	37-48%		289	135	41%	34-48%	
Widowed	861	380	42%	38-46%		510	218	41%	36-46%		351	162	44%	39-50%	
Never married	402	166	34%	29-40%		290	116	34%	28-40%		112	50	36%	25-47%	
Education	**					**					**				
Less than high school	361	84	22%	16-27%		194	44	22%	14-29%		167	40	21%	13-28%	
High school grad or GED	1325	530	37%	34-41%		641	233	35%	31-40%		684	297	42%	37-46%	
College 1-3 years	1101	553	47%	43-51%		629	307	45%	40-49%		472	246	53%	47-58%	
College grad	1138	710	61%	58-65%		772	478	62%	57-66%		366	232	59%	53-65%	
Advanced degree	866	582	66%	62-70%		616	413	66%	61-70%		250	169	64%	57-72%	
Employment Status	**					**					**				
Employed for wages	1906	1054	53%	50-56%		1198	665	53%	50-56%		708	389	54%	50-59%	
Self-employed	347	198	54%	48-61%		196	112	55%	47-63%		151	86	53%	43-62%	
Retired	1849	903	49%	46-52%		1067	521	49%	46-53%		782	382	47%	43-51%	
Other	685	299	41%	36-45%		385	172	42%	36-48%		300	127	38%	31-44%	
Household Income	**					**					**				
<\$25,000	826	253	27%	23-31%		431	127	26%	21-31%		395	126	29%	24-35%	
\$25,000-<\$35,000	415	177	38%	31-44%		225	83	35%	27-42%		190	94	46%	38-55%	
\$35,000-<\$50,000	532	276	50%	45-56%		277	142	51%	44-58%		255	134	47%	40-54%	
\$50,000-<\$75,000	617	352	51%	45-56%		366	201	50%	43-56%		251	151	54%	47-61%	
\$75,000 or greater	1527	963	61%	58-64%		1012	646	61%	58-65%		515	317	60%	55-65%	
Don't know/not sure	248	103	38%	30-46%		149	62	38%	29-48%		99	41	37%	26-48%	
Refused	639	339	53%	48-58%		399	217	54%	48-60%		240	122	48%	41-56%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

**TABLE 7-2. PEOPLE REPORTING THEY HAVE HAD AN ORAL CANCER EXAM IN THE PAST YEAR,
AMONG THOSE AGE 40 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4804	1963	40%	38-41%		2859	1189	40%	38-42%		1945	774	38%	35-41%	
Gender	^					^					**				
Male	1585	637	39%	36-42%		940	403	40%	37-44%		645	234	35%	30-39%	
Female	3219	1326	40%	38-42%		1919	786	40%	37-42%		1300	540	41%	38-44%	
Age	**					**					**				
40-49 years	1080	392	34%	31-38%		647	238	34%	30-38%		433	154	34%	29-39%	
50-64 years	1950	887	45%	43-48%		1189	556	46%	43-50%		761	331	42%	38-46%	
65 years and older	1774	684	38%	35-40%		1023	395	38%	35-41%		751	289	37%	33-40%	
Race	**					**					**				
White	3697	1717	47%	45-49%		1981	979	49%	46-51%		1716	738	42%	39-45%	
African American or Black	957	212	23%	20-27%		767	181	24%	20-28%		190	31	16%	9-22%	
Other	150	34	28%	18-38%		111	29	29%	19-40%		39	5	10%	1-20%	
Gender and Race	**					**					**				
White male	1253	558	45%	42-48%		683	332	47%	43-52%		570	226	39%	35-43%	
African American male	275	63	25%	19-30%		218	57	26%	20-33%		57	6	10%	1-19%	
Other male	57	16	30%	15-44%		39	14	31%	15-47%		18	2	11%	0-27%	
White female	2444	1159	48%	46-51%		1298	647	50%	47-53%		1146	512	44%	41-48%	
African American female	682	149	22%	18-26%		549	124	22%	18-27%		133	25	21%	12-30%	
Other female	93	18	26%	13-40%		72	15	28%	13-42%		21	3	9%	0-21%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 7-2. PEOPLE REPORTING THEY HAVE HAD AN ORAL CANCER EXAM IN THE PAST YEAR,
AMONG THOSE AGE 40 YEARS AND OLDER**

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					**				
Married or partner of unmarried couple	2713	1246	45%	42-47%		1528	744	46%	43-49%		1185	502	40%	37-44%	
Divorced or separated	808	290	31%	27-35%		519	183	31%	26-36%		289	107	32%	25-38%	
Widowed	861	297	32%	28-35%		510	170	31%	27-35%		351	127	35%	29-41%	
Never married	402	121	25%	20-30%		290	86	25%	19-31%		112	35	24%	15-33%	
Education	**					**					**				
Less than high school	361	60	16%	10-21%		194	31	17%	10-24%		167	29	13%	8-18%	
High school grad or GED	1325	405	27%	24-31%		641	170	25%	21-29%		684	235	32%	28-37%	
College 1-3 years	1101	428	36%	32-39%		629	237	34%	30-38%		472	191	41%	36-47%	
College grad	1138	583	50%	47-54%		772	402	51%	47-56%		366	181	46%	40-52%	
Advanced degree	866	483	53%	48-57%		616	346	53%	48-58%		250	137	49%	42-57%	
Employment Status	**					**					**				
Employed for wages	1906	833	42%	39-44%		1198	530	41%	38-45%		708	303	42%	38-46%	
Self-employed	347	154	43%	36-49%		196	91	44%	36-52%		151	63	37%	28-46%	
Retired	1849	751	41%	38-43%		1067	434	41%	38-45%		782	317	39%	35-42%	
Other	685	218	29%	25-34%		385	128	31%	25-36%		300	90	26%	20-32%	
Household Income	**					**					**				
<\$25,000	826	177	18%	15-21%		431	89	18%	14-22%		395	88	18%	14-22%	
\$25,000-<\$35,000	415	123	25%	19-30%		225	58	23%	17-30%		190	65	28%	21-35%	
\$35,000-<\$50,000	532	207	37%	32-42%		277	105	37%	31-44%		255	102	36%	29-43%	
\$50,000-<\$75,000	617	278	39%	34-44%		366	160	38%	32-44%		251	118	40%	34-47%	
\$75,000 or greater	1527	810	50%	47-53%		1012	545	50%	47-54%		515	265	50%	45-55%	
Don't know/not sure	248	80	30%	23-37%		149	51	31%	22-40%		99	29	27%	17-37%	
Refused	639	288	45%	40-50%		399	181	45%	40-51%		240	107	42%	35-50%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 7-3. PEOPLE REPORTING DENTAL VISITS DURING THE PAST YEAR, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4962	3656	73%	71-75%		2961	2213	73%	71-75%		2001	1443	72%	69-74%	
Gender	**					*					**				
Male	1653	1182	71%	68-73%		986	722	71%	68-75%		667	460	69%	65-73%	
Female	3309	2474	75%	73-77%		1975	1491	75%	73-77%		1334	983	74%	71-77%	
Age	**					**					**				
40-49 years	1106	818	71%	68-75%		663	486	71%	67-75%		443	332	73%	68-78%	
50-64 years	2014	1542	76%	74-78%		1228	953	76%	74-79%		786	589	75%	71-78%	
65 years and older	1842	1296	70%	68-73%		1070	774	71%	68-75%		772	522	66%	62-70%	
Race	**					**					**				
White	3820	2941	77%	76-79%		2058	1639	79%	77-81%		1762	1302	74%	71-76%	
African American or Black	984	599	60%	56-64%		787	484	60%	56-65%		197	115	58%	49-67%	
Other	158	116	77%	69-85%		116	90	78%	69-87%		42	26	64%	47-81%	
Gender and Race	**					**					**				
White male	1310	981	76%	73-78%		720	564	77%	73-81%		590	417	71%	67-76%	
African American male	283	158	55%	48-62%		225	126	55%	48-63%		58	32	55%	39-70%	
Other male	60	43	77%	63-90%		41	32	78%	64-92%		19	11	62%	38-85%	
White female	2510	1960	79%	77-81%		1338	1075	80%	78-83%		1172	885	76%	74-79%	
African American female	701	441	64%	59-68%		562	358	64%	59-69%		139	83	61%	51-71%	
Other female	98	73	77%	67-87%		75	58	78%	67-89%		23	15	66%	43-88%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

TABLE 7-3. PEOPLE REPORTING DENTAL VISITS DURING THE PAST YEAR, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					**				
Married or partner of unmarried couple	2797	2220	78%	76-80%		1582	1275	79%	76-81%		1215	945	76%	73-79%	
Divorced or separated	839	573	65%	60-70%		538	376	65%	59-71%		301	197	64%	57-72%	
Widowed	888	582	63%	59-67%		528	355	63%	58-68%		360	227	62%	56-68%	
Never married	416	263	58%	51-64%		299	194	58%	51-66%		117	69	53%	40-65%	
Education	**					**					**				
Less than high school	363	143	39%	32-45%		194	77	39%	30-47%		169	66	38%	29-47%	
High school grad or GED	1351	862	61%	57-65%		657	402	59%	55-64%		694	460	64%	60-69%	
College 1-3 years	1145	841	71%	67-74%		655	469	68%	63-73%		490	372	78%	74-82%	
College grad	1185	1011	85%	83-88%		801	697	86%	84-89%		384	314	80%	75-84%	
Advanced degree	903	788	85%	82-88%		645	561	85%	81-88%		258	227	86%	80-92%	
Employment Status	**					**					**				
Employed for wages	1965	1548	78%	75-80%		1233	981	78%	75-81%		732	567	77%	74-81%	
Self-employed	360	271	76%	70-82%		207	159	76%	69-83%		153	112	76%	69-84%	
Retired	1914	1392	72%	69-74%		1109	821	73%	70-76%		805	571	70%	66-73%	
Other	705	433	59%	54-63%		398	244	59%	53-65%		307	189	58%	51-66%	
Household Income	**					**					**				
<\$25,000	840	421	47%	43-52%		438	234	49%	43-55%		402	187	41%	35-47%	
\$25,000-<\$35,000	434	268	59%	53-65%		237	148	60%	52-68%		197	120	56%	47-64%	
\$35,000-<\$50,000	548	405	68%	63-73%		288	205	65%	58-72%		260	200	75%	68-82%	
\$50,000-<\$75,000	634	498	74%	69-79%		380	300	73%	67-80%		254	198	75%	69-82%	
\$75,000 or greater	1581	1381	85%	83-87%		1046	902	85%	82-87%		535	479	87%	84-91%	
Don't know/not sure	253	164	59%	50-67%		149	94	58%	48-68%		104	70	61%	49-73%	
Refused	672	519	78%	74-82%		423	330	79%	74-83%		249	189	77%	71-83%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Chapter 8. Access to Health Care and Cancer Screening

Health Care Coverage

Increasing the proportion of people under age 65 years who have health care insurance is one of the goals of HP 2010.¹ The HP 2010 target is to increase the percentage of persons with health insurance coverage from a national baseline of 83% to 100%.

Among Maryland adults age 40 years and older,

- 94% reported they have some form of health insurance (Table 8-1). Based on the MCS 2008 results, Maryland has not yet attained the HP 2010 target of 100% for health insurance coverage.

Statistically significant differences in health insurance status were observed by several demographic characteristics. The proportion of adults with health insurance was statistically significantly lower among the following groups:

- Younger respondents (91% of those age 40 to 49 years and 94% of those 50 to 64 years) compared to those age 65 years and older (99%);
- African Americans (89%) compared to Whites (96%);
- Those who were never married (82%) or were divorced or separated (90%), compared to persons who were married (96%) or widowed (97%); and
- Persons who were self-employed (86%) or had employment status of “other” (84%), compared to those who were employed for wages (96%) or retired (98%).

Persons with less than a high school education reported the lowest percentages of health insurance (82%). Those with a high school education (91%) and those with some college (93%) had significantly lower percentages with health insurance than college graduates (97%) and those with advanced degrees (99%). Persons with an annual household income of less than \$25,000 reported the lowest percentages of health insurance (81%). Those with annual household incomes less than \$50,000 had significantly lower percentages of health insurance than persons reporting annual household incomes of \$50,000 or higher.

People who currently have health insurance were asked whether there was a time in the past 12 months when they did not have insurance (Table 8-2).

Four percent (4%) of those who reported they currently had insurance said that they had been without health insurance sometime during the past year.

¹ U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. I. Access to Quality Health Services. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/document/HTML/Volume1/01Access.htm>. Last accessed July 27, 2009.

As shown in Table 8-2, respondents who were without health insurance sometime in the last year were more likely to:

- Be age 40 to 49 years compared to those age 50 years and older;
- Be African American compared to Whites;
- Be divorced or separated or never married compared to those who were married or partnered;
- Have an employment status of “other” compared to other employment categories; or
- Have an annual household income of less than \$50,000 compared to \$75,000 or more.

People who do not currently have any kind of health care coverage (6% of the survey population) were asked how long they have been without coverage. (Data not shown in tables.)

- Of those without insurance at the time of the survey, 27% reported losing their insurance in the last year, while 63% reported having been without insurance for one year or longer. Ten percent (10%) said they never had health insurance coverage.

The Maryland Health Insurance Plan (MHIP) is a state-administered health insurance program for Maryland residents who do not have access to health insurance. Participants in the MCS 2008 were asked whether they had ever heard of the MHIP (Table 8-2).

- Less than one-third (32%) of all respondents were familiar with the MHIP.
- A lower proportion of men (27%) than women (36%) said they have heard of the MHIP.

Health Care Access

Access to health care (primarily health insurance coverage and having a usual source of care) is a strong predictor of recent cancer screening.² Across all racial and ethnic groups, those who lack health insurance or have inadequate access to care typically have higher cancer incidence and mortality rates and lower rates of cancer survival.³

Participants were asked how long it had been since they last visited a doctor for a routine checkup. (Table 8-3.)

- Eighty-four percent (84%) of Marylanders age 40 years and older said they had a routine checkup in the past year.
- A significantly higher proportion of persons age 65 years and older (92%) reported having a routine checkup in the past year, compared to those age 40 to 49 years (79%) or age 50 to 64 years (82%).
- A significantly higher proportion of African American females (89%) reported a routine checkup within the past year, compared with White females (84%).

² Smith RA, Cokkinides V, Hammon JE. American Cancer Society Guidelines for Early Detection of Cancer, 2006. CA Cancer J Clin 2006; 56:11-25. Available at <http://caonline.amcancersoc.org/cgi/content/full/56/1/11>. Last accessed July 27, 2009.

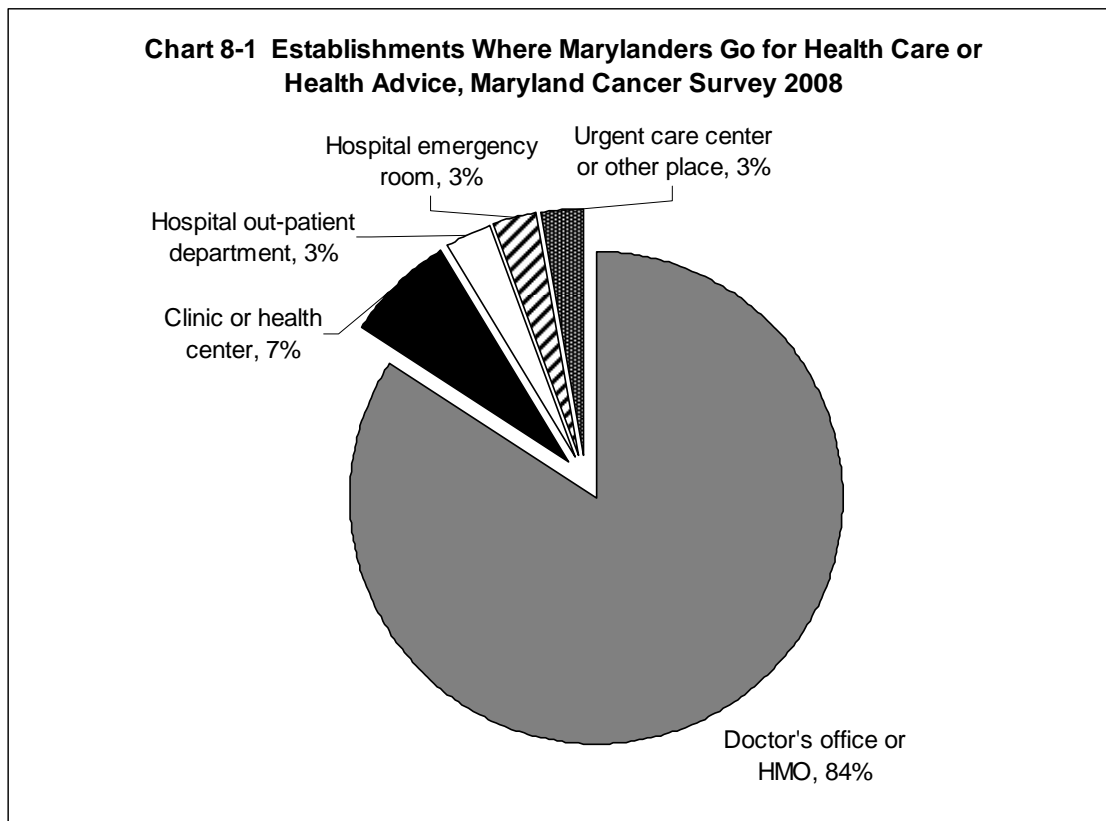
³ Institute of Medicine. The Unequal Burden of Cancer: An Assessment of NIH Research and Programs for Ethnic Minorities and the Medically Underserved. Washington, D.C., National Academy Press; 1999.

- The proportion of Marylanders having a routine checkup in the past year did not differ significantly by educational level or annual household income.
- Ninety percent (90%) of all men and 94% of all women reported having a routine checkup within the past 2 years. (Data not shown in tables.)
- Less than 1% said they have never visited a doctor for a routine checkup.

Ninety-four percent (94%) of Marylanders reported having one person they think of as their personal doctor or primary HCP (Table 8-3). This proportion was statistically significantly lower among respondents with the following characteristics:

- Males (93%) compared to females (96%)
- Younger than 65 years of age (92-94%) compared to those age 65 years and older (98%)
- Never married (83%) compared to those in other marital categories (93-96%)
- Less than a high school education (88%) compared to those in higher education groups (93-97%)
- Annual household income of less than \$25,000 (89%) compared to those in higher income groups (93-96%)

When asked where they go most often when sick or in need of advice about their health, 84% of Marylanders said they go to a doctor's office or health maintenance organization (HMO), 7% go to a clinic or health center, 3% go to a hospital emergency room, 3% go to a hospital outpatient department, and 3% go to an urgent care center or other place (Chart 8-1).



Health Care Access and Cancer Screening

Research has found that people who are uninsured or underinsured are less likely to be screened for cancer.^{4, 5} In the MCS 2008, we sought to determine whether having health insurance was associated with higher prevalence of cancer screening among Maryland residents (Table 8-4).

- For every type of cancer screening addressed in the MCS, the prevalence of screening was significantly higher among respondents with health insurance than among those without insurance.
- The prevalence of ever having CRC screening (by FOBT, sigmoidoscopy, or colonoscopy), ever having a mammogram, and ever having an oral cancer screening exam were statistically significantly lower among persons who were without health insurance for part of the past year compared to those who had insurance coverage during the entire year.
- The prevalence of cancer screening generally declined with increasing length of time since the last routine medical checkup.
- For every type of screening test, the prevalence of ever being screened was significantly lower among respondents who did not have a primary HCP, compared to those who did.

The MCS 2008 also examined the timeliness of cancer screening tests relative to various measures of health care access. In this analysis, up-to-date screening is based on frequencies recommended by the ACS or those incorporated in HP 2010 objectives. As shown in Table 8-5, the prevalence of up-to-date cancer screening among MCS 2008 respondents varied significantly with some measures of health care access.

For every type of cancer screening test,

- the prevalence of being up-to-date was significantly higher among respondents who had health insurance compared to those who did not.
- the proportion of people who were up-to-date decreased significantly with increasing length of time since the last routine medical checkup.
- the prevalence of being up-to-date with screening was significantly lower among respondents who did not have a primary HCP, compared to those who did.

⁴ 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.

⁵ Ross JS, Bradley EH, Busch SH. Use of health care services by lower-income and higher-income uninsured adults. *JAMA* 2006; 295(17): 2027-36.

TABLE 8-1. PEOPLE REPORTING TO HAVE HEALTH INSURANCE, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	5001	4734	94%	93-95%		2983	2851	94%	93-96%		2018	1883	92%	90-93%	
Gender	^					^					*				
Male	1665	1572	94%	92-95%		989	944	95%	93-96%		676	628	90%	87-93%	
Female	3336	3162	94%	93-95%		1994	1907	94%	93-96%		1342	1255	93%	91-95%	
Age	**					**					**				
40-49 years	1111	1003	91%	89-93%		666	611	92%	89-94%		445	392	87%	83-91%	
50-64 years	2027	1892	94%	92-95%		1236	1172	94%	93-96%		791	720	90%	88-93%	
65 years and older	1863	1839	99%	98-99%		1081	1068	99%	98-99%		782	771	98%	97-99%	
Race	**					**					**				
White	3845	3680	96%	95-97%		2067	2011	97%	96-98%		1778	1669	93%	91-94%	
African American or Black	997	907	89%	86-92%		799	731	90%	87-92%		198	176	84%	76-92%	
Other	159	147	94%	89-98%		117	109	94%	89-99%		42	38	92%	84-100%	
Gender and Race	**					**									
White male	1321	1266	96%	95-97%		722	705	98%	96-99%		599	561	92%	89-95%	
African American male	284	249	87%	82-92%		226	201	88%	84-93%		58	48	77%	61-92%	
Other male	60	57	94%	86-100%		41	38	94%	85-100%		19	19	100%	100%	
White female	2524	2414	95%	94-97%		1345	1306	96%	95-98%		1179	1108	94%	92-95%	
African American female	713	658	90%	87-94%		573	530	91%	87-94%		140	128	90%	84-96%	
Other female	99	90	94%	88-99%		76	71	94%	89-100%		23	19	87%	74-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

TABLE 8-1. PEOPLE REPORTING TO HAVE HEALTH INSURANCE, AMONG THOSE AGE 40 YEARS AND OLDER

	TOTAL ~					URBAN ~					RURAL ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status	**					**					**				
Married or partner of unmarried couple	2813	2702	96%	95-97%		1589	1548	97%	96-98%		1224	1154	93%	91-95%	
Divorced or separated	845	766	90%	87-93%		542	502	91%	88-94%		303	264	85%	80-91%	
Widowed	901	876	97%	95-98%		536	519	96%	95-98%		365	357	98%	96-99%	
Never married	419	368	82%	76-88%		301	268	83%	76-89%		118	100	77%	63-90%	
Education	**					**					**				
Less than high school	372	324	82%	76-88%		200	176	83%	75-90%		172	148	78%	70-87%	
High school grad or GED	1373	1276	91%	88-93%		668	624	91%	88-94%		705	652	89%	85-93%	
College 1-3 years	1148	1079	93%	91-95%		658	624	93%	90-95%		490	455	93%	91-96%	
College grad	1188	1147	97%	96-98%		802	780	97%	96-99%		386	367	94%	91-97%	
Advanced degree	904	892	99%	98-100%		646	638	99%	98-100%		258	254	98%	96-100%	
Employment Status	**					**					**				
Employed for wages	1972	1882	96%	95-97%		1239	1199	97%	95-98%		733	683	93%	91-95%	
Self-employed	361	305	86%	81-90%		207	185	88%	83-94%		154	120	76%	67-84%	
Retired	1935	1902	98%	97-99%		1119	1103	98%	97-99%		816	799	98%	97-99%	
Other	714	627	84%	80-88%		404	351	84%	79-89%		310	276	85%	78-91%	
Household Income	**					**					**				
<\$25,000	856	737	81%	77-85%		446	386	82%	77-87%		410	351	80%	73-86%	
\$25,000-<\$35,000	437	404	90%	85-94%		239	224	91%	85-96%		198	180	87%	80-94%	
\$35,000-<\$50,000	550	515	91%	87-95%		289	274	92%	87-97%		261	241	88%	83-94%	
\$50,000-<\$75,000	638	622	96%	94-98%		382	372	96%	94-99%		256	250	96%	93-99%	
\$75,000 or greater	1583	1559	99%	98-99%		1048	1035	99%	98-100%		535	524	98%	96-99%	
Don't know/not sure	263	249	93%	89-98%		157	153	95%	90-100%		106	96	86%	77-96%	
Refused	674	648	96%	93-98%		422	407	96%	93-98%		252	241	96%	93-99%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 8-2. PEOPLE CURRENTLY WITH HEALTH INSURANCE WHO WERE WITHOUT HEALTH INSURANCE SOMETIME IN THE LAST 12 MONTHS, AMONG THOSE AGE 40 YEARS AND OLDER

