Monitoring Changing
Tobacco Use Behaviors in Maryland

Maryland College Tobacco Survey: Spring 2004

**Tobacco Use Behaviors and Associated Alcohol Consumption
On the Campuses of Maryland's State-Funded Public Four Year Colleges and Universities**

Center for Health Promotion, Education, & Tobacco Use Prevention
Data Analysis and Report by ORC-Macro, Inc. – Calverton, Maryland

Family Health Administration
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Introduction

Tobacco use in Maryland is responsible for the premature deaths of at least 6,800 Marylander's every year. More lives are lost each year to tobacco than from the combined effects of illegal drugs, HIV/AIDS, homicide, and accidents (including drunk driving). Further, young adults, especially college students, are one of the primary targets of the tobacco industry's marketing and promotional efforts. Recognizing this, Maryland's Department of Health and Mental Hygiene (DHMH), through its' Center for Health Promotion, supports a range of local and statewide initiatives designed to discourage college students from using tobacco and to encourage those who do use tobacco to try to quit.

Prior to this report, however, DHMH and the Center for Health Promotion lacked consistent data from the campuses of Maryland's state-funded colleges and universities on the attitudes, behaviors, and knowledge of college students about tobacco, intent to use, associated alcohol use, and exposure to second-hand smoke. Although some of Maryland's colleges and universities have conducted tobacco surveys, the results are not comparable across institutions or campuses. Neither of Maryland's pre-existing biennial tobacco surveys reaches students living in institutional settings (i.e., college campuses).

To remedy the situation, the DHMH piloted the Maryland College Tobacco Survey (MCTS) in the spring of 2004 with the endorsement of the Maryland Higher Education Commission. The purpose of the MCTS was to gather attitude, usage, and exposure information regarding tobacco products and the associated usage of alcohol statewide among Maryland college students. The study was limited to full-time undergraduates attending four-year State-funded colleges and universities. Due to budget constraints, publicly funded two-year colleges were excluded from the study. The intent was to develop estimates by race/ethnicity and gender statewide and to develop overall estimates for each of the participating campuses.

As contractor for DHMH, ORC Macro – a Maryland-based research company – designed and selected a sample of students in 13 Maryland Public Post-secondary Institutions. Of the 13 institutions, two did not participate – the first, Morgan State University – because it was unable to provide the technological infrastructure to permit a web-based survey, and the second, University of Maryland at Baltimore, because it declined to participate in the survey. In some colleges, a stratified random sample was selected; in others a simple random sample was selected. In all, approximately 11,000 full-time undergraduate students between the ages of 18-24 were selected to participate. The sample was selected in such a way to over-sample key minority groups (African Americans and Hispanics) to meet the precision requirements for statewide estimates for these groups.

Sampled college students were invited to participate in the MCTS through an e-mail invitation, using their registered e-mail addresses. The e-mail invitation provided each selected student with a link to the web-based questionnaire and a unique password. Non-responding students were sent up to three reminders by e-mail. The web-based questionnaire was developed by DHMH, in collaboration with ORC Macro, in the winter of 2003. The MCTS included a core set of question based on the Maryland Youth Tobacco Survey and the Maryland Adult Tobacco Survey. The questionnaire covered nine topics: initiation of cigarette smoking, intensity of current cigarette smoking, use of other tobacco products, exposure to secondhand smoke, smoking cessation, knowledge and attitudes about tobacco, social context of tobacco use, associated alcohol use and demographics.

This report provides an overview of key findings from the 2004 MCTS. Throughout the report, when data are said to be significantly different, it means that there is no overlap in the 95 percent 'confidence intervals' of the percentages being compared. The confidence interval around a specific statistic (in this case, the percentage) represents the range of values within which the "true population" can be expected to be located, with 95 percent certainty, at a .05 level of precision. For example, if a given percentage is 32.3% and the confidence interval is ±2.5, it is 95% certain that the true population percentage will fall between 29.8% and 34.8%. The width of the confidence interval depends on the sample size, the variation of data values, and other factors. The calculation of confidence intervals is based on the assumption that the variable is normally distributed in the population. Overall, the narrower (or tighter) the confidence interval, the greater the certainty that the statistic represents the true population.

Current Use of Tobacco Products

Students were asked about their use of different forms of tobacco including cigarettes, cigars, and smokeless tobacco. Students were considered to be current tobacco users if they reported using any of these products at least once within the past 30 days.

- Approximately one-third (32.8%) of Maryland college students currently use one or more tobacco products.

- Males (39.6 %) are significantly more likely than females (27.1%) to have used tobacco products in the past 30 days.

- White (39.1%) and Hispanic (41.2%) students are significantly more likely than African American (17.1%) and Asian (24.4%) students to be current tobacco users.

- Males are significantly more likely than females to smoke cigars (18.3% vs. 4.5%) and to use smokeless tobacco (5.4% vs. 0.4%).

- White college students (2.6%) are significantly more likely than African American (6.6%) and Asian (6.8%) students to smoke cigars.

Figure 1. Percentage of students who used tobacco as least once in the past 30 days, by GENDER and RACE
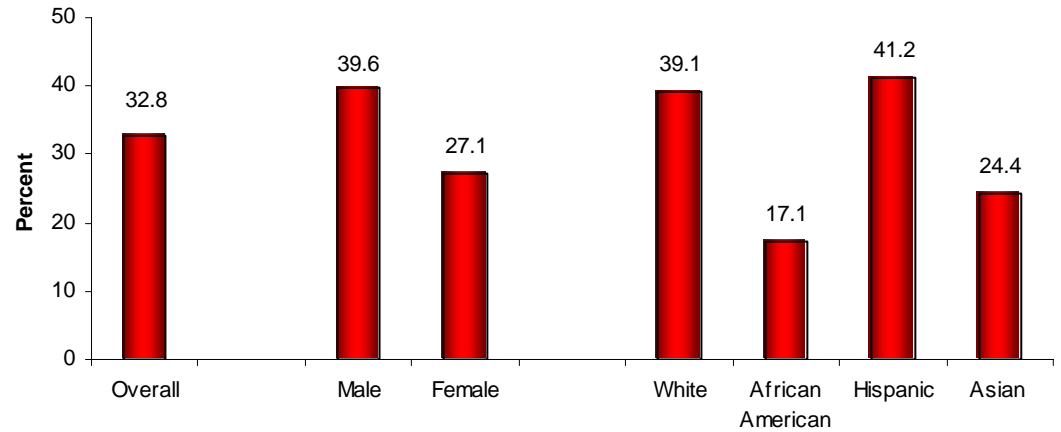
Figure 2. Tobacco use, by PRODUCT TYPE and GENDER
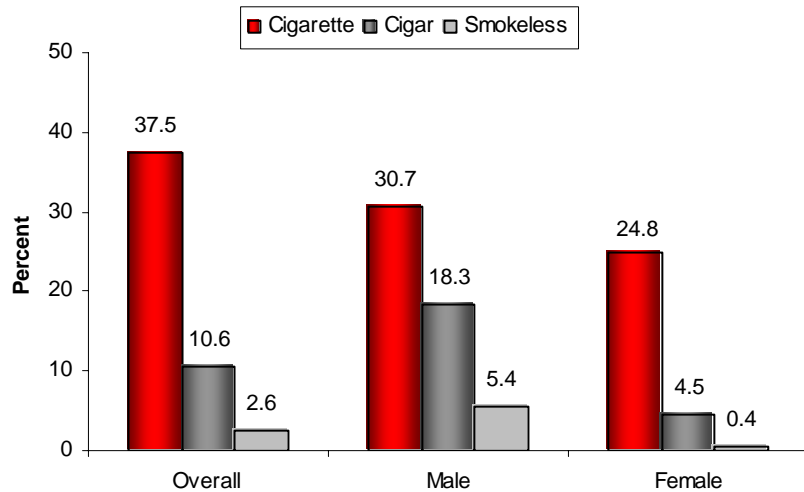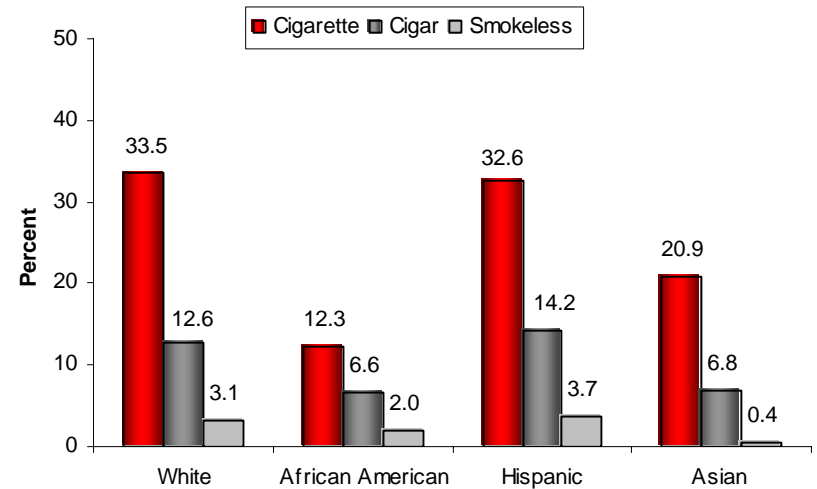

Figure 3. Tobacco use, by PRODUCT TYPE and RACE

Current Cigarette Smoking

Students were asked about their use of cigarettes during the past 30 days. Students were considered to be current smokers if they reported smoking cigarettes at least once within the past 30 days. Students were also asked if they smoked during their senior year of high school.

- Slightly more than one-fourth (27.5%) of Maryland college students smoke cigarettes.

- Rates of cigarettes smoking are significantly higher among males (30.7%) than among females (24.8%).

- Maryland college students are significantly more likely than Maryland high school students[1] to smoke cigarettes (27.5% and 17.6%, respectively).

- White students (33.5%) are significantly more likely than African American (12.3%) and Asian students (20.9%) to smoke cigarettes.

- Hispanic students (32.6%) are significantly more likely than African American students (12.3%) to smoke cigarettes.

Figure 4. Current cigarette use, by GENDER and RACE/ETHNICITY
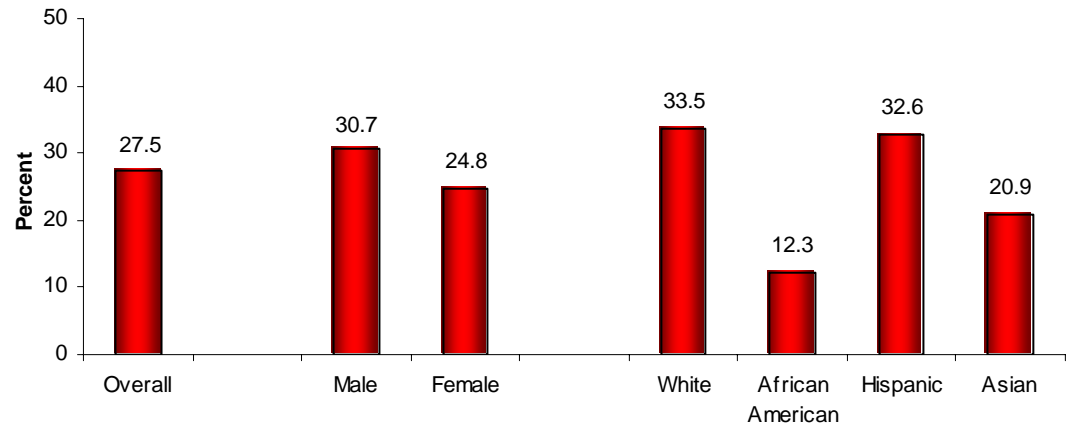
- Of the Maryland college students that are current smokers, 42.0% reported that they did not smoke as a senior in high school.

- Of the Maryland college students who are current smokers, there are no significant differences between the percent of males and females that report they did not smoke as a senior in high school.

- Of the Maryland college students who are current smokers, there are no significant differences among racial/ethnic students that report they did not smoke as a senior in high school.

Figure 5. Percentage of current smokers who did not smoke as a senior in high school, by GENDER and RACE

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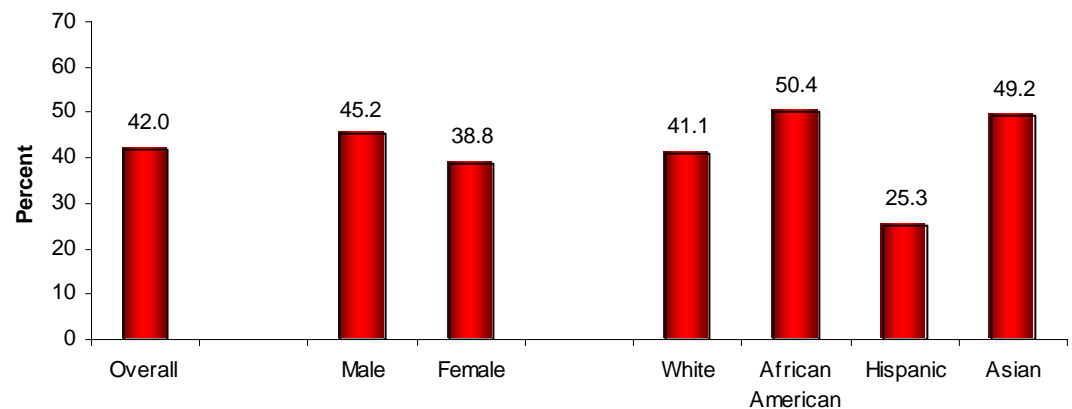
[1] Source: *Monitoring Changing Tobacco Use Behaviors in Maryland.* Maryland Department of Health and Mental Hygiene, September 2003.

Reasons for Cigarette Use

Students were asked to indicate the reasons they smoked cigarettes. The results are for current smokers.

- The top three reasons students gave for smoking cigarettes were:
  - "I like to smoke when I drink" (47.6%)
  - "To relieve stress" (27.8%), and
  - "I find it pleasurable" (18.9%).

- There are no significant differences between males (49.7%) and females (45.5%) who report they like to smoke when they drink.

- Significantly more females (34.1%) than males (21.5%) report smoking "to relieve stress."

- Males (26.5%) are more than twice as likely as females (11.3%) to report smoking because they "find it pleasurable."

Figure 6. Top three reasons for cigarette smoking, by GENDER
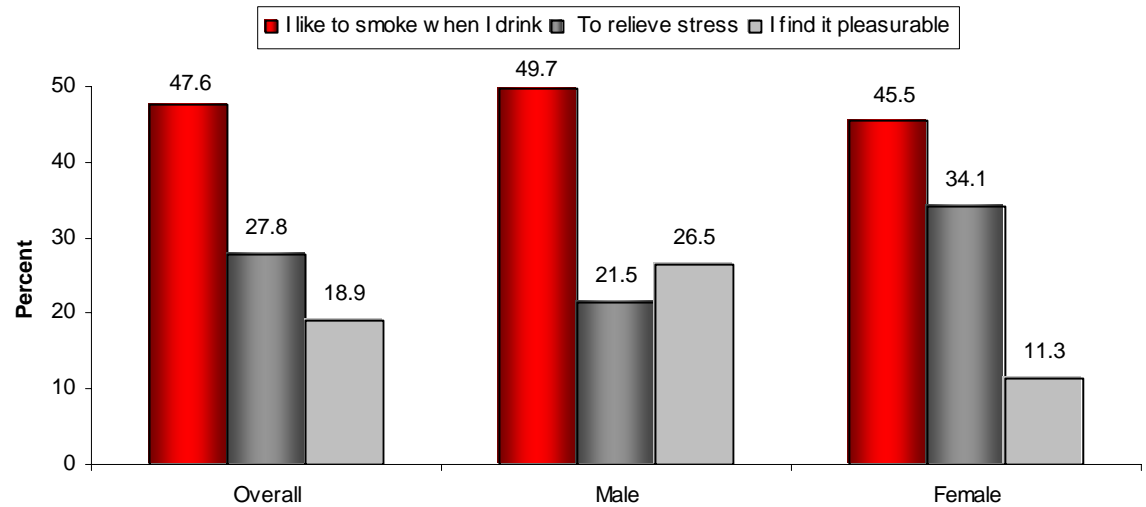
- There are no significant differences among racial/ethnic groups in their reported reasons for smoking. The top three reasons for smoking, among all racial/ethnic groups are "I like to smoke when I drink," "To relieve stress" and "I find it pleasurable."

- Students who started smoking in high school were significantly more likely to report smoking because "It's a habit" (17.6%) or "I am addicted" (15.7%) than were students who started smoking after college (2.8% and 3.7%, respectively) [data not shown – see Table A4].

Figure 7. Top three reasons for cigarette smoking, by RACE
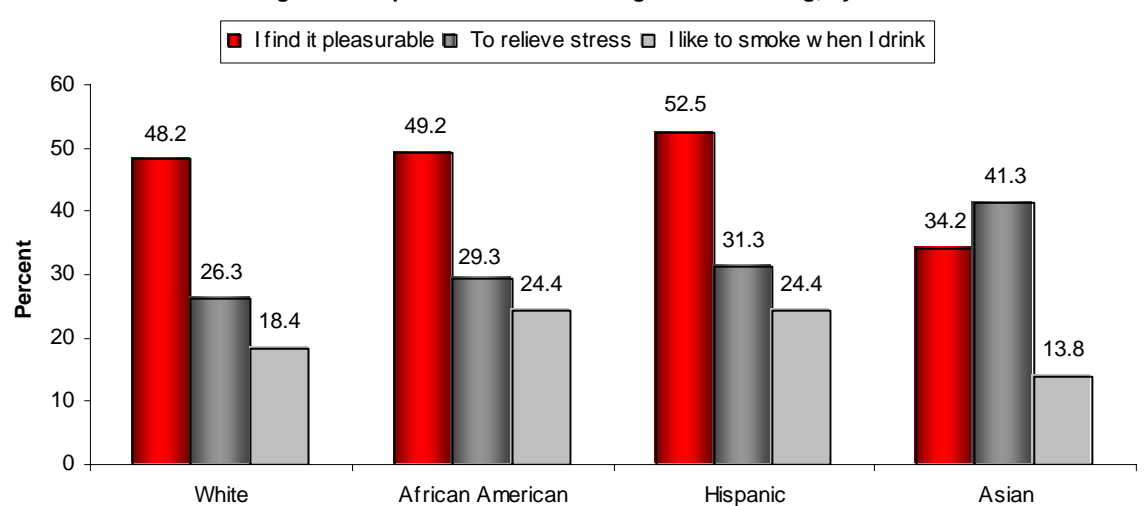
Frequency of Cigarette Smoking

Students were asked about their use of cigarettes during the past 30 days. Students were considered to be "daily smokers" if they smoked on 30 out of the past 30 days; they were considered "frequent smokers" if they smoke on 20 or more days out of the past 30 days.

- Overall, 5.1% of college students smoke cigarettes every day.

- The rate of daily smoking among male college students (5.5%) is comparable to that of female college students (4.9%).

- White (6.8%) and Asian (6.1%) students are significantly more likely than African American students (0.2%) to be daily smokers.

