

Maryland Department of Health & Mental Hygiene

# First Annual Tobacco Study

*Cigarette Restitution Fund Program*

*Tobacco Use Prevention and Cessation Program*

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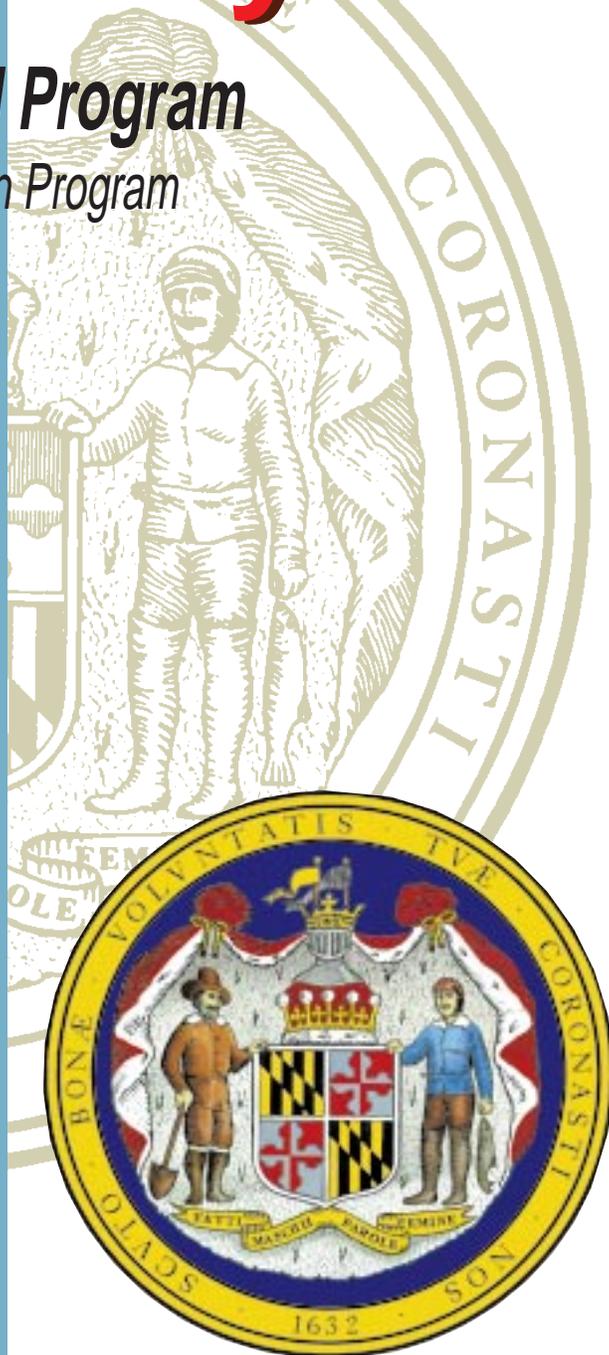
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**September, 2002**



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# Executive Summary

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For the First Annual Maryland Tobacco Study (AMTS-1), surveys were conducted to refine survey methodologies or fill gaps in data. The objective of the Fiscal Year 2002 Maryland Youth Tobacco Survey (MYTS) was to gather information on students attending alternative public schools and private schools, who were not included in the baseline MYTS, which focused exclusively on students attending regular public schools in grades 6-12.

The purpose of this year's Maryland Adult Tobacco Survey (MATS) was to pilot-test methods in two jurisdictions to produce more precise data for each of four racial/ethnic groups: African Americans, Asians, Hispanics, and Whites. Baltimore City and Montgomery County were selected for the pilot test because they represent the high and low ends, respectively, of the tobacco use spectrum; in addition, both jurisdictions have large concentrations of diverse racial/ethnic groups. This pilot test produced more precise, reliable data for the racial/ethnic minority populations residing in these two jurisdictions—especially those representing a relatively small portion of the overall population—than was feasible in the Maryland Baseline Tobacco Study (MBTS). For the two jurisdictions, it also becomes possible to look at changes occurring from the MBTS to the AMTS-1 for key variables for which the sample sizes are sufficiently large at both points in time.

## Key Youth Survey Findings

- **Alternative school students are significantly more likely to use tobacco in at least one form currently (i.e., in the past 30 days) than students attending regular public schools. Similarly, students attending regular public schools are significantly more likely to use tobacco than private school students.**
- At the middle school level, nearly 50 percent of alternative school students currently use some form of tobacco product, compared to only 12 percent of public school students and less than five percent of private school students.
- At the high school level, 56 percent of alternative school students currently use some form of tobacco product, as compared to 30 percent of public school students and 23 percent of private school students. Therefore, students enrolled in alternative schools are far more likely to use tobacco than other students, and far more likely to start using during or prior to middle school.
- Among alternative school students, middle school girls are more likely to use tobacco at 52 percent than middle school boys at 47 percent. However, among senior high alternative school students, girls at 49 percent are less likely than boys at 62 percent to use tobacco.
- In middle school, African American public school students at 13 percent are comparable to White counterparts at 11 in use of tobacco. However, by high school, African American public school students are significantly less likely at 22 percent than their White counterparts at 34 percent to use tobacco.

- In alternative schools, middle school African American students are significantly less likely at 38 percent than their White counterparts at 58 percent to use tobacco. At the high school level, African American students at 39 percent remain significantly less likely to use tobacco products than their White counterparts at 77 percent.
- **Recent initiation of cigarette smoking (i.e., started within the past two years) occurs far more frequently among alternative middle school students than among their counterparts in private and public schools.**
- At middle school level, 27 percent of alternative school students have started smoking in the past two years, compared to 10 percent of public school students and five percent of private school students. This reinforces the conclusion that alternative school students are far more likely to start using tobacco during or prior to middle school than other students.
- By senior high school, the proportion of students who have started smoking cigarettes in the past two years is virtually identical in the three types of school settings (private, public, and alternative) at approximately 20 percent.
- **Half to two-thirds of cigarette smokers enrolled in private, public, and alternative middle schools and senior high schools have made at least one attempt to quit smoking within the past 12 months. However, success rates in their quit attempts—based on not smoking during the past 30 days—vary widely.**
- At the middle school level, success in quitting smoking was higher among private school students at 63 percent and public school students at 44 percent than among alternative school students at 31 percent.
- At high school, private school students at 40 percent and public school students at 31 percent had higher rates of success in quit attempts than alternative school students at 20 percent.
- **Alternative school students are significantly more likely to live with a cigarette smoker than are public school students; similarly, public school students are significantly more likely than private school students to live with a cigarette smoker.**
- At both middle and senior high school, approximately 24 percent of private school students live with one or more people who smoke cigarettes. This proportion increases in a stepwise fashion, with approximately 42 percent of public school students living with a cigarette smoker, and 65 percent of alternative school students living with a cigarette smoker. The greater likelihood that alternative school students live with a smoker helps explain their greater likelihood of starting cigarette smoking at an earlier age and their lower rate of success in quit attempts.

## Key Adult Survey Findings

- **The percentage of Baltimore adults using at least one form of tobacco in the past 30 days declined significantly from 2000 to 2002 among African Americans, females, and targeted minorities (i.e., all racial/ethnic minorities plus females).**
  - Tobacco use among African American adults living in Baltimore decreased significantly from 34.8 percent in 2000 to 26.9 percent in 2002 (t-test at  $p < .01$ ).
  - Tobacco use among female adults living in Baltimore decreased significantly from 27.7 percent in 2000 to 22.0 percent in 2002 (t-test at  $p < .05$ ).
  - Tobacco use among targeted minority adults living in Baltimore decreased significantly from 31.4 percent in 2000 to 25.7 percent in 2002 (t-test at  $p < .01$ ).
- **Cigarette smoking among adults in Baltimore declined significantly from 2000 to 2002 among the general population, African Americans, and targeted minorities.**
  - The percentage of adults in Baltimore who currently smoke cigarettes declined significantly from 28.3 percent in 2000 to 23.6 percent in 2002 (t-test at  $p < .05$ ).
  - The percentage of African American adults who currently smoke cigarettes declined significantly from 33.5 percent in 2000 to 24.6 percent in 2002 (t-test at  $p < .01$ ).
  - The percentage of targeted minority adults who currently smoke cigarettes declined significantly from 29.8 percent in 2000 to 23.8 percent in 2002 (t-test at  $p < .05$ ).
- **The survey provided precise, reliable data on tobacco use among relatively small minority populations in Baltimore (Asians and Hispanics) and Montgomery County (African Americans, Asians, and Hispanics).**
  - The percent of Asian adults using tobacco currently in 2002 is 14.4 percent in Baltimore and 10.9 percent in Montgomery County.
  - The percent of Hispanics using tobacco currently in 2002 is 21.2 percent in Baltimore and 14.5 percent in Montgomery County.
  - The percent of African Americans using tobacco currently in 2002 is 26.9 percent in Baltimore and 13.8 percent in Montgomery County.
  - Confidence intervals for minority populations in the 2002 survey are far tighter than in the 2000 survey. Example: the 2000 confidence interval for Hispanics in Baltimore was  $\pm 19.8$  percent. On the 2002 survey, the confidence interval for Hispanics in Baltimore was  $\pm 6.6$  percent.

# Executive Summary

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- **Cigarette smoking was significantly higher in lower income populations in Baltimore in 2000, but this was no longer true in 2002.**
  - In 2000, those earning less than \$25,000 per year were significantly more likely at 37.6 percent to smoke cigarettes than those earning more than \$25,000 per year at 24.8 percent. However, by 2002, with the lower earnings group at 29.5 percent and the higher earnings group at 21.2 percent, there was no longer a statistically significant difference between the two groups. This suggests that the increasing cost of tobacco products might be curbing tobacco use to a greater degree in the low-income population.
- **Adult attempts to quit smoking cigarettes have remained constant in Montgomery County, but have increased significantly in Baltimore.**
  - The percentage of adults in Baltimore who attempted to quit smoking cigarettes increased significantly from 47.5 percent in 2000 to 63.7 percent in 2002. Meantime, the percentage of adults in Montgomery County who tried to quit was constant at approximately 59 percent at both points in time.
  - The percentage of male adults in Baltimore who attempted to quit smoking cigarettes increased significantly from 41.0 percent in 2000 to 67.4 percent in 2002.
  - The percentage of African American adults in Baltimore who attempted to quit smoking cigarettes increased significantly from 46.9 percent in 2000 to 72.2 percent in 2002.
  - The percentage of targeted minority adults in Baltimore who attempted to quit smoking cigarettes increased significantly from 47.4 percent in 2000 to 67.1 percent in 2002.
- **Overall, from 2000 to 2002, exposure of minor children to adult cigarette smoke in the home has dropped in Baltimore and approaches statistical significance.**
  - The proportion of adult females in Baltimore who live in households containing at least one adult smoker and at least one minor child has decreased significantly from 2000 at 48.7 percent to 2002 at 33.5 percent.
  - Overall, the percentage of households in Baltimore in which children are exposed to cigarette smoking has dropped from 47.1 percent in 2000 to 35.9 percent in 2002, with little overlap in confidence intervals.
- **Workplace exposure to cigarette smoke is significantly greater among younger, lower-income, minority populations.**
  - The 2002 survey showed that workplace exposure to cigarette smoke is significantly greater among 18-24 year olds (Montgomery), African Americans and Hispanics (Montgomery), and persons earning between \$15,000 and \$24,000 per year (Baltimore and Montgomery).

# Executive Summary

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- **There are indications that young adults aged 18 to 24 in Baltimore may increasingly be recent initiators, i.e., started using cigarettes in the past two years.**
  - The sample size in the 18-24 year old group is too small to permit definitive conclusions. However, the increase in recent initiation of cigarette smoking from 24.7 percent in 2000 to 39.8 percent in 2002 among 18-24 year olds needs to be watched. More intensive study of this population, which is heavily targeted by the tobacco industry, might be warranted.
- **There has been little reduction from 1998 to 2001 in Baltimore and Montgomery County in the percentage of women who smoked cigarettes while pregnant.**
  - Approximately 14 to 16 percent of women who gave birth in each year from 1998 through 2001 in Baltimore indicated that they smoked during pregnancy. Approximately 2 to 3 percent of women who gave birth during each of the same four years in Montgomery County indicated that they smoked during pregnancy. In both jurisdictions, few inroads have been made to decrease smoking among pregnant women.



As part of Maryland's aggressive strategy to reduce reliance on tobacco products and curtail tobacco's negative health consequences, Maryland enacted in 2000 Senate Bill 896 and House Bill 1425, which require annual surveys of youth and adults. The first surveys, part of Maryland Baseline Tobacco Study (MBTS) and reported in early 2001, generated data representing adults and youth on a Statewide basis and for each of Maryland's 24 political jurisdictions (23 counties plus the City of Baltimore). For youth, the MBTS also reported separately on middle school and senior high school students. These baseline surveys helped plan and refine Statewide and local programs intended to reduce dependence of Marylanders on tobacco products.

For the First Annual Maryland Tobacco Study (AMTS-1), surveys were conducted to refine survey methodologies or fill gaps in data. The objective of the Fiscal Year 2002 Maryland Youth Tobacco Survey (MYTS) was to gather information on students attending alternative public schools and private schools, who were not included in the baseline MYTS, which focused exclusively on students attending regular public schools in grades 6-12.

Alternative schools are special schools operated by a public school system to target the needs of youth who are identified as being unlikely to succeed in and graduate from regular public schools. Alternative schools tend to serve a mixture of short- and long-term populations. School systems vary widely in the selection criteria for alternative school placement. Prior research has shown alternative school students to be more likely to engage in a range of health risk behaviors.<sup>1</sup>

Private schools are schools operated by an organization other than a local public school system, including both religiously-affiliated and non-religiously affiliated entities. Private schools were included in the Maryland Adolescent Survey in the late 1980s, and were then dropped. Few data exist to demonstrate whether private school students use tobacco at rates similar to students attending public schools. Taken together, the 2000 and 2002 youth surveys provide a baseline profile of tobacco use among students attending regular public schools, alternative public schools, and private schools throughout Maryland.

The purpose of this year's Maryland Adult Tobacco Survey (MATS) was to pilot-test methods in two jurisdictions to produce more precise data for each of four racial/ethnic groups: African Americans, Asians, Hispanics, and Whites. Baltimore City and Montgomery County were selected for the pilot test because they represent the high and low ends, respectively, of the tobacco use spectrum; in addition, both jurisdictions have large concentrations of diverse racial/ethnic groups. This pilot test produced more precise, reliable data for the racial/ethnic minority populations residing in these two jurisdictions—especially those representing a relatively small portion of the overall population—than was feasible in the MBTS. For the two jurisdictions, it also becomes possible to look at changes occurring from the MBTS to the AMTS-1 for key variables for which the sample sizes are sufficiently large at both points in time.

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<sup>1</sup> Grunbaum, J., L. Kann, S.A Kinchen, J.G. Ross, V.R. Gowda, J.L. Collins, L.J. Kolbe. Youth Risk Behavior Surveillance, National Alternative High School Youth Risk Behavior Survey. In CDC Surveillance Summaries, October 29, 1999. *MMWR* 1999; 48(SS-7): 1-44.