	Persons reporting there was a time they were without health insurance sometime in the last 12 months ~					Persons reporting they have heard of the Maryland Health Insurance Plan				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4727	172	4%	3-5%		4919	1560	32%	30-34%	
Area of Residence	^					^				
Urban	2849	107	4%	3-5%		2942	950	32%	30-34%	
Rural	1878	65	4%	3-5%		1977	610	31%	29-34%	
Gender	^					**				
Male	1570	52	4%	2-5%		1640	448	27%	25-30%	
Female	3157	120	4%	3-5%		3279	1112	36%	34-38%	
Age	**					**				
40-49 years	1001	63	6%	4-8%		1100	357	31%	28-34%	
50-64 years	1891	72	3%	2-4%		1998	709	36%	33-38%	
65 years and older	1835	37	2%	1-3%		1821	494	27%	25-30%	
Race	**					^				
White	3676	108	3%	2-4%		3785	1210	32%	30-34%	
African American or Black	904	54	7%	4-9%		978	300	30%	27-34%	
Other	147	10	4%	1-7%		156	50	35%	25-45%	
Gender and Race	**					**				
White male	1264	38	3%	2-5%		1299	359	28%	25-32%	
African American male	249	12	5%	2-9%		282	72	23%	18-29%	
Other male	57	2	2%	0-6%		59	17	29%	14-43%	
White female	2412	70	3%	2-4%		2486	851	36%	33-38%	
African American female	655	42	8%	5-11%		696	228	36%	31-40%	
Other female	90	8	6%	1-11%		97	33	39%	26-52%	
Marital Status	**					^				
Married or partner of unmarried couple	2701	69	3%	2-4%		2768	907	32%	30-35%	
Divorced or separated	765	47	8%	5-11%		829	260	32%	28-37%	
Widowed	872	30	4%	2-6%		881	251	29%	26-33%	
Never married	367	26	8%	5-12%		418	135	29%	24-35%	
Education	**					**				
Less than high school	322	21	10%	4-16%		365	91	27%	20-33%	
High school grad or GED	1274	51	4%	3-6%		1354	393	29%	26-32%	
College 1-3 years	1078	43	4%	3-6%		1130	385	33%	29-36%	
College grad	1146	34	4%	2-6%		1172	367	32%	29-36%	
Advanced degree	892	23	2%	1-4%		883	322	36%	32-40%	
Employment Status	**					**				
Employed for wages	1881	73	4%	3-5%		1954	693	35%	32-38%	
Self-employed	304	13	4%	1-6%		357	119	30%	24-36%	
Retired	1899	40	2%	1-3%		1885	537	29%	26-31%	
Other	626	45	9%	6-12%		704	208	29%	24-33%	
Household Income	**					^				
<\$25,000	735	53	7%	5-9%		842	231	28%	23-32%	
\$25,000-<\$35,000	404	20	7%	3-11%		435	140	29%	23-35%	
\$35,000-<\$50,000	515	20	6%	3-9%		540	168	34%	28-39%	
\$50,000-<\$75,000	622	22	3%	2-5%		623	237	35%	30-40%	
\$75,000 or greater	1558	30	2%	1-4%		1558	532	34%	31-36%	
Don't know/not sure	248	7	3%	0-7%		256	57	28%	21-36%	
Refused	645	20	5%	2-8%		665	195	30%	25-34%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 8-3. HEALTH CARE ACCESS MEASURES, HAVING A PRIMARY HEALTH CARE PROVIDER AND HAVING A ROUTINE PHYSICAL EXAM IN THE PAST YEAR, AMONG RESPONDENTS AGE 40 YEARS AND OLDER ~

	People reporting they have been to visit a doctor in the past year for a routine check-up					Persons reporting they have at least one person they think of as their primary health care provider				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	4974	4216	84%	82-85%		5000	4763	94%	93-95%	
Area of Residence					**					^
Urban	2966	2536	84%	83-86%		2983	2845	94%	93-95%	
Rural	2008	1680	82%	79-84%		2017	1918	94%	93-95%	
Gender					**					**
Male	1653	1356	81%	79-84%		1664	1555	93%	91-94%	
Female	3321	2860	86%	84-87%		3336	3208	96%	95-97%	
Age					**					**
40-49 years	1103	856	79%	76-82%		1109	1018	92%	90-94%	
50-64 years	2017	1665	82%	80-84%		2029	1930	94%	93-96%	
65 years and older	1854	1695	92%	90-93%		1862	1815	98%	97-99%	
Race					**					**
White	3822	3199	82%	81-84%		3845	3677	95%	94-96%	
African American or Black	993	882	87%	84-90%		996	938	92%	90-95%	
Other	159	135	88%	81-94%		159	148	96%	92-99%	
Gender and Race					**					**
White male	1310	1065	81%	78-83%		1321	1246	94%	92-96%	
African American male	283	242	84%	78-89%		283	255	88%	84-93%	
Other male	60	49	82%	69-95%		60	54	94%	87-100%	
White female	2512	2134	84%	82-85%		2524	2431	96%	95-97%	
African American female	710	640	89%	87-92%		713	683	95%	93-97%	
Other female	99	86	92%	87-97%		99	94	97%	94-100%	
Marital Status					**					**
Married or partner of unmarried couple	2802	2372	84%	82-86%		2812	2716	96%	95-97%	
Divorced or separated	840	690	81%	77-84%		845	790	93%	90-95%	
Widowed	894	800	89%	86-91%		900	864	94%	92-97%	
Never married	416	333	79%	74-84%		420	371	83%	78-88%	
Education					^					**
Less than high school	369	323	85%	80-90%		371	340	88%	82-93%	
High school grad or GED	1365	1158	83%	80-86%		1373	1308	94%	93-96%	
College 1-3 years	1142	954	83%	81-86%		1148	1086	93%	91-95%	
College grad	1183	1012	84%	82-87%		1188	1137	95%	93-96%	
Advanced degree	900	756	84%	80-87%		904	876	97%	95-98%	
Employment Status					**					**
Employed for wages	1962	1579	81%	79-83%		1972	1870	94%	93-95%	
Self-employed	359	284	76%	71-82%		360	335	92%	88-96%	
Retired	1928	1760	91%	90-93%		1935	1884	98%	97-99%	
Other	708	580	81%	78-85%		714	656	89%	86-93%	
Household Income					^					**
<\$25,000	852	715	82%	78-85%		855	783	89%	86-92%	
\$25,000-<\$35,000	433	364	85%	81-89%		437	415	95%	93-98%	
\$35,000-<\$50,000	546	468	84%	79-88%		549	526	95%	92-98%	
\$50,000-<\$75,000	634	523	83%	79-86%		638	614	95%	93-97%	
\$75,000 or greater	1579	1319	83%	81-85%		1583	1521	95%	94-96%	
Don't know/not sure	260	234	87%	81-93%		263	252	93%	88-98%	
Refused	670	593	87%	83-90%		675	652	96%	94-98%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 8-4. PREVALENCE OF CANCER SCREENING AND ACCESS TO HEALTH CARE

	Ever had FOBT ~					Ever had sigmoidoscopy or colonoscopy ~					Ever had Prostate Specific Antigen Test #				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you have health insurance?					**					**					**
Yes	3703	2045	53%	51-55%		3716	2855	76%	75-78%		1182	968	77%	73-80%	
No	159	52	29%	20-39%		157	64	36%	26-45%		62	27	38%	24-52%	
Was there a time you were without health insurance in the last 12 months?					**					**					*
Yes	109	43	42%	31-53%		109	72	64%	53-75%		28	20	58%	35-82%	
No	3589	2001	54%	52-56%		3602	2781	77%	75-79%		1153	947	77%	74-80%	
How long have you been without health insurance or coverage, among those who did not currently have health care coverage?					^					^					^
Less than a year	33	12	32%	10-55%		33	18	39%	17-60%		7	4	32%	0-69%	
One year or longer	103	34	29%	18-39%		102	40	37%	26-49%		42	19	40%	22-58%	
Never had insurance	19	6	36%	6-65%		18	7	42%	12-72%		9	4	56%	17-94%	
How long has it been since you last visited a doctor for a routine checkup?					**					**					**
Within the past year (less than 1 year)	3337	1893	55%	53-57%		3346	2627	78%	76-80%		1040	870	79%	75-82%	
Within at least 1 year but less than 2 years	262	128	50%	43-57%		264	168	64%	58-71%		91	70	70%	58-82%	
Within at least 2 years but less than 5 years	109	33	27%	16-39%		109	61	56%	44-68%		56	34	56%	40-71%	
5 years or more (including never)	136	38	21%	13-29%		135	52	36%	25-46%		49	16	23%	10-35%	
Do you have one person you think of as your primary health care provider?					**					**					**
At least one health care provider	3717	2062	54%	52-56%		3729	2864	76%	75-78%		1170	969	77%	74-81%	
No health care provider	146	35	21%	12-30%		145	55	37%	26-47%		74	26	29%	17-42%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Age ≥ 50 years

Men ≥ 50 years and African American men age 45-49 years

~~ Age ≥ 40 years

#~ Women ≥ 40 years with an intact uterus

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

TABLE 8-4. PREVALENCE OF CANCER SCREENING AND ACCESS TO HEALTH CARE

	Ever had a mammogram ~~					Ever had a Pap test #~					Ever had oral cancer screening ~~				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you have health insurance?					**					**					**
Yes	3159	3054	96%	95-97%		2054	2021	99%	98-99%		4546	2388	52%	50-54%	
No	173	137	76%	68-85%		131	127	91%	79-100%		255	74	25%	18-32%	
Was there a time you were without health insurance in the last 12 months?					**					^					**
Yes	119	108	91%	84-98%		80	77	98%	95-100%		165	74	41%	31-51%	
No	3035	2943	96%	95-97%		1973	1943	99%	98-99%		4376	2312	52%	50-54%	
How long have you been without health insurance or coverage, among those who did not currently have health care coverage?					^					**					**
Less than a year	38	31	74%	54-94%		31	30	78%	42-100%		53	22	39%	20-57%	
One year or longer	115	90	76%	65-86%		84	82	96%	91-100%		168	49	24%	16-31%	
Never had insurance	19	16	88%	74-100%		15	14	94%	83-100%		29	3	6%	0-12%	
How long has it been since you last visited a doctor for a routine checkup?					**					^					**
Within the past year (less than 1 year)	2858	2786	97%	96-98%		1826	1798	98%	97-99%		4042	2096	51%	49-53%	
Within at least 1 year but less than 2 years	248	229	88%	82-94%		180	177	99%	97-100%		374	202	50%	43-56%	
Within at least 2 years but less than 5 years	87	68	77%	67-88%		67	66	98%	93-100%		168	78	42%	33-51%	
5 years or more (including never)	124	98	82%	74-90%		99	94	96%	93-100%		193	77	39%	30-48%	
Do you have one person you think of as your primary health care provider?					**					**					**
At least one health care provider	3205	3091	95%	94-96%		2083	2052	99%	98-99%		4574	2380	51%	49-53%	
No health care provider	127	100	81%	73-89%		100	94	95%	91-99%		226	82	37%	29-45%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Age ≥ 50 years

Men ≥ 50 years and African American men age 45-49 years

~~ Age ≥ 40 years

#~ Women ≥ 40 years with an intact uterus

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

TABLE 8-5. PREVALENCE OF UP-TO-DATE CANCER SCREENING (ACCORDING TO HEALTHY PEOPLE 2010 OBJECTIVES OR AMERICAN CANCER SOCIETY GUIDELINES) AND ACCESS TO HEALTH CARE

	Had FOBT in the last 2 years ~					~ Had Prostate-specific antigen test in the last year #					~*Had a Digital Rectal Exam in the last year #				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you have Health Insurance?					**					**					**
Yes	3703	1044	29%	27-30%		1182	751	59%	55-62%		1230	716	57%	53-60%	
No	159	28	15%	9-22%		62	14	19%	8-30%		62	19	33%	19-48%	
Was there a time you were without health insurance in the last 12 months?					**					**					^
Yes	109	18	16%	8-24%		28	12	34%	14-54%		30	15	38%	18-58%	
No	3589	1026	29%	27-31%		1153	738	59%	56-63%		1199	700	57%	54-61%	
How long have you been without health insurance or coverage, among those who did not currently have health care coverage?					^					**					^
Less than a year	33	10	17%	4-30%		7	2	17%	0-44%		9	4	27%	0-58%	
One year or longer	103	16	15%	7-24%		42	8	14%	3-26%		42	11	32%	15-49%	
Never had insurance	19	2	18%	0-46%		9	4	56%	17-94%		8	4	68%	32-100%	
How long has it been since you last visited a doctor for a routine checkup?					**					**					**
Within the past year (less than 1 year)	3337	1007	30%	29-32%		1040	719	64%	60-68%		1082	696	63%	60-67%	
Within at least 1 year but less than 2 years	262	53	23%	16-29%		91	28	27%	17-37%		93	24	26%	16-36%	
Within at least 2 years, but less than 5 years	109	4	2%	0-5%		56	12	17%	6-28%		58	8	15%	2-29%	
5 years or more (including never)	136	7	3%	1-6%		49	3	4%	0-9%		51	5	6%	0-12%	
Do you have one person you think of as your primary health care provider?					**					**					**
At least one health care provider	3717	1058	29%	27-31%		1170	755	59%	56-63%		1216	727	59%	55-62%	
No health care provider	146	14	6%	2-10%		74	10	9%	2-16%		76	8	11%	3-19%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

* HP 2010 objectives

~* American Cancer Society recommendation

~ Age ≥ 50 years

Men ≥ 50 years and African American men age 45-49 years

~~ Age ≥ 40 years

#~ Women ≥ 40 years with an intact uterus

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 8-5. PREVALENCE OF UP-TO-DATE CANCER SCREENING (ACCORDING TO HEALTHY PEOPLE 2010 OBJECTIVES OR AMERICAN CANCER SOCIETY GUIDELINES) AND ACCESS TO HEALTH CARE

	*Had a mammogram in the last two years ~~					*Had a Pap test within the past three years #~					*Had oral cancer screening in the past year ~~				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you have Health Insurance?					**					**					**
Yes	3159	2698	85%	83-86%		2054	1768	89%	87-90%		4546	1922	41%	39-43%	
No	173	100	55%	45-65%		131	87	68%	55-80%		255	41	14%	8-20%	
Was there a time you were without health insurance in the last 12 months?					**					**					**
Yes	119	88	73%	63-84%		80	59	79%	69-90%		165	52	26%	18-35%	
No	3035	2608	86%	84-87%		1973	1709	89%	88-91%		4376	1868	42%	40-44%	
How long have you been without health insurance or coverage, among those who did not currently have health care coverage?					**					^					**
Less than a year	38	26	65%	43-86%		31	25	65%	33-98%		53	11	26%	7-44%	
One year or longer	115	58	46%	34-58%		84	52	68%	55-80%		168	28	11%	6-16%	
Never had insurance	19	16	88%	74-100%		15	10	74%	52-97%		29	2	4%	0-11%	
How long has it been since you last visited a doctor for a routine checkup?					**					**					**
Within the past year (less than 1 year)	2858	2512	87%	86-89%		1826	1608	90%	89-92%		4042	1685	41%	39-43%	
Within at least 1 year but less than 2 years	248	180	68%	60-75%		180	146	82%	76-89%		374	161	39%	33-45%	
Within at least 2 years, but less than 5 years	87	30	35%	23-47%		67	39	67%	54-80%		168	53	29%	21-38%	
5 years or more (including never)	124	68	58%	47-68%		99	54	59%	48-70%		193	55	25%	18-33%	
Do you have one person you think of as your primary health care provider?					**					**					**
At least one health care provider	3205	2736	85%	83-86%		2083	1798	89%	87-90%		4574	1908	40%	39-42%	
No health care provider	127	60	52%	41-62%		100	55	65%	54-75%		226	54	26%	18-34%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

* HP 2010 objectives

~* American Cancer Society recommendation

~ Age > 50 years

Men > 50 years and African American men age 45-49 years

~~ Age > 40 years

#~ Women > 40 years with an intact uterus

** p-value < 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Chapter 9. Lifestyle Factors

Tobacco use and high-risk alcohol consumption are modifiable lifestyle risk factors that have been shown to influence the incidence of several diseases, including cancer.^{1,2} Cigarette smoking is causally related to cancer of the lung, mouth, larynx, esophagus, bladder, kidney, and pancreas.¹ Smoking cessation has been shown to decrease the risk of developing smoking-related cancers compared to current smoking. High-risk alcohol consumption is also related to cancers of the liver, esophagus, oral cavity, and larynx.² Tobacco use and alcohol abuse are among the leading health indicators targeted by HP 2010. In the MCS 2008, Marylanders age 40 years and older were asked about their use of cigarettes and other forms of tobacco, as well as their alcohol consumption patterns.

9.1 Tobacco Use

The HP 2010 target is to reduce the proportion of adult cigarette smokers (age 18 years and older) from the U.S. 1998 baseline of 24% to 12%.³

- Among Marylanders age 40 years and older, 15% report that they currently smoke, 30% have smoked in the past (but not currently), and 55% have never smoked (Table 9-1).

Significant differences were found between cigarette smoking status and most of the demographic characteristics examined for the Maryland population age 40 years and older (Table 9-1).

- A significantly higher percentage of rural residents currently smoke cigarettes (19%), compared to urban residents (14%).
- With increasing age, the percent of current smokers declines (ranging from 20% in those age 40 to 49 years to 15% among those age 50 to 64 years to 8% of those age 65 years and older).
- A significantly higher proportion of African Americans than Whites are current smokers (23% vs. 13%).
- As education level increased, the percent of current smokers declined. The prevalence of current smoking was almost seven times higher among respondents with less than a high school education compared to those with advanced degrees (33% vs. 5%).
- As income level increased, the percent of those who never smoked increased and the percent of current smokers decreased.

¹ U.S. Department of Health and Human Services. The health consequences of smoking: a report of the Surgeon General. Washington, DC; 2004. Available at http://www.cdc.gov/tobacco/data_statistics/sgr/2004/. Last accessed July 27, 2009.

² Centers for Disease Control and Prevention. Quick Stats: General Information on Alcohol Use and Health. Centers for Disease Control and Prevention. Available at http://www.cdc.gov/alcohol/quickstats/general_info.htm. Last accessed July 27, 2009.

³ U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. II. Tobacco Use. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/Document/HTML/Volume2/27Tobacco.htm>. Last accessed July 27, 2009.

Current smokers were asked how many cigarettes they smoke, on average, each day (Table 9-2).

- About one third (34%) reported they smoke at least one pack of cigarettes a day (20 or more cigarettes); 26% smoke from 10 to 19 cigarettes a day; and 40% smoke less than 10 cigarettes per day.
- Among smokers, a higher proportion of those who are male, White, or live in rural areas smoke one or more packs of cigarettes a day.

As an indicator of cigarette addiction level, smokers were asked how soon they have their first cigarette after waking up (Table 9-3).

- More than half (52%) of all smokers said they have their first cigarette within 30 minutes after waking.
- Thirty-eight percent (38%) of smokers said they typically have their first cigarette more than one hour after waking.

MCS 2008 respondents were asked whether and how frequently they currently use chewing tobacco, snuff, or dip. (Data not shown in tables.)

- Among Marylanders age 40 years and older, 0.5% report using smokeless tobacco every day and 0.3% report using these products some days.
- While the prevalence of everyday use of smokeless tobacco was very low in this survey, it was significantly higher among men than women.

Smoking Cessation

A number of HP 2010 objectives address smoking cessation. One objective is to increase the proportion of adult smokers who have been counseled by a physician in the past year about smoking cessation. The specific target for this objective is to increase this proportion from the 2001 baseline of 66% to 72%.⁴

- Among Marylanders age 40 years and older who currently smoke cigarettes, 67% reported having been told to stop smoking by a doctor, nurse, or other HCP during the past 12 months. This proportion is below the HP 2010 target of 72%. (Table 9-4).
- Compared with younger respondents, a significantly higher proportion of respondents age 65 years and older reported being told to stop smoking.

Another HP 2010 objective is to increase the smoking cessation attempts made by adult smokers (that is, to increase the number of adult smokers who stop smoking for one day or longer because they were trying to quit). The specific HP 2010 target is to increase smoking cessation from a baseline of 41% to a target of 75% (for adults 18 years and older).³ In the MCS

⁴ U.S. Department of Health and Human Services. Healthy People 2010 Midcourse Review: Access to Quality Health Services. Washington, DC; 2006. Available at <http://www.healthypeople.gov/data/midcourse/html/focusareas/FA01Objectives.htm>. Last accessed July 27, 2009.

2008, current smokers were asked whether they had stopped smoking at least one day during the previous 12 months because they were trying to quit smoking (Table 9-4).

- About half (51%) of all current smokers age 40 years and older reported they had at least one smoking cessation attempt during the past year, below the HP 2010 target of 75%. (HP 2010 target is based on adults age 18 years and older.)
- White women were significantly more likely to attempt smoking cessation than White men (52% vs. 37%).
- The proportion of respondents who attempted smoking cessation in the past year did not differ significantly by age, race (White compared to African American), marital status, education level, employment status, or household income.

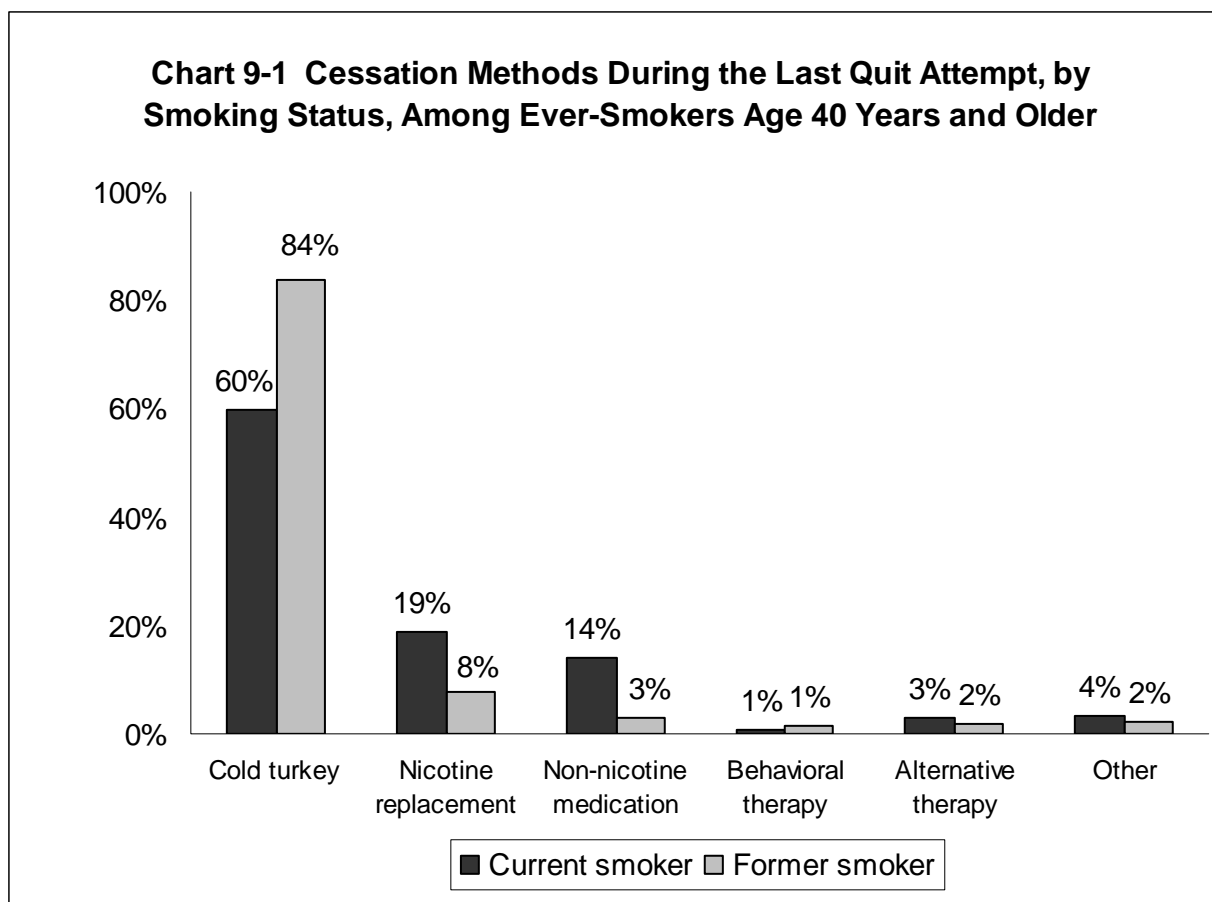
Current and former smokers were asked which cessation methods they used during their last attempt to stop smoking, such as “cold turkey” or quitting on their own without help, nicotine replacement, non-nicotine medication, behavioral therapy, etc. Figure 9-1 shows the distribution of cessation methods used by current and former smokers during their last cessation attempt.

- Eighty-four percent (84%) of the former smokers used “cold turkey” (or quit on their own without help) as a successful cessation method. (Data not shown in tables.)
- Among current smokers, 60% reported quitting on their own without help (or “cold turkey”) on their last cessation attempt (Table 9-4).
- The proportion of current smokers who reported quitting on their own as a smoking cessation method differed significantly by age. A higher proportion of younger respondents (age 40 to 49 years) said they tried quitting on their own, compared with persons in older age groups.
- The majority of former smokers (81%) reported quitting more than 5 years ago (Table 9-5).

Smoking Status and Cancer Screening

Smoking status was examined in relation to the various types of cancer screening (Table 9-6).

- Current smokers age 50 years and older were significantly less likely than non-smokers (i.e., never and former smokers) to have ever been screened for CRC by FOBT or by lower GI endoscopy.
- Male smokers in the age groups recommended for PSA testing were less likely than non-smokers to have ever had a PSA test.
- While current female smokers at least age 40 years were less likely than non-smokers or former smokers to have ever been screened for breast cancer by mammogram, no significant differences by smoking status were found in the percent of women screened for cervical cancer by Pap test.
- Current smokers were less likely to have ever been screened for oral cancer than former and never smokers.