Figure 8. Percentage of students who smoke cigarettes daily, by GENDER and RACE

- Overall, 9.4% of college students are frequent smokers, smoking cigarettes on 20 or more days out of the past 30 days.

- The rate of frequent smoking among male college students (10.1%) is comparable to that of female college students (8.8%).

- White (11.6%) and Asian (10.3%) students are significantly more likely than African American students (2.9%) to be frequent smokers.

Figure 9. Percentage of students who are frequent smokers, by GENDER and RACE
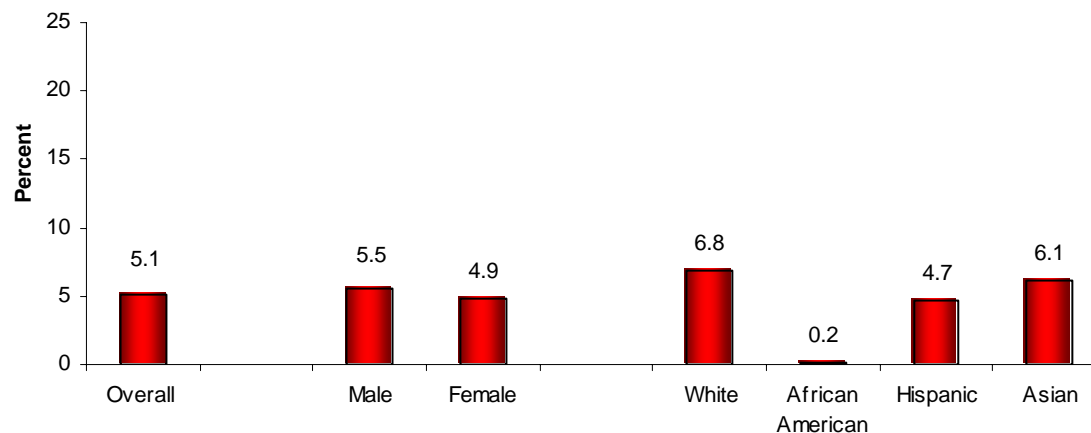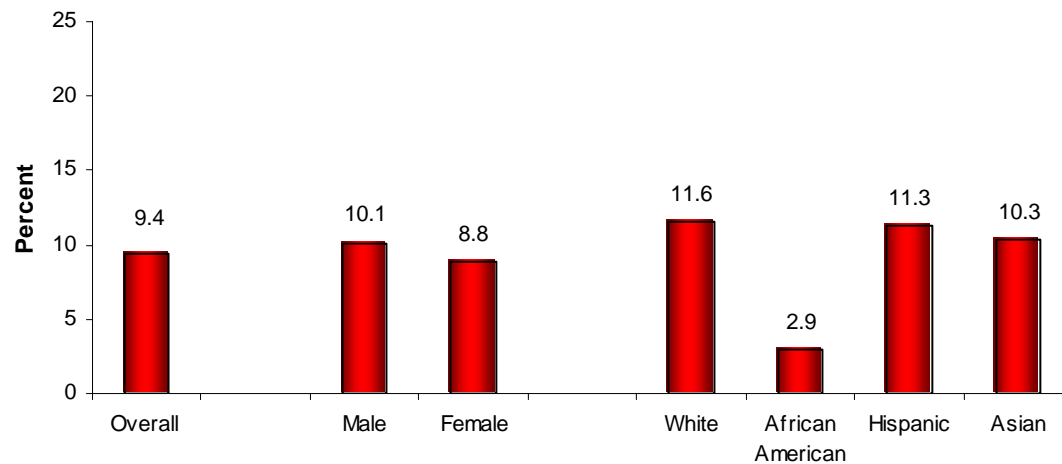
Frequency of Cigarette Smoking (continued)

Students were asked about their use of cigarettes during the past 30 days. Students were considered "less frequent smokers" if they smoked on 1 to 19 days out of the past 30 days. In addition, students were asked if they considered themselves "social smokers," that is someone who smokes only during certain situation, such as at a bar or party, when stressed, or when around certain people. "Social smokers" are not a mutually exclusive from daily, frequent, or less frequent smokers.

- Overall, 18.1% of college students are less frequent smokers, smoking on 1 to 19 days in the past 30 days.

- The rate of less frequent smoking among male college students (20.6%) is comparable to that of female college students (16.0%).

- White (22.0%) students are significantly more likely than African American (9.4%) and Asian (10.6%) students to be less frequent smokers.

Figure 10. Percentage of students who are less frequent smokers, by GENDER and RACE

- Currently, 15.1% of Maryland college students report being social smokers.

- The rate of social smoking among male college students (17.6%) is comparable to that of female college students (13.2%).

- White (18.7%) and Hispanic (21.6%) students are significantly more like than African American (7.6%) students to be social smokers; White students are also significantly more likely than Asian students (10.4%) to be social smokers.

- Among students who call themselves "social smokers," 5.6% smoke daily, 17.7% smoke frequently, and 81.9% smoke less frequently [data not shown on graphs].

- Students who report smoking as high school seniors are significantly more likely than those who did not smoke as high school seniors to be daily smokers (19.5% vs. 1.0%, respectively), frequent smokers (32.6% vs. 2.7%, respectively), less frequent smokers (38.6% vs. 12.1%, respectively), and social smokers (42.3% vs. 8.6%, respectively) [data not shown – see Table A6].

Figure 11. Percentage of students who are social smokers, by GENDER and RACE
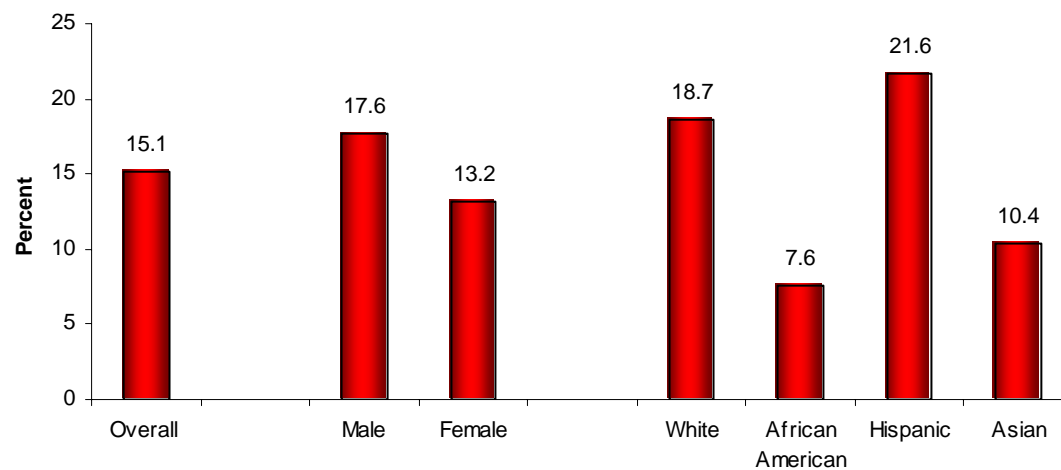
Number of Cigarettes Smoked

Students who are current smokers were asked about the number of cigarettes they smoked on the days they smoked during the past 30 days. The data reported represents the mean number of cigarettes smoked.

- On average, current smokers smoke 4.7 cigarettes a day.

- Male and female current smokers smoke approximately the same number of cigarettes on the days they smoke (4.9 and 4.5 cigarettes, respectively).

- There are no significant differences among racial/ethnic groups in the number of cigarettes they smoke.

Figure 12. Mean number of cigarettes smoked by current smokers on days they smoked, by GENDER and RACE
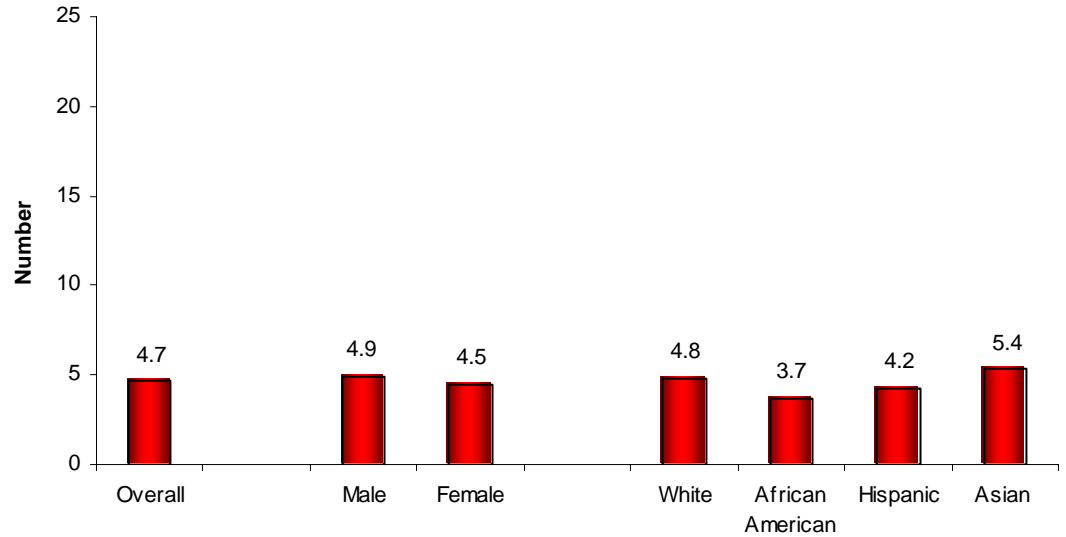
- Daily smokers smoke significantly more cigarettes per day than frequent, less frequent, and social smokers (11.8, 9.3, 2.2, and 3.0, respectively).

- Frequent smokers smoke significantly more cigarettes per day than less frequent and social smokers (9.3, 2.2, and 3.0, respectively).

- Current smokers who started smoking in high school on average smoke 6.1 cigarettes a day on the days they smoke which is about 3 more cigarettes a day than current smokers who started smoking after high school, who smoke 2.7 cigarettes a day.

Figure 13. Mean number of cigarettes smoked on days when smoke, by CURRENT SMOKING STATUS and HIGH SCHOOL SMOKING STATUS
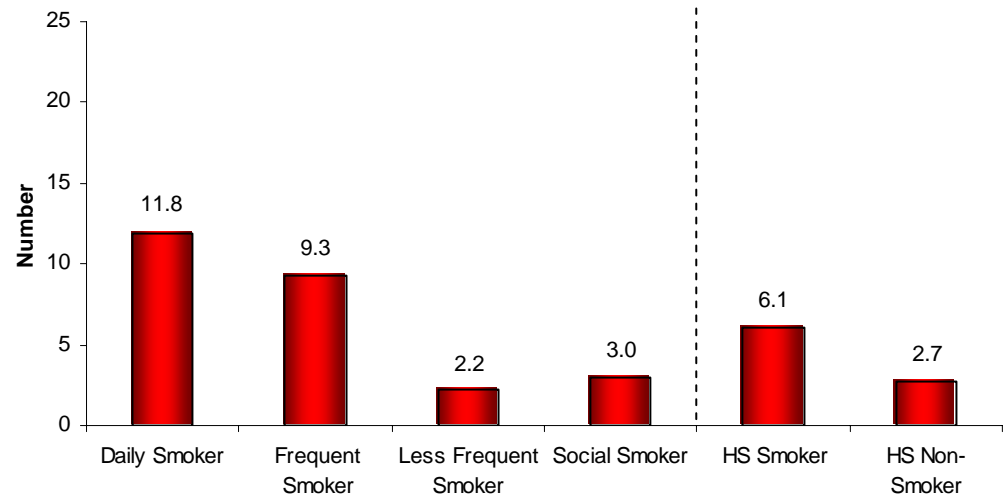
Initiation of Smoking

Students were asked how old they were when they smoked a whole cigarette for the first time. This indicator of early use was assessed to determine the proportion of students who smoked a whole cigarette under age, that is, before age 18.

- The initiation rates of cigarette smoking gradually increase as age increases, from 7.8% by the age of 12 to 15.3% at age 18. Once students reach the age of 18, initiation rates drop dramatically to 4.9% at age 19.

Figure 14. Age at which students smoked their first whole cigarette, among current smokers
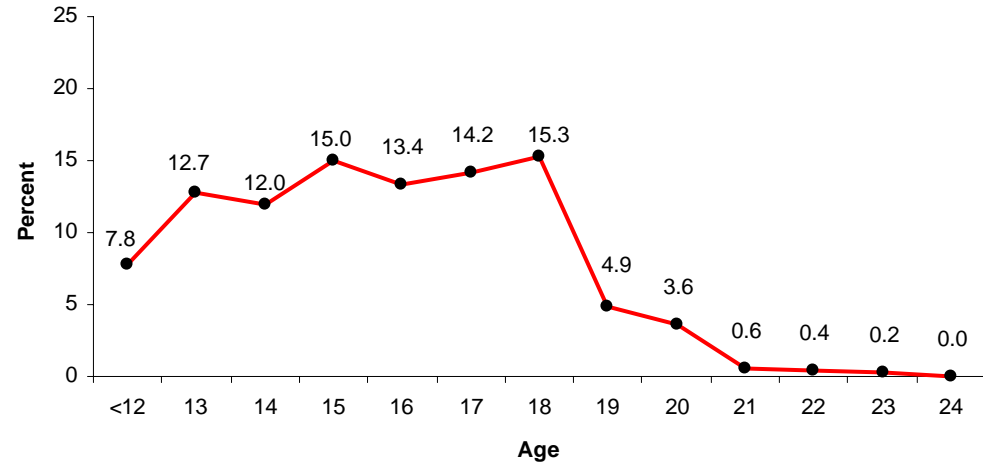
- Overall, 75.0% of Maryland college students who are current smokers report smoking their first whole cigarette before the age 18.

- There are no significant differences in the percent of male (73.6%) and female (76.4%) current smokers who started smoking cigarettes before age 18.

- There are no significant differences among White (76.5%), African American (68.7%), Hispanic (82.4%) and Asian (62.3%) current smokers in their under age initiation of smoking a whole cigarette.

Figure 15. Percentage of current smokers who smoked first whole cigarette before 18, by GENDER and RACE

Establishment of Smoking

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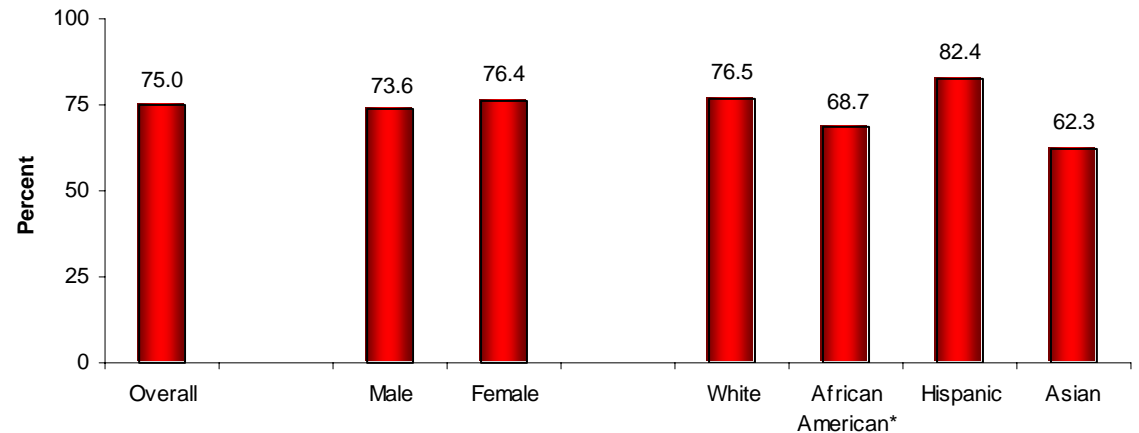
Established Smokers

Students that had smoked a whole cigarette were asked if they had ever smoked 100+ cigarettes (5 packs of cigarettes) in their lifetime. Students were considered to be "established smokers" if they currently smoke and they report smoking at least 100+ cigarettes (5 packs of cigarettes) in their lifetime. Students were considered to be current smokers if they reported smoking cigarettes at least once within the past 30 days.

- Among college students who currently smoke, 72.9% are "established smokers."

- There are no significant differences between males (70.0%) and females (75.9%) who are established smokers.

- There are no significant differences among White (73.3%), African American (67.6%), Hispanic (87.8%), and Asian (68.2%) students who are established smokers.

Figure 16. Percent of current smokers who are "established," by GENDER and RACE
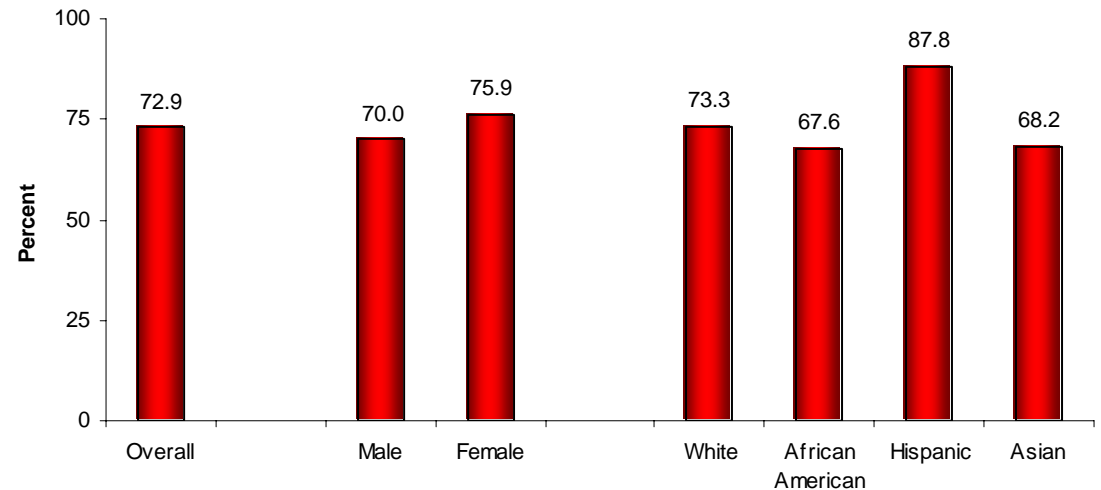
- Overall, 73.8% of established smokers were smokers in high school.

- Among established smokers, there are no significant differences between males (72.4%) and females (75.1%) who smoked in high school.

- Among established smokers, there are no significant differences among White (74.6%), Hispanic (83.8%), or Asian (67.4%) students who smoked in high school.