## Background

In November 1998, Maryland settled its lawsuit against the tobacco industry when it joined with 45 other States in signing the Master Settlement Agreement with the tobacco industry. In the Spring of 1999, the Maryland General Assembly and Governor Paris Glendening created the “Cigarette Restitution Fund” (CRF) as the repository of all settlement funds received by Maryland. Then, in the Spring of 2000, the enactment of Senate Bill 896 and House Bill 1425 spawned an aggressive new initiative against tobacco use in Maryland funded by the CRF, codified as Subtitle 10 of the General-Health Article, and titled the “Tobacco Use Prevention and Cessation Program.” The program provides for:

- Counter-marketing and Media Component: Statewide marketing and media campaigns to counter tobacco advertisements and promote healthy behaviors;
- Local Public Health Component: community-based programs, school-based programs, cessation programs, and enforcement programs;
- Statewide Public Health Component: support for local programs that emphasize the elimination of disparities in tobacco use among Maryland’s diverse population and provide outreach especially to the African American community; and
- Surveillance and Evaluation Component: annual surveys to evaluate Maryland’s success. The Maryland Youth Tobacco Survey (MYTS) focused on sixth through twelfth graders, and the Maryland Adult Tobacco Survey (MATS) among Marylanders aged 18 years and older.

The baseline and annual tobacco studies were authorized by the State legislature to generate data for use in:

- Allocating funds from the State’s CRF among Maryland’s 24 political subdivisions,
- Targeting programs so that disparities in tobacco use and associated health problems, including but not limited to cancer, would be reduced and eventually eliminated, and
- Adjusting or modifying tobacco use prevention and cessation strategies, in response to changes in dimensions of the problem observed over time.

## Methodology

This report presents a “first look” at the data gathered through two surveys implemented during the spring of 2002:

Maryland Youth Tobacco Survey—The first was a classroom-based survey of youth enrolled in grades 6 through 12 attending alternative schools and private schools throughout the state. The student survey, conducted from early April through mid-June, 2002, produced useable data from 1,458 alternative school students (73%) and 3,298 private school students (94%). All alternative

schools and 76% of randomly selected private schools, agreed to allow their students to participate in the MYTS.

Maryland Adult Tobacco Survey—The second was a telephone survey of adults representing Baltimore City and Montgomery County. The adult survey, conducted from mid-February through mid-May, 2002, produced completed telephone interviews with 3,560 adults, achieving a cooperation rate of 43.3% in households containing an identified, eligible respondent.

To ensure technical rigor and comparability with the MBTS and related state and national surveys, the Centers for Disease Control and Prevention (CDC), Office on Smoking and Health, (OSH), provided technical assistance and guidance in designing and implementing both the MYTS and the MATS. The MYTS included a core set of questions CDC developed, first implemented by a small number of states as early as 1998, and now adopted by the overwhelming majority of states in conducting their own youth tobacco surveys (YTS). A YTS also has been conducted nationally on three occasions to generate national estimates against which states can compare their own results and monitor national trends. In addition to assistance in finalizing the MYTS questionnaire, CDC randomly selected Maryland private schools following standardized protocols used to generate the sample for the 2000 MYTS and similar surveys in other States. CDC also assisted in processing YTS data.

All analyses conducted for this report are descriptive and utilize the weighted data. For the adult data, it presents comparative analyses at two points in time, 2000 and approximately a year and a half later in 2002 for two Maryland jurisdictions, Baltimore City and Montgomery County. Because the 2000 baseline MATS was designed to generate estimates for each Maryland jurisdiction as a whole, in many instances the numbers of respondents in various minority racial/ethnic groups tended to be relatively small. As a result, some comparisons from 2000 to 2002 cannot be made with confidence because of small sample sizes for certain racial/ethnic minority groups at the baseline administration. It needs to be recognized that the purpose of the special 2002 MATS was to produce more precise estimates, with tighter confidence intervals. The narrower (or tighter) the confidence interval, the greater the certainty that a statistic represents the true population. A significant difference is indicated if the two confidence intervals do not overlap. Supplemental significance tests (t-tests) were performed for a subset of those comparisons where potential significance was suggested.

In the body of this report, the major findings of both youth and adult surveys are presented. The report notes where key findings are statistically significant. If not noted, it can be assumed that any apparent differences are not statistically significant. Throughout the report, when data are said to be significantly different, this ordinarily means there is no overlap in the confidence intervals of the percentages being compared. If supplementary significance tests were performed (t tests), these are so noted (e.g.,  $p < .05$ ).

The results of the MYTS can be applied to all 2000 public school students and all 2002 alternative and private school students enrolled in grades 6 through 12. The MATS can be applied to all adults in 2000 and all adults in Baltimore City and Montgomery County in 2002.

Both the MYTS and MATS were conducted under a competitively awarded contract, as required under the legislation. ORC Macro (Macro International Inc.), a Maryland-based research organization, received the competitive contract.

The remainder of this report is divided into two parts. The first part summarizes MYTS findings. The second summarizes MATS findings. Appendix A describes the methodologies followed in conducting MYTS and MATS. Appendix B contains summary tables showing the 95 percent confidence intervals related to the major issues for which the Maryland legislature has requested periodic reporting. Appendix C explains in greater detail the utility of using supplementary statistical tests in assessing statistical significance of findings.

# Definitions

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**Alternative School:** Alternative schools are special schools operated by a public school system to target the needs of youth who are identified as being unlikely to succeed in and graduate from regular public schools. Alternative schools tend to serve a mixture of short- and long-term populations.

**Comparable:** Two estimates are considered comparable if the difference between the two is neither statistically nor practically significant.

**Confidence Interval:** 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. 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. For example, if a given percentage is 17.2% and the confidence interval is  $\pm 6.9$ , it is 95% certain that the true population percentage will fall between 10.3% and 24.1%. Overall, the narrower (or tighter) the confidence interval, the greater the certainty that the statistic represents the true population.

**Private School:** Private schools are schools operated by an organization other than a local public school system, including both religiously-affiliated and non-religiously affiliated entities.

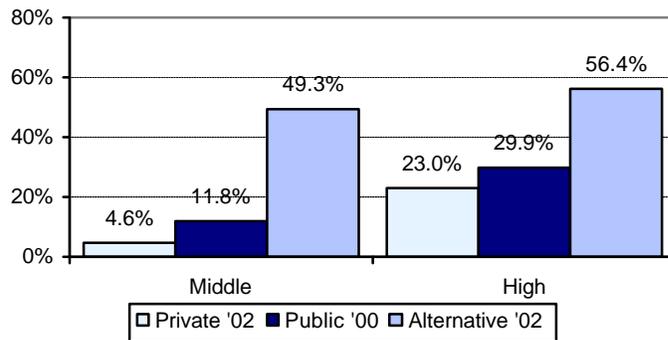
**Statistically significant:** Statistical significance refers to the assurance that the differences between two estimates can be regarded as representing the “true population” with a definable level of certainty that the differences were not the result of chance. Typically, statistical significance is stated in terms of the 95 percent certainty, at a .05 level of precision.



# Youth Tobacco Use

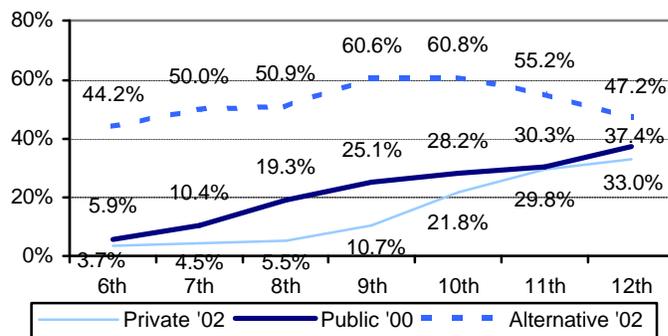
Students were asked about their use of several different forms of tobacco, including cigarettes, smokeless tobacco, cigars, pipes, bidis, and kreteks. Students were considered to be current tobacco users if they reported using any of these products within the past 30 days.

**Figure 1. School Type**  
Current Use of a Tobacco Product



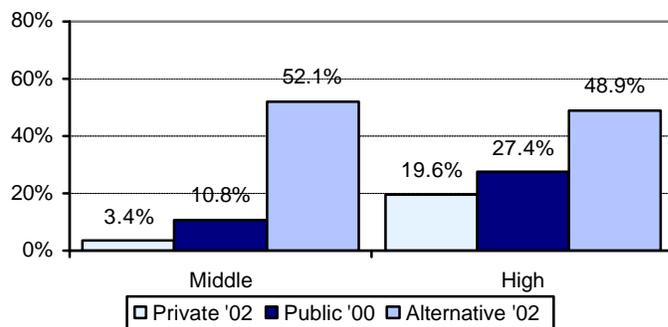
**Type of School:** Among middle school and high school students, those who attend private schools are significantly less likely than those attending public schools or alternative schools to use tobacco products. Approximately half of the alternative school students, in both middle and high school, report they currently use some form of tobacco.

**Figure 2. Grade**  
Current Use of a Tobacco Product



**Grade:** The use of tobacco products increases as grade increases. Among public school students, significant increases are seen between 6<sup>th</sup> and 7<sup>th</sup> grade, 8<sup>th</sup> and 9<sup>th</sup> grade, and 11<sup>th</sup> and 12<sup>th</sup> grade. Among private school students, a significant increase is seen between 9<sup>th</sup> and 10<sup>th</sup> grade. Among alternative school students, the use of tobacco products is highest in 9<sup>th</sup> and 10<sup>th</sup> grades, and decreases slightly in 11<sup>th</sup> and 12<sup>th</sup> grades.

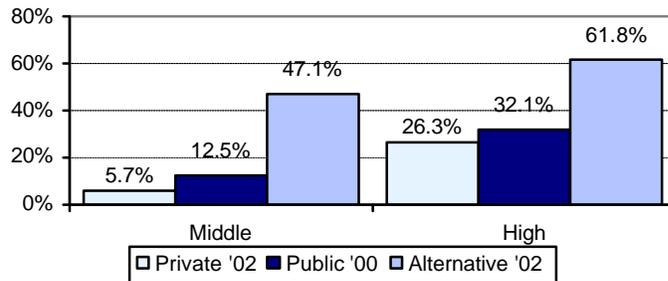
**Figure 3. Females**  
Current Use of a Tobacco Product



**Females:** Among middle school girls, those attending private schools are significantly less likely than those attending public schools or alternative schools to use tobacco products. More than half of the girls in alternative middle schools report they currently use some form of tobacco. By high school, private school girls and public school girls use tobacco products at rates comparable to one another; however, they are significantly less likely than alternative high school girls to use tobacco products.

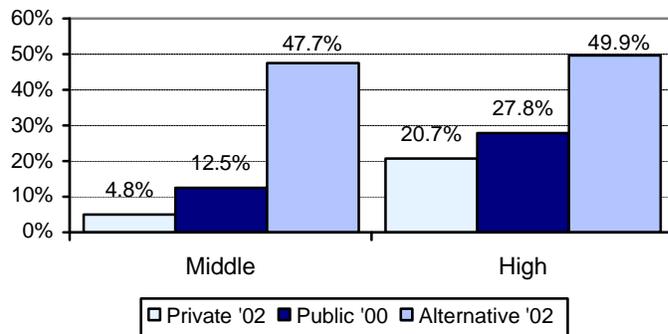
# Youth Tobacco Use

Figure 4. Males  
Current Use of a Tobacco Product



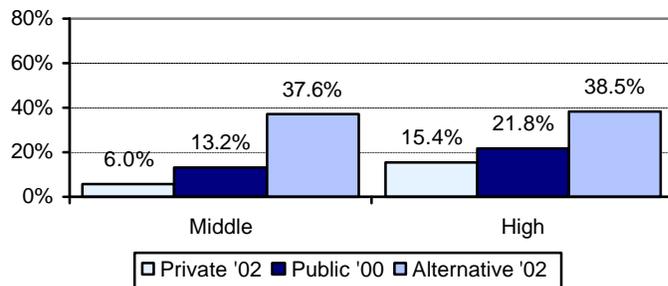
**Males:** Among middle school boys, those attending private schools are significantly less likely than those attending public schools or alternative schools to use tobacco products. Nearly half of the boys in alternative middle schools report they currently use some form of tobacco. By high school, private school boys and public school boys use tobacco products at rates comparable to one another; however, they are significantly less likely than alternative high school boys to use tobacco products.

Figure 5. Targeted Minorities  
Current Use of a Tobacco Product



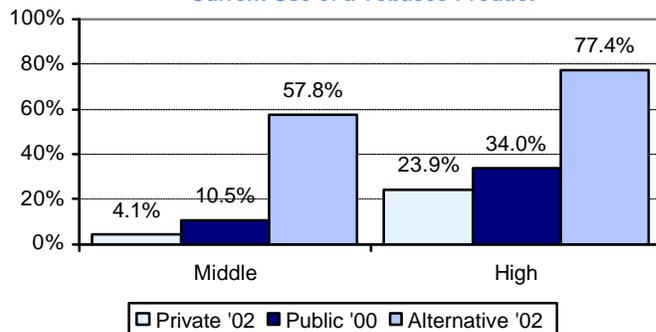
**Targeted Minorities:** Among minority middle school students, private school students are significantly less likely than public school or alternative school students to use tobacco products. Minority students attending alternative middle schools are nearly four times more likely than public middle school students to report they currently use some form of tobacco. In high school, minority students in private school continue to be significantly less likely than minority students in public schools to use tobacco products; however, both groups are significantly less likely than minority students in alternative high schools to use tobacco products.

Figure 6. African Americans  
Current Use of a Tobacco Product



**African Americans:** Among African American middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to use tobacco products. Slightly more than one-third of the African American students in alternative middle schools report they currently use some form of tobacco. By high school, African American students attending private school and public school use tobacco products at rates comparable to one another; however, they are significantly less likely than African American students attending alternative high schools to use tobacco products.

Figure 7. Whites  
Current Use of a Tobacco Product

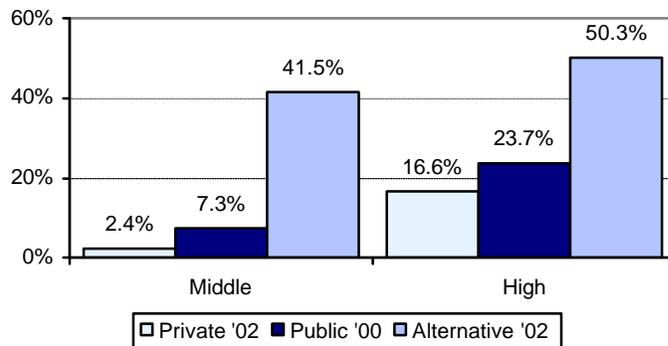


**Whites:** Among White middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to use tobacco products. More than half of the White students in alternative middle schools report they currently use some form of tobacco. In high school, White students attending private schools continue to be less likely than White students attending public schools to use tobacco products. Strikingly, more than three-fourths of White students attending alternative high schools report using tobacco products.