9.2 Alcohol Consumption

According to current guidelines of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), men are considered to be at high risk for alcohol-related problems if they consume more than 14 drinks per week or engage in binge drinking, while women are considered to be at high risk if they consume more than seven drinks per week or engage in binge drinking.⁵ (Note that there are different criteria for men and women because women have proportionally less body water than men, and therefore reach higher blood alcohol levels after drinking the same amount.⁵) The NIAAA has defined binge drinking as a blood alcohol concentration corresponding to consuming five drinks or more for men and four drinks or more for women in a period of about 2 hours.⁶ The definition of binge drinking used by HP 2010 to establish a national baseline (based on the 2002 National Survey on Drug Use and Health) is five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on

⁵ Dawson DA, Grant BF, Li T. Quantifying the risks associated with exceeding recommended drinking limits. *Alcohol Clin Exp Res* 2005; 29(5): 902-908.

⁶ National Institute on Alcohol Abuse and Alcoholism, National Advisory Council on Alcohol Abuse and Alcoholism. Summary of Meeting, February 2004. Available at <http://www.niaaa.nih.gov/AboutNIAAA/AdvisoryCouncil/CouncilMinutes/min2-04.htm>. Last accessed July 27, 2009.

at least one day in the past 30 days.^{7,8} There is solid evidence that alcohol consumption is associated with an increased risk of breast and oral cancer in a dose-dependent fashion. Alcohol is also associated with esophageal and colorectal cancer.⁹

Two HP 2010 objectives related to alcohol consumption include:

1. To reduce the proportion of adults age 18 years and older who engage in binge drinking from a national baseline in 2002 of 24.3% to a target of 13.4%⁷; and
2. To reduce the proportion of adults age 21 years and older who exceed guidelines for low-risk drinking from 1992 baselines of 72% and 74% for females and males, respectively, to a target of 50% for both sexes.¹⁰

The MCS 2008 included a series of survey questions about the frequency and amount of alcohol consumed during the past 30 days. Three categories of alcohol consumption were defined: non-drinkers, those at low risk for alcohol-related problems, and those at high risk (Table 9-7). For this analysis, high-risk drinking was defined in accordance with NIAAA guidelines, as more than 14 drinks in a week for a man and more than seven drinks in a week for a woman, or engaging in binge drinking. We have defined low-risk alcohol drinkers as those who consume some alcohol, but less than high-risk drinkers. The MCS questionnaire and analyses define binge drinking as consuming five or more drinks on one occasion, consistent with the definition used by HP 2010.

Binge Drinking

MCS respondents were asked how many times in the past month they had consumed five or more drinks on any one occasion. Among all respondents age 40 years and older,

- 10% meet the criteria for binge drinking. (Data not shown in tables.) This prevalence is less than the HP 2010 target of 13.4%.
- the highest prevalence of binge drinking was found among males and younger respondents (ages 40 to 49 years; data not shown in tables).

⁷ U.S. Department of Health and Human Services. Healthy People 2010 Midcourse Review: Substance Abuse. Washington, DC; 2006. Available at <http://www.healthypeople.gov/data/midcourse/default.htm#pubs>. Last accessed July 27, 2009.

⁸ U.S. Department of Health and Human Services. National Survey on Drug Use and Health, 2002. Substance Abuse and Mental Health Services Administration (SAMSHA). Washington, DC. Available at <http://www.oas.samhsa.gov/nhsda/2k2nsduh/Results/appD.htm>. Last accessed July 27, 2009.

⁹ National Cancer Institute. PDQ Cancer Information summaries: Prevention. Available at <http://www.cancer.gov/cancertopics/pdq/prevention>. Last accessed July 27, 2009.

¹⁰ U.S. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Vol. II. Substance Abuse. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/document/HTML/Volume2/26Substance.htm>. Last accessed July 27, 2009.

High- and Low-Risk Drinking (Table 9-7)

The following bullets summarize alcohol consumption patterns among Marylanders age 40 years and older:

- Twelve percent (12%) were classified as high-risk drinkers, 43% were low-risk drinkers, and 45% were classified as non-drinkers during the previous 30 days. Based on these findings, this population of Marylanders age 40 years and older has attained the HP 2010 target of reducing the proportion of all adults who are high-risk drinkers to 50% or less.
- A higher proportion of men than women reported they consumed alcohol in the 30 days prior to the survey (63% compared to 48% of women).
- Approximately 17% of men and 7% of women were classified as high-risk drinkers.
- The proportion of high-risk alcohol intake decreased with increasing age. A higher percentage of those under the age of 50 years were high-risk drinkers, compared to older respondents.
- High-risk drinking was more prevalent among Whites and African Americans than respondents of other races.
- Respondents with less than a high school education and those with low household income were more likely to be non-drinkers.
- The prevalence of low-risk drinking increased with increasing education or increasing income. The percent of high-risk drinkers was fairly stable across education and income levels.

Alcohol Consumption and Cancer Screening

Level of alcohol consumption was examined in relation to the prevalence of various types of cancer screening (Table 9-8). Significant differences in screening prevalence based on alcohol consumption were seen for all types of screening examined. Low-risk drinkers had the highest prevalence of ever having an FOBT, lower GI endoscopy, PSA or DRE (men), mammogram (women), or oral cancer screening.

TABLE 9-1. CIGARETTE SMOKING STATUS BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER

		Never Smoked ~			Previous Smoker ~			Current Smoker ~			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	4919	2617	55%	53-57%	1609	30%	29-32%	693	15%	14-16%	
Area of Residence											**
Urban	2937	1622	56%	54-58%	947	30%	28-32%	368	14%	12-16%	
Rural	1982	995	49%	47-52%	662	32%	29-34%	325	19%	16-21%	
Gender											**
Male	1640	753	51%	48-54%	625	33%	30-36%	262	16%	14-18%	
Female	3279	1864	58%	56-60%	984	28%	26-30%	431	14%	13-16%	
Age											**
40-49 years	1092	615	59%	56-63%	243	21%	18-24%	234	20%	17-23%	
50-64 years	2001	1038	53%	50-55%	653	32%	29-34%	310	15%	13-17%	
65 years and older	1826	964	51%	49-54%	713	40%	38-43%	149	8%	6-10%	
Race											**
White	3795	1992	54%	52-56%	1316	34%	32-35%	487	13%	11-14%	
African American or Black	970	523	54%	50-58%	256	24%	20-27%	191	23%	19-26%	
Other	154	102	75%	66-83%	37	18%	11-25%	15	7%	3-12%	
Gender and Race											**
White male	1306	587	50%	47-53%	528	36%	33-39%	191	14%	11-16%	
African American male	276	134	50%	43-57%	76	25%	19-31%	66	26%	19-32%	
Other male	58	32	68%	53-83%	21	26%	12-39%	5	7%	0-13%	
White female	2489	1405	57%	54-59%	788	31%	29-33%	296	12%	11-14%	
African American female	694	389	57%	52-61%	180	23%	19-26%	125	20%	16-24%	
Other female	96	70	80%	71-89%	16	12%	5-18%	10	8%	2-14%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value < 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 9-1. CIGARETTE SMOKING STATUS BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER

		Never Smoked ~			Previous Smoker ~			Current Smoker ~			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											**
Married or partner of unmarried couple	2768	1531	57%	55-60%	928	31%	29-33%	309	11%	10-13%	
Divorced or separated	832	372	44%	39-49%	268	28%	24-32%	192	28%	23-32%	
Widowed	886	487	53%	49-57%	306	35%	31-38%	93	12%	9-15%	
Never married	411	219	53%	47-59%	97	20%	15-24%	95	27%	21-33%	
Education											**
Less than high school	361	162	38%	31-44%	102	29%	23-35%	97	33%	27-40%	
High school grad or GED	1352	673	48%	44-51%	429	30%	27-34%	250	22%	19-25%	
College 1-3 years	1127	526	47%	43-51%	420	35%	31-38%	181	18%	15-21%	
College grad	1171	691	64%	60-67%	372	27%	24-30%	108	9%	7-11%	
Advanced degree	895	555	65%	62-69%	284	30%	26-33%	56	5%	3-7%	
Employment Status											**
Employed for wages	1946	1119	60%	57-62%	542	26%	24-28%	285	14%	12-16%	
Self-employed	355	195	58%	51-64%	115	33%	27-39%	45	9%	6-12%	
Retired	1901	960	49%	47-52%	771	41%	38-44%	170	9%	8-11%	
Other	700	330	47%	42-52%	179	22%	18-26%	191	31%	26-36%	
Household Income											**
<\$25,000	836	397	45%	40-49%	252	26%	23-30%	187	29%	24-34%	
\$25,000-<\$35,000	428	199	45%	38-51%	152	34%	29-40%	77	21%	16-27%	
\$35,000-<\$50,000	542	273	49%	44-54%	174	30%	25-35%	95	21%	17-26%	
\$50,000-<\$75,000	632	328	53%	48-58%	217	32%	28-37%	87	15%	11-19%	
\$75,000 or greater	1568	880	60%	57-63%	547	32%	29-34%	141	8%	7-10%	
Don't know/not sure	254	148	55%	47-63%	73	28%	21-35%	33	16%	10-23%	
Refused	659	392	62%	57-67%	194	26%	22-30%	73	12%	9-16%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value < 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 9-2. NUMBER OF CIGARETTES SMOKED PER DAY, AMONG CURRENT SMOKERS AGE 40 YEARS AND OLDER ~

		Less than 10 cigarettes per day			10 to 19 cigarettes per day			20 or more cigarettes per day			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	687	277	40%	35-45%	166	26%	22-31%	244	34%	29-38%	
Area of Residence											**
Urban	365	160	43%	37-49%	99	28%	22-34%	106	29%	24-35%	
Rural	322	117	33%	27-39%	67	22%	16-28%	138	45%	38-52%	
Gender											**
Male	261	87	33%	26-40%	62	27%	20-35%	112	40%	32-47%	
Female	426	190	47%	41-53%	104	25%	20-31%	132	28%	22-33%	
Age											^
40-49 years	233	95	42%	34-50%	56	27%	20-34%	82	31%	24-38%	
50-64 years	308	118	36%	29-43%	71	25%	18-31%	119	39%	32-47%	
65 years and older	146	64	45%	34-56%	39	30%	20-41%	43	25%	17-33%	
Race											**
White	483	160	30%	25-35%	118	27%	21-32%	205	43%	37-49%	
African American or Black	189	107	53%	44-62%	46	26%	19-34%	36	20%	13-28%	
Other	15	10	68%	39-98%	2	22%	0-50%	3	10%	0-24%	
Gender and Race											**
White male	190	52	24%	16-31%	44	26%	17-34%	94	51%	42-60%	
African American male	66	32	46%	32-60%	17	30%	17-43%	17	24%	13-36%	
Other male	5	3	56%	3-100%	1	39%	0-93%	1	5%	0-15%	
White female	293	108	37%	29-44%	74	28%	21-34%	111	36%	29-43%	
African American female	123	75	60%	50-71%	29	23%	14-32%	19	17%	9-24%	
Other female	10	7	77%	48-100%	1	10%	0-29%	2	14%	0-35%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 9-2. NUMBER OF CIGARETTES SMOKED PER DAY, AMONG CURRENT SMOKERS AGE 40 YEARS AND OLDER ~

		Less than 10 cigarettes per day			10 to 19 cigarettes per day			20 or more cigarettes per day			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											[^]
Married or partner of unmarried couple	306	122	37%	30-43%	85	31%	24-38%	99	32%	26-39%	
Divorced or separated	191	70	41%	32-51%	47	25%	17-33%	74	34%	25-42%	
Widowed	92	40	49%	35-63%	18	12%	6-18%	34	39%	25-53%	
Never married	94	42	43%	30-56%	16	22%	11-33%	36	36%	23-48%	
Education											[*]
Less than high school	97	34	28%	17-39%	23	29%	16-41%	40	43%	30-56%	
High school grad or GED	248	92	37%	29-45%	57	24%	17-32%	99	38%	30-46%	
College 1-3 years	180	74	42%	32-51%	40	27%	18-37%	66	31%	23-40%	
College grad	107	47	48%	36-60%	30	24%	15-33%	30	28%	18-39%	
Advanced degree	54	30	57%	39-74%	15	34%	16-51%	9	10%	2-18%	
Employment Status											[^]
Employed for wages	282	116	43%	36-51%	76	29%	22-35%	90	28%	22-35%	
Self-employed	45	14	27%	12-41%	11	27%	12-42%	20	46%	29-63%	
Retired	169	72	40%	30-50%	41	29%	19-38%	56	31%	22-41%	
Other	189	75	38%	29-47%	37	22%	14-30%	77	40%	31-49%	
Household Income											[^]
<\$25,000	186	82	42%	33-52%	32	19%	11-28%	72	38%	28-48%	
\$25,000-<\$35,000	76	18	29%	14-43%	25	37%	21-52%	33	34%	21-47%	
\$35,000-<\$50,000	95	43	42%	29-54%	23	29%	17-41%	29	29%	18-41%	
\$50,000-<\$75,000	86	32	40%	26-53%	25	28%	16-39%	29	33%	20-45%	
\$75,000 or greater	138	58	40%	29-50%	35	26%	17-35%	45	34%	24-44%	
Don't know/not sure	33	13	39%	17-62%	13	49%	26-72%	7	12%	2-21%	
Refused	73	31	44%	30-57%	13	19%	8-31%	29	37%	24-50%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

[^] p-value > 0.1

**TABLE 9-3. RESPONSES TO THE QUESTION "HOW SOON AFTER YOU WAKE UP DO YOU SMOKE YOUR FIRST CIGARETTE?"
AMONG CURRENT SMOKERS AGE 40 YEARS AND OLDER ~**

		Within 30 minutes after waking			31 to 60 minutes after waking			More than 60 minutes after waking			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	673	362	52%	47-57%	94	14%	11-18%	217	38%	29-38%	
Area of Residence											^
Urban	354	177	50%	44-56%	48	15%	10-20%	129	35%	29-41%	
Rural	319	185	57%	50-64%	46	13%	9-17%	88	30%	23-36%	
Gender											**
Male	252	145	58%	50-66%	40	15%	9-21%	67	27%	20-34%	
Female	421	217	46%	40-52%	54	14%	9-18%	150	40%	34-46%	
Age											^
40-49 years	230	120	50%	42-58%	28	16%	9-22%	82	34%	27-41%	
50-64 years	301	171	57%	50-64%	40	12%	7-16%	90	31%	24-38%	
65 years and older	142	71	42%	32-53%	26	17%	9-25%	45	41%	29-52%	
Race											*
White	476	271	54%	48-60%	62	14%	9-18%	143	32%	27-38%	
African American or Black	182	88	50%	41-59%	30	16%	9-23%	64	34%	25-42%	
Other	15	3	24%	0-53%	2	4%	0-9%	10	72%	43-100%	
Gender and Race											
White male	185	111	61%	52-70%	28	12%	7-18%	46	27%	19-35%	
African American male	62	32	55%	41-69%	12	20%	8-32%	18	25%	13-37%	
Other male	5	2	44%	0-97%	0	0%	0%	3	56%	3-100%	
White female	291	160	48%	41-55%	34	15%	9-21%	97	37%	30-44%	
African American female	120	56	45%	35-56%	18	13%	6-20%	46	42%	31-52%	
Other female	10	1	11%	0-32%	2	6%	0-16%	7	83%	60-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value $>$ 0.05 - 0.1

^ p-value $>$ 0.1

**TABLE 9-3. RESPONSES TO THE QUESTION "HOW SOON AFTER YOU WAKE UP DO YOU SMOKE YOUR FIRST CIGARETTE?"
AMONG CURRENT SMOKERS AGE 40 YEARS AND OLDER ~**

		Within 30 minutes after waking			31 to 60 minutes after waking			More than 60 minutes after waking			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											[^]
Married or partner of unmarried couple	299	144	48%	41-56%	48	16%	10-21%	107	36%	29-42%	
Divorced or separated	189	116	54%	45-64%	23	16%	7-25%	50	29%	20-38%	
Widowed	90	43	39%	26-52%	14	16%	6-27%	33	44%	30-59%	
Never married	92	57	64%	52-77%	9	7%	1-13%	26	29%	17-41%	
Education											[*]
Less than high school	95	63	67%	55-79%	11	9%	3-16%	21	24%	12-35%	
High school grad or GED	245	145	57%	49-65%	31	14%	8-21%	69	29%	22-36%	
College 1-3 years	176	85	44%	34-54%	25	14%	8-21%	66	42%	32-51%	
College grad	103	52	47%	35-59%	17	18%	8-28%	34	35%	24-47%	
Advanced degree	53	17	34%	17-52%	10	18%	5-32%	26	47%	30-65%	
Employment Status											[^]
Employed for wages	278	146	51%	43-58%	34	13%	8-18%	98	37%	29-44%	
Self-employed	45	25	55%	38-71%	8	15%	4-25%	12	31%	15-47%	
Retired	165	89	53%	43-63%	23	11%	6-16%	53	36%	26-46%	
Other	183	101	53%	43-62%	29	19%	11-27%	53	29%	20-37%	
Household Income											[^]
<\$25,000	180	113	58%	48-68%	20	15%	6-23%	47	27%	18-36%	
\$25,000-<\$35,000	77	50	62%	46-77%	6	4%	0-8%	21	34%	19-49%	
\$35,000-<\$50,000	92	48	47%	34-60%	16	24%	12-36%	28	29%	18-41%	
\$50,000-<\$75,000	85	40	44%	31-57%	11	9%	3-15%	34	47%	34-60%	
\$75,000 or greater	137	61	47%	36-57%	23	16%	9-24%	53	37%	27-47%	
Don't know/not sure	33	18	62%	40-84%	4	13%	0-29%	11	25%	7-43%	
Refused	69	32	50%	35-64%	14	14%	6-23%	23	36%	22-50%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

[^] p-value > 0.1

**TABLE 9-4. SMOKING CESSATION DURING THE PAST 12 MONTHS BY DEMOGRAPHIC CHARACTERISTICS,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

	Current smokers who were told to stop smoking by a health care professional during the past 12 months ~					Current smokers who attempted to stop smoking during the past 12 months ~					Current smokers who went "cold turkey" during their last attempt at smoking cessation during the past 12 months ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Total Population	691	468	67%	62-72%		691	354	51%	46-55%		352	186	60%	53-66%	
Area of Residence					^					^					^
Urban	367	248	67%	61-73%		367	195	51%	45-57%		194	106	61%	53-69%	
Rural	324	220	67%	60-73%		324	159	49%	42-56%		158	80	56%	46-66%	
Gender					^					**					^
Male	262	174	67%	60-74%		262	118	45%	37-52%		117	68	65%	54-75%	
Female	429	294	67%	61-73%		429	236	56%	50-62%		235	118	56%	48-64%	
Age					**					^					**
40-49 years	234	148	62%	54-70%		234	121	50%	42-58%		120	68	68%	58-78%	
50-64 years	309	204	68%	62-75%		308	158	51%	43-58%		157	79	54%	44-64%	
65 years and older	148	116	80%	73-88%		149	75	51%	40-62%		75	39	49%	34-64%	
Race					^										*
White	486	328	66%	61-72%		485	225	45%	39-51%		224	109	52%	44-61%	
African American or Black	191	133	70%	62-78%		191	114	56%	47-65%		114	69	68%	58-78%	
Other	14	7	44%	12-76%		15	15	100%	100%		14	8	64%	34-94%	
Gender and Race					^										^
White male	191	126	68%	59-76%		191	74	37%	29-46%		74	37	55%	40-70%	
African American male	66	45	66%	52-80%		66	39	53%	39-67%		39	29	77%	63-92%	
Other male	5	3	69%	24-100%		5	5	100%	100%		4	2	47%	0-100%	
White female	295	202	65%	58-72%		294	151	52%	45-59%		150	72	50%	40-61%	
African American female	125	88	73%	64-83%		125	75	59%	49-69%		75	40	60%	47-73%	
Other female	9	4	27%	0-58%		10	10	100%	100%		10	6	75%	45-100%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 9-4. SMOKING CESSATION DURING THE PAST 12 MONTHS BY DEMOGRAPHIC CHARACTERISTICS,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

	Current smokers who were told to stop smoking by a health care professional during the past 12 months ~					Current smokers who attempted to stop smoking during the past 12 months ~					Current smokers who went "cold turkey" during their last attempt at smoking cessation during the past 12 months ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig	N	n	wt %	95% CI	Stat Sig
Marital Status															
Married or partner of unmarried couple	308	202	65%	59-72%		308	146	45%	38-52%		145	68	55%	45-64%	^
Divorced or separated	192	136	77%	69-84%		192	113	61%	51-70%		112	60	58%	46-70%	
Widowed	92	67	74%	63-86%		93	50	51%	37-65%		50	30	66%	52-81%	
Never married	95	61	55%	42-68%		95	44	51%	38-64%		44	27	74%	59-89%	
Education															
Less than high school	96	73	76%	66-87%		97	59	54%	41-67%		59	32	61%	45-77%	^
High school grad or GED	250	165	67%	59-74%		250	115	44%	36-52%		115	62	59%	47-71%	
College 1-3 years	180	121	66%	56-75%		180	96	56%	46-66%		96	52	62%	50-74%	
College grad	108	69	64%	52-75%		108	55	52%	40-64%		54	25	52%	35-69%	
Advanced degree	56	40	64%	47-81%		55	28	54%	36-71%		27	14	66%	46-87%	
Employment Status															
Employed for wages	284	188	63%	56-71%		283	143	49%	41-56%		142	78	66%	57-75%	**
Self-employed	45	23	43%	27-60%		45	19	43%	27-60%		18	8	46%	20-71%	
Retired	169	122	78%	71-85%		170	83	49%	39-59%		83	36	39%	26-53%	
Other	191	135	70%	62-79%		191	108	55%	46-64%		108	63	63%	52-75%	
Household Income															
<\$25,000	187	135	73%	64-82%		187	100	55%	45-65%		100	62	71%	59-82%	^
\$25,000-<\$35,000	77	51	73%	61-85%		77	40	54%	39-70%		40	24	60%	38-81%	
\$35,000-<\$50,000	95	66	74%	65-84%		95	48	51%	38-64%		48	26	51%	34-69%	
\$50,000-<\$75,000	87	66	74%	62-85%		86	51	53%	39-66%		49	19	45%	28-62%	
\$75,000 or greater	140	85	58%	47-69%		140	58	41%	30-51%		58	28	64%	50-78%	
Don't know/not sure	32	19	39%	17-60%		33	21	62%	39-85%		21	8	38%	9-67%	
Refused	73	46	60%	46-74%		73	36	48%	34-62%		36	19	65%	48-81%	

N = Number of people in the sample who responded to the survey

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 9-5. RESPONSES TO THE QUESTION "ABOUT HOW LONG HAS IT BEEN SINCE YOU LAST SMOKED CIGARETTES DAILY?"
AMONG FORMER SMOKERS AGE 40 AND OLDER ~**

		Within the past year			1 to 5 years ago			More than 5 years ago			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	1594	97	6%	5-8%	180	12%	10-15%	1317	81%	78-84%	
Area of Residence											[^]
Urban	937	53	6%	4-8%	106	13%	10-15%	778	81%	78-84%	
Rural	657	44	7%	5-10%	74	12%	9-15%	539	81%	77-84%	
Gender											[^]
Male	618	40	7%	5-10%	59	12%	8-15%	519	81%	77-85%	
Female	976	57	6%	4-7%	121	13%	11-16%	798	81%	78-84%	
Age											**
40-49 years	237	26	11%	6-15%	47	20%	14-26%	164	70%	62-77%	
50-64 years	647	47	7%	5-10%	79	12%	9-16%	521	80%	77-84%	
65 years and older	710	24	3%	2-4%	54	7%	5-10%	632	90%	87-92%	
Race											[^]
White	1302	81	7%	5-9%	136	11%	9-14%	1085	82%	79-84%	
African American or Black	256	12	4%	1-6%	40	17%	11-23%	204	79%	73-86%	
Other	36	4	8%	0-17%	4	11%	0-24%	28	81%	65-97%	
Gender and Race											[^]
White male	522	35	8%	5-11%	46	10%	7-14%	441	82%	77-86%	
African American male	76	2	3%	0-7%	10	17%	6-28%	64	80%	69-91%	
Other male	20	3	11%	0-24%	3	16%	0-38%	14	73%	48-98%	
White female	780	46	6%	4-8%	90	12%	9-15%	644	81%	78-85%	
African American female	180	10	4%	1-7%	30	17%	11-24%	140	79%	72-86%	
Other female	16	1	4%	0-13%	1	1%	0-4%	14	94%	85-100%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

[^] p-value > 0.1

**TABLE 9-5. RESPONSES TO THE QUESTION "ABOUT HOW LONG HAS IT BEEN SINCE YOU LAST SMOKED CIGARETTES DAILY?"
AMONG FORMER SMOKERS AGE 40 AND OLDER ~**