Figure 17. Percentage of current smokers who are "established" and who smoked in high school, by GENDER and RACE
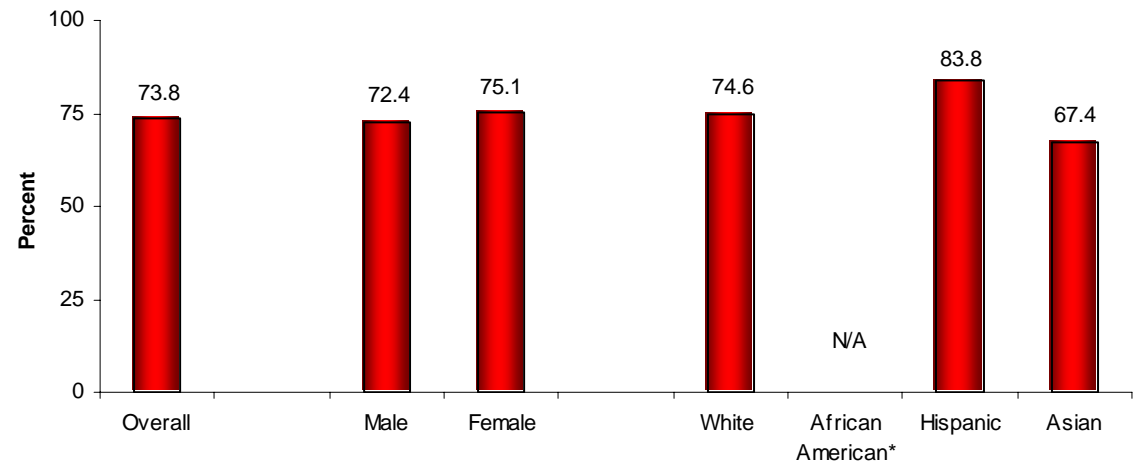
*Due to small sample size on this question, data for African Americans is not shown.

Establishment of Smoking   9

Ever a Regular Smoker

Students who reported that they had smoked at least one whole cigarette in their lifetime were asked how old they were when they first started smoking cigarettes regularly, that is, at least 20 days out of 30 days in a month. Students were considered "regular smokers" if they gave an age at which they began smoking at least 20 days out of 30 days in a month. Regular smokers are not necessarily currently smokers.

- Among college students who have smoked a whole cigarette at some point in their lives, 20.8% became regular smokers before the age of 18.

- There are no significant differences in the percent of males (19.8%) and females (21.7%) who became regular smokers before 18 years old.

- White (22.7%) and Hispanic (31.4%) are significantly more likely than African American students (11.5%) to have become regular smokers before age 18.

Figure 18. Percentage of students who have ever smoked a whole cigarette that became a regular smoker before age 18, by GENDER and RACE

- Initiation of regular cigarette smoking increases more than three-fold from 2.9% at age 15 to 9.5% at age 18.
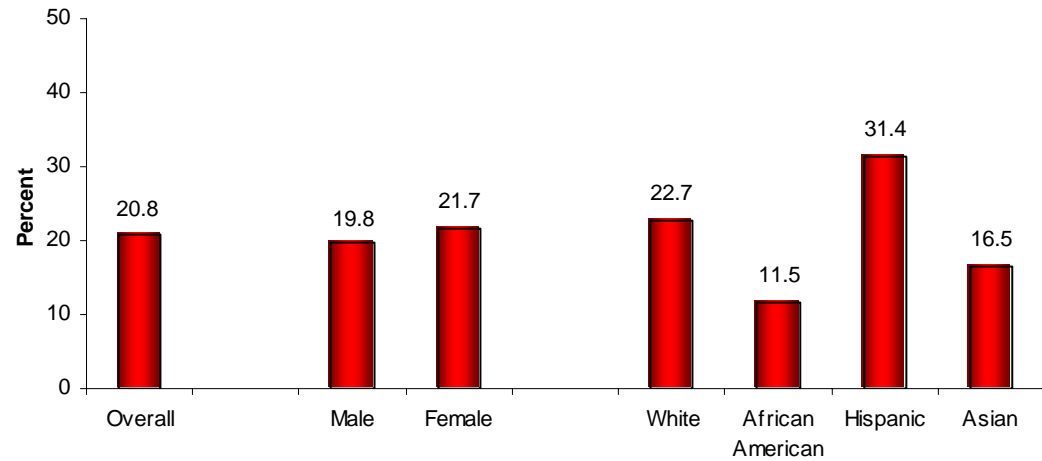
Figure 19. Age at which students first started smoking cigarettes regularly
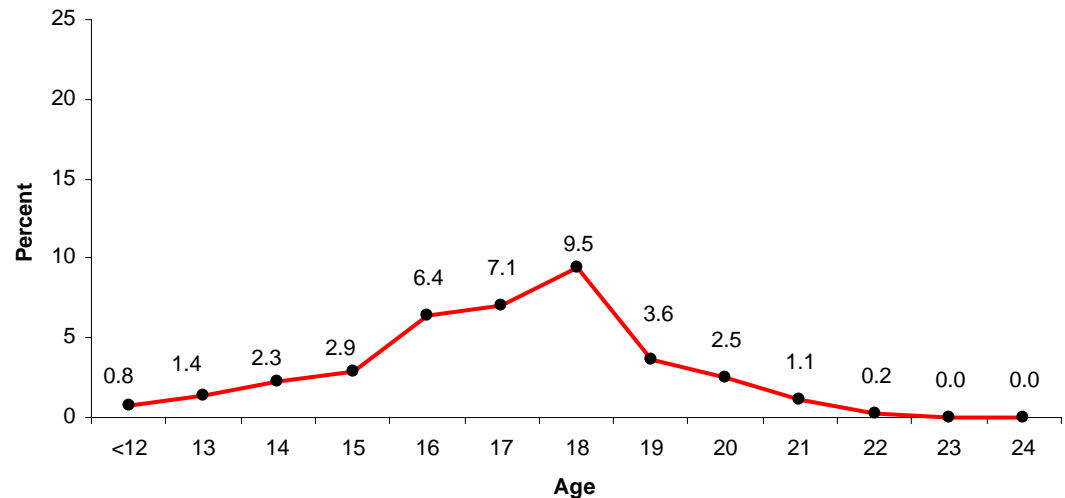
Exposure to Second-hand Smoke

To assess how many students are being exposed to second-hand smoke, students were asked if they had been in the same room with someone smoking within the past 7 days. Students were considered exposed to second-hand smoke if they had been in the same room with someone smoking on 1 or more of the preceding 7 days. Students were considered to be non-smokers if they had not smoked a cigarette within the past 30 days.

- Overall, 39.2% of Maryland college students have been exposed to second-hand smoke within the past 7 days.

- Exposure to second-hand smoke among male college students (40.3%) is comparable to that of female college students (38.4%).

- White students (44.1%) are significantly more likely than African American students (28.9%) to be exposed to second-hand smoke.

Figure 20. Percentage of students who have been exposed to second-hand smoke in the past 7 days, by GENDER and RACE
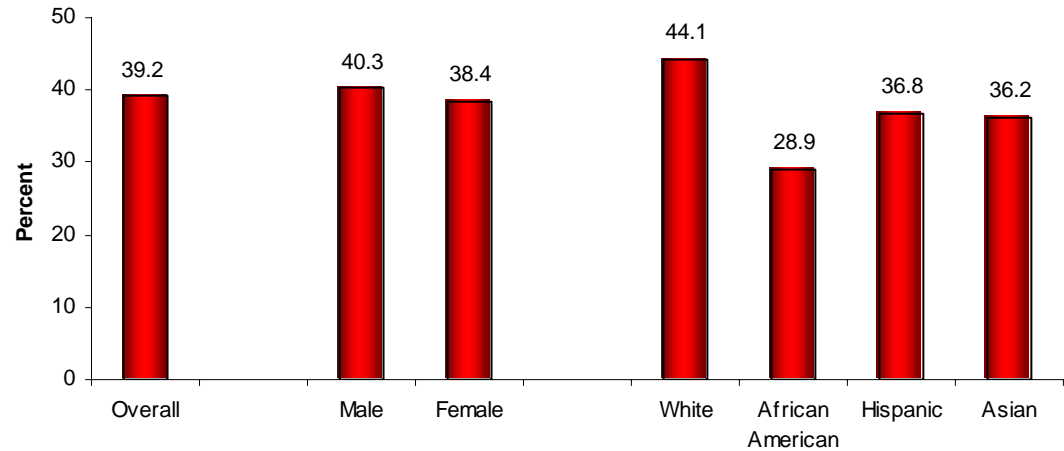
- One third (33.3%) of Maryland college students who do not smoke have been exposed to second-hand smoke within the past 7 days, which is significantly less than Maryland college students, overall.

- Non-smoking male students (34.9%) and non-smoking female students (32.1%) are equally likely to be exposed to second-hand smoke.

- Non-smoking White students (37.7%) are significantly more likely than non-smoking African American students (24.9%) to be exposed to second-hand smoke.

Figure 21. Percentage of non-smokers who have been exposed to second-hand smoke withing the past 7 days, by GENDER and RACE
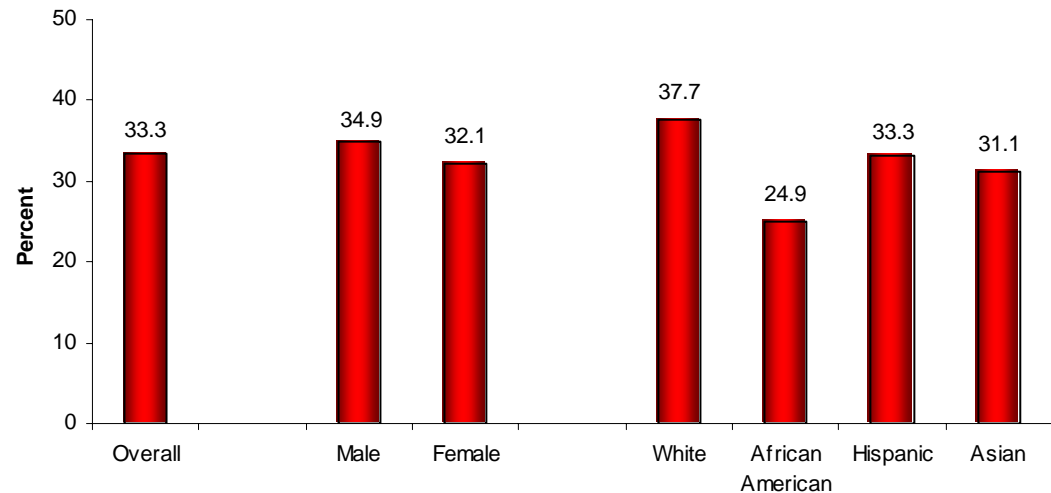
Parents who Smoke

Students were asked if, while in high school, either of their parents (including step-parents or guardians) who lived with them smoked. Students were considered to be current smokers if they reported smoking a cigarette at least once within the past 30 days. Students were considered to be non-smokers if they had not smoked a cigarette within the past 30 days.

- While in high school, one-fourth (25.6%) of current smokers lived with a parent who smoked.

- Both males (23.8%) and females (27.4%) who are current smokers are equally likely to have, during high school, lived with a parent who smoked.

- There are no significant differences in the percent of current smokers in the four racial/ethnic groups who report that while in high school they lived with a parent who smoked.

Figure 22. Percentage of current smokers who, while in high school, lived with a parent who smoked, by GENDER and RACE
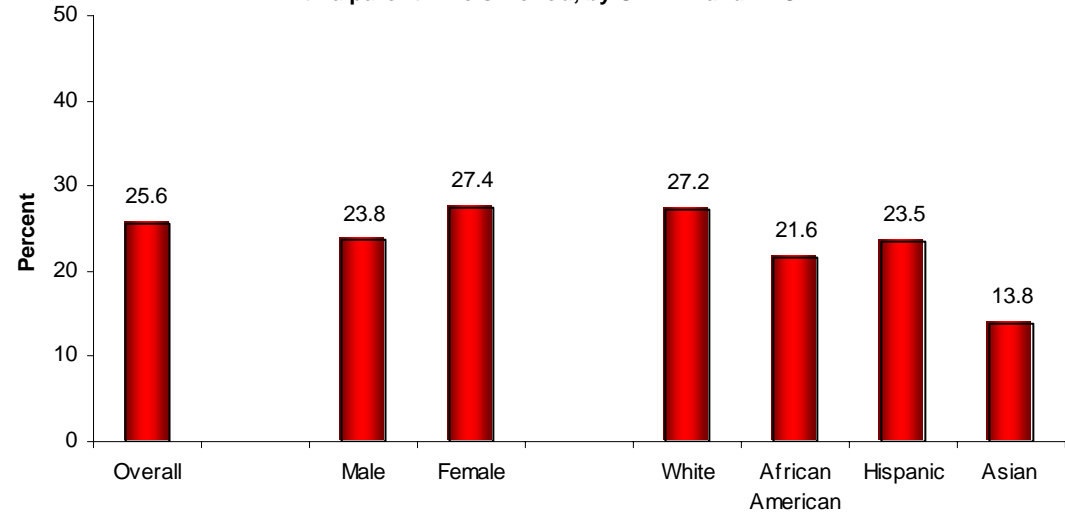
- Nearly one-fourth (24.4%) of non-smokers report, while in high school, living with a parent who smoked.

- The percent of non-smoking males (23.0%) and non-smoking females (25.4%) who, during high school, lived with a parent who smoked, is comparable.

- There are no significant differences in the percent of non-smokers in the four racial/ethnic groups who report that while in high school they lived with a parent who smoked.

Figure 23. Percentage of non-smokers who, while in high school, lived with a parent who smoked, by GENDER and RACE
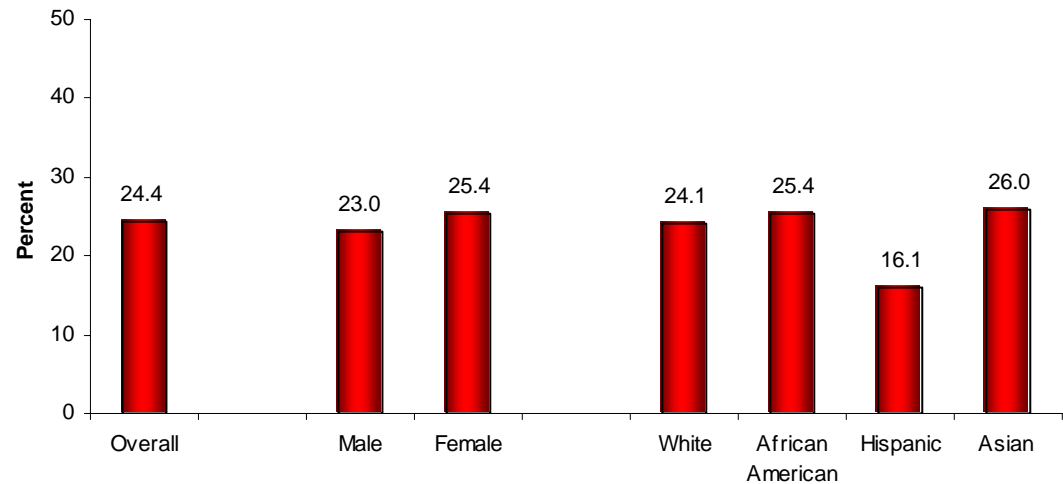
Friends who Smoke

Students were asked how many of their four closest friends smoke cigarettes. Students were considered to have friends who smoke if they reported at least one out of their four closest friends smoke. Students were considered to be current smokers if they reported smoking a cigarette at least once within the past 30 days. Students were considered to be non-smokers if they had not smoked a cigarette within the past 30 days.

- Currently, 79.2% of Maryland college students who are current smokers report having at least one close friend who smokes.

- There are no significant differences in the percent of male (77.1%) and female (81.3%) current smokers that have one or more friends who smoke.

- Among current smokers, White (81.0%), African American (68.1%), Hispanic (81.9%), and Asian (72.8%) students are comparable in the percent that have one or more friends who smoke.

Figure 24. Percentage of current smokers that have friends who smoke, by GENDER and RACE

- Nearly one-half (44.7%) of non-smokers have friends who smoke.

- The percentage of non-smoking males (49.3%) and females (41.5%) who have friends who smoke is comparable.

- Non-smoking White (50.8%) and Hispanic (59.8%) students are significantly more likely than non-smoking African American students (30.5%) to have friends who smoke.

Figure 25. Percentage of non-smokers that have friends who smoke, by GENDER and RACE

Roommates who Smoke

Students were asked if anyone who lives with them now (while at school) smokes cigarettes. Students were considered to be current smokers if they reported smoking a cigarette at least once within the past 30 days. Students were considered to be non-smokers if they had not smoked a cigarette within the past 30 days.

- Currently, 44.0% of current smokers report living with a smoker.

- The percent of male (44.2%) and female (43.9%) current smokers who report having a roommate who smokes is comparable.

- There are no significant differences among White (45.6%), African American (31.3%), Hispanic (59.2%) and Asian (36.5%) current smokers in the percent who currently live with a smoker.

Figure 26. Percentage of current smokers who currently live with a smoker, by GENDER and RACE
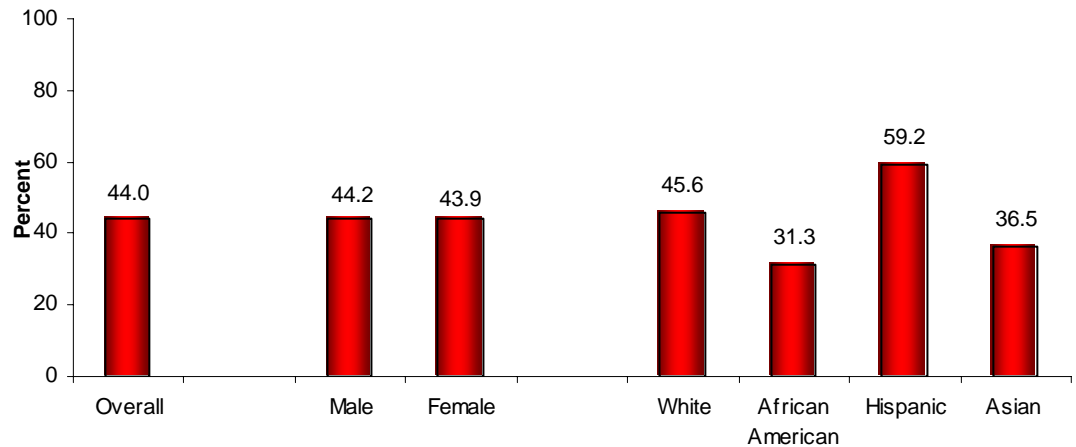
- Overall, 21.3% of non-smokers have a roommate who smokes.

- There are no significant differences between male non-smokers (21.4%) and female non-smokers (21.2%) who report having a roommate who smokes.

- There are no significant differences among White (22.6%), African American (17.1%), Hispanic (20.9%) and Asian (25.8%) non-smokers in the percent who currently live with a smoker.