# Youth Cigarette Use

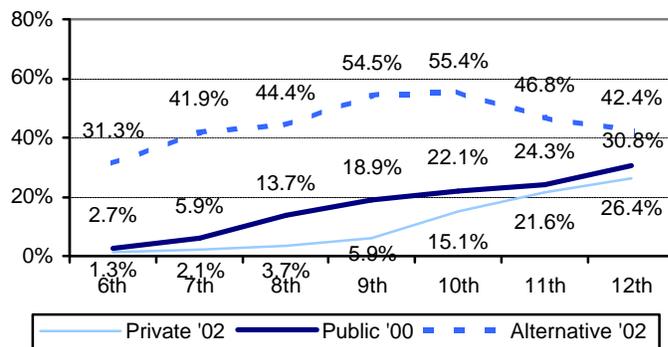
Students were asked about their use of cigarettes. Students were considered to be current smokers if they reported smoking cigarettes within the past 30 days.

**Figure 8. School Type  
Current Use of Cigarettes**



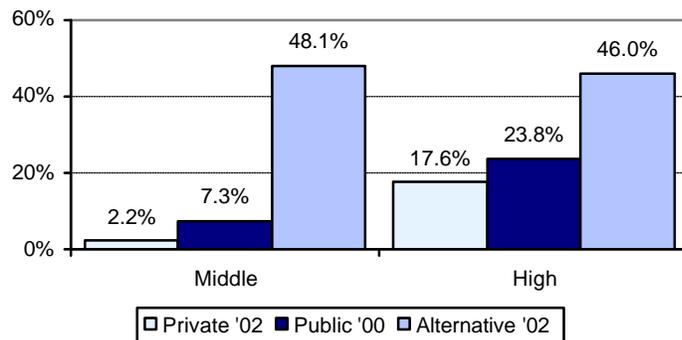
**Type of School:** Among middle school and high school students, those who attend private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Approximately two out of five alternative middle school students and half of alternative high school students currently smoke cigarettes.

**Figure 9. Grade  
Current Use of Cigarettes**



**Grade:** Cigarette smoking increases as grade increases. Among public school students, significant increases are seen between every grade, except between 10<sup>th</sup> and 11<sup>th</sup> grades. Among private school students, a significant increase is seen between 9<sup>th</sup> and 10<sup>th</sup> grade. Among alternative school students, the rate of cigarette smoking is highest in 9<sup>th</sup> and 10<sup>th</sup> grades, and decreases slightly in 11<sup>th</sup> and 12<sup>th</sup> grades.

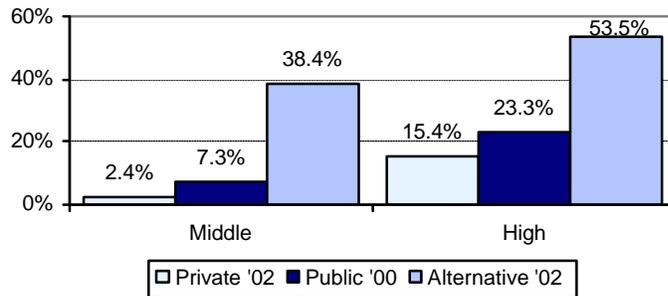
**Figure 10. Females  
Current Use of Cigarettes**



**Females:** Among middle school girls, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Close to half of the girls in alternative middle schools report they currently smoke cigarettes. By high school, private school girls and public school girls smoke cigarettes at rates comparable to one another; however, they are significantly less likely than alternative high school girls to smoke. Nearly twice as many alternative high schools girls smoke cigarettes than do public high school girls.

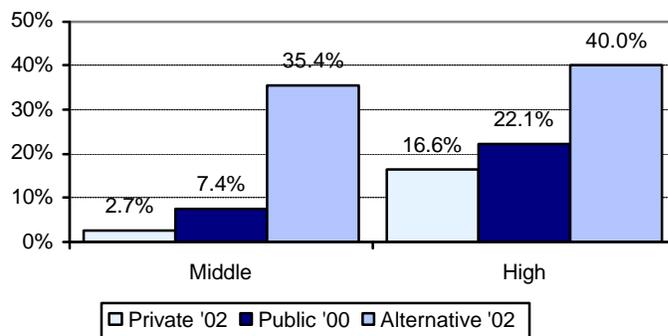
# Youth Cigarette Use

Figure 11. Males  
Current Use of Cigarettes



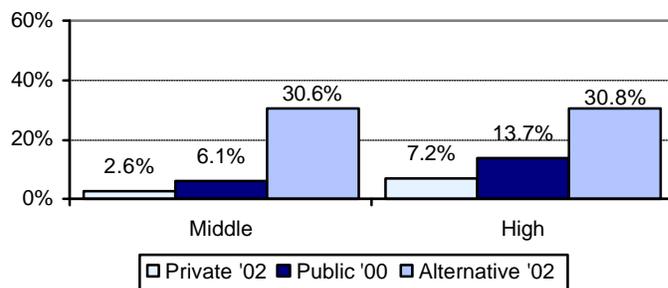
**Males:** Among middle school boys, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Close to half of the boys in alternative middle schools report they currently smoke cigarettes. In high school, boys attending private schools continue to be less likely than boys attending public or alternative schools to smoke cigarettes. More than half of the boys in alternative high schools report they currently smoke cigarettes.

Figure 12. Targeted Minorities  
Current Use of Cigarettes



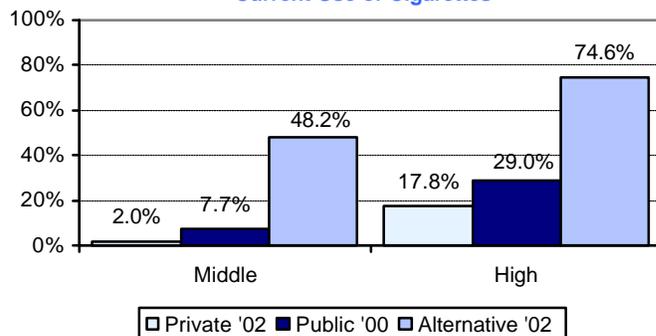
**Targeted Minorities:** Among minority middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Minority students attending alternative middle schools are nearly five times more likely than public middle school students to smoke cigarettes. In high school, minority students in private schools and public school smoke cigarettes at rates comparable to one another; however, both groups are significantly less likely than minority students in alternative high schools to smoke cigarettes.

Figure 13. African Americans  
Current Use of Cigarettes



**African Americans:** Among African American middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Slightly fewer than one-third of the African American students in alternative middle schools report they currently smoke cigarettes. By high school, African American students attending private school and public school smoke cigarettes at rates comparable to one another; however, they are significantly less likely than African American students attending alternative high schools to smoke.

Figure 14. Whites  
Current Use of Cigarettes

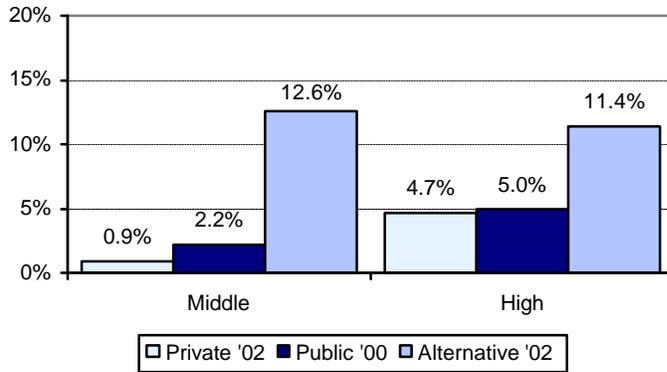


**Whites:** Among White middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigarettes. Nearly half of the White students in alternative middle schools report they currently smoke. In high school, White students attending private schools continue to be less likely than White students attending public schools to smoke cigarettes. Strikingly, three-fourths of White students attending alternative high schools currently smoke cigarettes.

# Youth Smokeless Tobacco Use

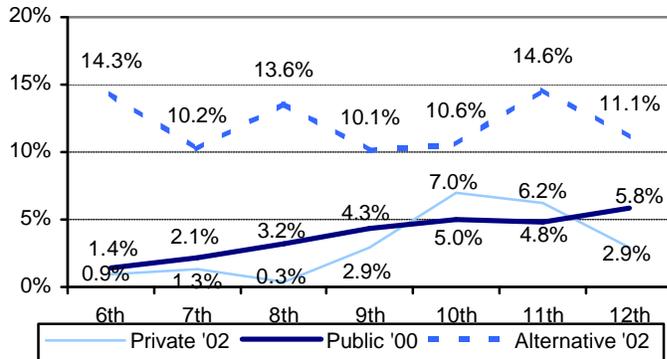
Students were asked about their use of smokeless tobacco. Students were considered to be current smokeless tobacco users if they reported using smokeless tobacco products within the past 30 days.

**Figure 15. School Type  
Current Use of Smokeless Tobacco**



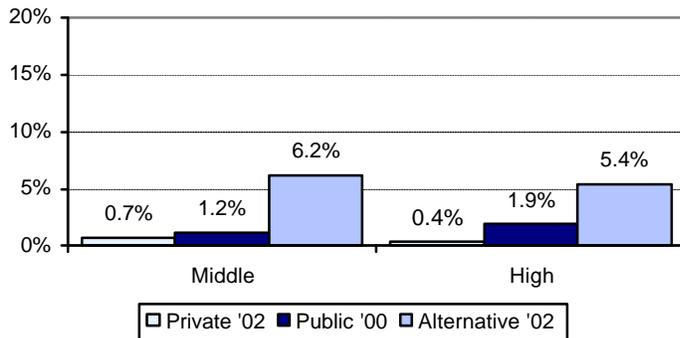
**Type of School:** Among middle school students, significantly fewer private school students currently use smokeless tobacco than do public or alternative school students. Students attending alternative middle schools are more than five times more likely than public middle school students to use smokeless tobacco. By high school, private school students and public school students use smokeless tobacco at rates comparable to one another. Alternative high school students use smokeless tobacco more than twice as much as private or public high school students.

**Figure 16. Grade  
Current Use of Smokeless Tobacco**



**Grade:** The use of smokeless tobacco gradually increases as grade increases among private and public school students. Among private school students, the rate of smokeless tobacco use triples from 6<sup>th</sup> to 12<sup>th</sup> grade. Among public school students, the rate quadruples from 6<sup>th</sup> to 12<sup>th</sup> grade. Among alternative school students, the use of smokeless tobacco fluctuates from grade to grade, with rates of use being highest in grades 6, 8, and 11.

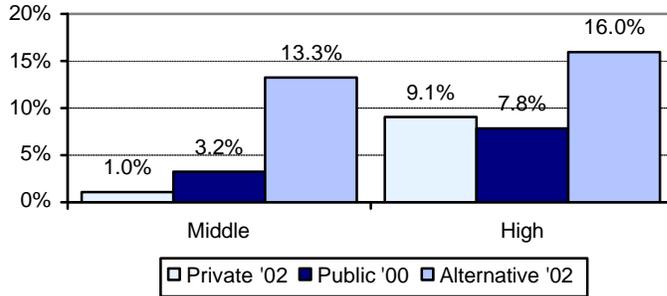
**Figure 17. Females  
Current Use of Smokeless Tobacco**



**Females:** Girls attending private and public middle schools use smokeless tobacco at rates comparable to one another—approximately one percent of each population. Girls attending alternative middle schools are nearly six times more likely than private and public middle school girls to report they currently use smokeless tobacco. By high school, public school girls are more likely than private school girls to use smokeless tobacco. However, both groups remain significantly less likely than alternative high school girls to use smokeless tobacco. Alternative high school girls are about 2.5 times more likely than public high school girls to use smokeless tobacco.

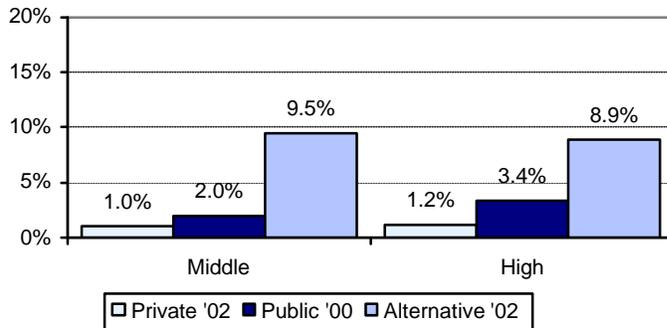
# Youth Smokeless Tobacco Use

**Figure 18. Males**  
Current Use of Smokeless Tobacco



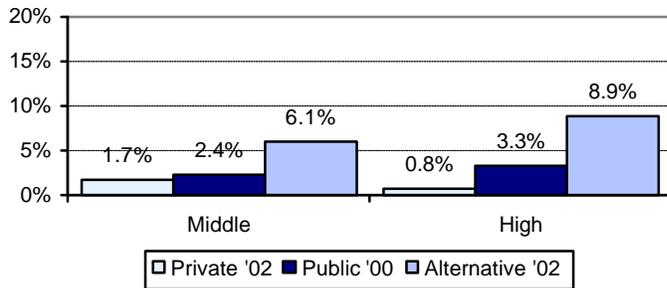
**Males:** Boys attending private middle schools are significantly less likely than boys attending public middle schools to use smokeless tobacco. Boys attending alternative middle schools are four times as likely than public middle school boys to use smokeless tobacco. By high school, boys attending private and public high schools use smokeless tobacco at rates comparable to one another; however, boys attending alternative high schools continue to be about twice as likely as those attending private or public high schools to be current smokeless tobacco users.

**Figure 19. Targeted Minorities**  
Current Use of Smokeless Tobacco



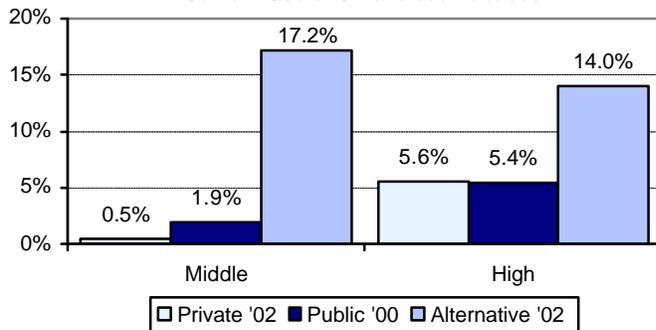
**Targeted Minorities:** Among minority middle school students, those attending private and public schools use smokeless tobacco at rates comparable to one another—about 1 to 2 percent. Minority students attending alternative middle schools are nearly five times more likely than public middle school students to use smokeless tobacco. By high school, minority students in public schools are significantly more likely than those in private high schools to use smokeless tobacco, however they both continue to be less likely than minority students in alternative high schools to use smokeless tobacco. Minority students attending alternative high schools are about 2.5 times more likely than public high school students to use smokeless tobacco.

**Figure 20. African Americans**  
Current Use of Smokeless Tobacco



**African Americans:** African American students in private and public middle schools use smokeless tobacco at rates comparable to one another. African American students attending alternative middle schools are nearly three times as likely as African American students attending public middle schools to use smokeless tobacco. By high school, African American students in public schools are significantly more likely than those in private high schools to use smokeless tobacco. African American students in alternative high schools remain significantly more likely than private or public high school students to use smokeless tobacco.