		Within the past year			1 to 5 years ago			More than 5 years ago			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											**
Married or partner of unmarried couple	920	49	5%	4-7%	94	12%	9-15%	777	83%	80-86%	
Divorced or separated	266	29	15%	8-22%	41	16%	10-22%	196	69%	61-77%	
Widowed	302	12	4%	2-7%	30	11%	7-15%	260	85%	80-90%	
Never married	97	5	6%	0-12%	14	15%	7-23%	78	79%	69-89%	
Education											**
Less than high school	102	8	5%	1-9%	13	17%	7-26%	81	78%	68-89%	
High school grad or GED	425	37	11%	7-15%	67	17%	12-23%	321	72%	66-78%	
College 1-3 years	419	25	7%	4-10%	53	14%	10-18%	341	80%	75-84%	
College grad	367	15	3%	1-6%	28	7%	4-11%	324	89%	85-93%	
Advanced degree	279	12	5%	2-8%	19	9%	4-14%	248	86%	80-91%	
Employment Status											**
Employed for wages	536	40	7%	5-10%	72	15%	11-19%	424	78%	73-82%	
Self-employed	110	6	4%	0-9%	13	14%	5-23%	91	82%	72-91%	
Retired	769	32	4%	2-5%	67	9%	6-11%	670	87%	85-90%	
Other	177	19	14%	7-22%	28	16%	9-23%	130	70%	61-79%	
Household Income											^
<\$25,000	252	20	10%	5-15%	41	19%	12-25%	191	72%	64-79%	
\$25,000-<\$35,000	151	11	8%	1-16%	18	15%	7-22%	122	77%	67-87%	
\$35,000-<\$50,000	174	11	6%	2-11%	20	14%	7-21%	143	79%	71-88%	
\$50,000-<\$75,000	214	10	4%	1-7%	20	11%	6-16%	184	85%	79-91%	
\$75,000 or greater	541	30	6%	4-9%	54	11%	8-15%	457	82%	78-86%	
Don't know/not sure	73	2	4%	0-11%	4	8%	0-19%	67	87%	76-99%	
Refused	189	13	6%	2-9%	23	10%	6-15%	153	84%	78-90%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value \leq 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 9-6. CANCER SCREENING PRACTICES BY SMOKING STATUS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER

	Never Smokers				Former Smokers				Current Smokers				
Screening Test	N	n	wt%	95%CI	N	n	wt%	95%CI	N	n	wt%	95%CI	Stat Sig
Persons reporting to have ever had a fecal occult blood test (Age ≥ 50 years)	1992	1081	53%	51-56%	1353	787	56%	53-59%	457	197	39%	33-45%	**
Persons reporting to have ever had a sigmoidoscopy or colonoscopy (lower GI endoscopy) (Age ≥ 50 years)	1994	1526	77%	74-79%	1361	1062	78%	75-81%	456	289	59%	53-65%	**
Men reporting to have ever had a Prostate Specific Antigen test (African American men age 45-49 years and all men age >50 years)	519	427	78%	73-83%	523	438	80%	76-85%	181	119	53%	44-63%	**
Men reporting to have ever had a digital rectal examination (African American men age 45-49 years and all men age >50 years)	545	485	88%	84-91%	539	505	93%	90-96%	188	150	78%	71-86%	**
Women reporting to have ever had a mammogram (Age ≥ 40 years)	1862	1793	95%	94-97%	983	952	97%	96-98%	431	392	89%	84-93%	**
Women reporting to have ever had a Pap test (Age ≥ 40 years with an intact uterus)	1222	1202	98%	97-100%	624	613	99%	98-99%	300	294	99%	97-100%	^
Persons reporting to have ever had oral cancer screening (Age ≥ 40 years)	2512	1315	52%	50-55%	1549	858	55%	52-58%	662	258	34%	30-39%	**

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 9-7. ALCOHOL CONSUMPTION DURING THE PAST 30 DAYS BY DEMOGRAPHIC FACTORS,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

		Non-drinkers			Low-risk drinkers *			High-risk drinkers~			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	4922	2387	45%	43-47%	2056	43%	41-45%	479	12%	11-13%	
Area of Residence											**
Urban	2936	1374	44%	42-46%	1283	45%	42-47%	279	12%	10-13%	
Rural	1986	1013	49%	46-51%	773	39%	36-41%	200	12%	10-14%	
Gender											**
Male	1639	638	37%	34-40%	751	46%	43-49%	250	17%	15-20%	
Female	3283	1749	52%	50-54%	1305	41%	39-43%	229	7%	6-9%	
Age											**
40-49 years	1089	442	39%	36-43%	473	42%	39-46%	174	18%	15-21%	
50-64 years	1997	894	42%	39-44%	910	48%	46-51%	193	10%	8-12%	
65 years and older	1836	1051	57%	55-60%	673	36%	34-39%	112	6%	5-8%	
Race											**
White	3795	1670	39%	37-41%	1730	48%	46-50%	395	13%	11-14%	
African American or Black	973	626	58%	54-63%	273	31%	27-35%	74	11%	8-14%	
Other	154	91	59%	48-69%	53	37%	27-48%	10	4%	1-7%	
Gender and Race											**
White male	1302	468	31%	28-34%	628	50%	47-54%	206	18%	16-21%	
African American male	278	143	48%	41-55%	97	36%	29-43%	38	16%	10-22%	
Other male	59	27	56%	40-72%	26	40%	24-55%	6	5%	0-9%	
White female	2493	1202	45%	43-48%	1102	47%	44-49%	189	8%	7-9%	
African American female	695	483	67%	62-71%	176	27%	23-31%	36	6%	4-9%	
Other female	95	64	61%	47-74%	27	35%	22-49%	4	4%	0-8%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

* Men ≤14 drinks/week or <5 drinks/occasion

Females ≤7 drinks/week or <5 drinks/occasion

~ High-risk drinking exceeds these criteria

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

Maryland Cancer Survey, 2008

**TABLE 9-7. ALCOHOL CONSUMPTION DURING THE PAST 30 DAYS BY DEMOGRAPHIC FACTORS,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

		Non-drinkers			Low-risk drinkers *			High-risk drinkers~			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											**
Married or partner of unmarried couple	2772	1193	41%	39-43%	1310	48%	45-50%	269	12%	10-13%	
Divorced or separated	827	417	49%	44-54%	309	36%	31-40%	101	15%	11-19%	
Widowed	893	555	60%	56-64%	287	33%	29-36%	51	7%	5-9%	
Never married	408	207	50%	44-56%	145	34%	28-40%	56	16%	11-21%	
Education											**
Less than high school	362	279	77%	71-82%	49	14%	9-18%	34	10%	6-14%	
High school grad or GED	1352	818	56%	52-60%	415	32%	28-35%	119	12%	10-15%	
College 1-3 years	1130	550	46%	42-50%	474	42%	38-46%	106	12%	9-15%	
College grad	1173	454	37%	34-41%	589	50%	46-53%	130	13%	10-15%	
Advanced degree	892	279	30%	26-34%	523	59%	55-63%	90	11%	8-13%	
Employment Status											**
Employed for wages	1940	771	37%	34-40%	931	49%	46-51%	238	14%	12-16%	
Self-employed	355	125	31%	26-37%	171	48%	42-55%	59	20%	14-26%	
Retired	1907	1056	55%	52-58%	730	38%	36-41%	121	7%	5-8%	
Other	703	425	57%	52-62%	218	33%	28-37%	60	10%	7-13%	
Household Income											**
<\$25,000	841	571	65%	60-70%	203	25%	21-29%	67	10%	7-13%	
\$25,000-<\$35,000	428	254	60%	54-66%	139	30%	25-36%	35	10%	6-14%	
\$35,000-<\$50,000	541	284	53%	48-59%	211	37%	32-42%	46	10%	7-14%	
\$50,000-<\$75,000	633	271	45%	40-50%	300	42%	37-47%	62	13%	9-17%	
\$75,000 or greater	1569	463	28%	25-30%	902	58%	55-61%	204	15%	13-17%	
Don't know/not sure	253	183	71%	63-78%	55	24%	17-31%	15	6%	2-9%	
Refused	657	361	54%	50-59%	246	38%	33-42%	50	8%	5-10%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

* Men ≤14 drinks/week or <5 drinks/occasion

Females ≤7 drinks/week or <5 drinks/occasion

~ High-risk drinking exceeds these criteria

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

**TABLE 9-8. CANCER SCREENING PRACTICES BY RISK LEVEL OF ALCOHOL CONSUMPTION DURING THE PAST 30 DAYS,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

	Non-drinkers				Low-risk drinkers *				High-risk drinkers~				
Screening Test	N	n	wt%	95%CI	N	n	wt%	95%CI	N	n	wt%	95%CI	Stat Sig
Persons reporting to have ever had a fecal occult blood test (Age ≥ 50 years)	1927	1018	51%	48-54%	1576	900	55%	52-58%	304	150	45%	38-52%	**
Persons reporting to have ever had a sigmoidoscopy or colonoscopy (Age ≥ 50 years)	1934	1417	72%	70-75%	1579	1236	78%	75-80%	304	225	72%	65-78%	**
Men reporting to have ever had a Prostate Specific Antigen test (African American men age 40-49 years and all men age ≥ 50 years)	494	384	71%	66-77%	583	494	79%	74-83%	149	105	67%	57-76%	**
Men reporting to have ever had a digital rectal examination (African American men age 40-49 years and all men age > 50 years)	518	455	85%	81-89%	603	567	93%	90-96%	153	121	80%	72-88%	**
Women reporting to have ever had a mammogram (Age ≥ 40 years)	1746	1670	95%	93-96%	1305	1262	96%	95-98%	229	210	90%	85-95%	**
Women reporting to have ever had a Pap test (Age ≥ 40 years with an intact uterus)	1045	1020	97%	95-99%	926	916	99%	99-100%	176	174	99%	96-100%	**
Persons reporting to have ever had oral cancer screening (Age ≥ 40 years)	2281	1004	43%	40-46%	1977	1181	59%	57-62%	468	245	45%	39-51%	**

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

* Men ≤14 drinks/week or <5 drinks/occasion

Females ≤7 drinks/week or <5 drinks/occasion

~ High-risk drinking exceeds these criteria

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

Chapter 10. Weight, Dietary Practices, and Physical Activity

Overweight and obesity are major health concerns in the United States (U.S.). Scientific evidence has established clear associations between overweight/obesity and the leading causes of morbidity and mortality in the U.S., including cardiovascular disease, cancer, and diabetes.^{1,2} Overweight and obesity are clearly associated with increased risk of developing cancers of the breast (in postmenopausal women), colon, endometrium, esophagus, and kidney. Highly suggestive evidence also indicates that obesity increases risk for cancers of the gallbladder, prostate, ovary, pancreas, thyroid, and cervix, and for multiple myeloma and Hodgkin's lymphoma.³ It has been estimated that in the U.S., overweight and obesity could account for as much as 14% of cancer-related deaths in men and 20% of all cancer-related deaths in women.⁴

Aside from tobacco use, body weight, dietary practices, and levels of physical activity are the most important modifiable determinants of cancer risk. Because of their critical importance in overall health, these factors are leading health indicators used by HP 2010 to measure the health of the nation. The MCS examines these indicators through a series of questions related to body weight and height, fruit and vegetable consumption, meat consumption (as an indicator of saturated fat intake), and frequency and intensity of physical activity. Findings were used to assess the prevalence of these risk factors among Marylanders, and to examine whether body mass index (BMI), dietary practices, and physical activity levels are associated with cancer screening behaviors.

10.1 Body Mass Index

BMI is widely used as an indicator of total body fat, based on an individual's height and weight. BMI is calculated as body weight in kilograms divided by height in meters, squared (kg/m^2). The table below shows the BMI ranges generally used as a measure of whether an individual is underweight, at a healthy weight, overweight, or obese.

	BMI range (kg/m^2)
Underweight	Less than 18.5
Healthy	18.5 – 24.9
Overweight	25.0 – 29.9
Obese	30.0 or higher

¹ Eyre H, Kahn R, and Robertson RM. Preventing cancer, cardiovascular disease, and diabetes. *Diabetes Care* 2004; 27(7): 1812-1824.

² National Cancer Institute. PDQ Cancer Information Summaries: Prevention. Available at <http://www.cancer.gov/cancertopics/pdq/prevention>. Last accessed July 27, 2009.

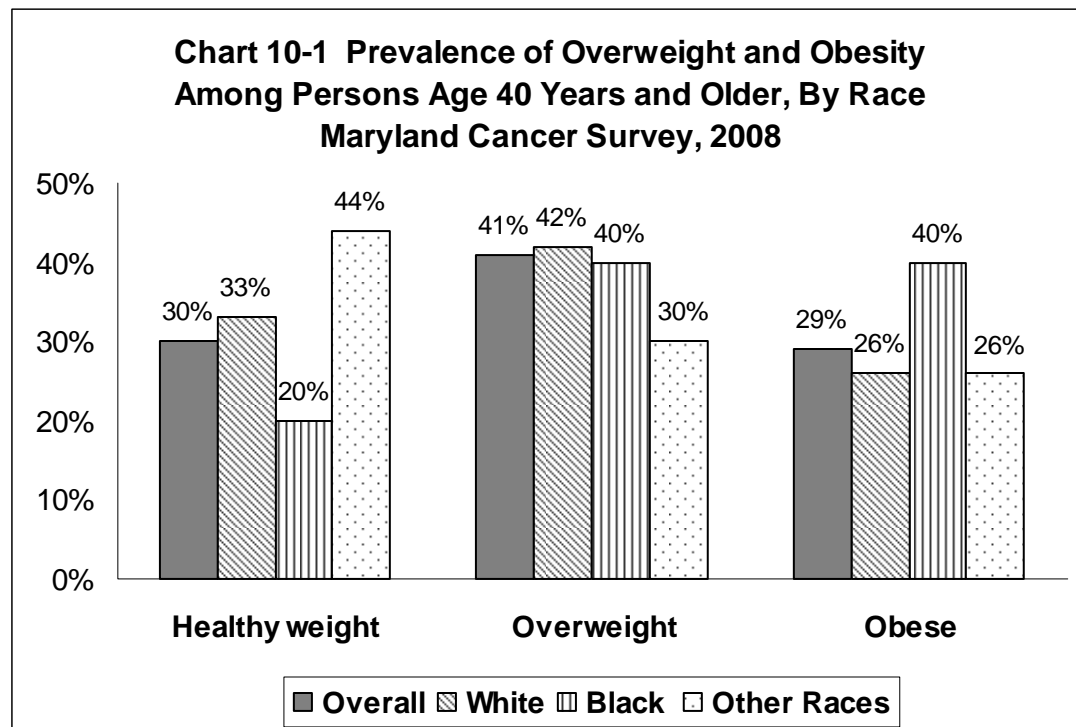
³ Kushi LH et al. American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention: Reducing the Risk of Cancer with Healthy Food Choices and Physical Activity. *CA Cancer J Clin* 2006; 56:254-281.

⁴ Calle EE et al. Overweight, obesity, and mortality from cancer in a prospectively studies cohort of U.S. adults. *N Engl J Med* 2003; 348:1625-1638.

Reducing the percentage of Americans who are overweight or obese is among the leading health indicators used by HP 2010. One specific HP 2010 target is to reduce the proportion of American adults age 20 years and older who are obese, from a national baseline of 23% to 15%. Another HP 2010 target is to increase the proportion of adults age 20 years and older that has a healthy weight, from a national baseline of 42% to 60%.⁵

In the MCS, participants were asked to provide their height and weight, which was then used to estimate BMI. The following is a summary of BMI distribution among Marylanders age 40 years and older, based on results of the MCS (Chart 10-1 and Table 10-1).

- Thirty percent (30%) had a BMI in the “healthy” range, 41% had a BMI in the “overweight” range and 29% had a BMI in the “obese” range. (82 persons with a BMI in the “underweight” range were excluded from analysis due to small sample size, as were the 155 persons who did not report a height and/or weight.)
- Seventy-percent (70%) of Marylanders age 40 years and older can be considered overweight or obese.



BMI differed significantly among respondents, based on several demographic characteristics (Table 10-1).

⁵ U.S. Department of Health and Human Services. Healthy People 2010. Understanding and Improving Health. Vol. II. Nutrition and Overweight. Washington, DC; November 2000. Available at <http://www.healthypeople.gov/document/HTML/Volume2/19Nutrition.htm>. Last accessed July 27, 2009.

- A lower percentage of men than women had a BMI in the healthy weight range (23% vs. 36%, respectively). Although the prevalence of overweight was significantly higher among men (50% compared to 33% for women), the prevalence of obesity was comparable for men and women (28% vs. 31%).
- African Americans had a significantly greater percentage with a BMI in the obese range than did either Whites or those of other races (40% vs. 26% for Whites and persons of other races; Chart 10-1).
- Education appears to be strongly associated with BMI in Marylanders age 40 years and older. As level of education increased, the proportion of persons who were obese generally decreased. The prevalence of obesity is highest among those with less than a high school education (37%) and lowest among those with an advanced degree (21%). The proportion of persons in the healthy BMI range increased with higher levels of education.
- Persons with household income of \$75,000 or more were significantly more likely to be in the healthy BMI range than persons in lower income groups.

MCS participants were asked whether, at the time of the survey, they were trying to either lose weight or keep from gaining weight. The following is a summary of findings related to weight control among Marylanders age 40 years and older.

- Forty-seven percent (47%) said they are currently trying to lose weight (Table 10-2).
- Twenty-four percent (24%) said that in the past 12 months, a health professional had advised them to lose weight. Of those with a BMI in the obese range, 53% reported that a health professional had advised them to lose weight. (Data not shown in tables.)
- Among Marylanders who said they were trying to lose weight or keep from gaining weight, 70% said they were using physical activity or exercise in their weight control efforts (Table 10-2).

10.2 Dietary Practices

Epidemiological studies have shown that eating a diet high in vegetables and fruits and low in animal fat and meat reduces the risk of some of the most common types of cancer.^{1,2} Current recommendations for overall health are to consume a diet that includes at least five servings of vegetables and fruits each day, to choose whole grain foods, and to limit consumption of saturated fats, alcohol, and excess calories.⁶

Fruit and Vegetable Consumption

Two HP 2010 objectives concern the consumption of fruits and vegetables in the American population age 2 years and older:

1. To increase the proportion of persons who consume at least two daily servings of fruit from a national baseline of 28% to 75%; and

⁶ U.S. Department of Health and Human Services (HHS) and U.S. Department of Agriculture (USDA). Dietary Guidelines for Americans 2005. Available at <http://www.healthierus.gov/dietaryguidelines>. Last accessed July 27, 2009.

2. To increase the proportion of those who consume at least three daily servings of vegetables from 3% to 50%.⁵

In 2007, the CDC launched the “Fruit and Veggies – More Matters” program, a public health initiative to increase consumption of fruits and vegetables by Americans. This program, which replaces the “5-A-Day” initiative, was developed to reflect new dietary guidelines which recommend more than five daily servings of fruit and vegetables for some people.⁷

In the MCS 2008, survey respondents were asked about their average daily consumption of a variety of fruits and vegetables. Using these survey results, we estimated the number of daily servings of fruits and vegetables by summing the responses from specific questions about consumption of fruits, fruit juice, leafy salad greens, and vegetables (other than potatoes). The results show that Maryland adults age 40 years and older do not yet meet the HP 2010 targets for either fruit or vegetable consumption. Only 64% reported eating two or more servings of fruit (compared to HP 2010 target of 75%) and only 29% reported that they consume three or more daily servings of vegetables (compared to target of 50%; data not shown in tables).

Table 10-3 presents the findings for Marylanders eating at least five servings of fruits and vegetables daily.

- Overall, 40% of Marylanders age 40 years and older reported eating five or more servings of fruits and vegetables a day.
- The proportion of persons who reported consuming five or more servings of fruits and/or vegetables a day differed significantly with respect to several demographic characteristics (Table 10-3).
 - A higher proportion of women than men reported eating at least five servings a day (45% vs. 35%, respectively).
 - As education level increased, the proportion of Marylanders adhering to the recommendation also increased, ranging from 27% of those with less than high school education to 48% of those possessing an advanced degree.
 - The proportion of persons eating at least five servings a day was somewhat lower among those with annual household income less than \$35,000 (34-35%), compared to those with incomes of \$35,000 or more (41-42%).
- Marylanders with a BMI in the healthy range were significantly more likely to consume at least five daily servings of fruits and/or vegetables than persons who were overweight or obese (45% compared to 38% of overweight or obese persons).
- Adherence to the recommendation did not differ significantly by age or race.

Red Meat Consumption

One of the primary dietary concerns in the U.S. is consuming too much saturated fat and total fat. (Cheese and beef are the leading sources of saturated fat in the American diet, comprising almost one-fourth of total saturated fat consumed.⁶) Large amounts of saturated fat in the diet contribute to the risk of heart disease, and high levels of meat consumption could

⁷ CDC. Fruit and Veggies – More Matters Program. Available at <http://www.fruitsandveggiesmatter.gov/index.html>. Last accessed July 27, 2009.

increase the risk of cancer of the colon and rectum,^{8,9,10} stomach,¹¹ and pancreas.^{12,13} Both the *Dietary Guidelines for Americans*⁶ and the National Cholesterol Education Program¹⁴ recommend a diet that contains less than 10% of calories from saturated fat and no more than 30% of calories from total fat. A related goal of the HP 2010 initiative is to increase the proportion of persons age 2 years and older who consume less than 10% of calories from saturated fat.⁵

As an indicator of saturated fat intake, MCS participants were asked about their frequency of meat consumption (such as beef, pork, lamb or veal, but excluding seafood and poultry) on a weekly basis (Table 10-4).

- Overall, 21% of Marylanders age 40 years and older eat one or fewer servings of meat a week; 45% eat two to six servings of meat per week; and 34% report eating seven or more servings of meat weekly.
- Persons living in rural areas of Maryland reported eating meat more frequently than those living in urban areas.
- A significantly higher proportion of men reported eating seven or more servings of meat per week (41%) compared to women (28%); a higher proportion of women ate one or fewer servings of meat a week (25%) compared to men (16%).
- Almost one-third of non-White persons (32% of African Americans and 34% of persons of other races) reported the lowest level of meat consumption (one or fewer servings of meat per week), compared to only 16% of Whites.
- The highest levels of meat consumption (at least seven servings weekly) were inversely associated with years of education. That is, as education level increased, the proportion of Marylanders reporting meat consumption at this highest level generally decreased.
- A higher proportion of people in the obese weight range (40%) reported eating seven or more servings of meat a week compared to those who are overweight (34%) or healthy weight (29%). A higher proportion of Marylanders in the healthy weight range reported eating meat one or fewer times per week (24%) compared to those who are overweight (20%) or obese (18%).

⁸ Chao A, Thun MJ et al. Meat consumption and risk of colorectal cancer. JAMA 2005; 293(2): 172-82.

⁹ Larson S, Wolk A. Meat consumption and risk of colorectal cancer: A meta-analysis of prospective studies. Int J Cancer 2006; 119(11): 2657-2664.

¹⁰ Hu J, La Vecchia C, DesMeules M, et al. Meat and fish consumption and cancer in Canada. Nutrition and Cancer 2008; 60(3): 313-324.

¹¹ Gonzalez CA et al. Meat intake and risk of stomach and esophageal adenocarcinoma within the European Prospective Investigation Into Cancer and Nutrition (EPIC). J Natl Cancer Inst. 2006; 98(5): 345-54.

¹² Tavani A, La Vecchia C. et al. Red meat intake and cancer risk: a study in Italy. International Journal of Cancer 2000; 86(3): 425-8.

¹³ Nothlings U, Wilkens LR et al. Meat and fat intake as risk factors for pancreatic cancer: the multiethnic cohort study. J Natl Cancer Inst. 2005; 97(19): 1458-65.

¹⁴ National Institutes of Health. National Cholesterol Education Program. Available at <http://www.nhlbi.nih.gov/guidelines/cholesterol>. Last accessed July 31, 2009.

10.3 Physical Activity

In addition to known benefits in reducing cardiovascular disease risk, physical activity may also reduce the risk of developing several types of cancer, including cancer of the breast,^{2,15,16} colon,^{2,17,18} and endometrium.^{19,20} Physical activity is one of the leading health indicators used by HP 2010. Two related HP 2010 goals are:

1. To increase the proportion of adults 18 years and older who engage in moderate physical activity for at least 30 minutes per day, 5 or more days per week, or vigorous physical activity for at least 20 minutes per day, 3 or more days per week, to a target of 50%²¹; and
2. To increase the proportion of adults age 18 years and older who engage in vigorous physical activity 3 or more days per week for at least 20 minutes per occasion to a target of 30%.²¹

Another objective of HP 2010 is to increase the proportion of people who have been counseled by a physician in the past year about physical activity or exercise, from a 2001 baseline of 45% to a target of 54%.²²

The following sections describe MCS 2008 findings relative to these targets.

Moderate or Vigorous Physical Activity

MCS participants were asked about the frequency and duration of their moderate and vigorous physical activity in a typical week. Responses to these questions were combined to estimate the proportion of the population that engages in regular physical activity – either 20 minutes of physical activity 3 or more days per week, or 30 minutes of moderate physical activity 5 or more days per week. This measure was used as a basis for comparisons with the associated HP 2010 objective (Table 10-5).

- More than half (57%) of Marylanders age 40 years and older engage in regular moderate or vigorous physical activity. This indicates that Marylanders age 40 years and older

¹⁵ Peters TM et al. Physical activity and postmenopausal breast cancer risk in the NIH-AARP diet and health study. *Cancer Epidemiol Biomarkers Prev* 2009; 18(1): 289-96.

¹⁶ Monninkhof EM et al. Physical activity and breast cancer: a systematic review. *Epidemiology* 2007; 18(1): 137-57.

¹⁷ Wolin KY et al. Physical activity and colon cancer prevention: a meta-analysis. *Br J Cancer* 2009; 100(4): 611-6.

¹⁸ Howard RA et al. Physical activity, sedentary behavior, and the risk of colon and rectal cancer in the NIH-AARP Diet and Health Study. *Cancer Causes Control* 2008; 19(9): 939-53.