Figure 27. Percentage of non-smokers who currently live with a smoker, by GENDER and RACE

Exposure to Second-hand Smoke   14
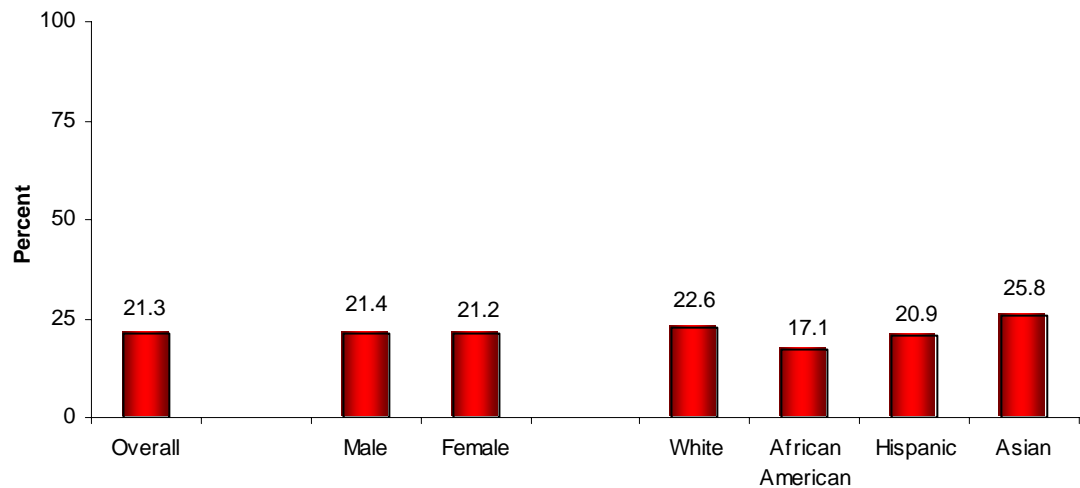
Social Influences

The influence of various people (parents, friends, and roommates) on current smoking was examined. Students were asked if, while in high school, either of their parents (including step-parents or guardians) who lived with them smoked, or if they have one or more friends who smoke, or if anyone who lives with them (while at school) smokes cigarettes. Students were considered to be current smokers if they reported smoking a cigarette at least once within the past 30 days.

Table 1 presents the results of three logistic regression models for the probability of current smoking. These models assess the effects of three independent variables on current smoking:

1) whether the student's parents smoke
2) whether the student's friends smoke
3) whether the student lives with someone who smokes

For each model, the table presents the odds ratios (ORs) as well as 95% confidence intervals for the ORs[1].

Table 1. Current Smoking Odds as a Function of Social Influences			
Influence	**OR**	**95% Confidence Limits**	
Parental Smoking	1.14	1.09	1.19
Friends Smoking	7.14	6.78	7.52
Roommate Smoking	3.14	3.01	3.27

- The first model shows a modest yet significant effect of parental smoking—students whose parents smoke are 1.14 times as likely to smoke compared to students whose parents do not smoke.

- The second model shows a dramatic effect for friends smoking; the odds for current smoking are increased seven-fold (7.14) for those students with friends who smoke (compared to those with non-smoking friends).

- Living with smokers also has a sizable effect on current smoking. Students living with smokers are more than three times (3.14) as likely to smoke compared to students who do not live with smokers.

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[1] The logistic models were estimated using survey weights with statistical software suitable for the purpose (providing accurate OR estimates).

Smoking and Alcohol

To examine the relationship between smoking and drinking behaviors, students were asked about their use of cigarettes and alcohol within the past 30 days. Students were considered to be "non-smokers/non-drinkers" if, within the past 30 days, they did not smoke cigarettes or drink alcohol. Students were considered to be "smokers/non-drinkers" if, within the past 30 days, they smoked cigarettes at least once but they did not drink alcohol. Students were considered to be "Drinkers/non-smokers" if, within the past 30 days, they drank alcohol at least once but they did not smoke cigarettes. Students were considered to be "current smokers and current drinkers" if, within the past 30 days, they smoked at least once and drank alcohol at least once.

- Slightly more than one-fourth (26.5%) of Maryland college students neither smokes cigarettes nor drinks alcohol.

- Only 1.6% of Maryland college students smoke cigarettes but do not drink alcohol.

- Nearly half (46.6%) of Maryland college students drink alcohol but do not smoke cigarettes.

- One-fourth (25.4%) of Maryland college students currently smoke cigarettes and drink alcohol.

- In all four categories (non-smokers/non-drinkers, smoker/non-drinker, drinker/non-smoker, smoker/drinker), there are no significant differences between males and females.

Figure 28. Smoking and drinking behaviors, by GENDER

- Asian (37.4%) and African American (45.4%) students are significantly more likely to be non-smokers/non-drinkers than White (18.5%) or Hispanic (19.0%) students.

- There are no differences among racial/ethnic groups in the percentage of Maryland college students who smoke cigarettes, but not drink alcohol.

- There are no differences among racial/ethnic groups in the percentage of Maryland college students who drink alcohol but do not smoke cigarettes.

- White (31.0%) and Hispanic (31.2%) students are significantly more likely smoke cigarettes and drink alcohol than African American (11.6%) students. White students are also more likely to smoke cigarettes and drink alcohol than Asian (18.2%) students.

Figure 29. Smoking and drinking behaviors, by RACE/ETHNICITY
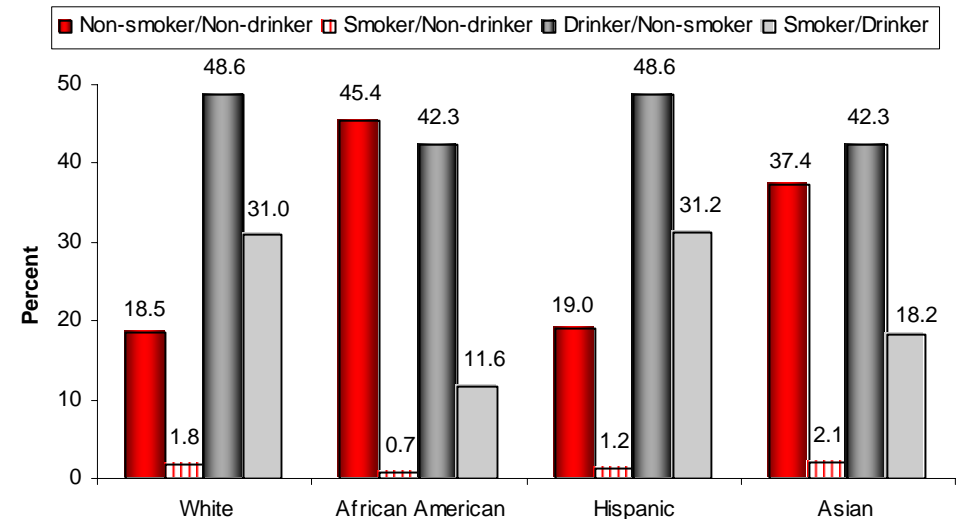
Smoking and Alcohol (continued)

Students who reported smoking a cigarette within the past year were asked if, when they are drinking alcohol, they smoke more than they otherwise would. Students were considered "social smokers," if they reported they smoke only during certain situation, such as at a bar or party, when stressed, or when around certain people.

- Of college students who smoked a cigarette within the past year, 85.7% reported smoking more cigarettes when they drink alcohol.

- There are no significant differences in the percent of males (84.7%) and females (86.6%) who report smoking more cigarettes when they drink alcohol.

- The percent of White (85.9%), African American (82.3%), Hispanic (91.3%), and Asian (84.4%) students that smoke more when they drink alcohol is comparable.

Figure 30. Percent of current smokers who smoke more when they drink, by GENDER and RACE
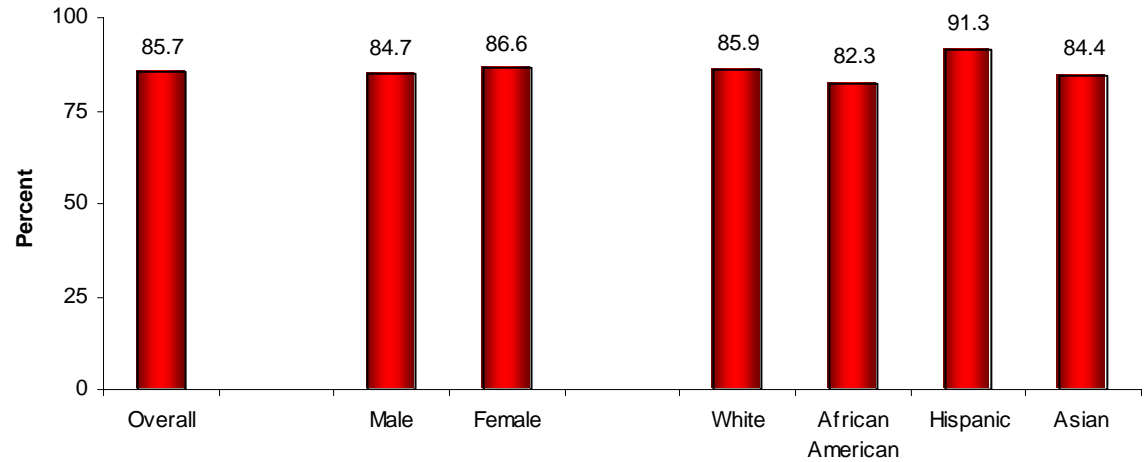
- Of social smokers, one-third (33.1%) smoke only when they drink alcohol.

- There are no significant differences in the percent of male (35.8%) and female (30.2%) social smokers who report smoking cigarettes only when they drink alcohol.

- There are no significant differences among racial/ethnic groups in the percentage of social smokers who report they smoke cigarettes only when they drink.

Figure 31. Percentage of social smokers who report they ONLY smoke when they drink, by GENDER and RACE
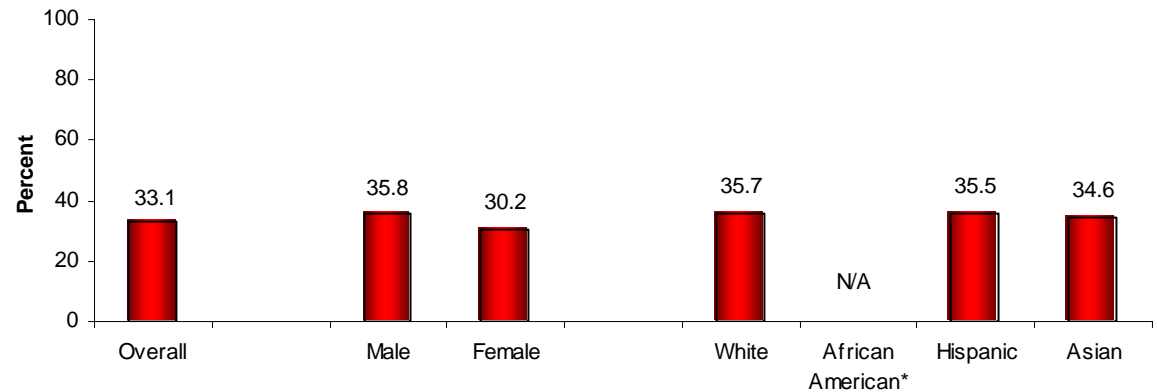
*Due to small sample size, data for African Americans is not shown.

Cigarettes and Associated Alcohol Use

Association Between Membership in Organizations and Smoking

To asses the association of membership in a fraternity or sorority on smoking and drinking behaviors, students were asked if they were members of a social, service, academic, or professional fraternity or sorority and/or if they were members of an intercollegiate sports team. Students were considered "non-members" if they reported they were not a member of a fraternity, sorority, or sports team.

- College students who are members of social fraternities and sororities (45.7%) are significantly more likely than those who are members of academic fraternities (24.1%), sports teams (22.8%), and non-members (23.6%) to be current smokers and drinkers.

Figure 32. Current smoking and drinking, by ORGANIZATIONAL MEMBERSHIP

- Both males (51.1%) and females (41.1%) who are members of social fraternities and sororities are significantly more likely than males and females who are not members of social fraternities and sororities (26.3% and 21.1%, respectively) to be current drinkers and smokers.

- White college students who are members of a social fraternity or sorority (46.0%) are significantly more likely than White students who are not members of social fraternities or sororities (29.0%) to currently smoke cigarettes and drink alcohol.

Figure 33. Social fraternity/sorority membership and current smoking and drinking, by GENDER

* Due to small sample sizes of African Americans, Hispanics, and Asians who belong to social fraternities/sororities, data are not presented.

Cigarette and Alcohol Initiation

To examine the relationship between the age at which students start smoking cigarettes and start drinking alcohol, students were asked how old they were when they smoked a whole cigarette for the first time. They were also asked how old they were when they had their first drink of alcohol, other than a few sips or for religious purposes. The difference of years between initiating smoking and initiating drinking alcohol is presented (age of cigarette initiation minus age of alcohol initiation). Negative numbers represent the difference in years after a student smoked a whole cigarette before they drank alcohol. For example, if a student started smoking cigarettes at age 15 and started drinking alcohol at age 18, the difference would be "-3." If a student started smoking cigarettes at age 19 and drinking alcohol at age 22, the difference would be "3."

- Over half of Maryland college students (55.6%) initiated smoking cigarettes or drinking alcohol within one year of starting the other behavior.

- One-fourth (24.9%) of college students started smoking cigarettes and drinking alcohol at the same age.

- One-fourth (25.4%) of college students started smoking cigarettes before they began drinking alcohol, compared to 43.5% of college students who started smoking cigarettes after they began drinking alcohol.

- Nearly 94% of students reported initiating both behaviors within four years of each other.

Figure 34. Difference, in years, of age between cigarette initiation and alcohol initiation
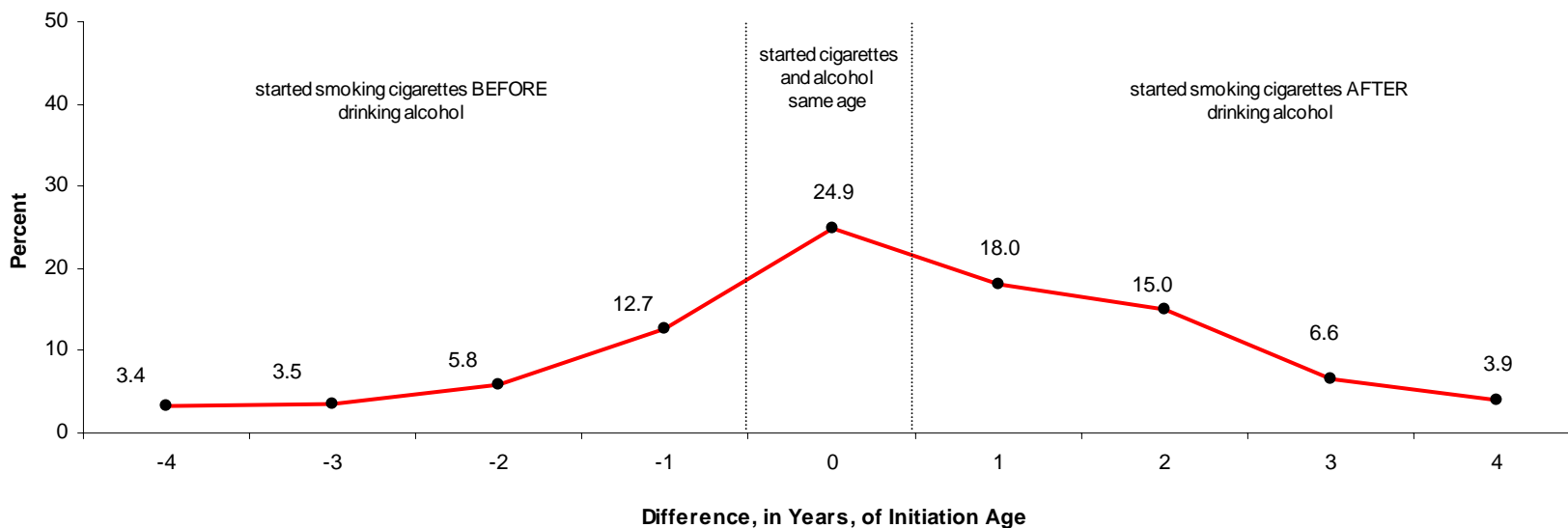
Underage Smoking and Underage Alcohol Use

To assess the influence of underage cigarette smoking on underage alcohol use, students were asked when they first smoked a whole cigarette and when they first had a drink of alcohol. Students were considered to have smoked cigarettes underage if they smoked their first whole cigarette before age 18. Students were considered underage drinkers if they had their first drink of alcohol, other than a few sips or for religious purposes, before age 21. Students were considered to be non-smokers if they had never smoked a cigarette.

- Overall, 85.6% of college students have drunk alcohol while underage (before age 21).

- There are no significant differences between males (85.3%) and females (85.8%) in the percentage who have drunk alcohol while underage.

- White (89.5%) and Hispanic (93.6%) students are significantly more likely than Asian (75.5%) and African American (78.7%) to have drunk alcohol while underage.

Figure 35. Percentage of college students who used alcohol underage, by GENDER and RACE
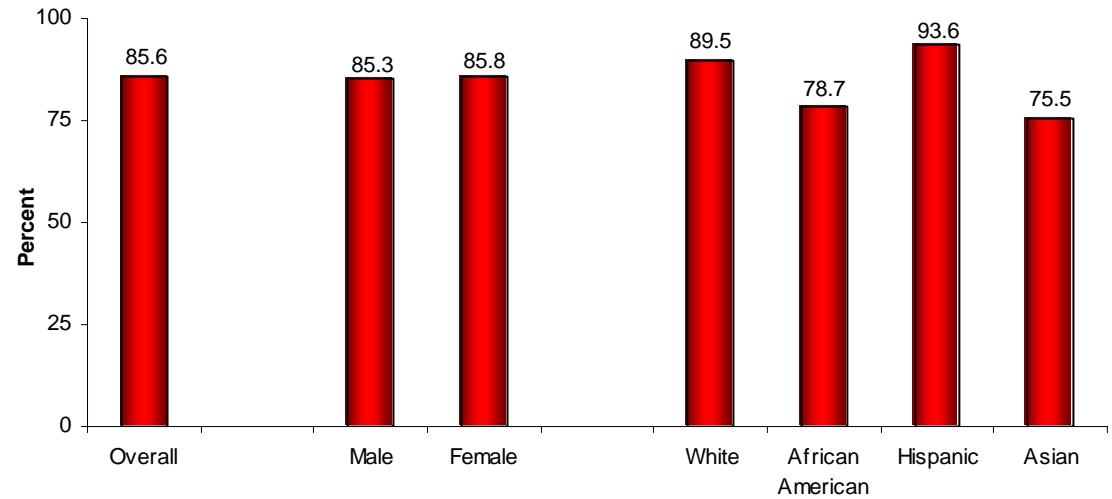
- Overall, 33.7% of Maryland college students smoked cigarettes and drank alcohol when they were underage.

- The percentage of students who initiated both smoking and drinking while underage is comparable among males (34.3%) and females (33.2%).

- White (39.3%) and Hispanic (47.3%) students are significantly more likely than African American (20.5%) and Asian (28.7%) students to have started smoking cigarettes and drinking alcohol while underage.