**Figure 21. Whites**  
Current Use of Smokeless Tobacco

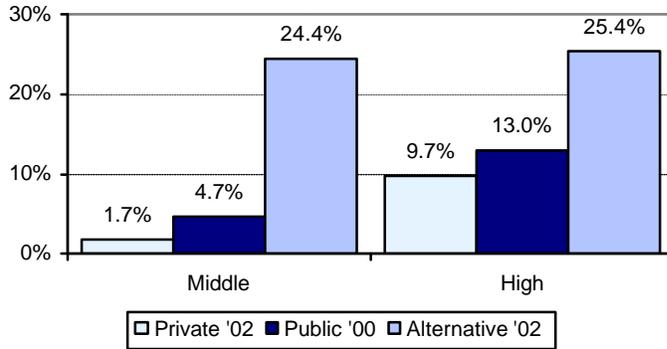


**Whites:** White students in private middle schools are significantly less likely than White students in public or alternative middle schools to use smokeless tobacco. White students attending alternative middle schools are nine times more likely than White students attending public middle schools to use smokeless tobacco. By high school, White students in private and public schools use smokeless tobacco at rates comparable to one another; however, White students in alternative high schools still use smokeless tobacco significantly more than White students attending private or public high schools.

# Youth Cigar Use

Students were asked about their use of cigars. Students were considered to be current cigar smokers if they reported smoking cigars within the past 30 days.

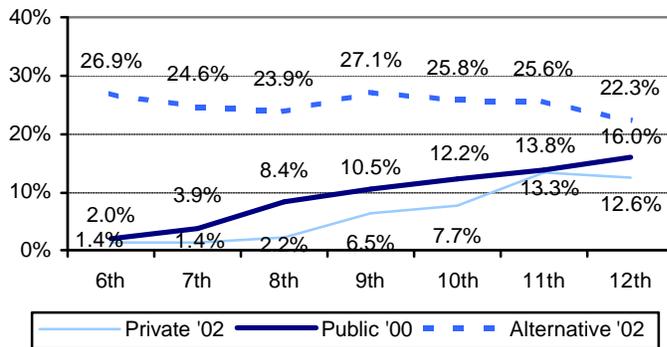
**Figure 22. School Type Current Use of Cigars**



## Type of School:

Among middle school students, those who attend private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. In high school, private school students continue to be less likely than public and alternative school students to smoke cigars. Approximately one-fourth of the alternative school students, in both middle and high school, report they currently smoke cigars.

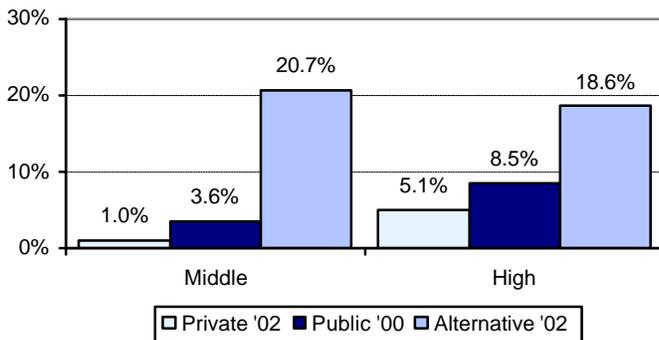
**Figure 23. Grade Current Use of Cigars**



## Grade:

Among private school students, cigar smoking increases as grade increases, with a significant increase seen between 8<sup>th</sup> and 10<sup>th</sup> grade. Among public school students, cigar smoking increases with grade, with significant increases between 6<sup>th</sup> and 7<sup>th</sup> grade, as well as 7<sup>th</sup> and 8<sup>th</sup> grade. Among alternative school students, cigar smoking fluctuates slightly by grade, with rates peaking in 9<sup>th</sup> grade; the rates then decrease continually to 12<sup>th</sup> grade.

**Figure 24. Females Current Use of Cigars**

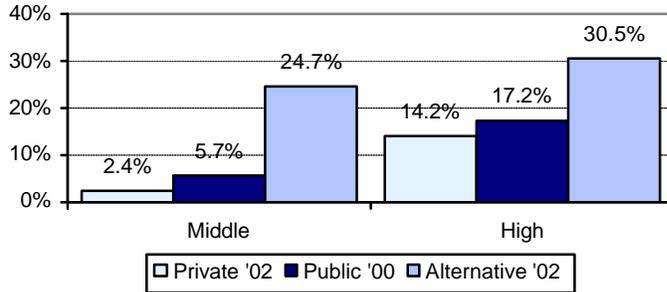


## Females:

Among middle school girls, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. One out of five girls in alternative middle schools currently smoke cigars. In high school, private school girls continue to be significantly less likely than public school and alternative school girls to smoke cigars. More than twice as many alternative high school girls smoke cigars than do public high school girls.

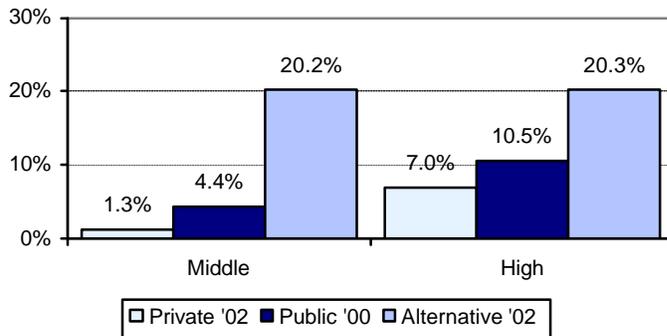
# Youth Cigar Use

**Figure 25. Males Current Use of Cigars**



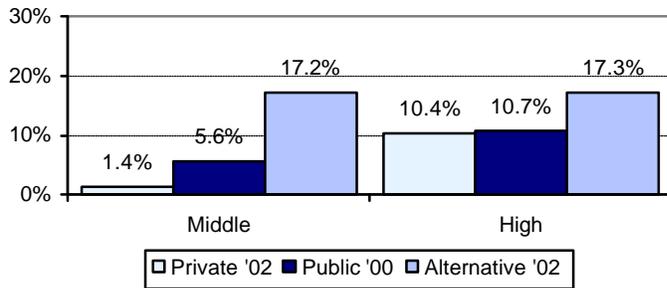
**Males:** Among middle school boys, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. Nearly one out of four boys in alternative middle schools currently smoke cigars. By high school, private school boys and public school boys smoke cigars at rates comparable to one another; however, they are significantly less likely than alternative high school boys to smoke cigars.

**Figure 26. Targeted Minorities Current Use Cigars**



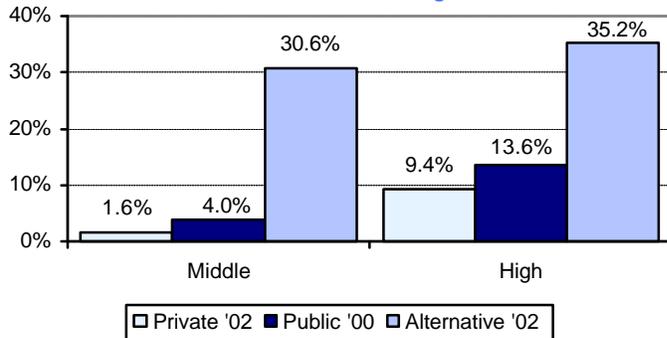
**Targeted Minorities:** Among minority middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. One out of five minority students attending alternative middle schools currently smoke cigars. In high school, minority students in private and public schools smoke cigars at rates comparable to one another; however, both groups continue to be less likely than minority students in alternative schools to smoke cigars.

**Figure 27. African Americans Current Use of Cigars**



**African Americans:** Among African American middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. African American students in alternative middle schools are three times as likely to smoke cigars than African American students in public middle schools. By high school, African American students attending private school and public school smoke cigars at rates comparable to one another; however, they are significantly less likely than African American students attending alternative high schools to smoke cigars.

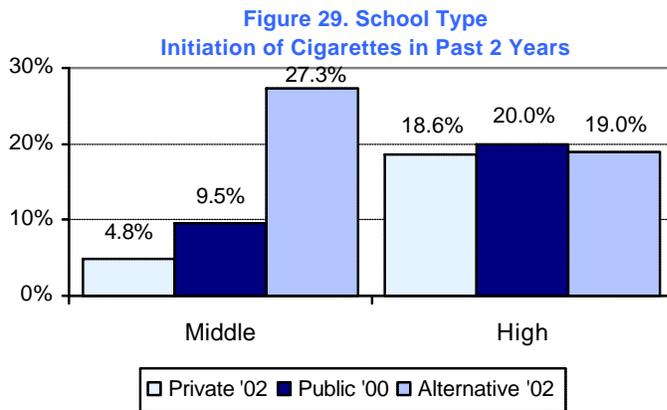
**Figure 28. Whites Current Use of Cigars**



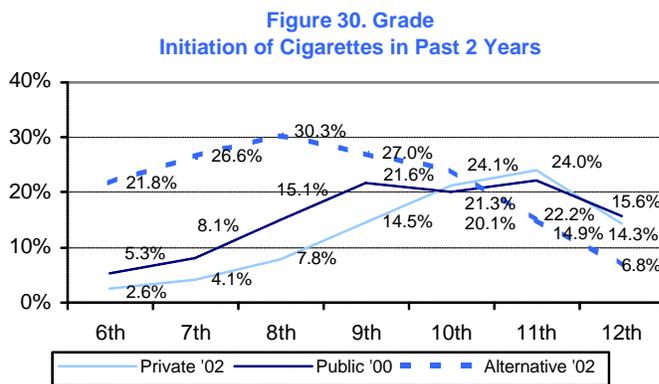
**Whites:** Among White middle school students, those attending private schools are significantly less likely than those attending public schools or alternative schools to smoke cigars. White students in alternative middle schools are more than seven times as likely to smoke cigars than White students in public middle schools. In high school, White students attending private school continue to be less likely than White students attending public school to smoke cigars. One out of three White students in alternative high schools currently smoke cigars.

# Youth Initiation of Cigarettes

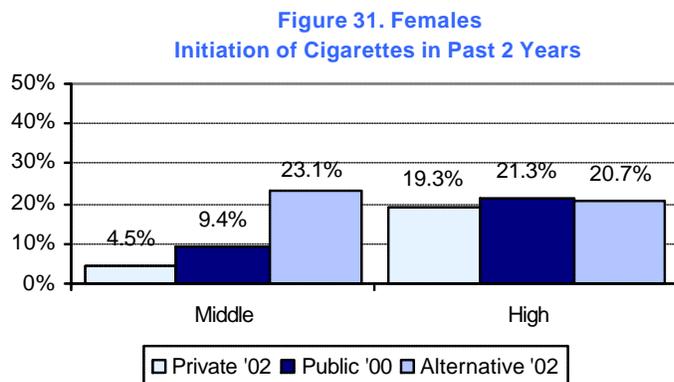
Two variables were used to determine if a student had begun using tobacco products within the two years preceding the survey. The first was their current age, the second was the age at which they began using the specific tobacco product.



**Type of School:** Among middle school students, significantly fewer private school students have started smoking cigarettes in the two years preceding the survey. Almost twice as many public middle school students and nearly six times more alternative middle school students have begun smoking within the preceding two years. The percentage of high school students who have begun smoking cigarettes in the two years preceding the survey is less variable among the three school types. That is, about one out of five students attending each type of school have begun smoking cigarettes within the preceding two years.



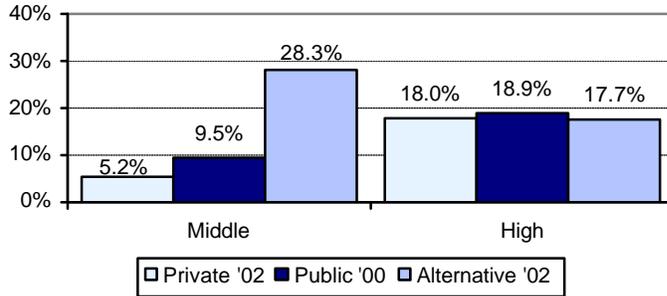
**Grade:** As grade increases, the percentage of private and public school students who have begun smoking cigarettes in the past two years also increases. Between grades 6 and 7 and grades 7 and 8, there is a significant increase in the number of public school students who have begun smoking cigarettes in the past two years. Among private school students, the initiation of cigarette smoking in the prior two years peaks by grades 10 and 11. In contrast, by the 6<sup>th</sup> grade, one out of five alternative school students has begun smoking within the past two years. This percentage continues to climb and peaks by the 8<sup>th</sup> grade.



**Females:** Among middle school girls, those attending private schools are significantly less likely than those attending public schools or alternative schools to use have begun smoking cigarettes in the past two years. Almost twice as many public middle school girls and more than five times more alternative middle school girls have begun smoking within the preceding two years. The percentage of high school girls who have begun smoking cigarettes in the two years preceding the survey was less variable among the three school types. That is, about one out of five female students attending each type of school have begun smoking cigarettes within the preceding two years.

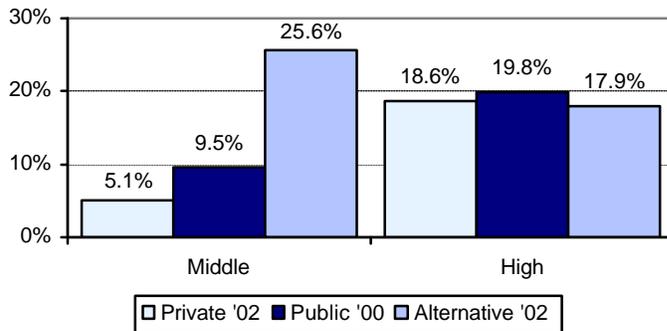
# Youth Initiation of Cigarettes

**Figure 32. Males**  
Initiation of Cigarettes in Past 2 Years



**Males:** Among middle school boys, those attending private schools are significantly less likely than those attending public schools or alternative schools to use have begun smoking cigarettes in the past two years. Almost twice as many public middle school boys and more than five times more alternative middle school boys have begun smoking within the preceding two years. The percentage of high school boys who have begun smoking cigarettes in the two years preceding the survey was less variable among the three school types. That is, approximately 18 percent of male students attending each type of school have begun smoking cigarettes within the preceding two years.

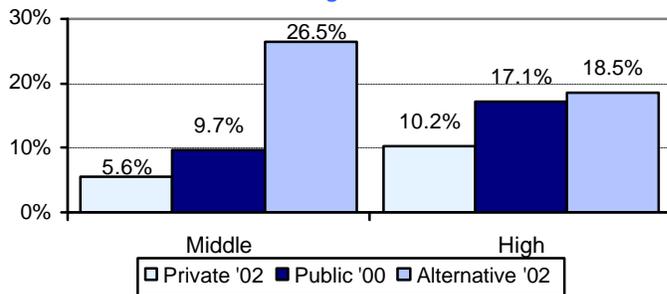
**Figure 33. Targeted Minorities**  
Initiation of Cigarettes in Past 2 Years



## Targeted Minorities:

Among minority middle school students, significantly fewer private school students have begun smoking cigarettes in the two years preceding the survey. Almost twice as many minority students in public middle school and five times more alternative middle school have begun smoking within the preceding two years. The percentage of minority high school students who have begun smoking cigarettes in the two years preceding the survey was rather similar among the three school types. That is, approximately 18 to 20 percent of minority students attending each type of school have begun smoking cigarettes within the preceding two years.