¹⁹ Gierach GL, et al. Physical activity, sedentary behavior, and endometrial cancer risks in the NIH-AARP Diet and Health Study. *Int J Cancer* 2009; 24(9): 2139-47.

²⁰ Voskuil DW et al. Physical activity and endometrial cancer risk, a systematic review of current evidence. *Cancer Epidemiol Biomarkers Prev* 2007; 16(4): 639-48.

²¹ U.S. Department of Health and Human Services. Healthy People 2010, Midcourse review: Physical Activity and Fitness. Available at <http://www.healthypeople.gov/data/midcourse/default.htm#pubs>. Last accessed July 28, 2009.

²² U.S. Department of Health and Human Services. Healthy People 2010, Midcourse review: Access to Quality Health Services. Available at <http://www.healthypeople.gov/data/midcourse/html/focusareas/FA01Objectives.htm>. Last accessed July 28, 2009.

meet the HP 2010 target for engaging in either moderate or vigorous physical activity on a routine basis.

- The highest proportions of persons achieving these activity levels were found among men, those in the youngest age group (40 to 49 years), persons with at least a college degree, and employed persons.
- As household income increased, the proportion of adults engaging in regular physical activity increased.
- People who were age 65 years and older, African American females, widowed, or those with less than a high school education had the lowest prevalence of achieving these levels of physical activity.

Persons who did not engage in either 20 minutes of vigorous activity 3 or more days per week or at least 30 minutes of moderate physical activity 5 or more days per week were asked the main reason why they were not physically active. (Data not shown in tables.)

- Thirty percent (30%) reported a lack of motivation
- Thirty percent (30%) reported a physical disability or other health limitation
- Twenty-seven percent (27%) reported a lack of time

Vigorous Physical Activity

MCS participants were asked about the frequency and duration of vigorous physical activity (non-occupational), such as running, aerobics, heavy yard work, or other activities that cause large increases in breathing or heart rate (Table 10-6).

- Almost one-half (45%) of all persons age 40 years and older reported they engage in vigorous physical activity 3 or more days per week for 20 or more minutes per occasion. This exceeds the HP 2010 target of 30% for regular vigorous activity among adults.

The percentage of Marylanders reporting that they engaged in vigorous physical activity at least 3 days per week differed significantly by almost all the demographic characteristics under consideration, except area of residence (urban vs. rural) and race.

- More men than women reported vigorous activity (52% vs. 39%).
- The proportion of those engaging in vigorous physical activity decreased significantly with age, dropping from 54% of those age 40 to 49 years to 33% of those age 65 years and older.
- As education level increased, the percentage of persons who reported they engage in regular vigorous activity also increased.
- The proportion of persons engaging in regular vigorous activity increased significantly with increasing levels of household income.

HCP Recommendations for Physical Activity

All MCS participants were asked whether, in the past year, a doctor or other HCP had recommended that they begin or continue to do exercise or physical activity (Table 10-7).

- Almost half (45%) said that exercise/activity had been recommended to them.
- Those receiving such recommendations in highest proportions included persons living in urban areas, those age 50 years and older, and persons in the highest income group (\$75,000 or more).

10.4 Cancer Screening Practices by Physical Activity, Dietary Practices, and BMI

Undergoing or performing cancer screening tests can be thought of as a healthy behavior, much like engaging in physical activity or eating a balanced diet. Physical activity, diet, and BMI were examined in relation to each of the cancer screening questions to see whether people who practice other healthy behaviors are also more likely to undergo cancer screening (Table 10-8).

Physical Activity and Cancer Screening

For each type of cancer screening, the prevalence of ever being screened was examined for persons who engage in regular physical activity (vigorous and moderate levels) compared to those who do not.

- Those who engaged in vigorous physical activity had a significantly higher prevalence of ever having a Pap test and ever being screened for oral cancer than persons who did not get regular vigorous exercise.
- Those who did not meet the HP 2010 objective for moderate or vigorous physical activity had a significantly lower prevalence of ever being screened for oral cancer than persons who met the objective.

Dietary Practices and Cancer Screening

Dietary practices, specifically the number of servings of fruit, vegetables, and meat consumed, were associated with whether a person was ever screened for most types of cancer addressed in the survey.

- Persons who reported eating at least three servings of fruits and vegetables per day reported significantly higher prevalence of ever having an FOBT, sigmoidoscopy or colonoscopy, PSA, or the oral cancer exam, compared to those who ate fewer servings a day.
- Compared with those who reported eating seven or more servings of red meat per week, persons who ate two to six servings had a significantly higher prevalence of every type of screening test except mammogram or Pap test.

Body Mass Index and Cancer Screening

- With the exception of oral cancer screening, BMI had no significant association with the prevalence of ever having any of the reported screening tests. Persons who were categorized as obese had a significantly lower prevalence of ever being screened for oral cancer than persons who were overweight or at a healthy weight.

- Persons who said they were trying to lose weight were significantly more likely to have ever had an FOBT, a PSA test, or a DRE than those who said they were not trying to lose weight.

TABLE 10-1. BODY MASS INDEX BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER ~

		Healthy Weight (BMI 18.5 - 24.9)			Overweight (BMI 25.0 - 29.9)			Obese (BMI ≥ 30.0)			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Total Population	4767	1482	30%	28-32%	1858	41%	39-43%	1427	29%	28-31%	
Area of Residence											[^]
Urban	2843	891	30%	28-32%	1124	41%	39-43%	828	29%	27-31%	
Rural	1924	591	29%	26-31%	734	40%	37-42%	599	31%	29-34%	
Gender											**
Male	1644	378	23%	20-25%	804	50%	47-53%	462	28%	25-30%	
Female	3123	1104	36%	34-39%	1054	33%	31-35%	965	31%	29-33%	
Age											*
40-49 years	1060	346	31%	27-34%	410	42%	38-45%	304	28%	24-31%	
50-64 years	1929	563	29%	26-31%	712	39%	37-42%	654	32%	30-35%	
65 years and older	1778	573	31%	29-34%	736	42%	39-44%	469	27%	24-29%	
Race											**
White	3657	1244	33%	31-35%	1434	42%	40-44%	979	26%	24-27%	
African American or Black	957	177	20%	17-23%	375	40%	36-44%	405	40%	36-44%	
Other	153	61	44%	34-55%	49	30%	21-39%	43	26%	18-34%	
Gender and Race											**
White male	1306	302	22%	20-25%	639	50%	47-54%	365	27%	24-30%	
African American male	278	54	20%	14-25%	137	48%	41-55%	87	32%	25-39%	
Other male	60	22	43%	27-59%	28	43%	27-59%	10	15%	4-25%	
White female	2351	942	43%	40-45%	795	33%	31-36%	614	24%	22-26%	
African American female	679	123	20%	16-24%	238	34%	29-38%	318	46%	42-51%	
Other female	93	39	45%	32-59%	21	18%	10-26%	33	37%	24-49%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

****** p-value ≤ 0.05

***** p-value > 0.05 - 0.1

[^] p-value > 0.1

TABLE 10-1. BODY MASS INDEX BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER ~

		Healthy Weight (BMI 18.5 - 24.9)			Overweight (BMI 25.0 - 29.9)			Obese (BMI ≥ 30.0)			
Selected Characteristic	N	n	wt %	95% CI	n	wt %	95% CI	n	wt %	95% CI	Stat Sig
Marital Status											**
Married or partner of unmarried couple	2698	847	31%	29-33%	1101	42%	40-45%	750	27%	25-29%	
Divorced or separated	810	242	28%	24-32%	296	38%	33-43%	272	34%	30-39%	
Widowed	848	287	32%	28-36%	318	38%	34-42%	243	30%	26-34%	
Never married	396	100	26%	20-31%	137	34%	28-40%	159	40%	34-46%	
Education											**
Less than high school	358	77	19%	14-25%	145	44%	37-51%	136	37%	31-44%	
High school grad or GED	1296	337	25%	22-28%	519	41%	38-45%	440	34%	31-37%	
College 1-3 years	1103	312	26%	23-29%	401	38%	34-41%	390	36%	33-40%	
College grad	1128	392	32%	28-35%	477	46%	42-49%	259	23%	20-26%	
Advanced degree	870	362	43%	38-47%	312	36%	32-40%	196	21%	18-25%	
Employment Status											*
Employed for wages	1893	601	31%	28-33%	734	41%	38-44%	558	28%	25-31%	
Self-employed	345	116	30%	24-36%	142	44%	37-50%	87	27%	21-33%	
Retired	1841	552	28%	26-31%	749	42%	39-45%	540	30%	27-32%	
Other	675	212	31%	27-36%	225	34%	30-39%	238	34%	30-39%	
Household Income											**
<\$25,000	834	222	26%	22-30%	312	38%	34-43%	300	35%	31-40%	
\$25,000-<\$35,000	417	103	24%	18-30%	171	40%	34-46%	143	36%	30-42%	
\$35,000-<\$50,000	530	149	26%	21-30%	214	45%	39-50%	167	30%	25-34%	
\$50,000-<\$75,000	623	170	24%	20-28%	242	41%	36-46%	211	35%	30-40%	
\$75,000 or greater	1539	532	33%	31-36%	611	42%	39-45%	396	25%	22-27%	
Don't know/not sure	236	82	35%	27-43%	82	30%	23-38%	72	34%	26-42%	
Refused	588	224	35%	30-40%	226	40%	35-45%	138	25%	21-29%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 10-2. RESPONSES TO QUESTIONS REGARDING WEIGHT CONTROL, AMONG RESPONDENTS AGE 40 AND OLDER ~

	Trying to lose weight					Using physical exercise to lose weight				
Selected Characteristic	N	n	%	95% CI	Stat Sig	N	n	%	95% CI	Stat Sig
Total Population	4944	2338	47%	45-49%		2330	1575	70%	68-73%	
Area of Residence	^					^				
Urban	2951	1419	48%	46-50%		1413	966	71%	68-74%	
Rural	1993	919	45%	42-48%		917	609	68%	64-71%	
Gender	**					^				
Male	1647	649	40%	37-42%		648	456	73%	69-77%	
Female	3297	1689	54%	51-56%		1682	1119	69%	66-72%	
Age	**					**				
40-49 years	1091	546	47%	44-51%		543	410	77%	73-81%	
50-64 years	2009	1078	52%	49-55%		1076	755	72%	69-75%	
65 years and older	1844	714	39%	36-42%		711	410	57%	52-61%	
Race	^					^				
White	3806	1794	47%	45-49%		1791	1207	70%	68-73%	
African American or Black	982	473	48%	44-52%		469	317	71%	66-76%	
Other	156	71	43%	33-53%		70	51	73%	60-85%	
Gender and Race	**					^				
White male	1309	517	40%	37-43%		517	360	72%	67-76%	
African American male	279	111	39%	32-46%		110	78	76%	68-84%	
Other male	59	21	33%	18-47%		21	18	72%	47-98%	
White female	2497	1277	53%	51-56%		1274	847	69%	66-72%	
African American female	703	362	55%	50-59%		359	239	68%	62-74%	
Other female	97	50	52%	39-65%		49	33	73%	59-87%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

TABLE 10-2. RESPONSES TO QUESTIONS REGARDING WEIGHT CONTROL, AMONG RESPONDENTS AGE 40 AND OLDER ~

	Trying to lose weight					Using physical exercise to lose weight				
Selected Characteristic	N	n	%	95% CI	Stat Sig	N	n	%	95% CI	Stat Sig
Marital Status	**					**				
Married or partner of unmarried couple	2781	1409	48%	46-51%		1405	992	73%	70-75%	
Divorced or separated	836	395	46%	41-51%		394	257	68%	62-74%	
Widowed	894	302	34%	30-38%		299	170	57%	50-64%	
Never married	411	220	53%	47-59%		220	146	68%	60-76%	
Education	**					**				
Less than high school	365	138	40%	33-47%		138	75	62%	52-72%	
High school grad or GED	1358	613	46%	42-49%		609	385	65%	60-70%	
College 1-3 years	1138	572	50%	46-54%		570	380	69%	65-74%	
College grad	1175	573	49%	46-53%		573	413	75%	71-79%	
Advanced degree	896	437	44%	40-48%		435	318	74%	69-79%	
Employment Status	**					**				
Employed for wages	1950	1015	50%	47-53%		1011	729	74%	71-77%	
Self-employed	356	170	45%	39-52%		169	131	80%	74-87%	
Retired	1916	795	41%	39-44%		793	489	62%	58-66%	
Other	705	347	49%	44-54%		346	217	67%	61-73%	
Household Income	^					**				
<\$25,000	842	352	44%	39-48%		350	200	60%	54-67%	
\$25,000-<\$35,000	430	197	49%	42-55%		197	114	59%	50-68%	
\$35,000-<\$50,000	546	252	45%	39-50%		251	169	70%	63-77%	
\$50,000-<\$75,000	634	325	48%	43-53%		323	223	67%	61-74%	
\$75,000 or greater	1570	821	49%	46-52%		819	611	77%	74-81%	
Don't know/not sure	257	99	42%	34-50%		98	60	65%	53-76%	
Refused	665	292	47%	42-52%		292	198	69%	63-76%	
Body Mass Index	**					**				
Healthy Weight (BMI 18.5-24.9)	1467	338	22%	20-25%		336	247	74%	68-80%	
Overweight (BMI 25.0-29.9)	1840	888	48%	45-51%		887	639	73%	69-76%	
Obese (BMI ≥ 30.0)	1408	1015	71%	68-74%		1010	625	67%	63-70%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

**TABLE 10-3. ADHERENCE TO DIETARY RECOMMENDATIONS FOR FRUIT AND VEGETABLE CONSUMPTION,
AMONG RESPONDENTS AGE 40 YEARS AND OLDER**

	Persons reporting they eat five or more servings of fruits and vegetables per day ~#				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Total Population	4948	2023	40%	38-42%	
Area of Residence					^
Urban	2955	1222	40%	38-42%	
Rural	1993	801	40%	37-42%	
Gender					**
Male	1648	558	35%	32-38%	
Female	3300	1465	45%	43-47%	
Age					^
40-49 years	1098	472	42%	38-46%	
50-64 years	2005	822	39%	36-41%	
65 years and older	1845	729	40%	37-43%	
Race					^
White	3809	1574	41%	39-43%	
African American or Black	984	385	38%	34-42%	
Other	155	64	43%	33-54%	
Gender and Race					**
White male	1309	437	34%	31-37%	
African American male	279	98	36%	29-42%	
Other male	60	23	40%	24-56%	
White female	2500	1137	47%	44-49%	
African American female	705	287	39%	35-44%	
Other female	95	41	46%	33-59%	
Marital Status					^
Married or partner of unmarried couple	2779	1171	41%	39-43%	
Divorced or separated	837	327	39%	34-44%	
Widowed	896	363	40%	36-44%	
Never married	413	149	34%	29-40%	
Education					**
Less than high school	365	99	27%	21-33%	
High school grad or GED	1358	472	32%	29-36%	
College 1-3 years	1138	452	39%	35-43%	
College grad	1179	550	45%	42-49%	
Advanced degree	895	445	48%	44-52%	
Employment Status					**
Employed for wages	1955	778	39%	36-41%	
Self-employed	357	177	50%	43-56%	
Retired	1914	777	40%	37-42%	
Other	705	281	40%	36-45%	
Household Income					**
<\$25,000	848	296	34%	29-38%	
\$25,000-<\$35,000	432	148	35%	29-41%	
\$35,000-<\$50,000	545	245	41%	36-47%	
\$50,000-<\$75,000	632	267	42%	37-48%	
\$75,000 or greater	1570	677	42%	39-45%	
Don't know/not sure	258	84	34%	27-42%	
Refused	663	306	43%	39-48%	
Body Mass Index					**
Healthy Weight (BMI 18.5-24.9)	1463	663	45%	41-48%	
Overweight (BMI 25.0-29.9)	1844	725	38%	35-41%	
Obese (BMI ≥ 30)	1411	530	38%	34-41%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

derived variable-see text for explanation

TABLE 10-4. FREQUENCY OF MEAT[#] CONSUMPTION BY DEMOGRAPHIC FACTORS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER ~

		One or fewer servings of meat per week			2 to 6 servings of meat per week			7 or more servings of meat per week			
Selected Characteristic	N	n	%	95% CI	n	%	95% CI	n	%	95% CI	Stat Sig
Total Population	4866	1073	21%	20-23%	2253	45%	44-47%	1540	33%	32-35%	
Area of Residence											**
Urban	2905	728	23%	21-25%	1334	45%	43-48%	843	32%	30-34%	
Rural	1961	345	16%	14-18%	919	46%	43-49%	697	39%	36-41%	
Gender											**
Male	1615	262	16%	14-19%	735	43%	40-46%	618	40%	37-43%	
Female	3251	811	25%	24-27%	1518	47%	45-49%	922	27%	25-29%	
Age											**
40-49 years	1087	197	18%	15-21%	501	46%	42-49%	389	36%	33-40%	
50-64 years	1976	439	21%	19-23%	901	45%	42-48%	636	34%	31-36%	
65 years and older	1803	437	25%	23-28%	851	46%	43-49%	515	28%	26-31%	
Race											**
White	3762	700	16%	15-18%	1871	50%	48-52%	1191	34%	32-36%	
African American or Black	953	324	32%	29-36%	324	35%	31-38%	305	33%	29-37%	
Other	151	49	34%	24-44%	58	38%	28-48%	44	28%	19-37%	
Gender and Race											**
White male	1288	169	11%	9-13%	612	47%	44-51%	507	41%	38-45%	
African American male	268	71	26%	20-32%	105	36%	30-43%	92	38%	30-45%	
Other male	59	22	41%	25-57%	18	24%	11-38%	19	35%	19-51%	
White female	2474	531	21%	19-23%	1259	53%	50-55%	684	27%	25-29%	
African American female	685	253	37%	33-42%	219	33%	29-38%	213	29%	25-34%	
Other female	92	27	28%	17-39%	40	50%	37-63%	25	22%	13-32%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

^ p-value > 0.1

Beef, pork, lamb, or veal

TABLE 10-4. FREQUENCY OF MEAT[#] CONSUMPTION BY DEMOGRAPHIC FACTORS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER ~

		One or fewer servings of meat per week			2 to 6 servings of meat per week			7 or more servings of meat per week			
Selected Characteristic	N	n	%	95% CI	n	%	95% CI	n	%	95% CI	Stat Sig
Marital Status											**
Married or partner of unmarried couple	2740	499	19%	17-20%	1355	48%	45-50%	886	34%	32-36%	
Divorced or separated	822	211	23%	20-27%	363	44%	39-48%	248	33%	28-38%	
Widowed	875	234	28%	24-32%	368	42%	37-46%	273	30%	27-34%	
Never married	407	121	29%	23-35%	158	37%	31-43%	128	34%	28-40%	
Education											**
Less than high school	353	84	20%	15-26%	145	40%	34-47%	124	39%	32-46%	
High school grad or GED	1329	270	21%	18-24%	561	40%	37-44%	498	38%	35-42%	
College 1-3 years	1125	224	18%	15-20%	535	45%	42-49%	366	37%	33-41%	
College grad	1162	267	22%	19-24%	577	50%	47-54%	318	28%	25-31%	
Advanced degree	888	223	24%	21-28%	433	47%	43-51%	232	29%	25-33%	
Employment Status											*
Employed for wages	1930	409	21%	18-23%	910	46%	43-49%	611	34%	31-36%	
Self-employed	351	78	20%	15-25%	162	48%	41-54%	111	32%	26-38%	
Retired	1879	437	24%	21-26%	878	46%	43-49%	564	30%	28-33%	
Other	690	149	20%	16-24%	290	41%	36-46%	251	39%	34-44%	
Household Income											**
<\$25,000	833	206	27%	23-31%	332	36%	32-41%	295	37%	32-41%	
\$25,000-<\$35,000	424	91	19%	15-24%	186	42%	36-48%	147	39%	32-45%	
\$35,000-<\$50,000	536	112	20%	16-25%	251	47%	41-52%	173	33%	28-38%	
\$50,000-<\$75,000	626	135	22%	18-26%	295	45%	40-50%	196	33%	28-38%	
\$75,000 or greater	1554	297	18%	16-20%	799	50%	47-53%	458	32%	29-35%	
Don't know/not sure	248	71	27%	20-34%	100	42%	34-50%	77	31%	23-38%	
Refused	645	161	25%	21-29%	290	43%	39-48%	194	32%	27-36%	
Body Mass Index											**
Healthy Weight (BMI 18.5-24.9)	1436	360	25%	22-27%	699	47%	44-51%	377	28%	25-31%	
Overweight (BMI 25.0-29.9)	1820	382	20%	18-22%	867	46%	43-49%	571	33%	31-36%	
Obese (BMI ≥ 30.0)	1386	261	18%	16-21%	595	43%	39-46%	530	39%	36-43%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value >0.05 - 0.1

^ p-value > 0.1

Beef, pork, lamb, or veal

TABLE 10-5. PARTICIPATION IN EITHER VIGOROUS PHYSICAL ACTIVITY THREE OR MORE DAYS OR MODERATE ACTIVITY FIVE TO SEVEN DAYS PER WEEK BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER

	Engage in vigorous physical activity on ≥ 3 days per week for ≥ 20 minutes per occasion OR in moderate physical activity on 5-7 days per week for ≥ 30 minutes a day ~				
Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Total Population	4985	2747	57%	55-59%	
Area of Residence	[^]				
Urban	2976	1622	57%	55-59%	
Rural	2009	1125	58%	55-61%	
Gender	**				
Male	1655	985	61%	59-64%	
Female	3330	1762	53%	51-55%	
Age	**				
40-49 years	1104	690	64%	61-67%	
50-64 years	2023	1135	56%	53-59%	
65 years and older	1858	922	50%	47-52%	
Race	[^]				
White	3836	2165	58%	56-60%	
African American or Black	991	490	54%	50-58%	
Other	158	92	59%	49-69%	
Gender and Race	**				
White male	1314	775	60%	57-63%	
African American male	281	169	64%	58-71%	
Other male	60	41	66%	50-82%	
White female	2522	1390	56%	54-59%	
African American female	710	321	46%	42-51%	
Other female	98	51	53%	41-66%	
Marital Status	**				
Married or partner of unmarried couple	2800	1626	59%	57-61%	
Divorced or separated	844	453	55%	50-60%	
Widowed	900	438	48%	44-52%	
Never married	418	218	55%	49-61%	
Education	**				
Less than high school	369	160	45%	38-52%	
High school grad or GED	1365	688	52%	48-55%	
College 1-3 years	1147	621	56%	52-60%	
College grad	1188	718	62%	58-65%	
Advanced degree	902	554	63%	59-67%	
Employment Status	**				
Employed for wages	1965	1166	61%	59-64%	
Self-employed	358	251	70%	64-76%	
Retired	1931	983	51%	48-53%	
Other	714	337	49%	44-54%	
Household Income	**				
<\$25,000	852	395	48%	43-53%	
\$25,000-<\$35,000	435	212	49%	43-55%	
\$35,000-<\$50,000	550	319	57%	52-63%	
\$50,000-<\$75,000	637	359	58%	53-63%	
\$75,000 or greater	1580	979	64%	61-67%	
Don't know/not sure	261	107	37%	30-45%	
Refused	670	376	57%	52-62%	

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n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

[^] p-value > 0.1

TABLE 10-6. PARTICIPATION IN VIGOROUS PHYSICAL ACTIVITY THREE OR MORE DAYS PER WEEK BY DEMOGRAPHIC CHARACTERISTICS, AMONG RESPONDENTS AGE 40 YEARS AND OLDER

	Engage in vigorous physical activity for three or more days per week for 20 or more minutes per occasion ~			
Selected Characteristic	N	n	wt %	95% CI
Total Population	4964	2051	45%	43-47%
Area of Residence				[^]
Urban	2963	1227	45%	43-47%
Rural	2001	824	45%	42-48%
Gender				**
Male	1646	784	52%	49-55%
Female	3318	1267	39%	37-41%
Age				**
40-49 years	1101	574	54%	50-57%
50-64 years	2017	876	45%	42-48%
65 years and older	1846	601	33%	30-36%
Race				[^]
White	3816	1610	46%	44-48%
African American or Black	990	373	43%	39-47%
Other	158	68	43%	32-53%
Gender and Race				**
White male	1305	610	50%	46-53%
African American male	281	144	57%	51-64%
Other male	60	30	51%	35-68%
White female	2511	1000	42%	40-44%
African American female	709	229	32%	28-37%
Other female	98	38	35%	23-47%
Marital Status				**
Married or partner of unmarried couple	2785	1275	48%	46-50%
Divorced or separated	844	338	43%	39-48%
Widowed	895	272	30%	27-34%
Never married	417	157	40%	34-46%
Education				**
Less than high school	369	88	26%	20-32%
High school grad or GED	1359	479	38%	35-42%
College 1-3 years	1142	460	44%	40-48%
College grad	1181	581	51%	48-55%
Advanced degree	900	438	52%	47-56%
Employment Status				**
Employed for wages	1961	970	53%	50-56%
Self-employed	355	212	59%	52-65%
Retired	1921	642	34%	31-37%
Other	711	219	32%	27-36%
Household Income				**
<\$25,000	850	236	29%	25-34%
\$25,000-<\$35,000	435	152	38%	32-44%
\$35,000-<\$50,000	548	242	46%	41-52%
\$50,000-<\$75,000	636	283	48%	43-53%
\$75,000 or greater	1572	803	54%	51-57%
Don't know/not sure	258	70	23%	17-30%
Refused	665	265	40%	36-45%