Figure 36. Percentage of college students who were underage smokers and underage alcohol users, by GENDER and RACE

Experimentation with Cigarettes and Alcohol
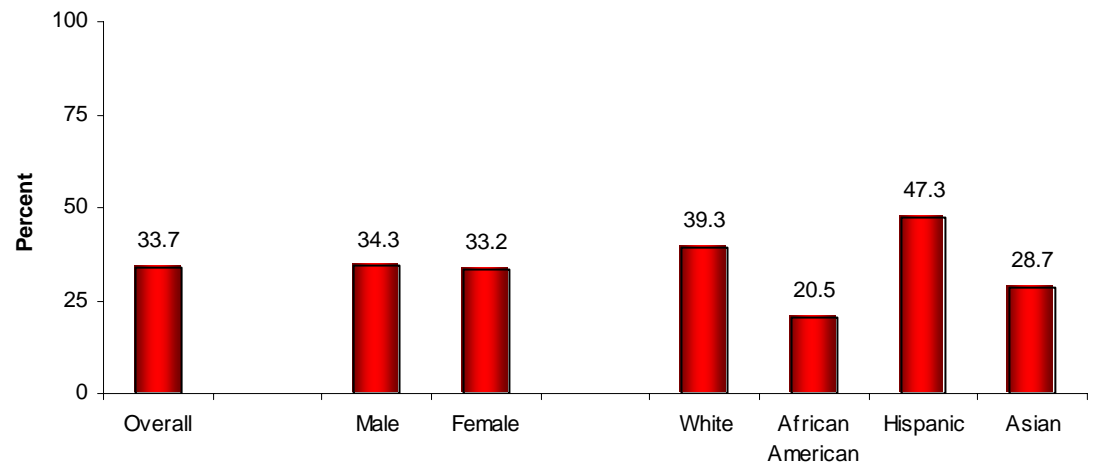
Cessation Plans

To assess their desire and ability to quit smoking, students who currently smoke were asked if they were seriously thinking about quitting smoking and if they had made a serious attempt to quit smoking in the past 12 months. Students were considered current smokers if they reported smoking cigarettes at least once within the past 30 days. Students were considered to be seriously thinking about quitting if they replied yes, regardless of the timeframe, when asked if they were thinking about quitting. Students were considered having made a serious attempt to quit smoking if they had stopped smoking for a day or longer because they were trying to quit.

- Overall, 79.9% of Maryland college students who currently smoke cigarettes are seriously thinking about quitting smoking.

- The percent of male (75.7%) and female (84.`%) current smokers who are seriously thinking about quitting is comparable.

- There are no significant differences among White (81.3%), African American (71.5%), Hispanic (70.8%) and Asian (81.2%) current smokers who are seriously thinking about quitting smoking.

Figure 37. Percentage of current smokers who are seriously thinking about quitting smoking, by GENDER and RACE
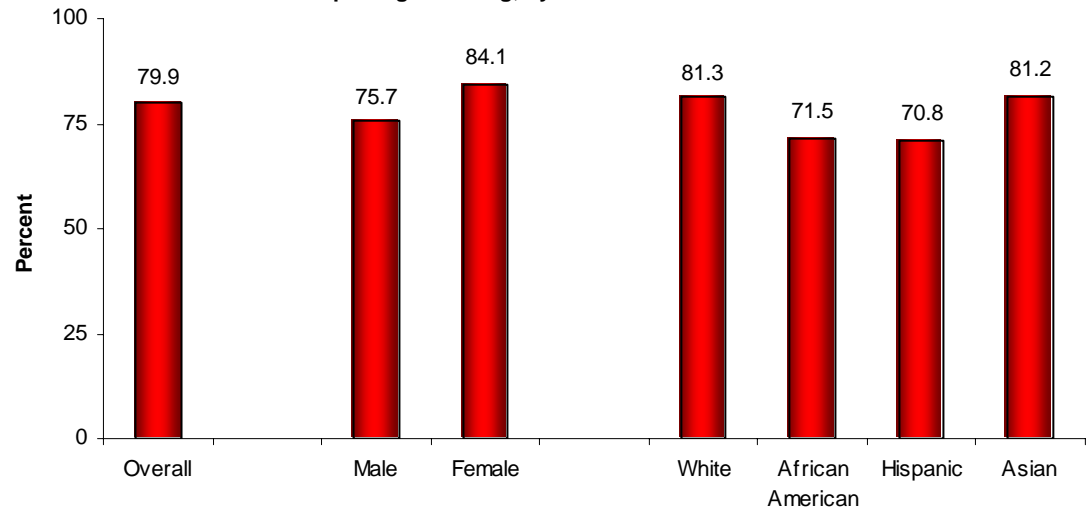
- Nearly half (44.3%) of current smokers have tried to quit smoking in the past 12 months.

- Both male (39.9%) and female (48.8%) current smokers were comparable in their attempts to quit smoking within the past 12 months.

- There are no significant differences among the percent of White (43.7%), African American (39.8%), Hispanic (55.0%) and Asian (51.4%) current smokers who tried to quit smoking during the past 12 months.

Figure 38. Percentage of current smokers who made a serious attempt to quit smoking during the past 12 months, by GENDER and RACE

Cessation
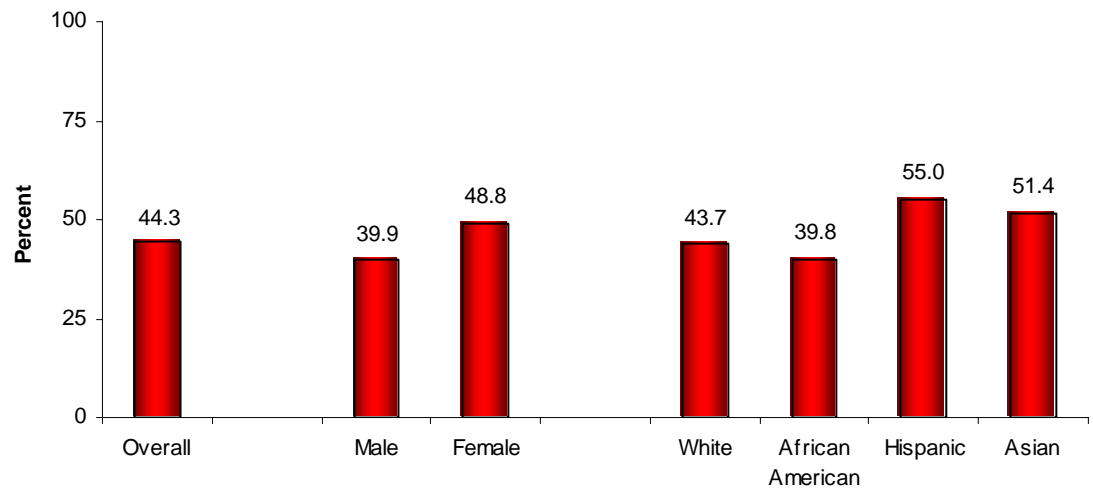
Length of Last Quit Attempt

Students were asked about the length of time they stayed off cigarettes when they last tied to quit smoking. Students were considered current smokers if they reported smoking cigarettes at least once within the past 30 days. Students were considered frequent smokers if they smoked on 20 or more days out of the past 30 days.

- Over one-third (36.4%) of current smokers have never tried to quit smoking.

- Approximately one-third (31.3%) of students who currently smoke were unable to quit smoking for more than 30 days.

- Although they currently smoke, 15.4% of students have been able to quit smoking for six months or more.

Figure 39. Length of last quit attempt among current smokers

- Nearly one-fourth of frequent smokers (23.0%) have never tried to quit smoking.

- Slightly more than one-third (36.3%) of frequent smokers have been able to stop smoking for up to a week.

- One-third (33.2%) of frequent smokers has been able to stop smoking for a week to 6 months.
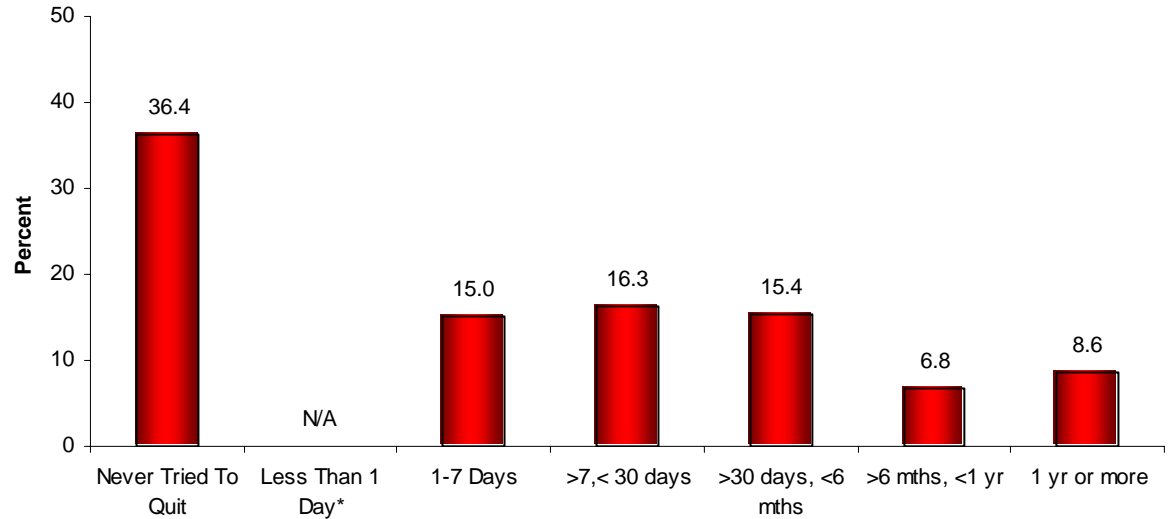
Figure 40. Length of last quit attempt among frequent smokers
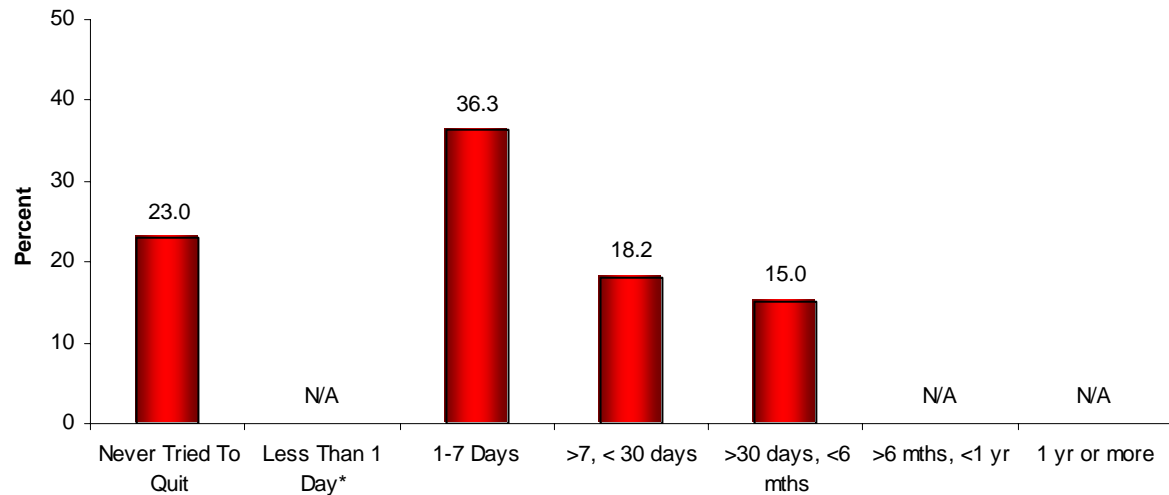
*Due to small sample size on this question, data is not shown.

Cessation

Cessation Methods

To assess students' cessation methods, students were asked what they did or used within the past 12 months to help them quit smoking. Students were considered current smokers if they reported smoking cigarettes at least once within the past 30 days.

Figure 41. Percentage of current smokers who tried to quit smoking in the past 12 months and cessation method used
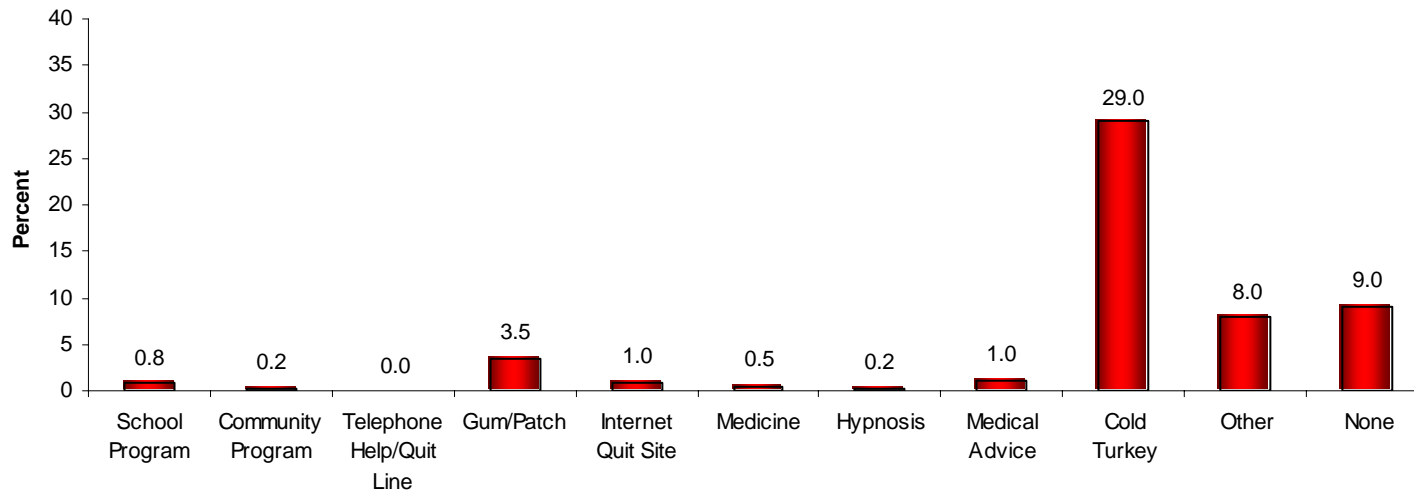
- 38% of current smokers tried to quit smoking "cold turkey" or report using no method.

- 3.5% of current smokers reported using nicotine gum or a patch to help them quit.

- Less than 10% (7.2%) of current smokers reported using a school program, community program, telephone help/quit line, Internet site, medicine, medical advice, or hypnosis to quit smoking.

- 8% of current smokers report using some "other" method of smoking cessation.

Cessation Methods (continued)

The successfulness of students' cessation attempts was measured by examining their attempts to quit smoking in the past 12 months along with their current smoking status. Students were considered "successful" if they tried to quit smoking in the past 12 months and are not currently smokers. Students were considered "unsuccessful" if they tried to quit smoking within the past 12 months but are still current smokers. Students were considered successful <u>regular</u> smokers if they smoked cigarettes regularly/frequently during the past 12 months, they attempted to quit smoking within the past 12 months, and they do not currently smoke cigarettes.

Figure 42. Success rate of students who tried to quit smoking in the past 12 months

- Approximately one-fourth (23.0%) of Maryland college students have successfully quit smoking in the past 12 months.

- The percent of males (24.3%) and females (21.8%) who have been successful in quitting smoking is comparable.

- One-third (33.3%) of White students have successfully quit smoking in the past 12 months.
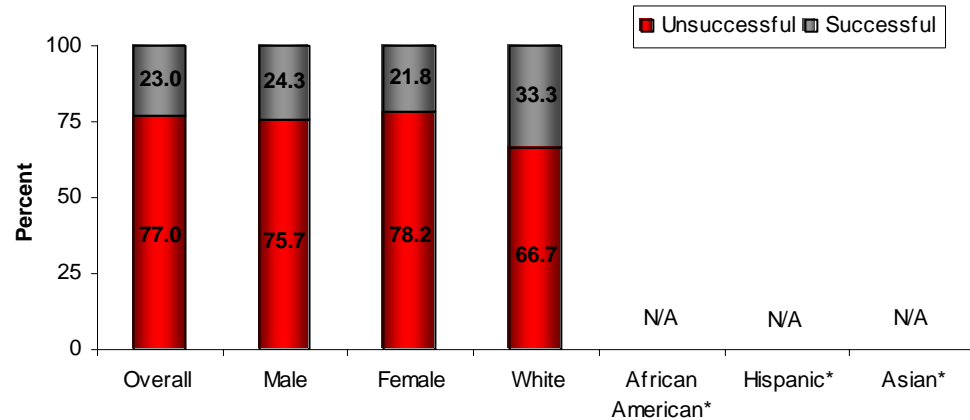
*Due to small sample sizes on this question for African American, Hispanic, and Asian, data is not shown.

Figure 43. Percentage of regular smokers who have successfully quit smoking, by GENDER and RACE

- One-third (33.7%) of regular smokers successfully quit smoking during the past 12 months.

- Among smokers who have quit successfully, 77.6% report quitting "cold turkey," while another 13.7% report visiting an internet quit site to stop smoking; 10.1% used hypnosis; and 27.5% report using some "other" method to quit smoking [data not shown – see Table A19].
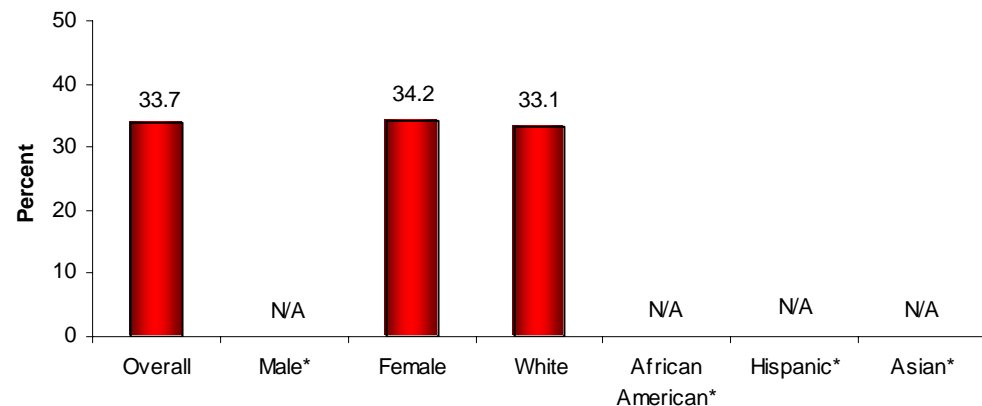
*Due to small sample sizes on this question for males, African American, Hispanic, and Asian, data is not shown.