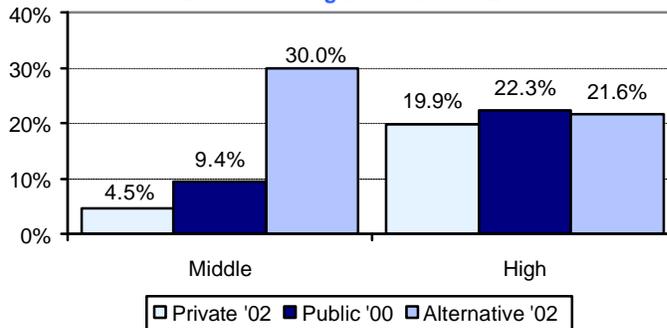
**Figure 34. African Americans**  
Initiation of Cigarettes in Past 2 Years



## African Americans:

Among African American middle school students, significantly fewer private school students have begun smoking cigarettes in the two years preceding the survey. Almost 10 percent of African American students in public middle school and over 25 percent of African American students in alternative middle school have begun smoking within the preceding two years. Among high school students, African American students attending private school were significantly less likely than African American students attending public schools to have begun smoking within the past two years. In turn, African American students attending public schools were significantly less likely than African American students attending alternative high schools to have begun smoking within the past two years.

**Figure 35. Whites**  
Initiation of Cigarettes in Past 2 Years

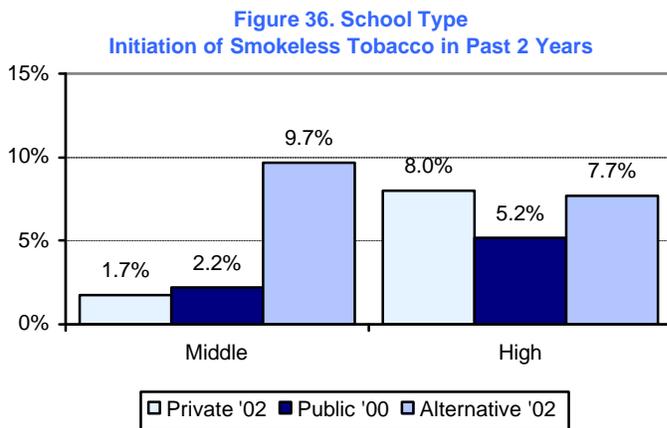


## Whites:

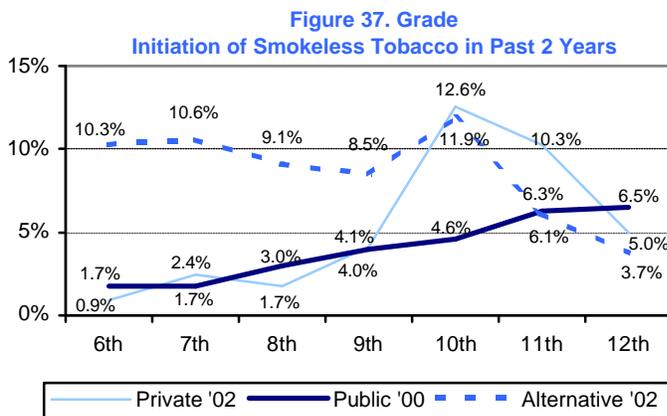
Among White middle school students, significantly fewer students in private schools have begun smoking cigarettes in the two years preceding the survey than public or alternative school students. Fewer than 10 percent of White students in public middle school and close to one-third of White students in alternative middle school have begun smoking within the preceding two years. Among all three school types, White high school students have rates comparable to one another of students who have begun smoking in the past two years. That is, approximately 20 percent of White students attending each type of school have begun smoking cigarettes within the preceding two years.

# Youth Initiation of Smokeless Tobacco

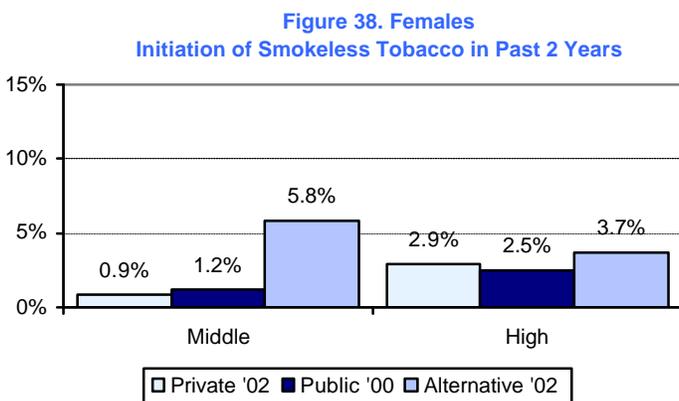
Two variables were used to determine if a student had begun using tobacco products within the two years preceding the survey. The first was their current age, the second was the age at which they began using the specific tobacco product.



**Type of School:** Among middle school students, approximately two percent of private and public school students have begun using smokeless tobacco in the two years preceding the survey. Almost five times as many alternative middle school students have begun using smokeless tobacco within the preceding two years. Among high school students, approximately eight percent of private and alternative school students have begun using smokeless tobacco within the two years preceding the survey. Public high school students are less likely to have begun using smokeless tobacco within the past two years, with only about 5 percent having started.

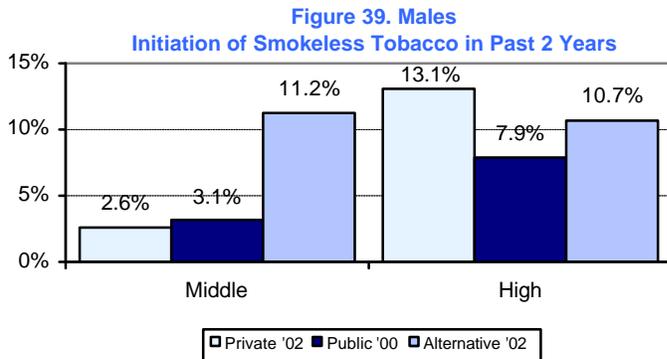


**Grade:** The initiation of smokeless tobacco use within the two years preceding the survey increases gradually among public school students, with significant changes seen between grades 7 and 8 and grades 10 and 11. Among private school students, the initiation of smokeless tobacco remains very low (less than 2%) in grades 6 through 8, but begins to climb by grade 8. The percentage of private school students who have begun using smokeless tobacco within the two years preceding the survey peaks in grade 10, then rapidly drops off by grade 12. Among alternative school students, the percentage of students who have begun using smokeless tobacco within the two years preceding the survey is already relatively high by 6<sup>th</sup> grade (10%). This percentage remains fairly constant until 9<sup>th</sup> grade, but then peaks by 10<sup>th</sup> grade. As with private school students, this percentage then rapidly drops off by grade 12.

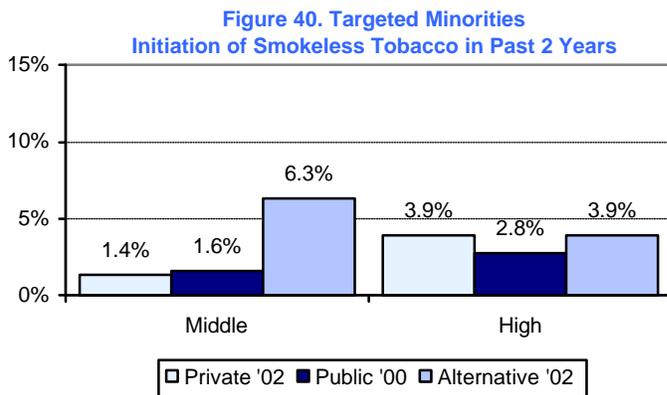


**Females:** Among private and public middle school students, the initiation of smokeless tobacco use among girls within the two years preceding the survey is very low (about 1%). However, among alternative middle school students, the percentage of girls who have begun using smokeless tobacco within the two years preceding the survey is considerably higher (nearly 6%). Among high school students, the percentage of girls who have begun using smokeless tobacco within the two years preceding the survey is similar for private and public school girls and slightly higher for alternative school girls.

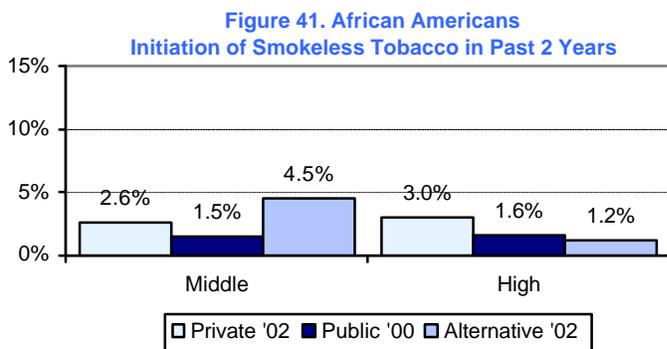
# Youth Initiation of Smokeless Tobacco



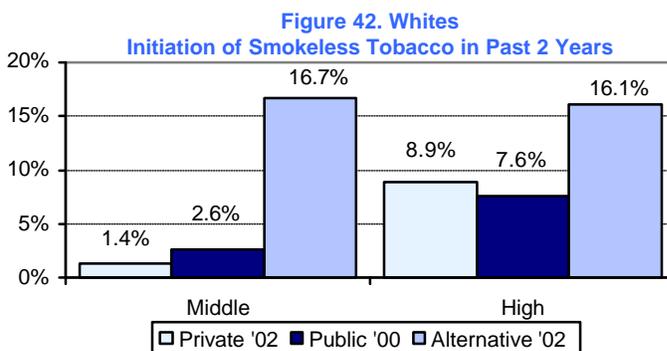
**Males:** Among private and public middle school students, the initiation of smokeless tobacco use among boys within the two years preceding the survey is similar (about 3%). However, among alternative middle school students, the percentage of boys who have begun using smokeless tobacco within the two years preceding the survey is nearly four times higher. Among high school students, the percentage of private school boys who have begun using smokeless tobacco within the two years preceding the survey is higher than that of alternative school boys and public school boys. The percentage of public high school boys who have begun using smokeless tobacco within the past two years is the lowest among the three types of schools.



**Targeted Minorities:** Among private and public middle school students, the initiation of smokeless tobacco use among minorities within the two years preceding the survey is very low (under 2%). However, among alternative middle school minority students, the percentage of students who have begun using smokeless tobacco within the two years preceding the survey is much higher (about 6%). Among private and alternative high school students, the percentage of minority students who have begun using smokeless tobacco within the two years preceding the survey is identical (almost 4%), and slightly less among public high school minority students (almost 3%).



**African Americans:** Among African American students in all three types of school (private, public, alternative), the initiation of smokeless tobacco use within the two years preceding the survey is relatively low across both levels (middle and high school). The highest percentage of African American students beginning to use smokeless tobacco within the two years preceding the survey is seen among alternative middle school students.

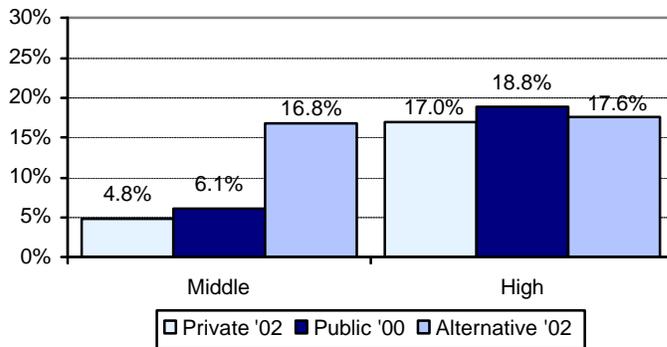


**Whites:** Among private and public middle school students, the initiation of smokeless tobacco use among White students within the two years preceding the survey is low (under 3%). However, among alternative middle school students, the percentage of White students who have begun using smokeless tobacco within the two years preceding the survey is more than six times higher. Among high school students, the percentage of White students in private and public schools who have begun using smokeless tobacco within the two years preceding the survey is significantly lower than that of White students in alternative schools.

# Youth Initiation of Cigars

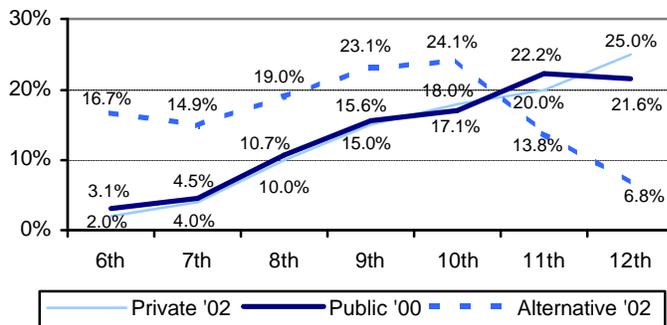
Two variables were used to determine if a student had begun using tobacco products within the two years preceding the survey. The first was their current age, the second was the age at which they began using the specific tobacco product.

**Figure 43. School Type  
Initiation of Cigars in Past 2 Years**



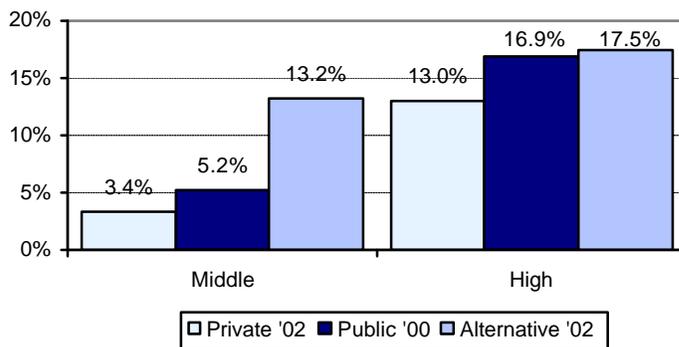
**Type of School:** Among private and public middle school students, approximately five to six percent of students have begun smoking cigars in the two years preceding the survey. However, more than twice as many alternative middle school students have begun smoking cigars within the preceding two years. The percentage of high school students who have begun smoking cigars in the two years preceding the survey is comparable across all three school types. That is, approximately 17-18 percent of private, public, and alternative high school students have begun smoking cigars within the preceding two years.

**Figure 44. Grade  
Initiation of Cigars in Past 2 Years**



**Grade:** The initiation of cigar smoking within the two years preceding the survey increases rather steadily among private and public school students, with significant changes seen between grades 7 and 8 at both private and public schools. However, the initiation of cigar smoking within the two years preceding the survey among alternative school students is already high by 6<sup>th</sup> grade (nearly 17%), and continues to climb until it peaks at 10<sup>th</sup> grade; this rate then drops off dramatically by 12<sup>th</sup> grade.