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n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value $> 0.05 - 0.1$

[^] p-value > 0.1

Table 10-7. RESPONDENTS REPORTING THAT, IN THE PAST 12 MONTHS, A HEALTH CARE PROFESSIONAL RECOMMENDED THEY BEGIN OR CONTINUE TO ENGAGE IN EXERCISE OR PHYSICAL ACTIVITY ~

Selected Characteristic	N	n	wt %	95% CI	Stat Sig
Total Population	4966	2249	45%	44-47%	
Area of Residence					**
Urban	2969	1421	47%	44-49%	
Rural	1997	828	41%	38-44%	
Gender					^
Male	1654	712	44%	41-47%	
Female	3312	1537	47%	45-49%	
Age					**
40-49 years	1097	473	42%	39-46%	
50-64 years	2014	983	49%	46-51%	
65 years and older	1855	793	45%	42-47%	
Race					^
White	3819	1686	45%	43-47%	
African American or Black	990	490	45%	41-49%	
Other	157	73	51%	41-61%	
Gender and Race					^
White male	1314	568	45%	41-48%	
African American male	280	115	39%	32-46%	
Other male	60	29	54%	38-70%	
White female	2505	1118	46%	43-48%	
African American female	710	375	50%	45-54%	
Other female	97	44	49%	36-61%	
Marital Status					*
Married or partner of unmarried couple	2788	1320	47%	45-49%	
Divorced or separated	838	352	40%	36-45%	
Widowed	901	390	44%	40-48%	
Never married	416	179	44%	38-50%	
Education					^
Less than high school	367	155	42%	35-49%	
High school grad or GED	1363	562	42%	38-45%	
College 1-3 years	1139	511	45%	41-48%	
College grad	1185	576	48%	45-52%	
Advanced degree	898	440	48%	44-52%	
Employment Status					**
Employed for wages	1957	927	46%	44-49%	
Self-employed	356	147	39%	33-45%	
Retired	1927	852	46%	44-49%	
Other	709	316	44%	39-49%	
Household Income					**
<\$25,000	850	343	41%	37-46%	
\$25,000-<\$35,000	434	172	43%	36-49%	
\$35,000-<\$50,000	549	234	42%	37-48%	
\$50,000-<\$75,000	634	290	41%	36-46%	
\$75,000 or greater	1576	813	50%	47-53%	
Don't know/not sure	260	118	44%	37-52%	
Refused	663	279	44%	39-49%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Some data missing for marital status, education, and employment status

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 10-8. CANCER SCREENING PRACTICES BY PHYSICAL ACTIVITY, DIET, AND BODY MASS INDEX

	Persons reporting to have ever had a fecal occult blood test ~					Persons reporting to have ever had a sigmoidoscopy or colonoscopy ~					Men reporting to have ever had a Prostate-Specific Antigen Test #					Men reporting to have ever had a digital rectal examination #				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you engage in vigorous physical activity for 3 or more days per week for 20 or more minutes per occasion?					^					^					^					^
Yes	1468	823	54%	50-57%		1473	1119	75%	72-78%		557	448	73%	68-78%		570	517	91%	88-93%	
No	2368	1259	51%	49-54%		2374	1782	74%	72-77%		672	538	76%	71-80%		708	626	88%	86-91%	
Engage in vigorous physical activity on > 3 days per week for > 20 minutes per occasion OR in moderate physical activity on 5-7 days per week for > 30 minutes a day ~					^					^					^					^
Yes	2046	1122	53%	50-56%		2052	1551	74%	72-77%		720	579	74%	69-78%		737	664	90%	88-92%	
No	1808	970	52%	49-55%		1813	1363	75%	73-78%		516	413	76%	71-81%		548	486	89%	86-91%	
How many total servings of fruits and vegetables do you eat each day?					**					**					**					*
0-2 fruits/vegetables per day	821	399	44%	40-48%		823	605	69%	65-74%		314	221	61%	54-68%		334	288	86%	83-90%	
3-4 fruits/vegetables per day	1459	807	54%	51-57%		1466	1098	74%	72-77%		506	421	77%	71-82%		518	469	91%	88-93%	
5+ fruits/vegetables per day	1544	871	55%	52-58%		1546	1190	78%	76-81%		410	343	81%	76-86%		427	387	91%	88-93%	
How many servings of red meat do you eat each week?					**					**					**					**
0-1 servings per week	870	474	51%	47-56%		871	680	76%	72-80%		208	168	74%	67-82%		220	197	90%	85-94%	
2-6 servings per week	1743	998	56%	53-59%		1749	1352	78%	75-80%		573	479	79%	75-84%		590	544	92%	90-94%	
7+ servings per week	1140	561	48%	44-51%		1144	809	70%	66-73%		422	317	68%	62-74%		442	386	87%	84-90%	
Body Mass Index					^					^					^					^
Healthy weight (BMI 18.5 - 24.9)	1123	606	52%	48-55%		1132	850	74%	71-78%		285	233	77%	70-84%		298	259	87%	83-91%	
Overweight (BMI 25.0 - 29.9)	1439	776	52%	48-55%		1438	1092	74%	71-77%		596	464	71%	66-76%		612	551	90%	88-92%	
Obese (BMI ≥ 30.0)	1120	618	54%	50-57%		1122	852	76%	73-79%		346	285	77%	71-83%		365	333	91%	88-94%	
Are you now trying to lose weight?					**					^					**					**
Yes	1783	1014	55%	53-58%		1787	1374	76%	74-79%		483	404	79%	74-84%		503	473	94%	92-96%	
No	2044	1065	50%	47-52%		2050	1521	74%	71-76%		747	584	72%	67-76%		776	673	87%	84-89%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Age ≥ 50 years

African American men 45-49 years and all men ≥ 50 years

~~ Age ≥ 40 years

#~ Women ≥ 40 years with an intact uterus

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

TABLE 10-8. CANCER SCREENING PRACTICES BY PHYSICAL ACTIVITY, DIET, AND BODY MASS INDEX

	Women reporting to have ever had a mammogram ~~					Women reporting to have ever had a Pap test #~					Persons reporting to have ever had oral cancer screening ~~				
Selected characteristic	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig	N	n	wt%	95%CI	Stat Sig
Do you engage in vigorous physical activity for 3 or more days per week for 20 or more minutes per occasion?					^					**					**
Yes	1266	1208	95%	93-97%		901	889	99%	99-100%		1980	1133	55%	52-58%	
No	2048	1967	95%	94-96%		1269	1244	98%	96-99%		2788	1312	46%	44-48%	
Engage in vigorous physical activity on > 3 days per week for > 20 minutes per occasion OR in moderate physical activity on 5-7 days per week for > 30 minutes a day ~					^					^					**
Yes	1761	1683	95%	93-96%		1232	1213	98%	97-100%		2644	1485	54%	52-57%	
No	1565	1504	95%	94-97%		946	928	98%	98-99%		2142	970	45%	42-47%	
How many total servings of fruits and vegetables do you eat each day?					^					*					**
0-2 fruits/vegetables per day	647	623	97%	95-98%		418	409	96%	92-100%		1014	421	40%	36-44%	
3-4 fruits/vegetables per day	1185	1131	94%	92-96%		768	754	98%	98-99%		1787	895	49%	46-52%	
5+ fruits/vegetables per day	1464	1402	95%	93-96%		974	960	99%	98-100%		1951	1128	57%	54-60%	
How many servings of red meat do you eat each week?					^					^					**
0-1 servings per week	810	776	94%	92-96%		505	495	97%	94-100%		1032	533	49%	45-53%	
2-6 servings per week	1515	1454	96%	94-97%		1030	1016	99%	98-100%		2165	1185	55%	52-58%	
7+ servings per week	922	880	94%	92-96%		595	585	99%	98-100%		1480	698	45%	42-49%	
Body Mass Index					^					^					**
Healthy weight (BMI 18.5 - 24.9)	1103	1051	95%	93-97%		781	762	99%	98-99%		1439	808	55%	52-59%	
Overweight (BMI 25.0 - 29.9)	1054	1010	94%	92-96%		660	652	99%	98-100%		1774	922	52%	49-55%	
Obese (BMI ≥ 30.0)	963	930	96%	94-98%		593	587	98%	95-100%		1371	601	41%	38-44%	
Are you now trying to lose weight?					^					^					*
Yes	1688	1629	95%	94-97%		1134	1125	99%	97-100%		2245	1208	52%	50-55%	
No	1605	1525	94%	93-96%		1022	995	98%	97-99%		2501	1232	49%	46-51%	

N = Number of people in the sample who responded to the survey question

n = Number of people answering "yes" to that question or who had that characteristic

~ Age ≥ 50 years

African American men 45-49 years and all men ≥ 50 years

~~ Age ≥ 40 years

#~ Women ≥ 40 years with an intact uterus

** p-value ≤ 0.05

* p-value > 0.05 - 0.1

^ p-value > 0.1

Chapter 11. Summary of the Maryland Cancer Survey (MCS) 2008

The Maryland Cancer Survey (MCS) 2008 is part of an ongoing surveillance effort by the Maryland Department of Health and Mental Hygiene (DHMH), Center for Cancer Surveillance and Control (CCSC) in conjunction with the University of Maryland, Baltimore (UMB) under the Cigarette Restitution Fund (CRF) Program to provide information on cancer screening rates, knowledge of cancer and cancer screening, and lifestyle factors related to cancer risk behaviors among Maryland residents age 40 years and older. Gaining knowledge about the factors that are associated with cancer screening and cancer risk behaviors will allow policies to be developed and programs to be implemented that promote cancer prevention and screening among populations currently at risk.

The MCS is a population-based, random-digit-dial (RDD) computer-assisted telephone interview (CATI), based on questions from previous MCS surveys (2002, 2004, and 2006); national and state surveys; and some newly developed questions. In addition to overall cancer screening prevalence, the MCS reports the percentage of respondents up-to-date with certain screening tests. These estimates are based on screening intervals recommended by the American Cancer Society, where available. Prevalence of ever having a particular type of cancer screening and of up-to-date screening are compared to results obtained in the MCS 2002, MCS 2004, and MCS 2006¹; national targets established in Healthy People (HP) 2010²; and other national estimates or baselines (e.g., the National Health Interview Survey or the Behavioral Risk Factor Surveillance System [BRFSS]). The final analytic sample in the MCS 2008 consisted of 5,004 persons. The sample was weighted to match the Maryland population by age, race, gender, and area of residence (urban vs. rural).

The MCS 2008 results show that residents of Maryland continue to make significant progress in increasing both awareness and utilization of cancer screening tests. Marylanders are being screened for cancer at rates comparable to or better than the national targets outlined in Healthy People 2010. However, the MCS 2008 found evidence of disparities in the prevalence of some screening tests based on several demographic factors, including race, age, education, employment status, and income. Other factors that were found to have a significant influence on cancer screening prevalence in Maryland include health insurance status, whether people have had a recent physical examination, and whether a health care provider (HCP) recommends the test be done. Although Marylanders age 40 years and older have been successful in meeting or exceeding several HP 2010 targets related to cancer screening, they have been less successful in attaining targets for behavioral and lifestyle goals aimed at reducing risk of cancer and other chronic diseases, including reducing cigarette use, maintaining a healthy body weight, and increasing fruit and vegetable consumption.

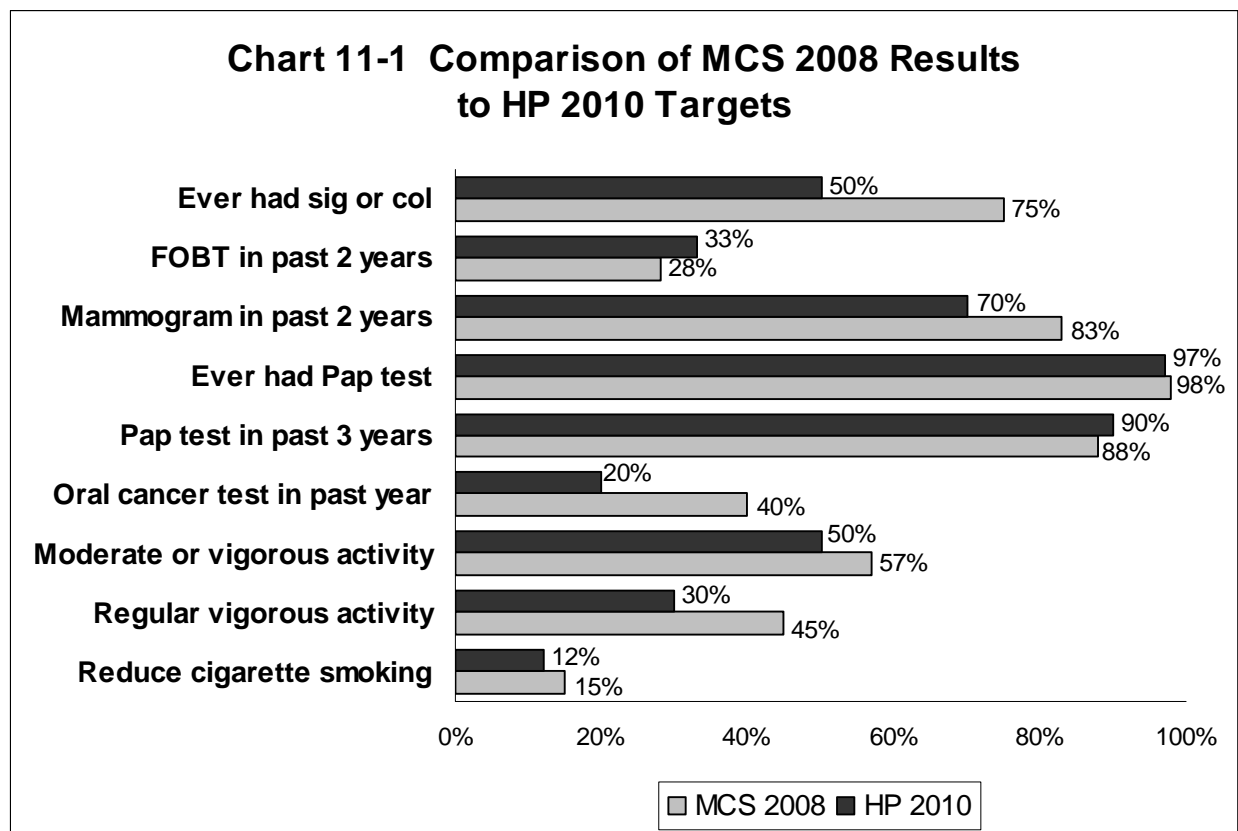
¹ Maryland Department of Health and Mental Hygiene. Maryland Cancer Survey Reports. Baltimore, MD. Available at http://www.fha.state.md.us/cancer/surv_data-reports.cfm. Last accessed July 28, 2009.

² U.S. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Washington, DC; November 2000. Available at <http://www.healthypeople.gov>. Last accessed July 28, 2009.

11.1 Comparisons to Healthy People 2010 Targets

According to the results of the MCS 2008, Maryland adults exceed the HP 2010 targets for the following cancer screening tests and lifestyle factors (Chart 11-1 and Table 11-1):

- Ever having colorectal cancer (CRC) screening with sigmoidoscopy or colonoscopy (HP 2010 target based on adults age 50 years and older.)
- Having had a mammogram in the last 2 years (HP 2010 target based on women age 40 years and older.)
- Ever having a Pap test (HP 2010 target based on women age 18 years and older.)
- Having had oral cancer screening in the past year (HP 2010 target based on adults age 40 years and older.)
- Engaging in regular moderate or vigorous physical activity (HP 2010 target based on adults age 18 years and older.)



Maryland adults are close to meeting the following HP 2010 targets:

- Having a fecal occult blood test (FOBT) within the past 2 years (HP 2010 target based on adults age 50 years and older.)
- Having a Pap test in the past 3 years (HP 2010 target based on women age 18 years and older.)
- Reducing current cigarette smoking (HP 2010 target based on adults age 18 years and older.)

Maryland adults age 40 years and older have not yet met the HP 2010 targets for the following measures (data not shown in chart; refer to Chapters 8, 9, and 10):

- Health insurance coverage (HP 2010 target based on adults under the age of 65 years.)
- Daily fruit and vegetable consumption (HP 2010 target based on persons age 2 years and older.)
- Healthy weight (HP 2010 target based on adults age 20 years and older.)
- Smoking cessation attempts during the past year (HP 2010 target based on adults age 18 years and older.)

There are no HP 2010 objectives related to routine prostate cancer screening, and the United States Preventive Services Task Force (USPSTF) has concluded that there is insufficient evidence to assess the balance of harms and benefits of routine screening for prostate cancer in men younger than age 75 years. The USPSTF recommends against screening for prostate cancer in men age 75 years and older.³ National screening data from the 2006 BRFSS, published by the American Cancer Society,⁴ showed that 54% of men age 50 years and older have had a prostate-specific antigen (PSA) test within the past year and 50% have had a digital rectal exam (DRE) within the past year. By comparison, 56% of Maryland men in the MCS 2008 had a PSA test in the past year and 55% had a DRE within the past year. (Maryland figures include African American men age 45 years and older.)

While Marylanders have been successful in meeting or exceeding several HP 2010 objectives related to cancer screening, they have been less successful in attaining objectives for some of the behavioral and lifestyle goals aimed at reducing the risk of cancer and other chronic diseases. Tobacco use, body weight, dietary practices, and levels of physical activity are the most important modifiable determinants of cancer risk. The MCS 2008 found that 15% of Marylanders age 40 years and older currently smoke cigarettes, which approaches but does not meet the HP 2010 target for adults of 12%. About half (51%) of all current smokers in Maryland reported they had at least one smoking cessation attempt during the past year, below the HP 2010 target of 75%. Only 30% of Marylanders had a body mass index (BMI) in the “healthy” range (based on self-reported height and weight), well below the HP 2010 target of 60%. Among Marylanders age 40 years and older, 29% are considered obese, almost double the HP 2010

³ U.S. Preventive Services Task Force. 2008. Screening for Prostate Cancer. Available at <http://www.ahrq.gov/clinic/uspstf/uspstfprca.htm>. Last accessed July 28, 2009.

⁴ American Cancer Society. Cancer Prevention and Early Detection Facts & Figures 2008. Atlanta, GA; 2007. Available at http://www.cancer.org/downloads/STT/CPED_2008.pdf. Last accessed July 28, 2009.

target of 15%. When asked about daily fruit and vegetable consumption, only 29% reported eating three or more servings of vegetables (compared to the HP 2010 target of 50%) and only 64% reported at least two daily servings of fruit (compared to the target of 75%).

11.2 Disparities in Cancer Screening and Cancer Risk Factors

As in previous MCS surveys, the results of the MCS 2008 showed important differences in cancer screening prevalence across demographic groups, including race, age, education, employment status, income, and health insurance status. Racial differences in prevalence were found for several types of cancer screening (Chart 11-2). Compared with Whites, both African American and other non-White respondents had a significantly lower prevalence of the following cancer screening tests:

- Ever performed a home FOBT
- Ever had a DRE (men)
- Ever had an oral cancer screening exam
- Had an oral cancer screening exam in the past year

African Americans also had significantly lower prevalence than Whites of these screenings:

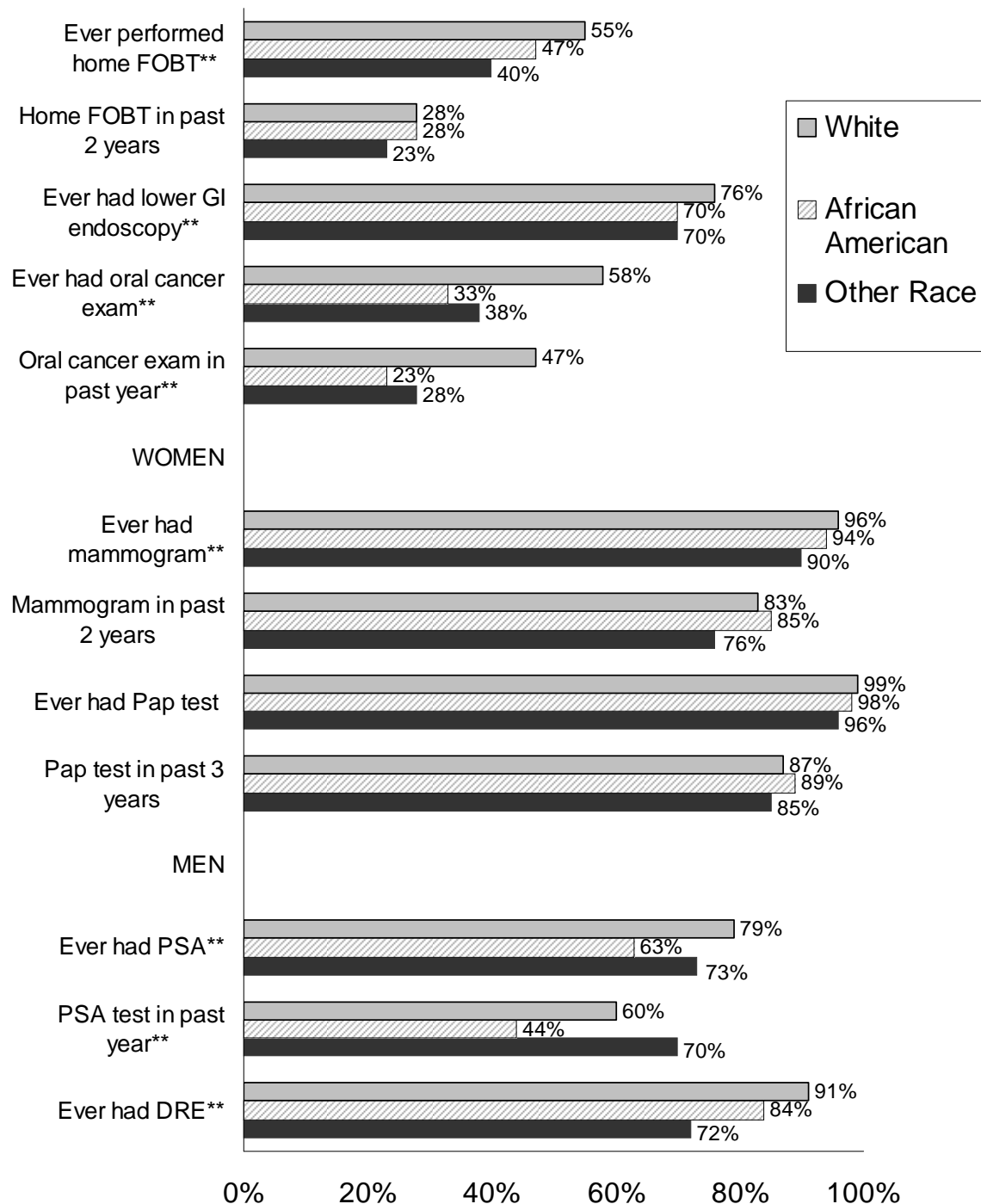
- Ever had CRC screening with sigmoidoscopy or colonoscopy
- Ever had a PSA test (men)
- Had a PSA test in the last year (men)

African American women reported marginally significant lower prevalence of ever having mammogram testing. Females of other races (not White or African American) were significantly less likely than White women to have ever had a mammogram.

Racial disparities were also found in the MCS 2008 for some lifestyle and behavioral factors related to cancer risk:

- African Americans were more likely than Whites or persons of other races to have a BMI in the obese range;
- A higher proportion of African Americans than Whites were current smokers; and
- High-risk drinking was more prevalent among Whites and African Americans than respondents of other races.

Chart 11-2 Prevalence of cancer screening, by race, among MCS 2008 respondents



** Statistically significant difference by race

With increasing age, the percentage of people who reported having cancer screening generally increased. CRC screening with FOBT and lower gastrointestinal [GI] endoscopy (sigmoidoscopy or colonoscopy) increased with age, as did prostate cancer screening among men (ever had PSA, PSA in the past year, and DRE in the past year) and the prevalence of ever having breast cancer screening by mammography among women. The prevalence of mammography within the last 2 years increased with age until women reached age 75 years, when prevalence decreased. The prevalence of Pap testing within the past 3 years increased with age until women reached age 65 years, and then decreased, which is consistent with USPSTF recommendations. Generally, cancer screening increased with higher educational levels and higher annual household incomes.

Maryland residents who reported being without health care coverage or access to health care were significantly less likely to report cancer screening than persons with insurance and/or access to care, as highlighted below and in Chart 11-3.

- No health insurance: Compared to those with health insurance, those without health insurance reported significantly lower rates of ever being screened for cancer, as well as lower prevalence of up-to-date screening, for all types of screening tests included in the MCS. African Americans were significantly less likely than Whites to have health insurance.
- Currently have insurance but were without health insurance sometime within the past year: Marylanders who reported being without health insurance sometime within the past year had significantly lower screening rates for every type of cancer screening except ever having a Pap test (women) and having a DRE in the past year (men). African Americans were significantly more likely than Whites to report being without health care coverage sometime within the past year.
- Do not have a personal doctor or health care provider: Maryland residents who do not have a HCP reported lower prevalence of every type of cancer screening test and significantly lower prevalence of up-to-date screening for all tests included in the MCS.
- No routine checkup within the past 2 years: For every type of cancer screening test except ever having a Pap test (women), Marylanders age 40 years and older who have not had a physical exam in the past 2 years were significantly less likely to report screening than those who said they had a checkup within 2 years.