Appendix A – Detailed Data Tables

Table A1. Prevalence of current* tobacco use among students, by gender and race/ethnicity

Category	Any** tobacco use			Cigarette use			Cigar use			Smokeless tobacco use		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
Overall	17,157	32.8%	2.2%	14,291	27.5%	2.1%	6,297	10.6%	1.4%	1,554	2.6%	0.7%
Gender												
Male	9,389	39.6%	3.9%	7,188	30.7%	3.7%	4,798	18.3%	2.9%	1,423	5.4%	1.6%
Female	7,768	27.1%	2.4%	7,103	24.8%	2.3%	1,498	4.5%	1.1%	131	0.4%	0.3%
Race/Ethnicity												
White	13,321	39.1%	2.5%	11,356	33.5%	2.4%	4,684	12.6%	1.7%	1,162	3.1%	0.9%
African American	2,105	17.1%	5.5%	1,496	12.3%	5.0%	1,033	6.6%	3.4%	308	2.0%	1.8%
Hispanic	667	41.2%	9.8%	528	32.6%	9.2%	246	14.2%	6.9%	65	3.7%	3.4%
Asian	1,064	24.4%	5.7%	911	20.9%	5.4%	334	6.8%	3.1%	19	0.4%	0.5%

Table A2. Prevalence of current* tobacco and current*** alcohol use among students, by institution

Institution	Any tobacco use**			Cigarette use			Alcohol use			Combined smoking and alcohol use		
	N	%	CI(+/-)	N	%	CI(+/-)	N	%	CI(+/-)	N	%	CI(+/-)
Frostburg State University	1,388	42.8%	5.8%	1,246	38.9%	5.7%	2,606	72.8%	4.9%	1,064	34.0%	5.6%
Salisbury University	1,810	39.5%	6.0%	1,388	30.6%	5.7%	4,050	81.6%	4.4%	1,267	28.5%	5.6%
Towson Universtiy	3,936	42.5%	5.2%	3,404	37.0%	5.1%	8,085	78.6%	4.1%	3,111	34.3%	5.1%
University of Baltimore	136	39.3%	16.6%	86	26.2%	15.8%	300	69.5%	14.5%	74	22.5%	14.9%
University of Maryland Baltimore County	1,543	27.9%	3.9%	1,337	24.3%	3.7%	3,624	58.6%	4.1%	1,159	21.3%	3.6%
University of Maryland Eastern Shore	263	14.0%	10.3%	192	10.3%	9.8%	1,507	58.9%	11.4%	136	7.4%	8.4%
University of Maryland University College	221	36.2%	8.7%	178	29.5%	8.3%	446	66.6%	8.2%	149	25.4%	8.1%
University of Maryland, College Park	6,089	33.6%	3.6%	5,066	28.0%	3.4%	15,432	78.3%	3.0%	4,791	26.7%	3.4%
St. Mary's College of Maryland	412	28.5%	4.1%	334	23.2%	3.9%	1,248	78.5%	3.5%	320	22.4%	3.8%

*Smoked cigarettes on ≥1 of the 30 days preceding the survey.
**This is a composite variable that includes use of cigarettes or cigars or smokeless tobacco on ≥ 1 of the 30 days preceding the survey.
***Drank alcohol on ≥ 1 of the 30 days preceding the survey.

Table A3. Prevalence of current cigarette smoking by students who did not smoke as a high school senior, by gender and race/ethnicity

Category	Current smokers who did not smoke as high school seniors		
	N	%	CI (+/-)
Overall	6,002	42.0%	4.3%
Gender			
Male	3,246	45.2%	6.9%
Female	2,755	38.8%	5.2%
Race/Ethnicity			
White	4,666	41.1%	4.3%
African American	54	50.4%	21.8%
Hispanic	134	25.3%	13.5%
Asian	448	49.2%	14.7%

Table A4. Reasons reported for cigarette smoking by students that have smoked a cigarette, even one or two puffs within the past year, by high school smoking status

Reasons	Current Smokers			Current smokers who did not smoke as high school seniors			Current smokers who smoked as high school seniors		
	N	%	CI(+/-)	N	%	CI(+/-)	N	%	CI(+/-)
I Like to Smoke When I Drink	6,793	47.6%	4.3%	3,009	50.3%	7.0%	3,784	45.7%	5.5%
To Relieve Stress	3,967	27.8%	3.7%	1,564	26.1%	5.9%	2,403	29.0%	4.8%
I Find It Pleasurable	2,701	18.9%	3.5%	1,068	17.8%	5.0%	1,633	19.7%	4.9%
I Just Like Smoking	1,957	13.7%	3.0%	559	9.3%	3.8%	1,398	16.9%	4.2%
I Like Smoking When I Go Out	1,737	12.2%	2.8%	885	14.8%	5.1%	852	10.3%	3.1%
It Is a Habit	1,661	11.6%	2.8%	204	3.4%	1.9%	1,457	17.6%	4.4%
To Take a Break	1,608	11.3%	2.5%	687	11.5%	4.1%	921	11.1%	3.2%
I Am Addicted	1,527	10.7%	2.4%	222	3.7%	2.2%	1,305	15.7%	3.7%
Boredom	1,470	10.3%	3.1%	747	12.5%	6.1%	722	8.7%	3.0%
My Friends Smoke	1,392	9.8%	2.3%	769	12.9%	4.1%	623	7.5%	2.6%
Helps Me to Socialize	1,262	8.8%	2.6%	702	11.7%	4.3%	560	6.8%	3.2%
My Significant Other Smokes	371	2.6%	1.4%	146	2.4%	1.9%	225	2.7%	1.9%
To Relieve Depression	304	2.1%	1.1%	130	2.2%	1.6%	174	2.1%	1.5%
Helps Me to Control My Weight	193	1.4%	0.8%	54	0.9%	1.1%	139	1.7%	1.2%
Helps Me to Stay Awake or to Study	133	0.9%	0.6%	86	1.4%	1.3%	47	0.6%	0.5%
Makes Me Look More Attractive	50	0.4%	0.4%	24	0.4%	0.5%	26	0.3%	0.6%

Table A5. Prevalence of cigarette smoking by frequent, less frequent, daily and social smokers, by gender and race/ethnicity

Category	Frequent smokers			Less frequent smokers			Daily smokers			Social smokers		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
Overall	4,898	9.4%	1.3%	9,393	18.1%	1.8%	2,676	5.1%	0.9%	9,076	15.1%	1.6%
Gender												
Male	2,369	10.1%	2.3%	4,820	20.6%	3.1%	1,288	5.5%	1.6%	4,639	17.6%	2.9%
Female	2,529	8.8%	1.4%	4,573	16.0%	2.0%	1,389	4.9%	1.1%	4,437	13.2%	1.7%
Race/Ethnicity												
White	3,913	11.6%	1.6%	7,442	22.0%	2.1%	2,312	6.8%	1.3%	6,980	18.7%	1.9%
African American	352	2.9%	2.7%	1,144	9.4%	4.3%	23	0.2%	0.3%	1,201	7.6%	3.6%
Hispanic	182	11.3%	6.1%	346	21.3%	8.1%	76	4.7%	3.9%	382	21.6%	7.7%
Asian	450	10.3%	4.2%	461	10.6%	4.0%	266	6.1%	3.3%	513	10.4%	3.8%

Table A6. Prevalence of cigarette smoking by frequent, less frequent, daily and social smokers, by high school smoking status

Category	Frequent smokers			Less frequent smokers			Daily smokers			Social smokers		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
High school smoker	3,799	32.6%	4.4%	4,491	38.6%	4.5%	2,265	19.5%	3.5%	4,934	42.3%	4.6%
High school non-smoker	1,099	2.7%	0.7%	4,902	12.1%	1.8%	412	1.0%	0.5%	4,141	8.6%	1.4%

Table A7. Prevalence of cigarette smoking by students who first started smoking cigarettes underage, by gender and race/ethnicity

Category	Current smokers who smoked first whole cigarette before age 18		
	N	%	CI (+/-)
Overall	10,699	75.0%	3.9%
Gender			
Male	5,289	73.6%	6.4%
Female	5,410	76.4%	4.5%
Race/Ethnicity			
White	8,669	76.5%	3.7%
African American	1,027	69	22.0%
Hispanic	435	82.4%	11.5%
Asian	567	62.3%	14.1%

Table A8. Percent of "established smokers" that is, current smokers who have smoked 100 or more cigarettes in their lifetime, by gender and race/ethnicity

Category	Current smokers who smoked 100+ cigarettes in lifetime		
	N	%	CI (+/-)
Overall	10,399	72.9%	3.8%
Gender			
Male	5,028	70.0%	6.0%
Female	5,371	75.9%	4.7%
Race/Ethnicity			
White	8,302	73.3%	4.0%
African American	1,011	67.6%	18.9%
Hispanic	464	87.8%	9.4%
Asian	622	68.2%	13.6%

Table A9. Percent of students who became regular smokers, that is smoking on at least 20 days out of 30 days in a month, before they were 18 years old, by gender and race/ethnicity

Category	Student who became regular smokers before age 18		
	N	%	CI (+/-)
Overall	5,892	20.8%	2.5%
Gender			
Male	2,663	19.8%	4.2%
Female	3,229	21.7%	2.9%
Race/Ethnicity			
White	4,682	22.7%	2.7%
African American	527	11.5%	8.5%
Hispanic	326	31.4%	11.3%
Asian	356	16.5%	7.1%

Table A10. Percentage of students and the percentage of non-smokers who were in a room with someone smoking cigarettes within the past 7 days, by gender and race/ethnicity

Category	Students exposed to second-hand smoke			Non-smokers exposed to second-hand smoke		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	23,155	39.2%	2.2%	12,496	33.3%	2.7%
Gender						
Male	10,461	40.3%	3.9%	5,635	34.9%	4.7%
Female	12,694	38.4%	2.5%	6,861	32.1%	3.1%
Race/Ethnicity						
White	16,197	44.1%	2.4%	8,425	37.7%	3.0%
African American	4,539	28.9%	5.7%	2,636	24.9%	6.2%
Hispanic	646	36.8%	9.3%	362	33.3%	11.9%
Asian	1,772	36.2%	6.1%	1,072	31.1%	6.9%

Table A11. Percent of current smokers who while in high school one of their parents smoked, who have one or more friends who smoke, who have a roommate who smokes, by gender and race/ethnicity

Category	Current smoker who had parents that smoked			Current smoker that has friends who smoke			Current smoker that has a roommate who smokes			Current smoker exposed to multiple* social influences		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
Overall	3,659	25.6%	3.7%	11,316	79.2%	3.8%	6,294	44.0%	4.3%	12491	87.4%	3.4%
Gender												
Male	1,711	23.8%	5.9%	5,541	77.1%	6.4%	3,178	44.2%	6.7%	6051	84.2%	5.9%
Female	8	27.4%	4.6%	5,775	81.3%	4.0%	3,116	43.9%	5.2%	6440	90.7%	2.9%
Race/Ethnicity												
White	3,086	27.2%	3.9%	9,201	81.0%	3.5%	5,180	45.6%	4.4%	10114	89.1%	2.7%
African American	323	21.6%	18.2%	1,020	68.2%	21.7%	468	31.3%	19.8%	1117	74.7%	21.7%
Hispanic	124	23.5%	14.0%	433	81.9%	12.0%	313	59.2%	16.6%	492	93.0%	7.4%
Asian	126	13.8%	10.1%	663	72.8%	13.1%	333	36.5%	14.0%	768	84.3%	10.5%

* Composite variable: includes parents smoked, friends smoke and roommate smokes.

Table A12. Percent of non-smokers who while in high school one of their parents smoked, who have one or more friends who smoke, who have a roommate who smokes, by gender and race/ethnicity

Category	Non-smoker who had parents that smoked			Non-smoker that has friends who smoke			Non-smoker that has a roommate who smokes			Non-smoker exposed to multiple* social influences		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
Overall	8,883	24.4%	2.5%	16,002	44.7%	2.9%	8,037	21.3%	2.3%	22274	59.0%	2.9%
Gender												
Male	3,566	23.0%	4.2%	7,335	49.3%	5.3%	3,467	21.4%	4.1%	9852	60.8%	5.2%
Female	5,318	25.4%	2.9%	8,667	41.5%	3.3%	4,570	21.2%	2.6%	12422	57.7%	3.3%
Race/Ethnicity												
White	5,333	24.1%	2.6%	10,882	50.8%	3.1%	5,096	22.6%	2.5%	14166	62.9%	3.0%
African American	2,491	25.4%	6.4%	3,050	30.5%	7.0%	1,822	17.1%	5.7%	5414	50.8%	7.5%
Hispanic	173	16.1%	8.5%	626	59.8%	12.2%	229	20.9%	9.8%	693	63.4%	11.8%
Asian	887	26.0%	6.7%	1,444	43.9%	7.5%	890	25.8%	6.7%	2001	58.0%	7.3%

* Composite variable: includes parents smoked, friends smoke and roommate smokes.

Table A13. Percent of students who are non-smokers and non-drinkers, students who are smokers and non-drinkers, students who are drinkers and non-smokers, and students who are smokers and drinkers, by gender and race/ethnicity

Category	Students who are non-smokers and non-drinkers			Students who are smokers and non-drinkers			Students who are drinkers and non-smokers			Students who are smokers and drinkers		
	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)	N	%	CI (+/-)
Overall	13,611	26.5%	2.2%	808	1.6%	0.5%	23,975	46.6%	2.4%	13,064	25.4%	2.0%
Gender												
Male	5,761	24.9%	3.8%	371	1.6%	0.9%	10,386	44.9%	4.2%	6,602	28.6%	3.6%
Female	7,850	27.7%	2.6%	436	1.5%	0.6%	13,589	48.0%	2.8%	6,462	22.8%	2.3%
Race/Ethnicity												
White	6,201	18.5%	1.9%	616	1.8%	0.7%	16,259	48.6%	2.5%	10,372	31.0%	2.4%
African American	5,483	45.4%	7.1%	82	0.7%	0.9%	5,100	42.3%	7.2%	1,401	11.6%	5.0%
Hispanic	306	19.0%	7.5%	20	1.2%	1.8%	783	48.6%	10.0%	502	31.2%	9.2%
Asian	1,620	37.4%	6.3%	90	2.1%	1.8%	1,832	42.3%	6.6%	789	18.2%	5.2%

Table A14. Percent of current smokers who report they smoke more cigarettes when they drink alcohol and social smokers who report that they only smoke when they drink, by gender and race/ethnicity

Category	Current smokers who smoke more when they are drinking			Social smokers who smoke only when drinking		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	11,566	85.7%	3.1%	3,003	33.1%	5.0%
Gender						
Male	5,822	84.7%	4.8%	1,662	35.8%	8.0%
Female	5,744	86.6%	3.8%	1,341	30.2%	6.1%
Race/Ethnicity						
White	9,194	85.9%	3.3%	2,492	35.7%	5.4%
African American	1,188	82.3%	14.1%	§	§	§
Hispanic	457	91.3%	8.1%	136	35.5%	19.5%
Asian	727	84.4%	10.7%	177	34.6%	18.6%

§ Fewer than 30 observations

Table A15. Percent of students who are members of a social fraternity or sorority and who currently smoke cigarettes and drink alcohol and students who are not members of a social fraternity or sorority who currently smoke cigarettes and drink alcohol, by gender and race/ethnicity

Category	Members of social fraternities or sororities who are current smokers and drinkers			Non-members of social fraternities or sororities who are current smokers and current drinkers		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	2,102	45.7%	7.2%	10,962	23.4%	2.1%
Gender						
Male	1,086	51.1%	11.2%	5,517	26.3%	3.7%
Female	1,016	41.1%	9.0%	5,446	21.1%	2.3%
Race/Ethnicity						
White	1,828	46.0%	7.6%	8,544	29.0%	2.5%
African American	§	§	§	1,293	10.9%	4.9%
Hispanic	§	§	§	400	27.9%	9.1%
Asian	§	§	§	725	17.8%	5.3%

§ Fewer than 30 observations

Table A16. Percent of students who started smoking cigarettes and drinking alcohol underage and students who started drinking underage, by gender and race/ethnicity

Category	Underage smokers/drinkers			Underage drinkers		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	20,003	33.7%	2.10%	50,854	85.6%	1.6%
Gender						
Male	8,958	34.3%	3.80%	22,263	85.3%	2.9%
Female	11,045	33.2%	2.40%	28,591	85.8%	1.9%
Race/Ethnicity						
White	14,524	39.3%	2.40%	33,078	89.5%	1.4%
African American	3,233	20.5%	5.30%	12,412	78.7%	4.8%
Hispanic	831	47.3%	9.60%	1,646	93.6%	3.9%
Asian	1,416	28.7%	5.70%	3,717	75.5%	5.3%

Table A17. Prevalence of current cigarette smokers who are seriously think about quitting and who tried to quit smoking cigarettes during the preceding 12 months, by gender and race/ethnicity

Category	Current smokers thinking about quitting			Current smokers who attempted to quit		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	11,414	79.9%	3.6%	5,886	44.3%	4.5%
Gender						
Male	5,442	75.7%	5.9%	2,728	39.9%	7.1%
Female	5,971	84.1%	3.9%	3,158	48.8%	5.5%
Race/Ethnicity						
White	9,229	81.3%	3.5%	4,614	43.7%	4.5%
African American	1,069	71.5%	19.1%	551	39.8%	23.7%
Hispanic	374	70.8%	15.7%	281	55.0%	17.4%
Asian	740	81.2%	12.3%	440	51.4%	15.1%

Table A18. Length of last quit attempt made by current smokers and frequent smokers, by gender and race/ethnicity

Duration	Current Smokers			Frequent Smokers		
	N	%	CI (+/-)	N	%	CI (+/-)
Never Tried To Quit	4,974	36.4%	4.3%	1,499	23.0%	6.2%
Less Than One Day	§	§	§	§	§	§
1 To 7 Days	2,053	15.0%	3.2%	2,140	36.3%	7.3%
More Than 7 Days Less Than 30 Days	2,224	16.3%	3.6%	1,007	18.2%	5.2%
More Than 30 Days Less Than 6 Months	2,100	15.4%	3.0%	874	15.0%	4.9%
More Than 6 Months But Less Than a Year	931	6.8%	2.0%	§	§	§
One Year Or More	1,172	8.6%	2.3%	§	§	§

§ Fewer than 30 observations

Table A19. Methods used for quitting smoking, by current smokers and successful quitters

Method	Methods current smokers used when trying to quit			Methods successful quitters used to quit smoking		
	N	%	CI (+/-)	N	%	CI (+/-)
Attended Program at School/Health Center	113	0.8%	0.7%	54	3.9%	5.0%
Attended Program at Community	30	0.2%	0.3%	0	0.0%	0.0%
Called Help Line or Quit Line	0	0.0%	0.0%	112	8.1%	11.5%
Used Nicotine Gum or Nicotine Patch	501	3.5%	1.4%	55	4.0%	4.3%
Visited an Internet Quit Site	136	1.0%	0.6%	191	13.7%	14.4%
Used Any Medicine to Help Quit	70	0.5%	0.4%	0	0.0%	0.0%
Acupuncture	0	0.0%	0.0%	0	0.0%	0.0%
Hypnosis	34	0.2%	0.3%	141	10.1%	12.6%
Medical Advice	149	1.0%	0.9%	3	0.2%	0.3%
Cold Turkey	4140	29.0%	4.1%	1080	77.6%	11.6%
Other	1141	8.0%	2.2%	383	27.5%	15.6%
None	1281	9.0%	2.3%	70	5.0%	4.9%

Table A20. Percent of current smokers who were unsuccessful at quitting smoking cigarettes and regular smokers who successfully quit smoking cigarettes, by gender and race/ethnicity

Category	Current smokers unsuccessful at quitting			Regular smokers who have quit		
	N	%	CI (+/-)	N	%	CI (+/-)
Overall	4656	77.0%	5.8%	374	33.7%	13.4%
Gender						
Male	2196	75.7%	9.8%	118	32.8%	24.5%
Female	2460	78.2%	6.5%	256	34.2%	15.7%
Race/Ethnicity						
White	3580	78.2%	5.6%	§	§	§
African American	§	§	§	§	§	§
Hispanic	237	66.7%	20.9%	§	§	§
Asian	§	§	§	339	33.1%	13.9%

§ Fewer than 30 observations

Appendix B – Methodology

The purpose of the Maryland College Tobacco Survey (MCTS) was to gather attitude, usage, and exposure information regarding tobacco products and the associated usage of alcohol statewide among Maryland college students. The study was limited to full-time undergraduates attending four-year State-funded colleges and universities. Due to budget constraints, publicly-funded two-year colleges were excluded from the study. The intent was to develop estimates by race/ethnicity and gender statewide and to develop overall estimates for each of the participating campuses.