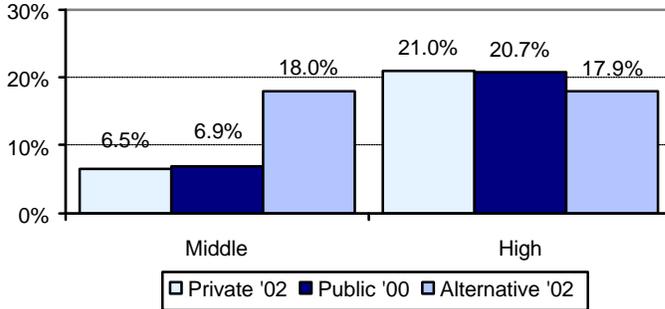
**Figure 45. Females  
Initiation of Cigars in Past 2 Years**



**Females:** Among private and public school students, the percentage of girls who have begun smoking cigars in the two years preceding the survey is rather low (3% and 5%, respectively). However, more than twice as many alternative middle school girls have begun smoking cigars within the preceding two years. Among high school students, the percentage of private school girls who have begun smoking cigarettes in the past two years is significantly less than that of public and alternative high school girls. Approximately 17 percent of public and alternative high school girls have begun smoking cigars within the two years preceding the survey.

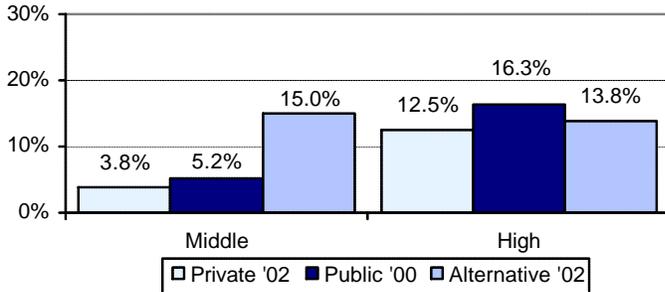
# Youth Initiation of Cigars

**Figure 46. Males**  
Initiation of Cigars in Past 2 Years



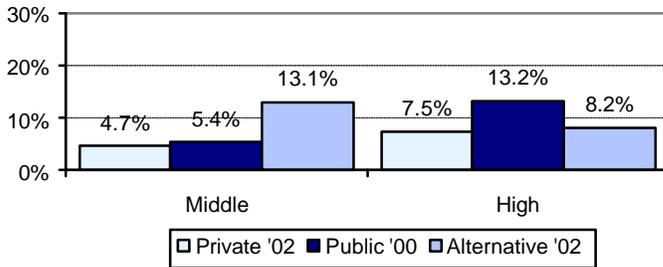
**Males:** Among private and public school students, the percentages of boys who have begun smoking cigars in the two years preceding the survey are similar (approximately 6.5%). However, nearly three times as many alternative middle school boys have begun smoking cigars within the preceding two years. Among high school students, the percentage of private and public school boys who have begun smoking cigars in the past two years is similar, at about 21 percent. However, the percentage of alternative school boys who have begun smoking cigars in the two years prior to the survey is slightly lower (approximately 18%).

**Figure 47. Targeted Minorities**  
Initiation of Cigars in Past 2 Years



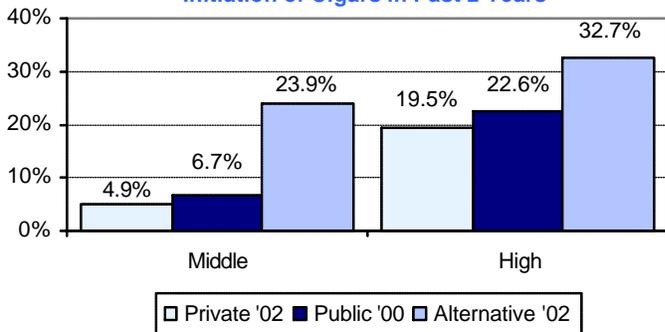
**Targeted Minorities:** Among private and public middle school students, approximately four to five percent of minority students have begun smoking cigars in the two years preceding the survey. However, nearly three times as many minority students in alternative middle school have begun smoking cigars within the preceding two years. Among high school students, the percentage of minority students who have begun smoking cigars in the two years preceding the survey is highest among those attending public school.

**Figure 48. African Americans**  
Initiation of Cigars in Past 2 Years



**African Americans:** Among private and public middle school students, approximately five percent of African American students have begun smoking cigars in the two years preceding the survey. However, more than twice as many African American students in alternative middle school have begun smoking cigars within the preceding two years. Among high school students, the percentage of African American students who have begun smoking cigars in the two years preceding the survey is highest among those attending public school.

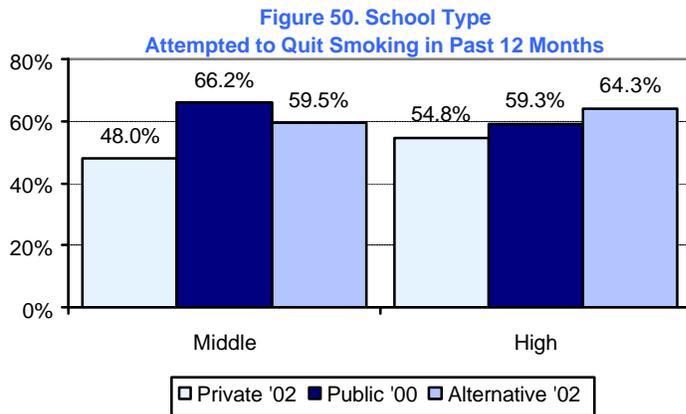
**Figure 49. Whites**  
Initiation of Cigars in Past 2 Years



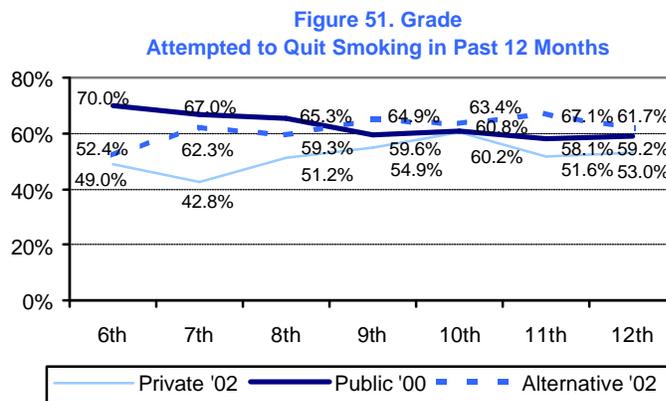
**Whites:** Among private and public middle school students, approximately five to seven percent of White students have begun smoking cigars in the two years preceding the survey. However, more than three times as many White students in alternative middle school have begun smoking cigars within the preceding two years. Among high school students, the percentage of White students who have begun smoking cigars in the two years preceding the survey is highest among those attending alternative schools (one-third of all students).

# Youth Attempted Cessation

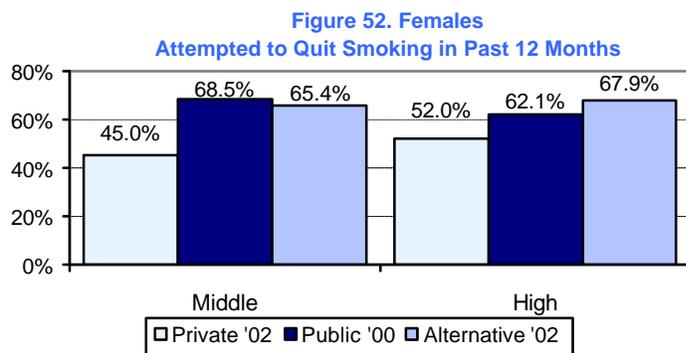
Students were asked if they had tried to quit smoking within the past 12 months.



**Type of School:** Among middle school students, significantly more public school smokers have attempted to quit smoking in the past 12 months than have private or alternative school smokers. Among high school students, there are no significant differences in the percentage of private and public school smokers who have attempted to quit smoking in the past 12 months. Nearly two-thirds of alternative high school students have attempted to quit.

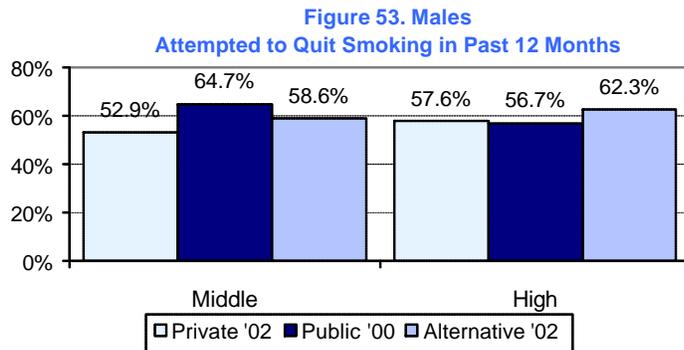


**Grade:** Among public school students, the percentage of students who have attempted to quit smoking cigarettes in the past 12 months declines slightly from 6<sup>th</sup> grade to 12<sup>th</sup> grade. However, among private school and alternative school students, the percentage of students who have attempted to quit smoking cigarettes in the past 12 months increases slightly from 6<sup>th</sup> grade to 12<sup>th</sup> grade.

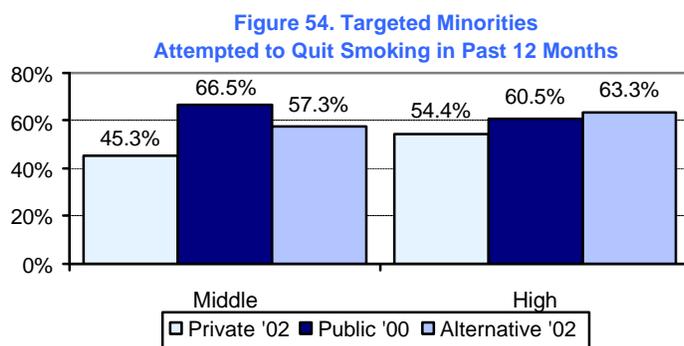


**Females:** Among middle school students, significantly fewer private school girls have attempted to quit smoking cigarettes in the past 12 months than have public school and alternative school girls. Similarly, among high school students, private school girls remain less likely to have attempted to quit smoking cigarettes in the past 12 months than public school and alternative school girls.

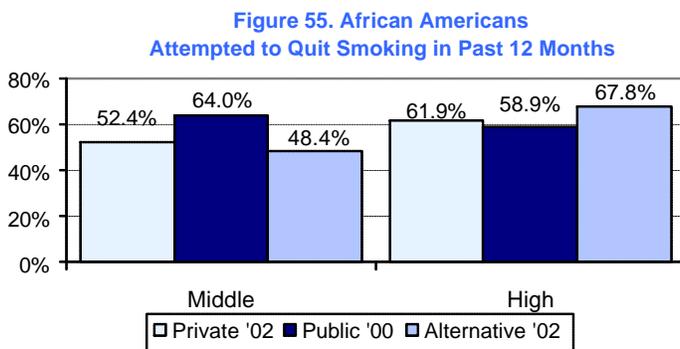
# Youth Attempted Cessation



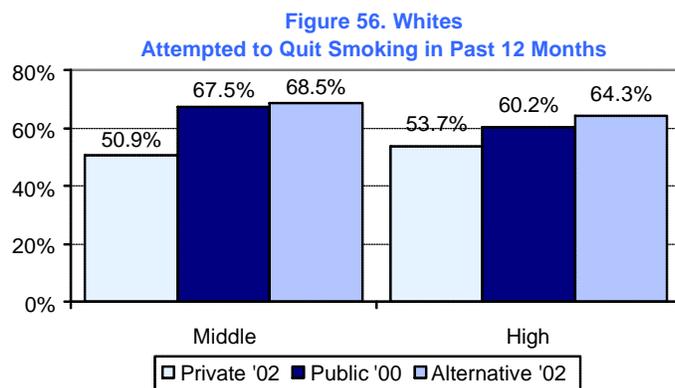
**Males:** Among middle school students, the percentage of male smokers who have attempted to quit smoking cigarettes in the past 12 months is comparable across all three school settings. Similarly, among high school students, the percentage of male smokers who have attempted to quit smoking cigarettes in the past 12 months is comparable across all three school settings.



**Targeted Minorities:** Among minority middle school students, public school smokers are significantly more likely than private school or alternative school smokers to have attempted to quit smoking in the past 12 months. Among minority high school students, smokers in all three school settings have attempted to quit smoking cigarettes in the past 12 months at rates comparable to one another.



**African Americans:** Among middle school students, African American smokers in all three school settings have attempted to quit smoking cigarettes in the past 12 months at rates comparable to one another. Among African American high school students, alternative school students were most likely to have attempted to quit smoking cigarettes in the past 12 months, with more than two-thirds of students attempting to quit.

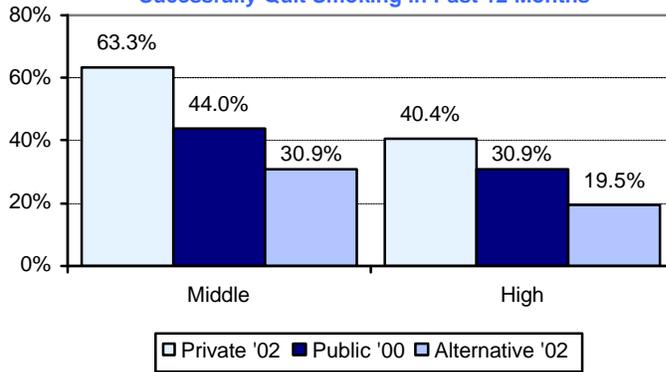


**Whites:** Among White middle school students, significantly fewer private school students have attempted to quit smoking cigarettes in the past 12 months than have public and alternative school students. Among White high school students, private school students are less likely to have attempted to quit smoking cigarettes in the past 12 months than have public or alternative high school students.

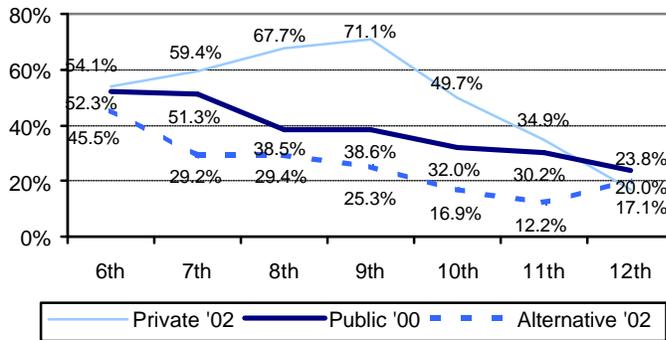
# Youth Successful Cessation

To determine if youth had successfully quit smoking cigarettes in the past 12 months, two variables were used. The student had to respond positively that he or she had attempted to quit smoking in the past 12 months and that he or she was not currently smoking cigarettes (hadn't smoked within the past 30 days).