Receiving a recommendation from an HCP for cancer screening is an important factor in whether a cancer screening test is done. When an HCP recommended lower GI endoscopy or a mammogram or Pap test (women), or discussed prostate cancer screening (men), the prevalence rates of these screening tests were much higher than when screening was not recommended or discussed. For these and most other cancer screening tests examined in the MCS 2008, the lack of a doctor's recommendation was often a prominent reason cited by respondents for not having the test.

In summary, MCS 2008 data suggest disparities in prevalence of some screening tests based on demographic factors, including race, age, education, employment status, and income. Other factors found to have a significant influence on screening prevalence in Maryland include

health insurance status, whether people have had a recent physical examination, whether they have an HCP, and whether an HCP recommends the test be done.

Chart 11-3 Differences in cancer screening prevalence among MCS 2008 respondents, by measures of health care access *

	No health insurance	Without health insurance sometime in past 12 months	No personal doctor or health care provider	Two or more years since last routine checkup
Ever had FOBT	●	●	●	●
Had FOBT in past 2 years	●	●	●	●
Ever had lower GI endoscopy	●	●	●	●
Ever had PSA test	●	◼	●	●
Had PSA test in past year	●	●	●	●
Had DRE in past year	●	○	●	●
Ever had mammogram	●	●	●	●
Had mammogram in past 2 years	●	●	●	●
Ever had Pap test	●	○	●	○
Had Pap test in past 3 years	●	●	●	●
Ever had oral cancer exam	●	●	●	●
Had oral cancer exam in past year	●	●	●	●

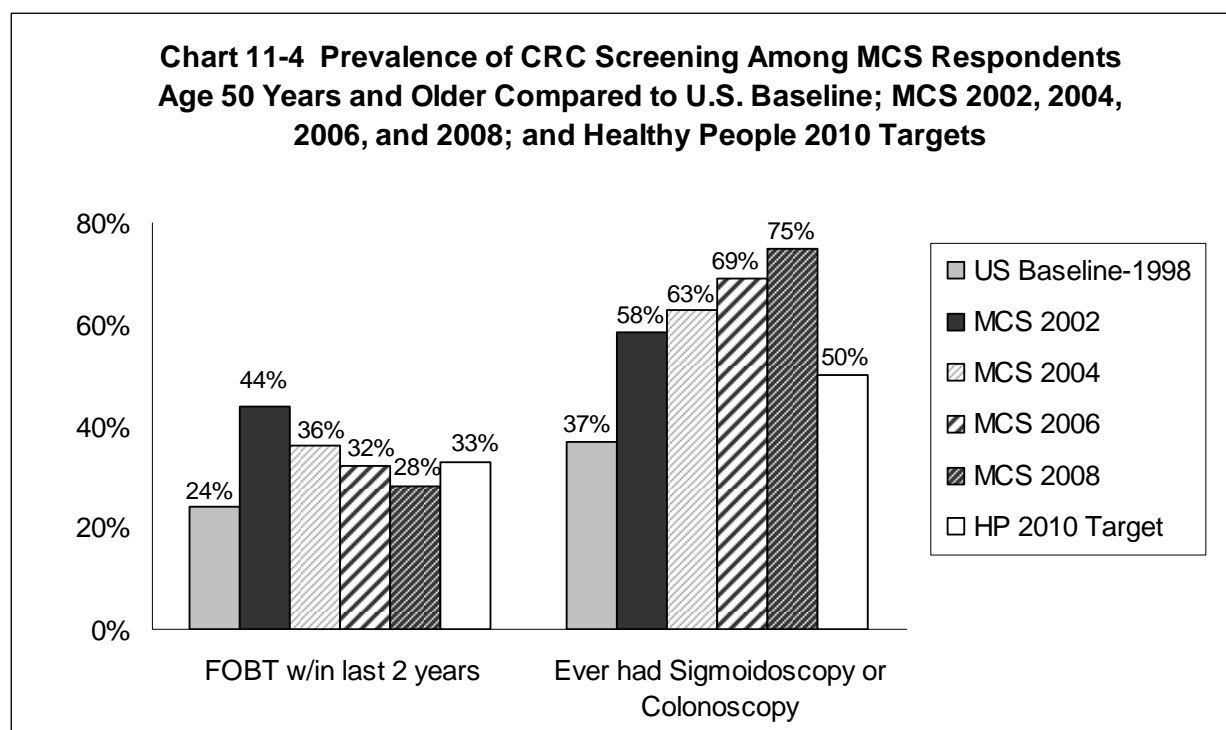
* Summarized from Tables 8-4 and 8-5

Key:

- Significantly lower prevalence ($p \leq 0.05$)
- ◼ Marginally significant lower prevalence ($p > 0.05 - 0.1$)
- No significant difference in prevalence ($p > 0.1$)

11.3 Trends in Cancer Screening and Cancer Risk Factors in Maryland: Comparisons Between Maryland Cancer Surveys

Table 11-1 summarizes the prevalence of selected measures of cancer screening, health care access, and cancer risk factors over time, based on results of the four statewide MCS surveys conducted to date (2002, 2004, 2006, and 2008). The MCS results show that an increasing percentage of Marylanders are familiar with CRC screening procedures, particularly sigmoidoscopy or colonoscopy. In the MCS 2008, 93% of Marylanders said they had heard of these tests, up from 88% in 2002. The percentage of Marylanders age 50 years and older who reported having an FOBT in the past 2 years has been declining over time. However, an increasing percentage of people age 50 years and older are reporting to have ever had lower GI endoscopy (from 58% in 2002 to 75% in 2008; Chart 11-4). Overall, it appears that a smaller proportion of Marylanders are reporting having CRC screening by FOBT and sigmoidoscopy, while the proportion reporting having colonoscopy is increasing. As a result of the increases in prevalence of colonoscopy, the proportion of Marylanders age 50 years and older never tested for CRC has dropped from 26% in 2002 to 18% in 2008. The prevalence of up-to-date colonoscopy (colonoscopy within the past 10 years) has increased from 41% in 2002 to 66% in 2008 among Marylanders age 50 years and older. Screening rates for prostate cancer, cervical cancer, and breast cancer in Maryland remained fairly stable from 2002 to 2008. A statistically significant increase occurred in the prevalence of ever having oral cancer screening, rising from 43% in both 2002 and 2004 to 50% in 2008. The percent of Marylanders reporting to have had an oral cancer exam in the past year has also increased significantly, from 33% in 2002 to 40% in 2008.



As discussed in Chapter 8 of this report, access to health care is a strong predictor of cancer screening. The results of the MCS indicate that the proportion of Marylanders age 40 years and older with health insurance did not change significantly from 2002 to 2008. Persons who reported having a dental visit in the past year declined slightly, from 76% in 2002 to 73% in 2008 (Table 11-1).

Trends in selected lifestyle factors related to cancer risk, specifically BMI and smoking status, were also examined for the Maryland population age 40 years and older. (Table 11-1; dietary and physical activity measures could not be compared due to differences in these questions across surveys.) The proportion of the Maryland population age 40 years and older that is overweight or obese has shown a statistically significant increase over time. The prevalence of obesity increased from 25% in 2002 to 29% in 2008; the proportion of overweight Marylanders increased from 35% in 2002 to 41% in 2008. The prevalence of current cigarette smoking among Marylanders age 40 years and older has steadily decreased, from 18% in 2002 to 15% in the 2008 survey.

**TABLE 11-1. COMPARISON OF POPULATION SCREENING AND RISK BEHAVIOR CHARACTERISTICS MEASURED IN THE MCS 2002, 2004, 2006 AND 2008 TO UNITED STATES
BASELINE MEASUREMENTS AND HEALTHY PEOPLE 2010 OBJECTIVES**

	MCS 2002		MCS 2004		MCS 2006		MCS 2008		US Baseline	HP 2010 Target
Selected Population Screening Characteristic	wt %	95% CI	wt %	95% CI	wt %	95% CI	wt %	95% CI	%	%
Colorectal Cancer Screening										
Heard of sigmoidoscopy/colonoscopy (≥ 40 years)	88%	87-89%	91%	90-92%	92%	91-93%	92%	91-93%		
Awareness of no-cost colon screening at local health department (≥ 40 years)	27%	26-29%	24%	23-26%	25%	24-27%	24%	23-26%		
Ever performed a home FOBT (≥ 50 years)	57%	56-59%	54%	52-56%	57%	55-59%	52%	50-54%		
Performed a home FOBT in the last 2 years (≥ 50 years)	44%	42-46%	36%	34-38%	32%	30-34%	28%	26-30%	24%*	33%*
Ever had a sigmoidoscopy/colonoscopy (≥ 50 years)	58%	56-60%	63%	61-65%	69%	67-70%	75%	73-76%	37%*	50%*
Of those who had lower GI endoscopy, most recent endoscopy was a sigmoidoscopy (≥ 50 years)	24%	22-26%	16%	15-19%	10%	9-11%	7%	5-8%		
Of those who had lower GI endoscopy, most recent endoscopy was a colonoscopy (≥ 50 years)	76%	74-78%	84%	81-85%	90%	89-91%	93%	92-95%		
Up-to-Date Colorectal Cancer Testing (≥ 50 years)										
Never tested	26%	24-28%	23%	21-25%	20%	18-21%	18%	16-19%		
Tested by not up to date	10%	9-12%	10%	9-11%	11%	10-12%	9%	8-10%		
Up-to-date with only FOBT in the last year	11%	10-13%	9%	8-10%	6%	5-7%	4%	3-5%		
Up-to-date with only sigmoidoscopy in the last 5 years	6%	5-7%	5%	4-6%	3%	2-3%	2%	1-2%		
Up-to-date with FOBT in the last year and sigmoidoscopy in the last 5 years	5%	4-6%	3%	2-4%	2%	1-2%	1%	1-2%		
Up-to-date with colonoscopy in the last 10 years +/- FOBT	41%	39-43%	50%	48-52%	59%	57-61%	66%	64-68%		
Prostate Cancer Screening (all men ≥ 50 years and African American men ≥ 45 years)										
Ever had a PSA test among the PSA eligible group	73%	70-75%	77%	74-80%	74%	71-78%	74%	71-77%		
Had a PSA test in the last year in PSA eligible group	58%	55-61%	60%	57-63%	57%	54-60%	56%	53-60%		
Ever had a DRE among the PSA eligible group	88%	86-90%	86%	83-88%	89%	87-91%	88%	86-90%		
Had a DRE in the last year among PSA eligible group	60%	57-63%	58%	55-62%	57%	54-60%	55%	52-59%		
Had both a PSA and DRE in the last year	47%	44-50%	47%	44-50%	45%	41-48%	42%	39-45%		
Breast and Cervical Cancer Screening (women ≥ 40 years)										
Health care provider recommended a mammogram in the last year	86%	84-87%	84%	83-86%	86%	85-88%	85%	84-87%		
Health care provider recommended a Pap test in the last year, among women who have not had a hysterectomy	98%	97-98%	77%	75-79%	79%	77-81%	77%	75-79%		
Ever had a mammogram	93%	92-94%	93%	91-94%	94%	93-95%	95%	94-96%		
Had a mammogram in the last 2 years	84%	82-85%	83%	82-85%	83%	81-84%	83%	81-85%	67%**	70%**
Ever had a clinical breast exam	94%	93-95%	96%	95-96%	--	--	--	--		
Ever had a Pap test, among women who have not had a hysterectomy	97%	96-98%	98%	98-99%	98%	97-99%	98%	97-99%	92%^*	97%^*
Had a Pap test in the last 3 years, among women who have not had a hysterectomy	89%	88-91%	90%	88-91%	88%	86-89%	88%	86-89%	79%^*	90%^*

* Adults ≥ 50 years

** Women ≥ 40 years

^* Women ≥ 18 years

^~ Persons ≥ 2 years

^^ Adults ≥ 40 years

^ Adults ≥ 18 years

~ Persons < 65 years

Adults ≥ 20 years

Maryland Cancer Survey, 2008

**TABLE 11-1. COMPARISON OF POPULATION SCREENING AND RISK BEHAVIOR CHARACTERISTICS MEASURED IN THE MCS 2002, 2004, 2006 AND 2008 TO UNITED STATES
BASELINE MEASUREMENTS AND HEALTHY PEOPLE 2010 OBJECTIVES**

	MCS 2002		MCS 2004		MCS 2006		MCS 2008		US Baseline	HP 2010 Target
Selected Population Screening Characteristic	wt %	95% CI	wt %	95% CI	wt %	95% CI	wt %	95% CI	%	%
Oral Cancer Screening (≥ 40 years)										
Had a dental visit during the past year	76%	75-77%	76%	74-77%	74%	72-75%	73%	71-75%	44%^~	56%^~
Ever had an oral cancer exam	43%	41-44%	43%	42-45%	47%	45-49%	50%	48-52%		
Had an oral cancer exam in the last year	33%	32-35%	34%	32-35%	37%	35-38%	40%	38-41%	13%^^^	20%^^^
Access to Health Care (≥ 40 years)										
Has health insurance	94%	93-94%	93%	92-94%	94%	93-95%	94%	93-95%	83%~	100%~
Had no health insurance sometime in the last 12 months	3%	2-3%	5%	4-6%	3%	3-4%	4%	3-5%		
Life style Factors (≥ 40 years)										
Body mass index										
Healthy weight individuals BMI (18.5-24.9)	36%	35-38%	33%	31-35%	31%	30-33%	30%	28-32%	42%#	60%#
Overweight individuals (BMI 25.0-29.9)	35%	33-36%	38%	37-40%	39%	38-41%	41%	39-43%		
Obese individuals (BMI ≥ 30.0)	25%	24-27%	29%	27-31%	29%	28-31%	29%	28-31%	23%#	15%#
Current smoking status										
Never smokers	48%	47-50%	50%	48-52%	51%	50-53%	55%	53-57%		
Former smokers	33%	32-35%	33%	31-34%	32%	31-34%	30%	29-32%		
Current smokers	18%	17-20%	17%	16-19%	16%	15-18%	15%	14-16%	24%^	12%^

* Adults ≥ 50 years

** Women ≥ 40 years

^* Women ≥ 18 years

^~ Persons ≥ 2 years

^^ Adults ≥ 40 years

^ Adults ≥ 18 years

~ Persons < 65 years

Adults ≥ 20 years

Maryland Cancer Survey, 2008

Questionnaire for the Maryland Cancer Survey, 2008

Hello, my name is _____. I'm calling for the Maryland State Health Department and the University of Maryland. We're conducting a survey on cancer prevention and screening for Maryland residents. Your phone number has been chosen randomly for participation in this important survey. This call may be monitored for quality assurance purposes.

Have I reached you on a cell phone or a regular phone line (land line)?

If cell phone – Thank you very much. We are only talking to people on landlines for this survey.

If land line - Is this a private residence? READ ONLY IF NECESSARY (That is, a home as opposed to a business or an institution.)

IF "NO": Thank you very much. We are only talking to people in private residences. This number will not be included in the survey.

IF "YES": I need to randomly select one person who lives in your household to be interviewed.

How many members of your household, including yourself, are 40 years of age or older?
_____ (1) NUMBER OF ADULTS AGED 40 OR GREATER. (If there is at least one person age 40 years and older, continue with survey for people 40 years and above)

IF "0" Thank you very much for your time. As we are only interviewing people aged 40 or older, we will not be interviewing anyone in your household for this survey. **STOP**

IF "1": Are you the individual who is at least 40 years of age?

IF "YES": Then you are the person I need to speak with. ENTER 1 MAN OR 1 WOMAN BELOW. (ASK GENDER IF NECESSARY).

IF "NO": Is the adult a man or a woman? ENTER 1 MAN OR 1 WOMAN BELOW,

May I speak with (him/her)? GO TO "CORRECT RESPONDENT"

IF ">1" In order to choose the person I need to speak to I need to know how many of these adults are men and how many are women.

_____ NUMBER OF MEN
_____ NUMBER OF WOMEN

IF 1 MAN AND 1 WOMAN GO TO RANDOM SELECTION.

IF MORE THAN ONE OF EITHER GENDER

The person in your household that I need to speak with is _____.

TO CORRECT RESPONDENT: Hello, my name is _____. I'm calling for the Maryland State Health Department and the University of Maryland. We're conducting a survey on cancer screening for Maryland residents aged 40 years or older. Your phone number has been chosen randomly for participation in this important survey.

The information collected in this survey will assist the health department in designing cancer education and screening programs for Maryland residents.

This survey is entirely voluntary and I won't ask for your name, address, or other personal information that can identify you. You don't have to answer any question you don't want to, and you can end the interview at any time. The survey takes about 15 minutes and any information you give us will be confidential. If you have any questions about this survey, you can call the project director Dr. Eileen Steinberger at 1-866-205-7688. If you have any questions about your rights as a participant you can call Ms. Gay Hutchen from the Institutional Review Board at the State Health Department at 410-767-8448. This call may be monitored for quality assurance purposes.

(If anyone does request Gay Hutchen's telephone number, they will be given the name (Maryland Cancer Survey) and protocol number #07-61 to reference this survey.)

SECTION 1: HEALTH STATUS

I'd like to start with a question about your general health.

1.1 Would you say that in general your health is:

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

SECTION 2: HEALTH CARE ACCESS

Now I'll ask you some questions about how you get your health care.

2.1 Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Medical Assistance?

GO TO Q 2.3	←	1 YES
		2 NO
		7 DON'T KNOW/NOT SURE
		8 REFUSED

2.2 During the past 12 months, was there any time that you did **not** have any health insurance or coverage?

GO TO Q 2.4	←	1 YES
		2 NO
		7 DON'T KNOW/NOT SURE
		8 REFUSED
		9 NA

2.3 About how long has it been since you had health insurance or coverage?
(READ ONLY IF NECESSARY)

- 1 Within the past 6 months (ANYTIME < 6 MONTHS AGO)
- 2 Within the past year (≥ 6 MONTHS BUT < 12 MONTHS AGO)
- 3 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS)
- 4 Within the past 5 years (≥ 2 YEARS BUT < 5 YEARS)
- 5 5 or more years ago
- 6 Have never had health insurance
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

2.4 Have you ever heard of the Maryland Health Insurance Plan (MHIP), a state administered health insurance program for Maryland residents who do not have access to health insurance?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

2.5 About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness or condition. (READ ONLY IF NECESSARY)

- 1 Within the past year (ANYTIME <12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS)
- 3 Within the past 5 years (≥ 2 YEARS BUT < 5 YEARS)
- 4 5 or more years ago
- 5 Never visited the doctor for a routine checkup
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

2.6 Do you have one person you think of as your personal doctor or *primary* health care provider?

- 1 Yes, only one
- 2 More than one
- 3 No
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

IF "NO" ASK: Is there more than one or is there no person who you think of?

2.7 What kind of place do you go to most often when you are sick or you need advice about your health? Is it . . .

- 1 A doctor's office or HMO
- 2 A clinic or health center
- 3 A hospital outpatient department
- 4 A hospital emergency room
- 5 An urgent care center, or
- 6 Some other kind of place
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

SECTION 3: COLON CANCER SCREENING

Now some questions about different kinds of cancer. We'll start with colon or bowel cancer which includes cancer of the rectum.

- 3.1 How likely do you think it is that you will develop colon cancer in the future? Would you say your chance of getting colon cancer is. . . . FOR A COLON CANCER SURVIVOR, THIS MEANS GETTING ANOTHER CANCER IN THE FUTURE IN ANOTHER PART OF THE COLON

- 1 Very low
- 2 Somewhat low
- 3 Moderate
- 4 Somewhat high
- 5 Very high
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

- 3.2 Has a parent, brother, sister or child of yours ever been diagnosed with colon cancer? (WE ARE INTERESTED IN FIRST DEGREE BLOOD RELATIVES ONLY. DO NOT INCLUDE FAMILY MEMBERS RELATED ONLY THROUGH MARRIAGE SUCH AS STEPFATHER, STEPSISTER OR FAMILY MEMBERS WHO WERE ADOPTED).

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

- 3.3 Did you know that there are screening tests for colon cancer?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

- 3.4 There are several tests used to screen for colon cancer. The first one we'll talk about is the fecal occult blood test or blood stool test. This is a test that may use a special kit, at home, to determine whether the stool contains blood. Have you ever heard of this test?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

3.5 In the PAST 12 MONTHS, has a doctor or other health professional RECOMMENDED that you have a HOME blood stool test?

- 1 Yes
- 2 No
- 3 No doctor's visit in the past twelve months
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

3.6 Have you ever done this test using a home kit?

GO TO Q 3.10	1 YES
	2 NO
	7 DON'T KNOW/NOT SURE
	8 REFUSED

3.7 How long has it been since you did your last blood stool test using a home kit?
(READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.8 What was the MAIN reason you did this exam? Was it . . . (READ CHOICES)

- 1 Part of a routine physical exam/screening test
- 2 Because of a symptom or health problem
- 3 Follow-up test of an earlier abnormal test
- 4 Family history
- 5 Other
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.9 You said your most recent stool blood test was {INSERT TIME FRAME FROM 3.7}.
How long before that stool test was the previous one?

- 1 A year or less before
- 2 More than 1 but not more than 2 years before
- 3 More than 2 but not more than 5 years before
- 4 Over 5 years before
- 5 None before the most recent
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

IF RESPONSE TO 3.7 WAS "WITHIN PAST YEAR " SKIP TO Q 3.11
--

3.10 What is the most important reason you have {NEVER done /NOT done a HOME blood stool test in the PAST YEAR}? (READ ONLY IF NECESSARY – RECORD ALL RESPONSES NOTED BY RESPONDENT).

- 01 No reason/never thought about it
- 02 Didn't need it/didn't know I needed this type of test
- 03 Doctor didn't order it/didn't say I needed it
- 04 Haven't had any problems
- 05 Put it off/didn't get around to it
- 06 Too expensive/no insurance/cost
- 07 Too painful, unpleasant, or embarrassing
- 08 Had another type of colorectal exam like a colonoscopy, sigmoidoscopy or Barium enema.
- 09 Don't have doctor
- 10 Never heard of the test
- 11 Had stool blood test done at doctor's office
- 12 Age/too young
- 13 Other, SPECIFY: _____
- 77 DON'T KNOW/NOT SURE
- 88 REFUSED
- 99 NA

3.11 Sigmoidoscopy and colonoscopy are two other tests to screen for colon cancer. Both tests examine the bowel. A narrow, lighted tube is inserted in the rectum to look for growths in the colon. Sigmoidoscopy uses a shorter tube that just reaches the **lower** part of the colon. Colonoscopy uses a long tube and examines the **entire** colon. Before a colonoscopy is done, you are usually given medication through a needle in your arm to make you sleepy. Have you ever heard of these exams?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

3.12 Has a doctor or other health professional ever RECOMMENDED that you have a sigmoidoscopy or colonoscopy?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

3.13 Have you ever had a sigmoidoscopy or colonoscopy?

GO TO Q 3.18	←	1 YES
		2 NO
		7 DON'T KNOW/NOT SURE
		8 REFUSED

3.14 What was this MOST RECENT exam called: a sigmoidoscopy or a colonoscopy, or something else?

- 1 Sigmoidoscopy
- 2 Colonoscopy
- 3 Something else: Specify _____
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.15 How long has it been since you had your last sigmoidoscopy or colonoscopy? (READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YR BUT < 2 YRS AGO)
- 3 Within the past 5 years (≥ 2 YRS BUT < 5 YRS AGO)
- 4 Within the past 10 years (≥ 5 YRS BUT < 10 YRS AGO)
- 5 10 years ago
- 6 More than 10 years ago
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.16 What was the MAIN reason you had this exam? Was it . . . (READ ALL CHOICES)

ASK Q 3.17	←	1 Part of a routine physical exam/screening test
		2 Because of a symptom or health problem
		3 Follow-up test of an earlier abnormal test (Fecal Occult Blood Test or sigmoidoscopy)
ASK Q 3.17	←	4 Family history
		5 Other
		7 DON'T KNOW/NOT SURE
		8 REFUSED
		9 NA

3.17 (ASK ONLY THOSE WHO ANSWERED 1 OR 4 to Q3.16): What type of health care provider recommended that you have this exam?

- 01 Primary care physician
- 02 Gynecologist (woman's doctor)
- 03 Nurse or nurse practitioner
- 04 Physician assistant
- 05 Gastroenterologist
- 06 Other type of provider: Specify _____
- 07 None, no recommendation from a health care provider
- 77 DON'T KNOW/NOT SURE
- 88 REFUSED
- 99 NA

3.18 **IF RESPONDENT HAS HAD COLONOSCOPY WITHIN PAST 10 YEARS OR SIGMOIDOSCOPY WITHIN PAST 5 YEARS SKIP TO Q 3.19**

What is the most important reason you have [NEVER had/NOT had} one of these exams in the LAST (5 YEARS if last exam was a sigmoidoscopy or something else in 3.14) (10 years if last exam was a colonoscopy in 3.14)]? (READ ONLY IF NECESSARY– RECORD ALL RESPONSES NOTED BY RESPONDENT).