Questionnaire Development

The web-based questionnaire was developed by the DHMH, in collaboration with ORC Macro, in the winter of 2003. The MCTS included a core set of question based on the Maryland Youth Tobacco Survey and the Maryland Adult Tobacco Survey. The questionnaire covered nine topics: initiation of cigarette smoking, intensity of current cigarette smoking, use of other tobacco products, exposure to secondhand smoke, smoking cessation, knowledge and attitudes about tobacco, social context of tobacco use, associated alcohol use and demographics.

Sampling

ORC Macro designed and selected a sample of students in 13 four-year Maryland public post-secondary institutions. Of the 13 institutions, two did not participate – the first, Morgan State University – because it was unable to provide the technological infrastructure to permit a web-based survey, and the second, University of Maryland at Baltimore, because it declined to participate in the survey. The target population was full-time, undergraduate students between 18 and 25 years old (at the time of the survey) enrolled in these public institutions.

To design a statistically valid and effective sample, detailed enrollment data for each school was obtained. These data included the demographic composition of each school to permit the allocation of a sample of students to schools and to each racial/ethnic group of interest. Electronic rosters of eligible students were obtained from each target institution. These rosters included an e-mail address for each student, and in most cases, key demographic information.

Enrollment figures for each of the four key racial/ethnic groupings were obtained from the Maryland Higher Education Commission and provided the basis for the racial distribution by institution included in Exhibit 1.

Exhibit 1. Total Enrollment and Racial Distribution of Targeted Institutions and Campuses

Institution	Full-Time Undergraduate	African American %	White %	Asian %	Hispanic %
Bowie State University	2,815	90.2%	5.2%	1.2%	1.1%
Coppin State University	2,418	95.3%	0.6%	0.3%	0.5%
Frostburg State University	4,223	13.3%	80.4%	1.6%	1.9%
Salisbury University	5,439	6.0%	84.6%	2.0%	1.8%
Towson University	12,275	9.3%	77.7%	3.1%	1.8%
University of Baltimore	938	28.6%	51.2%	3.0%	2.5%
University of Maryland Baltimore	599	28.4%	55.3%	7.9%	3.8%
University of Maryland Baltimore County	7,793	15.2%	55.6%	19.3%	2.5%
University of Maryland College Park	22,763	12.1%	60.6%	13.7%	5.2%
University of Maryland Eastern Shore	2,895	78.6%	7.2%	1.6%	1.1%
University of Maryland University College	2,393	32.9%	39.3%	10.0%	4.4%
Morgan State University	5,313	91.1%	0.7%	0.3%	0.6%
St. Mary's College of Maryland	1,648	7.2%	81.9%	4.0%	2.7%
Total	71,512	27.0%	54.8%	7.9%	2.9%

* Source: Maryland Higher Education Commission. *Trends in Enrollment by Race and Gender Maryland Higher Education Institutions*. May 2004.

Exhibit 2 shows the gender distribution by institution, obtained from the Maryland Higher Education Commission.

Exhibit 2. Total Enrollment and Gender Distribution of Targeted Institutions and Campuses

Institution	Full-Time Undergraduate	Male %	Female %
Bowie State University	2,815	38.0%	62.0%
Coppin State University	2,418	26.3%	73.7%
Frostburg State University	4,223	50.0%	50.0%
Salisbury University	5,439	42.9%	57.1%
Towson University	12,275	38.6%	61.4%
University of Baltimore	938	36.8%	63.2%
University of Maryland Baltimore	599	11.6%	88.4%
University of Maryland Baltimore County	7,793	52.8%	47.2%
University of Maryland College Park	22,763	50.4%	49.6%
University of Maryland Eastern Shore	2,895	40.3%	59.7%
University of Maryland University College	2,393	39.0%	61.0%
Morgan State University	5,313	42.4%	57.6%
St. Mary's College of Maryland	1,648	39.5%	60.5%
Total	71,512	44.6%	55.4%

* Source: Maryland Higher Education Commission. *Trends in Enrollment by Race and Gender Maryland Higher Education Institutions*. May 2004.

The sample was designed to achieve the following precision levels required at the state level and for four racial ethnic groupings defined in terms of 95% confidence intervals (CIs) for estimated percentages and proportions (e.g., prevalence rates):

a) State-level estimates should be within +/- 3 percentage points (i.e., standard errors of 1.5% or less), and
b) Racial/ethnic estimates should be within +/- 5 percentage points (i.e., standard errors of 2.5% or less).

Primary strata were colleges, and sub-strata were the key racial groupings defined within each college. Although colleges are conceptually primary strata, they may also be conceived as separate frames.

Exhibit 3 presents the sample allocation to strata based on the initial target sample sizes per college and the expected response rates.

Exhibit 3. Desired Allocation to Institutions (Primary Strata) and to Racial Groups within Institution (Substrata)

Institution	Total Sample	Blacks	Whites	Asians	Hispanics
Bowie	1,000	890	46	33	31
Coppin	1,000	967	14	6	13
Frostburg	1,200	150	903	69	78
Salisbury	1,200	100	892	111	97
Towson	1,600	229	1,250	77	44
UB	938	268	480	28	23
UMB	599	170	331	47	23
UMBC	1,600	244	1008	309	40
UMCP	2,200	266	1520	300	114
UMES	1,000	785	136	46	33
UMUC	1,000	329	465	100	105
St. Mary's	1,000	119	771	66	44
TOTAL SAMPLE	**14,337**	**4,518**	**7,816**	**1,192**	**644**

These sample sizes were refined to reflect the characteristics of the colleges, the quality and specificity of the frame data, and logistical concerns of sample selection.

Sample Selection

Macro attempted to obtain electronic versions of rosters of eligible students from each target institution. Ideally, these rosters should include key demographic information and an e-mail address for each student. However, many colleges had problems in constructing or making available such files. Some of the institutions selected the samples themselves, following sampling specifications provided by Macro.

Exhibit 4 presents the full-time undergraduate enrollment data obtained from the Maryland Commission of Higher Education; the updated full-time, undergraduate, 18-25 year-old enrollment data obtained from the individual institutions (sampling frame); and the actual sample sizes by institution.

Exhibit 4. Full-time Undergraduate Population Totals and Frame Totals Used for each Institution

College	Full-time Undergraduate Enrollment	Full-time Undergraduate 18-25 year-old Enrollment (Sampling Frame)	Sample Size
Bowie	2,815	2,176	995
Coppin	2,418	2,176	1,394
Frostburg	4,223	3,715	1,169
Morgan State	5,313	4,864	N/A*
Salisbury	5,439	5,055	1,197
St Mary's	1,648	1,626	993
Towson	12,275	10,512	1,558
UB	938	448	448
UMB	599	308	N/A*
UMBC	7,793	6,446	1,650
UMCP	22,763	20,310	2,182
UMES	2,895	2,639	520
UMUC	2,393	778	741

* Did not participate

Data Collection

For the MCTS, ORC Macro utilized FormMagician, a sophisticated survey creation and management tool. FormMagician is a proprietary software written by ORC Macro using Macromedia ColdFusion MX and Microsoft SQL Server. The software provides survey administrators the ability to add, edit and delete survey questions dynamically throughout the questionnaire development period. It also allows the specification of complex skip patterns and data validation rules.

The system stored and retrieved all data from centrally located database records. As a result, respondents were able to save data and return multiple times to complete the survey. All data were immediately validated for completeness and consistency as they were entered. ORC Macro staff monitored the status of the data collection effort in real-time using the administrative side of the system. At any point during data collection, ORC Macro staff were able to view response rates by institution.
Respondents were invited to participate in the MCTS through an e-mail invitation. To send out thousands of emails to students at the participating Maryland state universities and colleges, ORC Macro used a product called Mach5 Mailer, which is produced by Mach5 Enterprises. The Mach5 Mailer software is capable of performing an email merge with data retrieved from several different database products via open database connectivity (ODBC). In this case, ORC Macro retrieved the data from a SQL Server

2000 database that contained the contact, school, and response information for each of the recipients. In addition to providing email merge capabilities, the Mach5 Mailer software provides several different scripting options, allowing messages to be conditionally customized based on certain attributes such as the school a recipient attends. Email messages can be plain text or HTML-encoded, and contain attachments.

For each mailing, ORC Macro followed a set of procedures that were designed to ensure that the mailing was a success. The procedures included independent verification of key parts of the mailing, such as the text, passwords, subject lines, and other attributes of the message to be sent. A log of each mailing was kept so that ORC Macro could verify that recipients received one and only one message per mailing. Mailings were also based on questionnaire responses, so students were not emailed repeatedly after they had responded to the questionnaire.

The MCTS utilized multiple security controls throughout the duration of the data collection effort. Web survey access control was the most visible component of security. Data were password-protected so that only a unique identification number and password allow access to survey records. When first accessing the system, users were prompted to enter a user ID and password for each session. As an added precaution, a timeout feature prevents unauthorized users from gaining access to data if the Web survey is left unattended on the user's computer screen. After a predetermined period of inactivity, this feature prompts anyone who tries to gain access to the Web survey for an identification number and password.

Data were also secured at the database level. Survey data were stored in a database behind a firewall. The Web survey system communicated with the database using an additional user ID and password, which was required to pass through the firewall. This user ID was issued by the database system administrator and was known only to select client and ORC Macro personnel. The database user ID and password could never be observed through a Web browser because these terms were secure within the Web survey's programming code. Users could not access the database from a different software application unless they know this particular user ID and password, or are issued their own user ID and password by the database system administrator.

To ensure that student survey data was anonymous, confidential and secure, the database was designed so that the link between student email address and the student's survey responses was removed upon submission. Specifically the id that linked email address and response data reverted to 0 for all students and responses. The only linkage that remained was between survey response and institution. As a consequence it was also impossible to link student information provided for entry into the lottery and survey response data. The server environment was also secure and access was tightly controlled. Exhibit 5 details the response rates obtained, by educational institution, for the MCTS.

Exhibit 5. MCTS Response Rates

Educational Institution	Total
Bowie State University	
Bowie Frame	2176
Sample	995
Respondents	16
Participation Rates	1.61%
Coppin State University	
Coppin Frame	2176
Sample	1394
Respondents	25
Participation Rates	1.79%
Frostburg State University	
Frostburg Frame	3715
Sample	1169
Respondents	342
Participation Rates	29.26%
Salisbury State University	
Salisbury Frame	5055
Sample	1197
Respondents	308
Participation Rates	25.73%
Towson University	
Towson Frame	10512
Sample	1558
Respondents	433
Participation Rates	27.79%
University of Baltimore	
UB Frame	448
Sample	448
Respondents	43
Participation Rates	9.60%

Educational Institution	Total
Univ. of Maryland Baltimore County	
UMBC Frame	6446
Sample	1650
Respondents	598
Participation Rates	36.24%
Univ. of Maryland College Park	
UMCP Frame	20310
Sample	2182
Respondents	766
Participation Rates	35.11%
Univ. of Maryland Eastern Shore	
UMES Frame	2639
Sample	520
Respondents	85
Participation Rates	16.35%
Univ. of Maryland University College	
UMUC Frame	778
Sample	741
Respondents	155
Participation Rates	20.92%
St. Mary's College of Maryland	
SMCM Frame	1626
Sample	993
Respondents	539
Participation Rates	54.28%
Overall Sample*	10458
Overall Respondents*	3269
Overall Participation Rates*	**31.26%**

*excluding Bowie and Coppin

Weighting

Sampling weights and survey weights were developed and adjusted for student non-response, for each college and state-wide. These adjustments made use of demographic data available for the state college student population, data collected in the initial steps of the sampling process, as well as survey data. Post-stratification adjustments by race/ethnicity were performed to force the sum of the weights to match known population totals.

Survey weights were developed for each college and for statewide estimation analyses. In each case, survey weights reflect probabilities of selection and are adjusted for non-response. These adjustments lead to potential bias reduction if post-strata (or weighting classes) are homogeneous in the key variables of interest (e.g., smoking behaviors).

Two of the 13 institutions did not participate, the first because it was unable to provide the technological infrastructure to permit an internet-based survey, and the second because its Institutional Review Board refused to approve the survey. In two of the remaining 11 colleges, student participation rates were so low that their data could not be included in the development of statewide estimates. From a sampling perspective, the non-participation of four institutions, three of which were historically black colleges and universities (HBCUs), posed challenges in weighting data to produce reliable statewide estimates. Briefly, this meant we would have to use the data collected from participating African Americans, whose weights then get inflated, to compensate for the lack of data from the predominantly Black nonparticipating institutions. The discussion that follows describes the techniques used in weighting the survey data.

College-level weights were computed that reflect the varying probabilities of selection (sampling weights) and response rates. For each college, the computation of sampling weights as the reciprocal of the probabilities of selection will depend on the sampling method used for that college. Along these lines, we distinguish two categories of colleges:

1) colleges where a sample was selected with simple random sampling or proportional stratified random sampling,

2) colleges where a disproportional stratified sample was selected (over-sampling racial groups that are more rare in the population).

For the first type of college, one overall sampling weight was computed as the number of eligible students in the frame divided by the number of selected students (N/n). For the second type of college, the sampling weight was similarly computed within each racial/ethnic stratum, as $N(h)/n(h)$ for stratum-h.

Non-response adjustments will force the adjusted weights to sum to the number of eligible students in the frame for the college. College-level weights were adjusted to allow for differential non-response across the two gender groups. With this first ratio

adjustment, the adjusted weights for male students in each college sum to the total number of eligible male students in the college, and similarly for female students in each college.

To generate weights for statewide estimates, we post-stratified the adjusted college-level weights. Post-strata were based on the primary racial/ethnic groups—African Americans, Asians, Hispanics and Whites/Others—crossed by gender. The total population counts for these post-strata are presented in Exhibit 6.

Exhibit 6. Post-stratum Totals

Gender *Race/Ethnicity Grouping*	Male	Female
Asians	2,224	2,734
Blacks	7,195	8,844
Hispanics	793	975
Whites (and Others)	17,176	21,113

In computing adjustment factors for each post-stratum, we used eligible student population totals by racial group and by gender computed in one of the two following ways depending on whether racial totals were available for the college. For those colleges where we obtained the frame, we could compute the number of eligible students in each group directly.

For the other colleges, however, the total per group was estimated using the data available from the Maryland Higher Education Commission. The total for racial group-j was estimated using the total number of eligible students in the college, N, together with the proportion in the group, P(j), computed from the population distribution in Exhibit 1. Specifically, the group-j total was computed as N*P(j).

A similar method was used to estimate the total population in each post-stratum defined by gender and racial grouping, i.e., in each cell (i,j) defined by racial group-i and gender-j. Specifically, the proportion in each gender, P(j), was used to apportion the total in group-i.

The final adjusted weights had coefficient of variation (CV) of 80%, so that the Design Effect (DEFF) component due to (unequal) weighting is limited to 1.50. This relatively small DEFF is an ingredient of our effective sampling design that minimized the variances of survey estimates, i.e., that ensured very good precision levels for the survey.

Appendix C – Terms Used in This Report

College Student

A college student is defined as a full-time, undergraduate student between 18 and 24 years old (at the time of the survey) enrolled in one of 11 Maryland Public Post-secondary Institutions[1] (see Appendix B).

College Tobacco Survey

The Maryland College Tobacco Survey (MCTS) is intended to provide data on the prevalence of tobacco use by college students attending Maryland state-funded colleges and universities, as well as information regarding their attitudes, exposure, and associated use of alcohol.

Comparable

Two estimates are considered comparable if the difference between the two is not statistically significant.

Confidence Interval

The confidence interval around a specific statistic (in this case, the percentage) represents the range of values within the "true population" that can be expected to be located, with 95 percent certainty, at a .05 level of precision (see Appendix E for a complete description and discussion).

Current Smoker

The term "current smoker" is used to refer to college students who have smoked on at least one day of the 30 days preceding the survey.

Daily Smoker

The term "daily smoker" is used to refer to college students who have smoked on all 30 days preceding the survey.[2]

Established Smoker

The term "established smoker" is used to refer to a college study who reports that he or she is a current smoker and has smoked at least 100 cigarettes (5 packs) in their lifetime.

Frequent Smoker

The term "frequent smoker" is used to refer to college students who have smoked on 20 or more days of the 30 days preceding the survey.[2]

Less Frequent Smoker

The term "less frequent smoker" is used to refer to college students who have smoked on 1 to 19 days of the 30 days preceding the survey.[2]

The term "regular smoker" is used to refer to college students

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[1] Although there are 13 public institutions in the Maryland state system, two of these institutions did not participate.
[2] "Daily Smoker," "Frequent Smoker," and "Less Frequent Smoker" are subsets of current smokers and therefore are not mutually exclusive from the proportion of current smokers.

Regular Smoker	who reported an age at which they began smoking on 20 or more days out of 30 days.
Social Smoker	A "social smoker" is defined as someone who smokes only during certain situations (for example, smoke mostly at a bar or party, or when stressed or around certain people).
Statistical Significance	Statistical significance refers to the assurance that the difference between two estimates can be regarded as representing the "true population," with a definable level of certainty that the differences were not the result of chance. Throughout the report, when data are said to be statistically different, there is not overlap in the confidence intervals of the percentages being compared.
Tobacco Product	A tobacco product is defined by statute in Maryland to include any product that contains any amount of tobacco in any form.
Underage Smoker	Within this report, "underage smoker" refers to people under the age of 18 who smoke cigarettes.
Underage Drinker	Within this report, "underage drinker" refers to people under the age of 21 who drink alcohol.