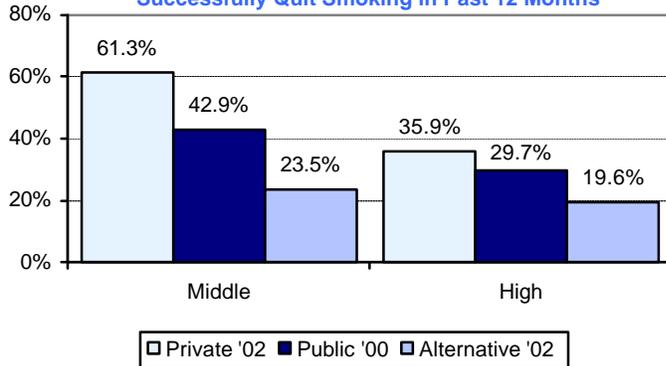
**Figure 57. School Type  
Successfully Quit Smoking in Past 12 Months**



**Figure 58. Grade  
Successfully Quit Smoking in Past 12 Months**



**Figure 59. Females  
Successfully Quit Smoking in Past 12 Months**

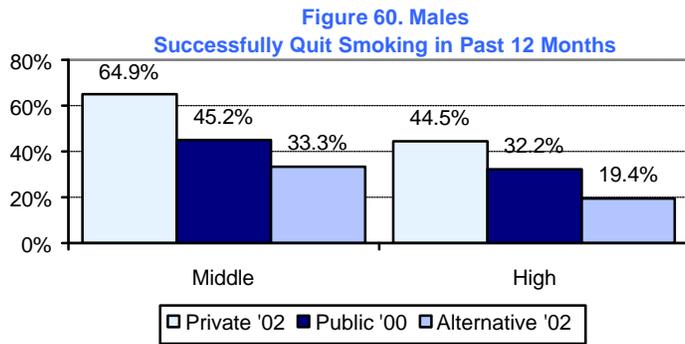


**Type of School:** Among middle school and high school students, those attending private school and public school were significantly more likely to have successfully quit smoking cigarettes within the past 12 months than alternative school students. Although the difference in success rates appears large between private schools and public schools, data show the rates of students attending these two types of schools of having successfully quit smoking in the past 12 months to be comparable to one another.

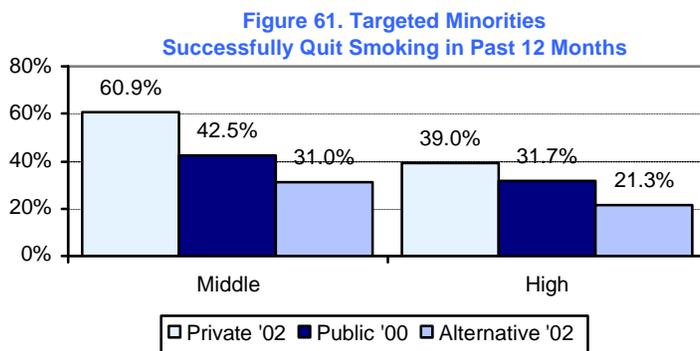
**Grade:** Among public school and alternative school students, the ability to quit smoking cigarettes successfully within the past 12 months decreases steadily as grade increases, with 12<sup>th</sup> graders being the least likely to have successfully quit smoking. However, among private school students, the percentage of students who were able to successfully quit smoking cigarettes within the past 12 months increases steadily from 6<sup>th</sup> to 9<sup>th</sup> grade, then drops off significantly by 12<sup>th</sup> grade.

**Females:** Among middle school students, private school girls and public school girls were more likely to have successfully quit smoking cigarettes within the past 12 months than alternative school girls. Similarly among high school students, private school girls and public school girls were more likely to have successfully quit smoking cigarettes within the past 12 months than alternative school girls. Approximately one in four female students attending alternative middle schools and one in five female students attending alternative high schools were able to successfully quit smoking cigarettes.

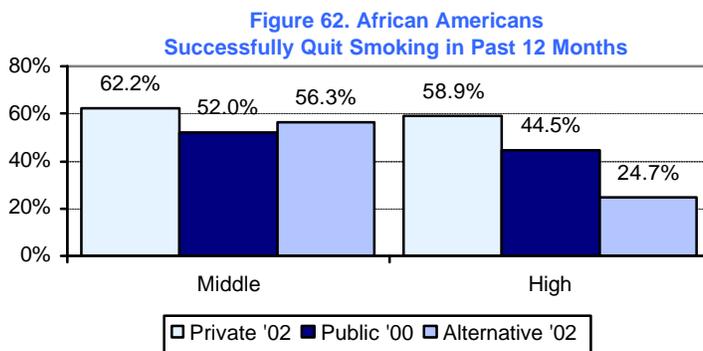
# Youth Successful Cessation



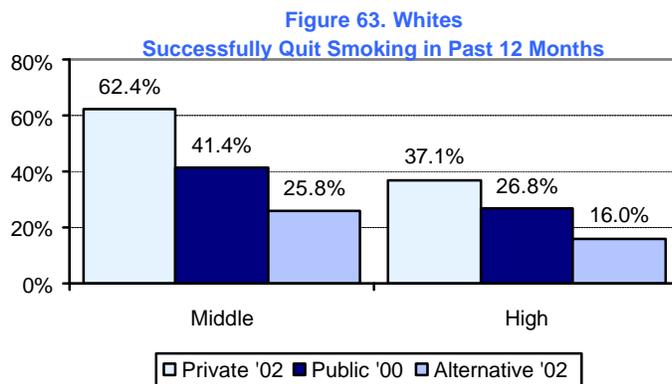
**Males:** Among middle school students, private school boys and public school boys were more likely to have successfully quit smoking cigarettes within the past 12 months than alternative school boys. Similarly among high school students, private school boys and public school boys were more likely to have successfully quit smoking cigarettes within the past 12 months than alternative school boys. Approximately one-third of male students attending alternative middle schools and one-fifth of male students attending alternative high schools were able to successfully quit smoking cigarettes in the past 12 months.



**Targeted Minorities:** Among minority middle school and high school students, private school students and public school students were more likely to have successfully quit smoking cigarettes within the past 12 months than minority students at alternative schools. About one-third of minority middle school students and one-fifth of minority high schools students were able to successfully quit smoking cigarettes in the past 12 months.



**African Americans:** Among African American middle school students, no significant differences were found in the rate of successfully quitting smoking in the past 12 months between private, public and alternative school students. Among African American students in high school, private school students and public school students were more likely to be successful in quitting smoking than African Americans students in alternative schools.

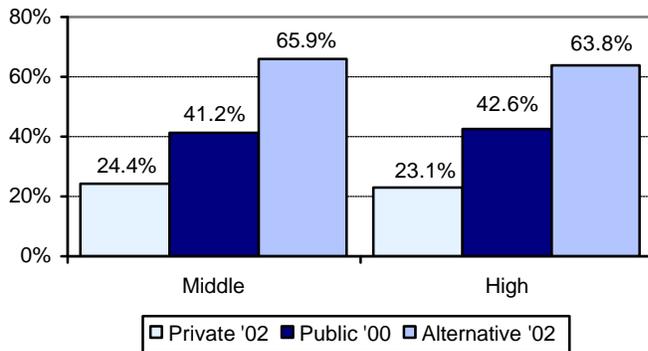


**Whites:** Among White middle school and high school students, private school students and public school students were more likely to have successfully quit smoking cigarettes within the past 12 months than White alternative school students. Among White high school students, 16 percent of alternative school students were successful in quitting smoking, which is significantly lower than the percentage of White students at private or public high schools.

# Youth Exposure to Environmental Tobacco Smoke

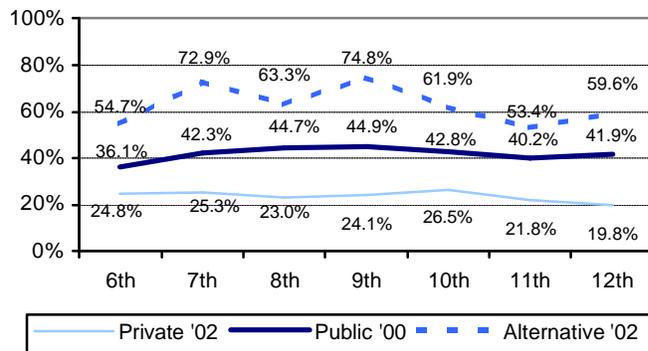
Students were asked if anyone who currently lives with them smokes cigarettes.

**Figure 64. School Type Lives in House with Smoker**



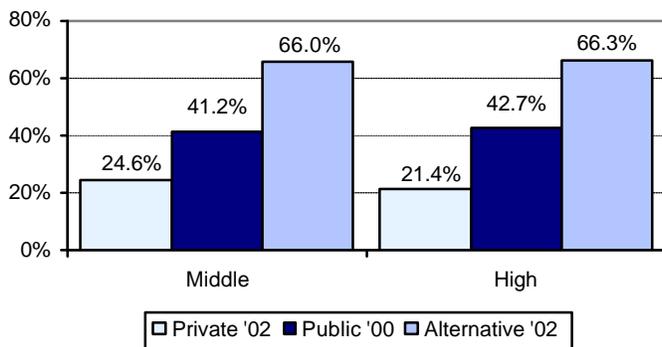
**Type of School:** Among middle school and high school youth, private school students are significantly less likely than public school students to live with someone who smokes. Further, public school students are significantly less likely than alternative school students to live with someone who smokes. In both middle school and high school, less than one-fourth of private school students, less than half of public school students, and nearly two-thirds of alternative school students live with a smoker.

**Figure 65. Grade Lives in House with Smoker**



**Grade:** Among private and public school students, the percentage of youth who live with a smoker remains fairly constant across grades. Among public school students, the percentage living with a smoker increases slightly from 6<sup>th</sup> to 12<sup>th</sup> grade. Among private school students, the percentage living with a smoker decreases slightly from 6<sup>th</sup> to 12<sup>th</sup> grade. Among alternative school students, there is wider variability across grades, with nearly three-quarters of 7<sup>th</sup> and 9<sup>th</sup> graders living with a smoker.

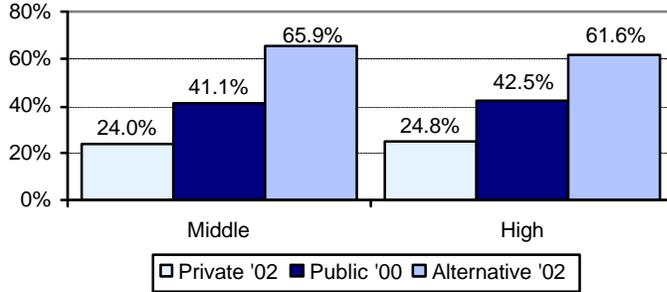
**Figure 66. Females Lives in House with Smoker**



**Females:** Among middle school and high school youth, private school girls are significantly less likely than public school girls to live with someone who smokes. Public school girls are significantly less likely than alternative school girls to live with someone who smokes. In both middle school and high school, less than one-fourth of private school girls, less than half of public school girls, and two-thirds of alternative school girls live with a smoker.

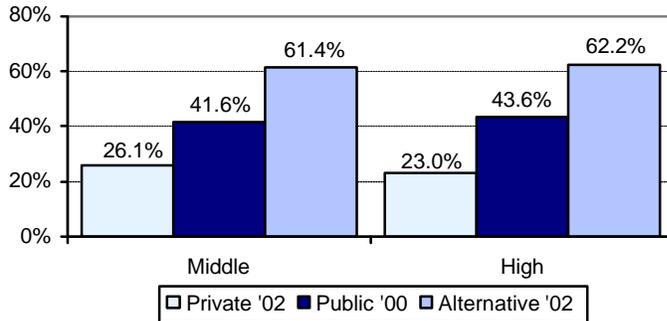
# Youth Exposure to Environmental Tobacco Smoke

**Figure 67. Males Lives in House with Smoker**



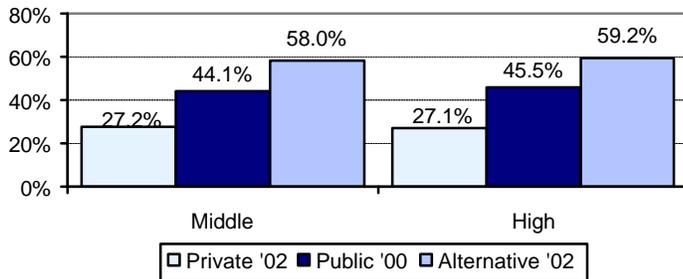
**Males:** Among middle and high school youth, private school boys are significantly less likely than public school boys to live with a smoker. Public school boys are significantly less likely than alternative school boys to live with a smoker. In both middle school and high school, less than one-fourth of private school boys, less than half of public school boys, and approximately two-thirds of alternative school boys live with a smoker.

**Figure 68. Targeted Minorities Lives in House with Smoker**



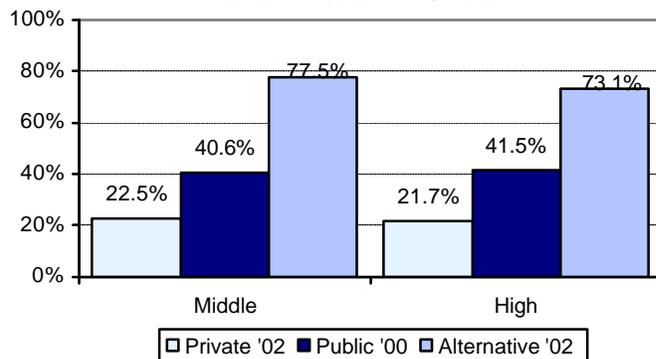
**Targeted Minorities:** Among minority middle and high school youth, private school students are significantly less likely than public school students to live with a smoker. Public school students are significantly less likely than alternative school students to live with a smoker. Among minority students in both middle school and high school, approximately one-fourth of private school students, less than half of public school students, and nearly two-thirds of alternative school students live with a smoker.

**Figure 69. African Americans Lives in House with Smoker**



**African Americans:** Among African American middle and high school youth, private school students are significantly less likely than public school students to live with a smoker. Public school students are significantly less likely than alternative school students to live with a smoker. Among African American students in both middle school and high school, slightly more than one-fourth of private school students, less than half of public school students, and more than half of alternative school students live with a smoker.

**Figure 70. Whites Lives in House with Smoker**

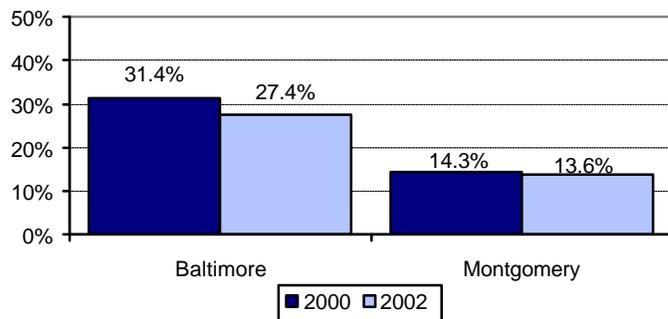


**Whites:** Among White middle and high school youth, private school students are significantly less likely than public school students to live with a smoker. Public school students are significantly less likely than alternative school students to live with a smoker. Among White students in both middle school and high school, less than one-fourth of private school students, less than half of public school students, and approximately three-fourths of alternative school students live with a smoke.

# Adult Tobacco Use

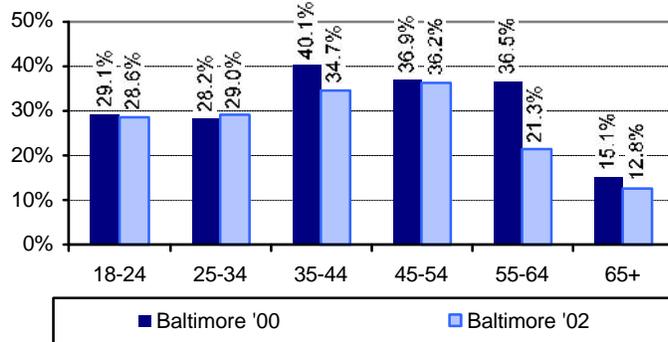
Adults were asked about their use of several different forms of tobacco, including cigarettes, smokeless tobacco, cigars, pipes, bidis, and kreteks. Adults were considered current tobacco users if they reported using one or more of these products within the past 30 days.