- 01 No reason/never thought about it
- 02 Didn't need it/didn't know I needed this type of test
- 03 Doctor didn't order it/didn't say I needed it
- 04 Haven't had any problems
- 05 Put it off/didn't get around to it
- 06 Too expensive/no insurance/cost
- 07 Too painful, unpleasant, or embarrassing
- 08 Had a barium enema
- 09 Don't have doctor
- 10 Didn't want to know if I had cancer
- 11 Didn't have childcare or respite care if adult caregiver
- 12 Too young or not old enough
- 13 Other, SPECIFY: _____
- 77 DON'T KNOW/NOT SURE
- 88 REFUSED
- 99 NA

3.19 Have you had any other type of colon cancer screening test, other than those mentioned above? (that is, other than home blood stool test, sigmoidoscopy, or colonoscopy)

GO TO Q 3.22	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED

3.20 What was the name of the test you had? (DO NOT READ RESPONSES; **CHECK ALL THAT APPLY**)

- 1 VIRTUAL COLONOSCOPY (CT COLONOSCOPY)
- 2 BARIUM ENEMA
- 3 STOOL BLOOD TEST IN THE DOCTOR'S OFFICE
- 4 DIGITAL RECTAL EXAM
- 5 OTHER (specify) _____
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.20a (IF MORE THAN ONE RESPONSE to 3.20), which was the most recent?

- 1 VIRTUAL COLONOSCOPY (CT COLONOSCOPY)
- 2 BARIUM ENEMA
- 3 STOOL BLOOD TEST IN THE DOCTOR'S OFFICE
- 4 DIGITAL RECTAL EXAM
- 5 OTHER (specify) _____
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.21 How long has it been since you last had **the most recent test** for colorectal cancer screening? (READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YR BUT < 2 YRS AGO)
- 3 Within the past 5 years (≥ 2 YRS BUT < 5 YRS AGO)
- 4 Within the past 10 years (≥ 5 YRS BUT < 10 YRS AGO)
- 5 10 years ago
- 6 More than 10 years ago
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

3.22 Are you aware that most health departments in Maryland have a no cost colon cancer screening program for low income individuals?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

At this point we ask questions about cancer screening that are specific to men or women.

3.23 Can you please tell me if you are male or female. (ASK ONLY IF NECESSARY. RECORD GENDER)

- | | | |
|---|---------|--------------------------|
| 1 | MALE | |
| 2 | FEMALE | → GO TO SECTION 5 |
| 8 | REFUSED | |

SECTION 4: PROSTATE CANCER SCREENING

Now I'm going to ask you about prostate cancer screening.

4.1 Has your father, or a brother or son of yours ever been diagnosed with prostate cancer? (WE ARE INTERESTED IN FIRST DEGREE BLOOD RELATIVES ONLY. DO NOT INCLUDE FAMILY MEMBERS RELATED ONLY THROUGH MARRIAGE SUCH AS STEPFATHER, STEPBROTHER OR ADOPTED BROTHERS OR SONS)

- | | |
|---|---------------------|
| 1 | YES |
| 2 | NO |
| 7 | DON'T KNOW/NOT SURE |
| 8 | REFUSED |
| 9 | NA |

4.2 Has a doctor or other health care professional ever discussed prostate cancer screening with you?

- | | |
|---|---------------------|
| 1 | YES |
| 2 | NO |
| 7 | DON'T KNOW/NOT SURE |
| 8 | REFUSED |
| 9 | NA |

4.3 A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever heard of this test?

- | | |
|---|---------------------|
| 1 | YES |
| 2 | NO |
| 7 | DON'T KNOW/NOT SURE |
| 8 | REFUSED |
| 9 | NA |

4.4 Have you ever **had** a PSA test?

- | | | |
|--------------------|---|---------------------|
| GO TO Q 4.7 | 1 | YES |
| | 2 | NO |
| | 7 | DON'T KNOW/NOT SURE |
| | 8 | REFUSED |
| | 9 | NA |

4.5 How long has it been since you had your last PSA test?
(READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

4.6 You said your last PSA test was {INSERT TIME FRAME FROM 4.5}. How long before that PSA test was the previous one?

- 1 A year or less before
- 2 More than 1 but not more than 2 years before
- 3 More than 2 but not more than 5 years before
- 4 Over 5 years before
- 5 None before the most recent
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

IF RESPONDENT HAS NEVER HAD A PSA TEST OR HAS NOT HAD ONE IN THE PAST YEAR (Q. 4.5) ASK 4.7. ALL OTHERS SKIP TO 4.8.

4.7 What is the most important reason you have [**never** had a PSA test /NOT had a PSA test in the last 12 months]? (READ ONLY IF NECESSARY-RECORD ALL RESPONSES NOTED BY RESPONDENT).

- 01 No reason/never thought about it
- 02 Didn't need it/didn't know I needed this type of test
- 03 Doctor didn't order it/didn't say I needed it
- 04 Haven't had any problems
- 05 Put it off/didn't get around to it
- 06 Too expensive/no insurance/cost
- 07 Didn't want to know the results
- 08 Don't have doctor
- 09 Too young or not old enough
- 10 Never heard of the test
- 11 Other, SPECIFY: _____
- 77 DON'T KNOW/NOT SURE
- 88 REFUSED
- 99 NA

- 4.8 A digital rectal exam is an exam in which a doctor, nurse, or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?

GO TO Q 6.1 ←	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NA

- 4.9 How long has it been since your last digital rectal exam?

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

IF RESPONDENT IS MALE, GO TO SECTION 6

SECTION 5: WOMEN'S HEALTH

Now for some questions about screening tests for women.

- 5.1 Has your mother or a sister or daughter of yours ever been diagnosed with breast cancer? (WE ARE INTERESTED IN FIRST DEGREE BLOOD RELATIVES ONLY. DO NOT INCLUDE FAMILY MEMBERS RELATED ONLY THROUGH MARRIAGE SUCH AS STEPMOTHER, STEPSISTER OR ADOPTED SISTERS OR DAUGHTERS)

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

- 5.2 A mammogram is an x-ray of each breast to look for breast cancer. In the PAST YEAR, has a doctor or other health professional recommended breast cancer screening such as a mammogram or a breast exam?

- 1 Yes
- 2 No
- 3 No doctor visit in past twelve months
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

5.3 Have you ever had a mammogram?

<div>GO TO 5.7</div>	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NA

5.4 How long has it been since you had your last mammogram? (READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

5.5 Was your (most recent) mammogram done as part of a routine checkup, because of a breast problem other than cancer, or because you've already had breast cancer?

- 1 ROUTINE CHECKUP
- 2 BREAST PROBLEM OTHER THAN CANCER
- 3 HAD BREAST CANCER
- 4 OTHER REASON _____
- 7 DON'T KNOW/NOT SURE
- 9 NA
- 8 REFUSED

5.6 You said your most recent mammogram was {INSERT TIME FRAME FROM 5.4}. How long before that mammogram was the previous one?

- 1 A year or less before
- 2 More than 1 but not more than 2 years before
- 3 More than 2 but not more than 5 years before
- 4 Over 5 years before
- 5 None before the most recent
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

IF RESPONDENT HAS HAD TEST IN PAST TWO YEARS (Q 5.4) SKIP TO Q5.8.

5.7 What is the most important reason why you have NEVER had /NOT had a mammogram in the past two years? (READ ONLY IF NECESSARY– RECORD ALL RESPONSES NOTED BY RESPONDENT.)

- 01 No reason/never thought about it
- 02 Didn't need it/didn't know I needed this type of test
- 03 Doctor didn't order it/didn't say I needed it
- 04 Haven't had any problems
- 05 Put it off/didn't get around to it
- 06 Too expensive/no insurance/cost
- 07 Too painful, unpleasant, or embarrassing
- 08 Don't have doctor
- 09 Didn't want to know if I had cancer
- 10 Other, SPECIFY: _____
- 77 DON'T KNOW/NOT SURE
- 88 REFUSED
- 99 NA

5.8 A Pap test is a routine test for cancer of the cervix in which the doctor examines the cervix, takes a cell sample from the cervix with a small stick or brush, and sends it to the lab. In the PAST YEAR, has a doctor or other health professional RECOMMENDED that you have a Pap test?

- 1 Yes
- 2 No
- 3 No doctor visit in the past 12 months
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

5.9 Have you ever had a Pap test?

GO TO 5.12	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NA

5.10 How long has it been since you had your last Pap test? (READ ONLY IF NECESSARY)

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

5.11 You said your most recent Pap test was {INSERT TIME FRAME FROM 5.10}.
How long before that Pap test was the previous one?

- 1 A year or less before
- 2 More than 1 but not more than 2 years before
- 3 More than 2 but not more than 3 years before
- 4 More than 3 but not more than 5 years before
- 5 Over 5 years before
- 6 None before the most recent
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

IF RESPONDENT HAS HAD PAP IN PAST 3 YEARS (Q 5.10) SKIP TO Q5.13.
--

5.12 What is the most important reason you have {NEVER had a
Pap test /NOT had a Pap test in the last 3 years}? (READ ONLY IF
NECESSARY– RECORD ALL RESPONSES NOTED BY RESPONDENT.)

- 01 No reason/never thought about it.
- 02 Didn't need/didn't know I needed this type of test
- 03 Doctor didn't order it/didn't say I needed it
- 04 Haven't had any problems
- 05 Put it off/didn't get around to it
- 06 Too expensive/no insurance/cost
- 07 Too painful, unpleasant, or embarrassing
- 08 Had hysterectomy
- 09 Don't have doctor
- 10 Didn't want to know if I had cancer
- 11 Other, SPECIFY: _____
- 77 DON 'T KNOW /NOT SURE
- 88 REFUSED
- 99 NA

5.13 Have you had a hysterectomy, that is, an operation to remove the uterus (womb)?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

SECTION 6: ORAL HEALTH/ORAL CANCER

Next we'll talk about your dental care and oral cancer.

6.1 How long has it been since you last visited a dentist or a dental clinic for any reason? (READ ONLY IF NECESSARY)

INCLUDE VISITS TO DENTAL SPECIALISTS SUCH AS ORTHODONTISTS

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

6.2 Have you ever had a test or exam for oral or mouth cancer in which the doctor or dentist pulls on your tongue, sometimes with gauze wrapped around it, and feels under the tongue and inside the cheeks?

GO TO Q 7.1	1	I THINK SO
	2	YES
	3	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED

6.3 When did you have your most recent oral or mouth cancer exam?

- 1 Within the past year (<12 MONTHS AGO)
- 2 Within the past 2 years (≥ 1 YEAR BUT < 2 YEARS AGO)
- 3 Within the past 3 years (≥ 2 YEARS BUT < 3 YEARS AGO)
- 4 Within the past 5 years (≥ 3 YEARS BUT < 5 YEARS AGO)
- 5 5 or more years ago
- 6 Never
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

6.4 What type of medical care person examined you when you had your last check-up for oral cancer? (READ CHOICES)

- 1 Doctor/physician
- 2 Nurse/Nurse Practitioner
- 3 Dentist
- 4 Dental Hygienist
- 5 Other, (SPECIFY _____)
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

SECTION 7: DEMOGRAPHICS

7.1 What is your age?

___ ___ ___ (Code age in years)

7	7	7	DON'T KNOW/NOT SURE
8	8	8	REFUSED

7.2 Are you Hispanic and/or Latino?

1	YES
2	NO
7	DON'T KNOW/NOT SURE
8	REFUSED

7.3 Which one or more of the following would you say is your race? (MARK ALL THAT APPLY).

1	White
2	Black or African American
3	Asian
4	Native Hawaiian or Other Pacific Islander
5	American Indian, Alaska Native or
6	Other (SPECIFY _____)
7	DON'T KNOW/NOT SURE
8	REFUSED

IF MORE THAN ONE RESPONSE TO Q 7.3. CONTINUE. OTHERWISE. GO TO Q 7.5

7.4 Which one of these groups would you say **best** represents your race?

1	White
2	Black or African American
3	Asian
4	Native Hawaiian or Other Pacific Islander
5	American Indian, Alaska Native or
6	Other (SPECIFY _____)
7	DON'T KNOW/NOT SURE
8	REFUSED
9	NA

7.5 Are you:

1	Married
2	Divorced
3	Widowed
4	Separated
5	Never Married
6	A partner of an unmarried couple
7	DON'T KNOW
8	REFUSED

7.6 How many members of your household, **including yourself**, are 18 years of age or older?

____ NUMBER OF ADULTS
7 7 DON'T KNOW
8 8 REFUSED

7.7 How many children less than 18 years of age live in your household?

____ NUMBER OF CHILDREN
0 0 NONE
7 7 DON'T KNOW
8 8 REFUSED

7.8 What is the highest grade or year of school you completed?
(READ ONLY IF NECESSARY)

01 Never attended school or only attended kindergarten
02 Grades 1 through 8 (Elementary)
03 Grades 9 through 11 (Some high school)
04 Grade 12 or GED (High school graduate)
05 College 1 year to 3 years (Some college or technical school)
06 College 4 years (College graduate)
07 Master's Degree
08 Advanced professional or doctoral degree
77 DON'T KNOW
88 REFUSED

7.9 Are you currently:

01 Employed for wages
02 Self-employed
03 Out of work for more than 1 year
04 Out of work for less than 1 year
05 A Homemaker
06 A Student
07 Retired or
08 Unable to work
77 DON'T KNOW
88 REFUSED

7.10 Is your annual household income from all sources
IF RESPONDENT REFUSES AT ANY INCOME LEVEL, CODE '88 REFUSED'
 READ AS APPROPRIATE

- 0 4 Less than \$25,000 [IF "NO," ASK 05; IF "YES," ASK 03]
 (\$20,000 TO LESS THAN \$25,000)
- 0 3 Less than \$20,000 [IF "NO," CODE 04; IF "YES," ASK 02]
 (\$15,000 TO LESS THAN \$20,000)
- 0 2 Less than \$15,000 [IF "NO," CODE 03; IF "YES," ASK 01]
 (\$10,000 TO LESS THAN \$15,000)
- 0 1 Less than \$10,000 [IF "NO," CODE 02]

- 0 5 Less than \$35,000 [IF "NO," ASK 06]
 (\$25,000 TO LESS THAN \$35,000)
- 0 6 Less than \$50,000 [IF "NO," ASK 07]
 (\$35,000 TO LESS THAN \$50,000)
- 0 7 Less than \$75,000 [IF "NO," CODE 08]
 (\$50,000 TO LESS THAN \$75,000)
- 0 8 \$75,000 or more

- 7 7 DON'T KNOW/NOT SURE
- 8 8 REFUSED

7.11 About how much do you weigh without shoes? ROUND FRACTIONS UP

___ ___ pounds OR ___ ___ kilos

- 7 7 7 DON'T KNOW/NOT SURE
- 8 8 8 REFUSED

7.12 About how tall are you without shoes? ROUND FRACTIONS DOWN

___ ___/___ ___ ft/inches OR ___ ___ centimeters

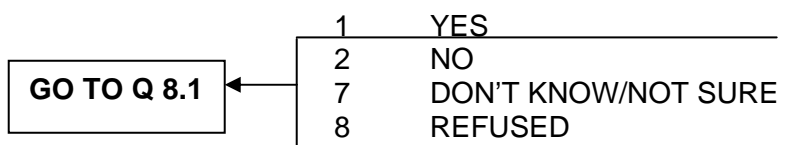
- 7 7 7 7 7 DON'T KNOW/NOT SURE
- 8 8 8 8 8 REFUSED

7.13 What county do you live in? _____ CODE ___ ___

IF RESPONSE IS "BALTIMORE" PROBE FOR COUNTY OR CITY.

- 7 7 7 DON'T KNOW/NOT SURE
- 8 8 8 REFUSED

7.14 Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.



7.15 How many of these are residential numbers?

- ___ RESIDENTIAL TELEPHONE NUMBERS [6=6 OR MORE]
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

SECTION 8: EXERCISE/PHYSICAL ACTIVITY

The next series of questions are about exercise and physical activities

IF "EMPLOYED" OR "SELF-EMPLOYED" TO Q 7.9, CONTINUE. OTHERWISE GO TO Q 8.2

8.1 When you are at work, which of the following best describes what you do? Would you say . . . (IF RESPONDENT HAS MULTIPLE JOBS, INCLUDE ALL JOBS.)

- 1 Mostly sitting or standing
- 2 Mostly walking or
- 3 Mostly heavy labor or physically demanding work
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NOT APPLICABLE

8.2 Vigorous physical activity is any activity that causes LARGE increases in breathing or heart rate such as running, aerobics or heavy yard work. [Fill in (When you are not working) if "employed" or "self employed" to core 7.9] do you do vigorous physical activity for three or more days per week for 20 or more minutes per occasion?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 9 REFUSED

8.3 Moderate physical activity is any activity that causes SMALL increases in breathing or heart rate such as brisk walking, bicycling, vacuuming or gardening. In a typical seven day week, [Fill in (When you are not working) if "employed" or "self employed" to core 7.9] how many days do you engage in moderate physical activity for at least 30 minutes a day?
(IF RESPONSE IS LESS THAN ONCE/WEEK OR NEVER CODE AS 00.)

 0 NUMBER OF DAYS/WEEK

- 77 DON'T KNOW/NOT SURE
- 99 REFUSED

IF YES TO 8.2 OR FIVE OR MORE DAYS TO 8.3, SKIP TO 8.5

8.4 I'm going to read you a list of reasons people give for not being physically active. Please tell me what is the main thing which prevents you most from doing a total of 30 minutes of physical activity at least 5 days a week?

- 1 A lack of motivation
- 2 A lack of time
- 3 A physical disability or other health limit
- 4 There's no place to exercise
- 5 The cost is too high
- 6 Some other reason. (SPECIFY: _____)
- 7 DON'T KNOW/NOT SURE
- 9 REFUSED

8.5 During the PAST 12 MONTHS, did a doctor or other health care professional RECOMMEND that you BEGIN or CONTINUE to do any type of exercise or physical activity?

- 1 Yes
- 2 No
- 3 No doctor visit in past twelve months
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

SECTION 9: FRUITS AND VEGETABLES

Now I'm going to ask you some questions about the foods you eat.

9.1 How many total servings of fruits and vegetables do you eat each day?

- | | | |
|----|----|------------------------|
| __ | __ | NUMBER OF SERVINGS/DAY |
| 5 | 5 | NEVER |
| 7 | 7 | DON'T KNOW/NOT SURE |
| 8 | 8 | REFUSED |

How many servings of the following foods do you eat per week or per day?

9.2 How many servings of fruit juices such as orange, grapefruit, or tomato do you drink per week or per day? (A serving is $\frac{3}{4}$ cup or 6 ounces of juice.)

- 1 ____ PER DAY
- 2 ____ PER WEEK
- 4 4 4 LESS THAN ONCE PER WEEK
- 5 5 5 NEVER
- 7 7 7 DON'T KNOW/NOT SURE
- 8 8 8 REFUSED

9.3 How many servings of fruit (not including juices) do you eat per week or per day? (A serving is one piece of fruit or a ½ cup of fruit.)

1 ____ PER DAY
2 ____ PER WEEK

4 4 4 LESS THAN ONCE PER WEEK
5 5 5 NEVER
7 7 7 DON'T KNOW/NOT SURE
8 8 8 REFUSED

9.4 How many servings of leafy salad greens do you eat per week or per day? (A serving is 1 cup of leafy salad greens)

1 ____ PER DAY
2 ____ PER WEEK

4 4 4 LESS THAN ONCE PER WEEK
5 5 5 NEVER
7 7 7 DON'T KNOW/NOT SURE
8 8 8 REFUSED

9.5 How many servings of vegetables (not including salad or potatoes) do you eat per week or per day? (A serving is ½ cup of vegetables)

1 ____ PER DAY
2 ____ PER WEEK

4 4 4 LESS THAN ONCE PER WEEK
5 5 5 NEVER
7 7 7 DON'T KNOW/NOT SURE
8 8 8 REFUSED

9.6 Not including seafood or poultry, how many servings of meat such as beef, pork, lamb or veal do you eat per day or per week? Please include foods that are made with meat such as soups, stews, sandwiches, lunch meats, and casseroles. (A serving size of meat is about the size of a deck of cards.)

1 ____ PER DAY
2 ____ PER WEEK

4 4 4 LESS THAN ONCE PER WEEK
5 5 5 NEVER
7 7 7 DON'T KNOW/NOT SURE
8 8 8 REFUSED

SECTION 10: Weight Control

10.1 Are you now trying to lose weight?

GO TO Q 10.3	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED

10.2 Are you now trying to maintain your current weight, that is, to keep from gaining weight?

GO TO Q10.5	1	YES
	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NOT APPLICABLE

10.3 To lose weight (if "Yes" on Q10.1) OR
To keep from gaining weight (if "Yes" on Q10.2)
Are you

- 1 Eating fewer calories
- 2 Eating less fat
- 3 Eating fewer calories and less fat
- 4 Neither
- 7 DON'T KNOW
- 8 REFUSED
- 9 NOT APPLICABLE

10.4 Are you using physical activity or exercise to...

lose weight? [if "Yes" on Q10.1]
keep from gaining weight? [if "Yes" on Q10.2]

- 1 YES
- 2 NO
- 7 DON'T KNOW
- 8 REFUSED
- 9 NOT APPLICABLE

10.5 In the past 12 months, has a doctor, nurse, or other health professional given you advice about your weight?

- 1 Yes, lose weight
- 2 Yes, gain weight
- 3 Yes, maintain current weight
- 4 No
- 7 DON'T KNOW
- 8 REFUSED

SECTION 11: ALCOHOL CONSUMPTION

11.1 A drink of alcohol 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 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage?

1 ___ Days per week

2 ___ Days in past 30

GO TO Q 12.1

0 0 NO DRINKS IN PAST 30 DAYS

7 7 DON'T KNOW/NOT SURE

8 8 REFUSED

11.2 On the days when you drank, about how many drinks did you drink on the average?

___ Number of drinks

7 7 DON'T KNOW/NOT SURE

8 8 REFUSED

9 9 NA

11.3 Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?

___ Number of times

0 0 NONE

7 7 DON'T KNOW/NOT SURE

8 8 REFUSED

9 9 NA

SECTION 12: TOBACCO USE

12.1 Have you smoked at least 100 cigarettes in your entire life?
(5 Packs = 100 cigarettes)

1 YES

2 NO

7 DON'T KNOW/NOT SURE

8 REFUSED

GO TO 13.1

12.2 (CURRENT AND FORMER SMOKERS) How old were you when you **first** started to smoke fairly regularly?

___ ENTER AGE IN YEARS

666 NEVER SMOKED CIGARETTES REGULARLY

777 DON'T KNOW/NOT SURE

888 REFUSED

999 NA

12.3 Do you now smoke cigarettes every day, some days, or not at all?

GO TO 12.4	1	EVERY DAY
	2	SOME DAYS
GO TO 12.7	3	NOT AT ALL
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NA

12.4. On average, about how many cigarettes do you now smoke per day, per week, or per month?

INTERVIEWER NOTE: 1 PACK = 20 CIGARETTES. IF 76 OR MORE CIGARETTES REPORTED, ENTER 76.

___ NUMBER OF CIGARETTES (1=per day, 2=per week, 3= per month)

77 DON'T KNOW/NOT SURE
88 REFUSED
99 NA

12.5. How soon after you wake up do you smoke your first cigarette?

1 Within 5 minutes
2 6-30 minutes
3 31 minutes – 60 minutes
4 After 60 minutes
7 DON'T KNOW
8 REFUSED
9 NA

12.6 During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

GO TO 12.9	1	YES
GO TO 12.10	2	NO
	7	DON'T KNOW/NOT SURE
	8	REFUSED
	9	NA

12.7 About how long has it been since you last smoked cigarettes regularly, that is, daily? (READ ONLY IF NECESSARY)

GO TO 12.8, 12.9 & 12.10	1	Within the past month (anytime less than 1 month)
	2	Within the past 3 months (1 mo. to less than 3 mo)
	3	Within the past 6 months (3 mo. to less than 6 mo.)
	4	Within the past year (6 mo. but less than 12 mo.)
GO TO 12.8 &12.9	5	Within the past 5 years (1 yr but less than 5 yrs)
	6	Within the past 15 years (5 yrs but less than 15 yrs)
	7	15 years ago or more
	77	DON'T KNOW
	88	REFUSED
	99	NA

12.8 How old were you when you **last** smoked cigarettes {fairly regularly}?
 DISPLAY "FAIRLY REGULARLY" EXCEPT WHEN RESPONSE TO Q12.2 WAS
 "NEVER SMOKED CIGARETTES REGULARLY".

__ __ __ ENTER AGE IN YEARS

777 DON'T KNOW/NOT SURE
 888 REFUSED
 999 NA

12.9 Which of the following methods did you use to stop smoking the last time you stopped? (**CHECK ALL THAT APPLY**)

- 1 "Cold Turkey", quit on your own without help
- 2 Nicotine replacement (patch, gum, inhaler or nasal spray).
- 3 Non-nicotine medication (Zyban or Bupropion)
- 4 Behavioral therapy alone, no medication
- 5 Alternative therapy such as acupuncture, hypnosis or an herbal remedy
- 6 Other: Specify _____
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

12.10 (ASK ALL CURRENT SMOKERS {Q12.3} AND ALL PAST SMOKERS WHO
 QUIT WITHIN THE PAST YEAR {Q12.7}) In the past 12 months, did a doctor,
 nurse, or other health professional advise you to quit smoking?

- 1 YES
- 2 NO
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED
- 9 NA

SECTION 13: OTHER TOBACCO PRODUCTS

13.1 Do you currently use chewing tobacco, snuff or dip every day, some days, or not at all?

- 1 EVERY DAY
- 2 SOME DAYS
- 3 NOT AT ALL
- 7 DON'T KNOW/NOT SURE
- 8 REFUSED

CLOSING STATEMENT

That completes the interview. Everyone's answers will be combined to give us information about the health practices of people aged 40 and over in the state of Maryland. A small sample of participants will be called back to verify answers to a few questions for quality assurance. Thank you very much for participating in this important survey.