Appendix D – Maryland College Tobacco Survey Instrument

INITIAL DEMOGRAPHIC QUESTIONS

1. **Are you currently a full-time student (enrolled in 12 or more credits?)**
    a. Yes
    b. No   **[IF "NO", RESPONDENT IS SKIPPED OUT OF THE SURVEY]**

2. **What is your class standing?**
    a. Freshman (or first year)
    b. Sophomore
    c. Junior
    d. Senior
    e. Graduate/Professional **[IF "e", RESPONDENT IS SKIPPED OUT OF THE SURVEY]**
    f. Not seeking a degree
    g. Other

3. **Do you pay in-state tuition?**
    a. Yes
    b. No
    c. I don't know

4. **Where do you currently live?**
    a. Campus residence hall
    b. Campus apartment
    c. Other college/university housing
    d. Fraternity or sorority housing
    e. Off campus housing
    f. Parent/guardian's house
    g. Other

5. **Do you consider yourself to be a smoker?**
    a. Yes
    b. No

6. **How old are you?**
    a. 17 years old or younger
    b. 18 years old
    c. 19 years old
    d. 20 years old
    e. 21 years old
    f. 22 years old
    g. 23 years old
    h. 24 years old
    i. 25 years old
    j. 26 years old or older

Appendix D – Maryland College Tobacco Survey Instrument

7. **What is your sex?**
   - a. Male
   - b. Female

8. **Which of the following BEST describes you?**
   CHOOSE ONLY ONE ANSWER
   - a. American Indian or Alaskan Native
   - b. Asian
   - c. Black or African American
   - d. Native Hawaiian or Other Pacific Islander
   - e. White

9. **Are you Hispanic or Latino?**
   - a. Yes
   - b. No

EVER TRIED CIGARETTE SMOKING

10. **Have you EVER tried cigarette smoking, even 1 or 2 puffs?**
   - a. Yes
   - b. No   **[SKIP TO QUESTION #31]**

11. **How old were you when you smoked a WHOLE cigarette for the first time?**
   - a. I have never smoked a whole cigarette   **[SKIP TO QUESTION #31]**
   - b. 12 years old or younger
   - c. 13 years old
   - d. 14 years old
   - e. 15 years old
   - f. 16 years old
   - g. 17 years old
   - h. 18 years old
   - i. 19 years old
   - j. 20 years old
   - k. 21 years old
   - l. 22 years old
   - m. 23 years old
   - n. 24 years old
   - o. 25 years old
   - p. 26 years old or older

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INTENSITY OF EVER CIGARETTE SMOKING

12.   **Have you smoked at least 100 cigarettes (5 packs) in your entire life?**
      a.   Yes
      b.   No

13.   **When you were a senior in high school, approximately how many days each month would you smoke cigarettes?**
      a.   I did not smoke cigarettes as a senior in high school
      b.   1 or 2 days
      c.   3 to 5 days
      d.   6 to 9 days
      e.   10 to 19 days
      f.   20 to 29 days
      g.   All 30 days

14.   **Around this time last year, approximately how many days each month would you smoke cigarettes?**
      a.   0 days
      b.   1 or 2 days
      c.   3 to 5 days
      d.   6 to 9 days
      e.   10 to 19 days
      f.   20 to 29 days
      g.   All 30 days

15.   **How old were you when you <u>first</u> started smoking cigarettes regularly, that is, at least 20 days out of 30 days in a month?**
      a.   I have never smoked cigarettes regularly   **[SKIP TO QUESTION #17]**
      b.   12 years old or younger
      c.   13 years old
      d.   14 years old
      e.   15 years old
      f.   16 years old
      g.   17 years old
      h.   18 years old
      i.   19 years old
      j.   20 years old
      k.   21 years old
      l.   22 years old
      m.   23 years old
      n.   24 years old
      o.   25 years old
      p.   26 years old or older

16. **When was the <u>last</u> time you smoked cigarettes regularly, that is, at least one cigarette a day for 20 or more days out of 30 days in a month?**
    a. Never smoked regularly
    b. Within the past month
    c. Within the past 1-3 months
    d. Within the past 4-6 months
    e. Within the past 7-12 months
    f. Over 1 year ago but less than 3 years ago
    g. At least 3 years ago but less than 5 years ago
    h. 5 or more years ago

CURRENT CIGARETTE SMOKING BEHAVIORS

17. **During the past 30 days, on how many days did you smoke cigarettes?**
    a. 0 days   **[SKIP TO QUESTION #27]**
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

18. **Would you consider yourself a "social" or "casual smoker," that is, someone who smokes only during certain situations? (For example, you smoke <u>mostly</u> when at a bar or a party, or when you are stressed or when around certain people?)**
    a. Yes, I consider myself a "social" or "casual smoker"
    b. No, I do not consider myself a "social" or "casual smoker"

19. **How soon after you wake up do you smoke your first cigarette?**
    a. Within 5 minutes
    b. 6 to 30 minutes
    c. 31 to 60 minutes
    d. After 60 minutes

20. **During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?**
    a. Less than one cigarette per day
    b. 1 cigarette per day
    c. 2 to 5 cigarettes per day
    d. 6 to 10 cigarettes per day
    e. 11 to 20 cigarettes per day
    f. More than 20 cigarettes per day

Appendix D – Maryland College Tobacco Survey Instrument

21. **During the past 30 days, what did you pay for your last pack of cigarettes that you bought? CHOOSE ONLY ONE ANSWER**
    a. I did not buy a pack of cigarettes during the past 30 days
    b. Less than $3.00
    c. $3.00 to $3.49
    d. $3.50 to $3.99
    e. $4.00 to $4.49
    f. $4.50 to $4.99
    g. $5.00 or more

22. **During the past 30 days, where did you usually buy your cigarettes?**
    a. I did not buy a pack of cigarettes during the past 30 days
    b. On campus
    c. Off campus
    d. Over the Internet

23. **During the past 30 days, where did you MOST frequently smoke your cigarettes? CHOOSE ONLY ONE RESPONSE**
    [This will be programmed to make the last option clicked be the response]
    a. At parent(s)/guardian(s) home
    b. In a car
    c. At social events such as parties
    d. At Bars and Clubs
    e. At a restaurant
    f. Outdoors – On Campus
    g. Outdoors – Off Campus
    h. In on campus housing, or fraternity or sorority house
    i. Off campus housing
    j. Other

CURRENT SMOKERS THOUGHTS ABOUT QUITTING

24. **Do you think you would be able to completely stop smoking cigarettes now if you wanted to?**
    a. I am not at all confident that I could quit
    b. I am somewhat confident that I could quit
    c. I am very confident that I could quit
    d. I am extremely confident that I could quit

25. **Are you seriously thinking about quitting smoking? Would you say…**
    a. Yes, within the next 30 days
    b. Yes, not within the next 30 days, but within the next 6 months
    c. Yes, not within the next 6 months, but within the next 12 months
    d. Yes, not within the next 12 months, but within the next 5 years
    e. Yes, but I am not sure when I will quit
    f. No

Appendix D – Maryland College Tobacco Survey Instrument

26. **What are some of the reasons that you smoke?**
    MARK THE 2 BIGGEST REASONS THAT APPLY
    [This will be programmed to allow only 2 choices; the last 2 clicked will be the responses. Except for response "a" which will allow only 1 answer]
    a. I find it pleasurable
    b. Helps me to control my weight
    c. It is a habit
    d. I am addicted
    e. To relieve stress
    f. Helps me to socialize
    g. My friends smoke
    h. My significant other smokes
    i. Helps me to stay awake or to study
    j. Makes me look more attractive
    k. Boredom
    l. To take a break
    m. I just like smoking
    n. To relieve depression
    o. I like to smoke when I drink
    p. I like smoking when I go out

ALL EVER SMOKERS – WHEN LAST SMOKED

27. **When was the last time you smoked a cigarette, even one or two puffs?**
    a. Earlier today
    b. Not today but within the past 7 days
    c. Not during the past 7 days but sometime during the past 30 days
    d. Not during the past 30 days but sometime within the past 6 months
    e. Not during the past 6 months but sometime during the past year
    f. 1 to 4 years ago   **[SKIP TO QUESTION #30]**
    g. 5 or more years ago   **[SKIP TO QUESTION #30]**

QUITTING ATTEMPTS BY ALL WHO SMOKED DURING PAST YEAR

28. **How many times during the past 12 months have you stopped smoking for one day or longer because you were trying to quit smoking?**
    a. None   **[SKIP TO QUESTION #30]**
    b. 1 time
    c. 2 times
    d. 3-5 times
    e. 6-9 times
    f. 10 or more times

Appendix D – Maryland College Tobacco Survey Instrument

29. **In the past 12 months, did you do any of the following to help you quit smoking? MARK ALL THAT APPLY**
    a. I did not smoke cigarettes during the past 12 months
    b. I smoke, but have not tried to quit during the past 12 months
    c. Attended a program at my school or health center
    d. Attended a program in my community
    e. Called a help line or quit line
    f. Used nicotine gum or nicotine patch
    g. Visited an Internet quit site
    h. Used any medicine to help quit
    i. Acupuncture
    j. Hypnosis
    k. Medical advice
    l. "Cold turkey"
    m. Other
    n. None

30. **When you last tried to quit, how long did you/have you stayed off cigarettes?**
    a. I have never tried to quit
    b. Less than one day
    c. 1 to 7 days
    d. More than 7 days, but less than 30 days
    e. More than 30 days, but less than 6 months
    f. More than 6 months, but less than a year
    g. One year or more

ALL RESPONDENTS – PEER INFLUENCE

31. **How many of your four closest friends smoke cigarettes?**
    a. None
    b. One
    c. Two
    d. Three
    e. Four
    f. Not sure

Appendix D – Maryland College Tobacco Survey Instrument

SECONDARY DEMOGRAPHIC QUESTIONS FOR ALL RESPONDENTS

32. **Are you a member of:**
     MARK ALL THAT APPLY
     a. Social fraternity or sorority
     b. Service fraternity or sorority
     c. Academic fraternity or sorority
     d. Professional fraternity or sorority
     e. Intercollegiate school sports team
     f. None of the above

OTHER TOBACCO PRODUCTS – ALL RESPONDENTS

33. **During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip?**
     a. 0 days
     b. 1 or 2 days
     c. 3 to 5 days
     d. 6 to 9 days
     e. 10 to 19 days
     f. 20 to 29 days
     g. All 30 days

34. **During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?**
     h. 0 days
     i. 1 or 2 days
     j. 3 to 5 days
     k. 6 to 9 days
     l. 10 to 19 days
     m. 20 to 29 days
     n. All 30 days

ALCOHOL USE AND SMOKING

35. **Do you usually smoke cigarettes when you drink alcohol?**
     CHOOSE ONLY ONE ANSWER
     a. I do not drink alcohol   **[SKIP TO QUESTION #38]**
     b. Always
     c. Almost always
     d. Sometimes
     e. Rarely
     f. Never

Appendix D – Maryland College Tobacco Survey Instrument

36. **Do you smoke <u>only</u> when you drink alcohol?**
    a. I do not drink alcohol   **[SKIP TO QUESTION #38]**
    b. Yes
    c. No

37. **When you are drinking alcohol do you smoke more than you otherwise would?**
    a. I do not drink alcohol
    b. Always
    c. Almost always
    d. Sometimes
    e. Rarely
    f. Never

ALCOHOL USE GENERALLY

38. **How old were you when you had your first drink of alcohol, other than a few sips or for religious purposes?**
    a. I have never had a drink of alcohol other than a few sips or for religious purposes
        [SKIP TO QUESTION #44]
    b. 12 years old or younger
    c. 13 years old
    d. 14 years old
    e. 15 years old
    f. 16 years old
    g. 17 years old
    h. 18 years old
    i. 19 years old
    j. 20 years old
    k. 21 years old
    l. 22 years old
    m. 23 years old
    n. 24 years old
    o. 25 years old
    p. 26 years old or older

39. **During the past 30 days, on how many days did you have at least one drink of alcohol?**
    a. 0 days   **[SKIP TO QUESTION #43]**
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

Appendix D – Maryland College Tobacco Survey Instrument

40. **During the past 30 days, on how many days did you have 5 or more drinks of alcohol within a few hours?**
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

41. **During the past 30 days, on how many days did you drink with the intention of getting "drunk" or intoxicated?**
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

42. **During the past 30 days, on how many days did you go to a restaurant or bar primarily to drink alcohol?**
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

43. **Please indicate your reasons for using alcohol.**
    MARK ALL THAT APPLY
    a. I do not drink alcohol
    b. To relieve academic stress
    c. To relieve other stress
    d. To have fun
    e. To ease social interaction
    f. To get drunk or high
    g. To "hook up" with someone
    h. To get away from problems and troubles
    i. To fit in with friends
    j. None of the above

Appendix D – Maryland College Tobacco Survey Instrument

EXPOSURE TO SECOND HAND SMOKE

44. **Does anyone who lives with you now (while you are attending school) smoke cigarettes?**
    a. Yes
    b. No

45. **In the past 7 days, on how many days did anyone, including yourself, smoke a tobacco product anywhere inside your current residence?**
    a. 0 days
    b. 1 or 2 days
    c. 3 or 4 days
    d. 5 or 6 days
    e. 7 days

46. **During the past 7 days, on how many days were you in the same room (in a residence or while at work) with someone who was smoking cigarettes?**
    a. 0 days
    b. 1 or 2 days
    c. 3 or 4 days
    d. 5 or 6 days
    e. 7 days

47. **Which statement best describes the rules about smoking inside your current residence?**
    a. Smoking is not allowed anywhere inside
    b. Smoking is allowed in some places/areas or at some times
    c. There are no rules about smoking inside where I currently live
    d. I don't know

48. **Some counties are considering laws that would make ALL restaurants/ bars/clubs in the county smoke-free: prohibiting any smoking inside such locations. Would you support a proposal in your county that would…**
    a. Ban smoking in all restaurants?   Yes   No   Not Sure
    b. Ban smoking in all bars and clubs?   Yes   No   Not Sure

49. **Some college/university campuses are considering proposals to ban smoking on campus. Would you be in favor of a policy at your campus that would…**
    a. Ban smoking anywhere indoors on campus?   Yes   No   Not Sure
    b. Ban smoking everywhere on campus, indoors or out? Yes   No   Not Sure
    c. Ban the sale of tobacco products on campus?   Yes   No   Not Sure

Appendix D – Maryland College Tobacco Survey Instrument

PERCEPTIONS OF TOBACCO

50. **How much do you agree with the statement, "Smoking is physically addictive"?**
   a. Strongly agree
   b. Agree
   c. Don't Know/Not Sure
   d. Disagree
   e. Strongly Disagree

51. **Do you think it is safe to smoke for only a year or two, as long as you quit after that?**
   a. Definitely yes
   b. Probably yes
   c. Don't Know/Not Sure
   d. Probably not
   e. Definitely not

52. **Do you think that light (low tar) cigarettes are somewhat less risky than regular (full flavor) cigarettes?**
   a. Definitely yes
   b. Probably yes
   c. Don't Know/Not Sure
   d. Probably not
   e. Definitely not

53. **Do you think the smoke from other people's cigarettes is harmful to you?**
   a. Definitely yes
   b. Probably yes
   c. Don't Know/Not Sure
   d. Probably not
   e. Definitely not

TOBACCO AND THE MEDIA AND IN THE COMMUNITY

54. **During the past 30 days, how often have you seen or heard commercials on TV, the Internet, or on the radio about the dangers of smoking?**
   a. Not in the past 30 days
   b. 1-3 times in the past 30 days
   c. 1-3 times per week
   d. Daily or almost daily
   e. More than once a day

Appendix D – Maryland College Tobacco Survey Instrument

55. **During the past 30 days, have you seen or participated in any promotional activities that were promoted or sponsored by tobacco companies at bars, clubs, restaurants, concerts, or sporting events?**
    a. Yes
    b. No **[SKIP TO QUESTION #57]**
    c. Don't Know/Not Sure

56. **Please identify all the brands that you saw being promoted from the list below.**
MARK ALL THAT APPLY
    a. American Spirit
    b. Camel
    c. GPC, Basic, or Doral
    d. Kool
    e. Lucky Strike
    f. Marlboro
    g. Newport
    h. Parliament
    i. Salem
    j. Virginia Slims
    k. Other brand(s)
    l. I saw no tobacco company sponsorships or promotions in the past 30 days

USE OF TOBACCO IN THE FUTURE

57. **Do you think that you will smoke a cigarette anytime during the next year?**
    a. Definitely yes
    b. Probably yes
    c. Probably not
    d. Definitely not

58. **Do you think you will be smoking 5 years from now?**
    a. Definitely yes
    b. Probably yes
    c. Probably not
    d. Definitely not

59. **When you were in high school, did either of your parents (step-parents/guardians) who lived with you smoke cigarettes?**
    a. Yes
    b. No
    c. Not sure

60. **On average, how many hours a WEEK do you work for pay, including work-study?**
    a. I am not currently employed
    b. 1 – 9 hours
    c. 10 – 19 hours
    d. 20 – 29 hours
    e. 30 – 39 hours
    f. 40 hours
    g. More than 40 hours

61. **What is your approximate cumulative COLLEGE grade point average (GPA)?**
    a. I do not have a college GPA yet because it's my first semester
    b. 0.0 – 2.0
    c. 2.1 – 2.5
    d. 2.6 – 3.0
    e. 3.1 – 3.5
    f. 3.6 – 4.0

Appendix E – Statistical Significance

The Maryland College Tobacco Survey is used to develop an estimate of the prevalence of tobacco use behaviors among college students attending 11 of Maryland's public post-secondary institutions. Like most surveys, not every Maryland college student is surveyed; random samples of students are asked to participate in the survey. From the survey data, estimates of the prevalence of tobacco use for the entire population are made. The larger population for which the estimate is made is sometimes referred to as the "true" population as a way to distinguish it from the "sample" population (i.e., those persons who were actually surveyed).

The specific estimate of the prevalence of a behavior, like cigarette smoking, is called the "point estimate." The point estimate is found in the middle of what is called the "confidence interval" or CI. The Maryland College Tobacco Survey, like most surveys, uses a 95% confidence interval when making estimates. This means that the analysis is based on a 95% probability that the actual prevalence of the behavior (e.g., cigarette smoking) is occurring among the true population. The smaller the confidence interval, the more precise the estimate is considered to be. Confidence intervals are often expressed as a percentage plus/minus form the point estimate, much like the "margins of error" commonly mentioned in connection with polls. The width of the confidence interval depends on the sample size, the variation of data values, and other factors.

When comparing two point estimates, such as when examining differences in the prevalence of cigarette smoking between males and females, data analysts need to determine whether the observed change is "statistically significant." If found to be significant, the analyst is stating that the observed change is not likely the result of variations within the sample on which the estimates are based, but is much more likely the result of real difference in the prevalence of the behavior in the true population.

To judge whether the difference between two point estimates is statistically significant, a shortcut data analysts often use is to examine the *overlap* between the two associated 95% confidence intervals. This method may provide a quick and easy alternative to standard statistical testing procedures. For example, if the estimate of cigarette smoking in the true population among males was 20% with a confidence interval of plus/minus 2%, then the CI is from 18% to 22%. If the estimate for cigarette smoking in the true population among females was 15% with a CI interval of plus/minus 2%, the CI is from 13% to 17%. There is no overlap in the two CIs so the difference between males (20%) and females (15%) is considered to be statically significant (i.e., an actual difference in cigarette smoking in the true population does exist).

Although the shortcut based on CIs usually provides good guidance, and correct conclusions, it is *more conservative* than the accurate testing of significance (Schenker and Gentleman, 2001).[1] In other words, using the CI shortcut for determining statistical significance with regard to the tobacco survey will fail to detect differences that may be detected with the more accurate and traditional method.

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[1] Schenker, N. and Gentleman, J. (2001). On Judging the Significance of Differences by Examining the Overlap Between Confidence Intervals," The American Statistician, 55, 3, pp. 182-186.