**Figure 71. Overall  
Current Use of a Tobacco Product**



**Overall:** Baltimore City and Montgomery County were selected for intensive study because they represent extremes in high and low tobacco use, respectively. Overall, prevalence of tobacco use in Baltimore City is twice that of Montgomery County. The percentage of adults in Baltimore currently using tobacco decreased from 31.4 percent in 2000 to 27.4 percent in 2002. In Montgomery County, the percentage of adults currently using tobacco is comparable at approximately 14 percent in both years.

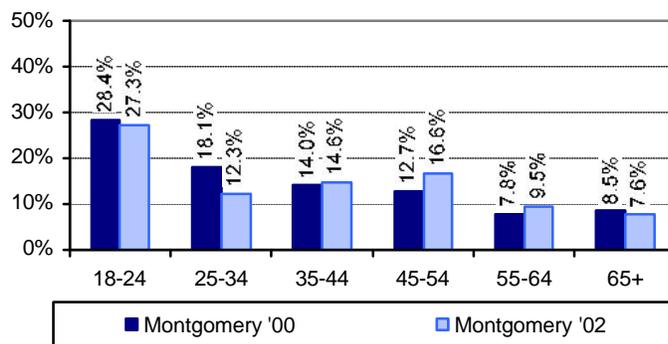
**Figure 72. Age - Baltimore City  
Current Use of a Tobacco Product**



**Age:** Among adults ages 25 and older, the prevalence of tobacco use in Baltimore is much higher than that of Montgomery County. However, among 18-24 year olds, tobacco use is comparable between the two jurisdictions at both points in time.

In Baltimore, the percentage of adults currently using tobacco products remained fairly constant from 2000 to 2002. However, there was a slight decrease among 35-44 year olds from 40.1 percent in 2000 to 34.7 percent in 2002, as well as a decrease from 36.5 percent in 2000 to 21.3 percent among 55-64 year olds.

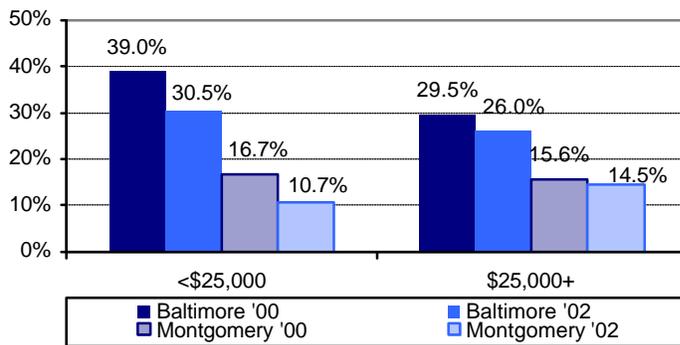
**Figure 73. Age - Montgomery County  
Current Use of a Tobacco Product**



In Montgomery County, the percentage of adults currently using tobacco products remained fairly constant from 2000 to 2002. However, there was a slight decrease among 25-34 year olds from 18.1 percent in 2000 to 12.3 percent in 2002.

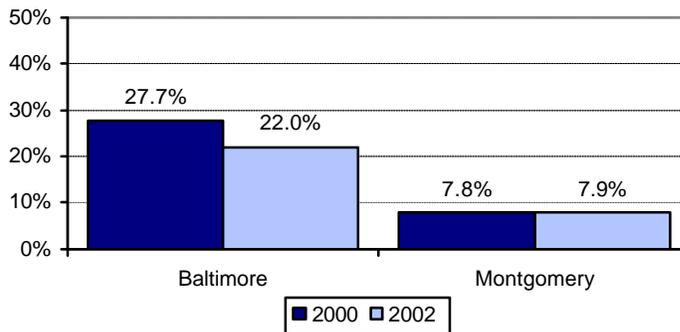
# Adult Tobacco Use

**Figure 74. Income**  
Current Use of a Tobacco Product



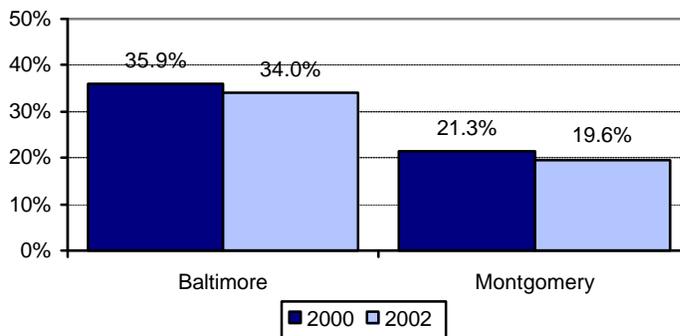
**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were more likely at 39.0 percent to use tobacco than those earning more than \$25,000 per year at 29.5 percent. By 2002, the two groups looked far more similar in tobacco use after the low income group dropped to 30.5 percent while the high income group dropped to 26.0 percent. In Montgomery County, the two income groups were virtually identical in 2000, and by 2002 the low income group at 10.7 percent uses tobacco less than the high income group at 14.5 percent. This suggests that the increasing cost of tobacco products might be curbing tobacco use to a greater degree in the low-income population.

**Figure 75. Females**  
Current Use of a Tobacco Product



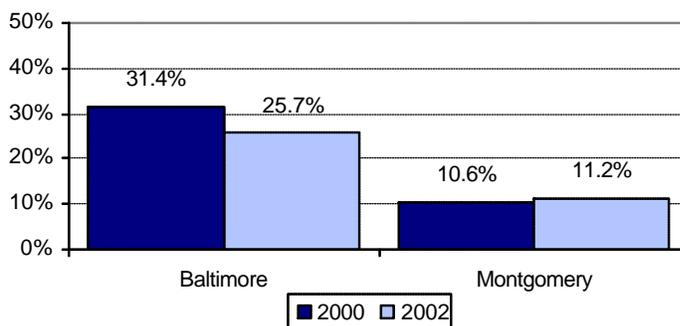
**Females:** In Baltimore, tobacco use among adult females declined significantly from 27.7 percent in 2000 to 22.0 percent in 2002 (t-test at p<.05). In Montgomery County, tobacco use among females is unchanged at slightly less than 8 percent.

**Figure 76. Males**  
Current Use of a Tobacco Product



**Males:** Tobacco use among males in both jurisdictions is comparable from 2000 to 2002.

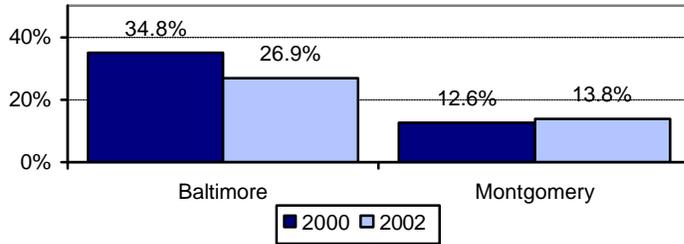
**Figure 77. Target Minorities**  
Current Use of a Tobacco Product



**Targeted Minorities:** Tobacco use among targeted minorities living in Baltimore decreased significantly from 31.4 percent in 2000 to 25.7 percent in 2002 (t-test at p<.01). In Montgomery County, tobacco use among targeted minorities is unchanged at approximately 11 percent.

# Adult Tobacco Use

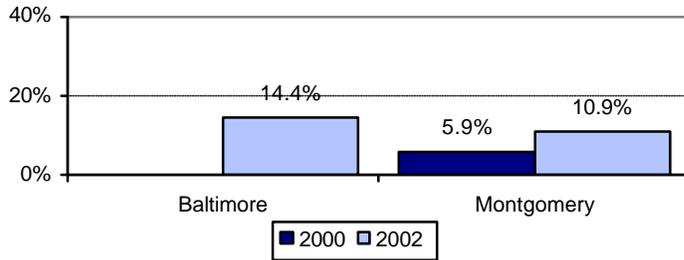
**Figure 78. African Americans  
Current Use of a Tobacco Product**



## African Americans:

Tobacco use among African Americans living in Baltimore decreased significantly from 34.8 percent in 2000 to 26.9 percent in 2002 (t-test at  $p < .01$ ). In Montgomery County, tobacco use among African American adults is unchanged at approximately 13 percent.

**Figure 79. Asians  
Current Use of a Tobacco Product**

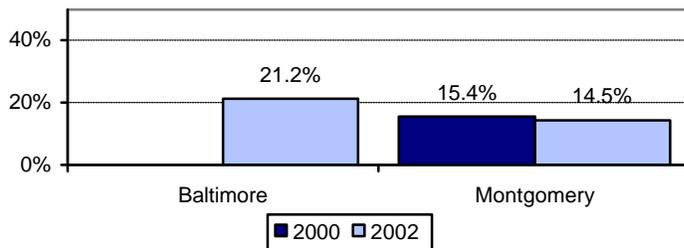


## Asians\*:

In Montgomery County, tobacco use among Asian adults appears to be increasing, with use rising from 5.9 percent in 2000 to 10.9 percent in 2002. However, the small sample size for Asians in 2000 provided unreliable data with large confidence intervals.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

**Figure 80. Hispanics  
Current Use of a Tobacco Product**

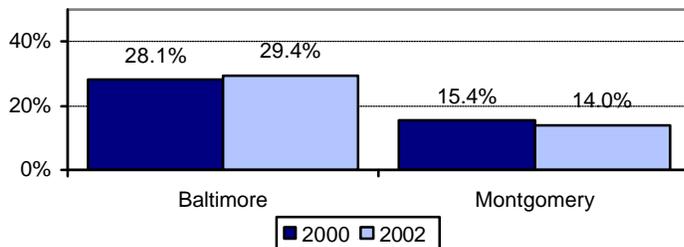


## Hispanics\*:

In Montgomery County, tobacco use among Hispanic adults remained unchanged from 2000 to 2002 at approximately 15 percent.

**\*Note:** Due to the extremely small number of Hispanic respondents in Baltimore in 2000, no data are shown for this population.

**Figure 81. Whites  
Current Use of a Tobacco Product**



## Whites:

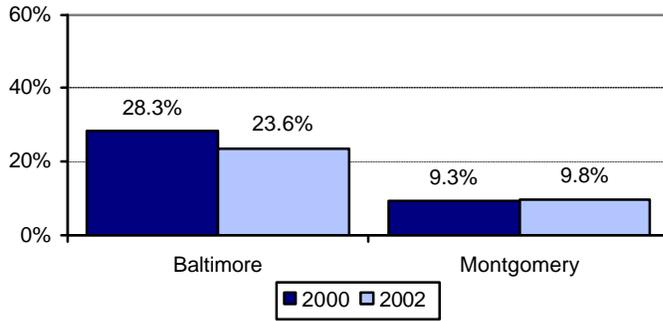
Among White adults in both jurisdictions, tobacco use remained essentially unchanged from 2000 to 2002.



# Adult Cigarette Use

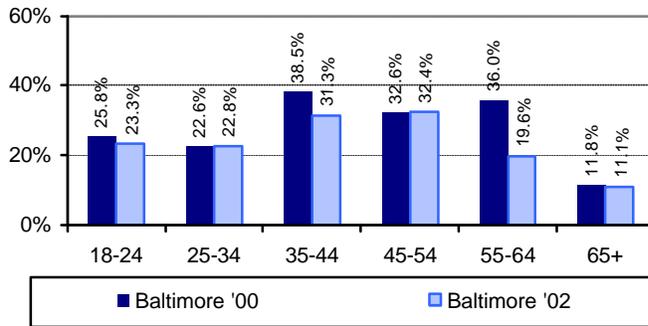
Adults were asked about their use of cigarettes. Adults were considered current smokers if they reported smoking cigarettes within the past 30 days.

**Figure 82. Overall Current Use of Cigarettes**



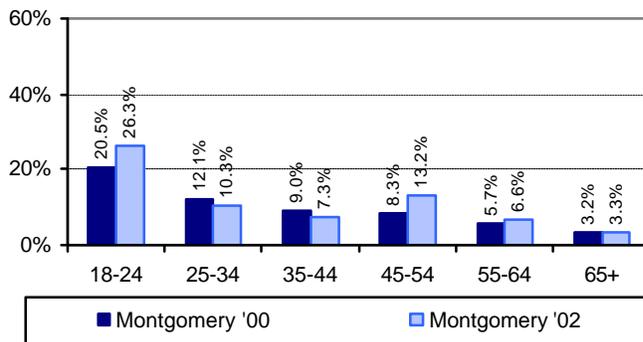
**Overall:** Overall, prevalence of cigarette use in Baltimore is twice that of Montgomery County. The percentage of adults in Baltimore who currently smoke cigarettes declined significantly from 28.3 percent in 2000 to 23.6 percent in 2002 (t-test at  $p < .05$ ). In Montgomery County, the percentage of adults currently smoking cigarettes remained the same at about 9.5 percent from 2000 to 2002.

**Figure 83. Age - Baltimore City Current Use of Cigarettes**



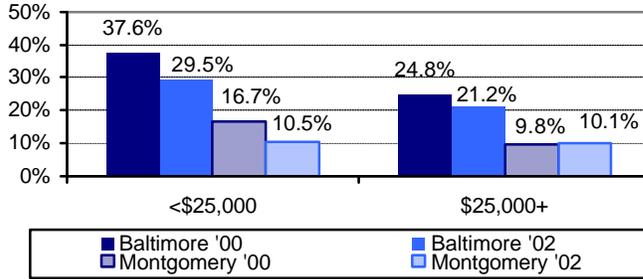
**Age:** In Baltimore, cigarette use is on the decline or flat in all age groups. Of note, there was a decrease from 38.5 percent in 2000 to 31.3 percent in 2002 among 35-44 year olds, and a decrease from 36.0 percent in 2000 to 19.6 percent in 2002 among 55-64 year olds. Montgomery County cigarette use also remains relatively flat from 2000 to 2002, with the possible exception of the 18-24 and 45-54 year old groups. Among 18-24 year olds, smoking was essentially identical between the two jurisdictions at both points in time.

**Figure 84. Age - Montgomery County Current Use of Cigarettes**



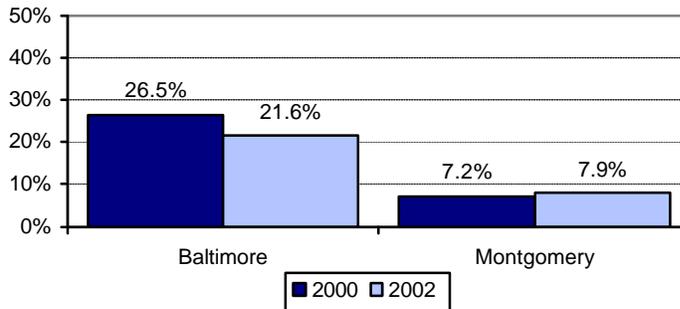
# Adult Cigarette Use

**Figure 85. Income  
Current Use of Cigarettes**



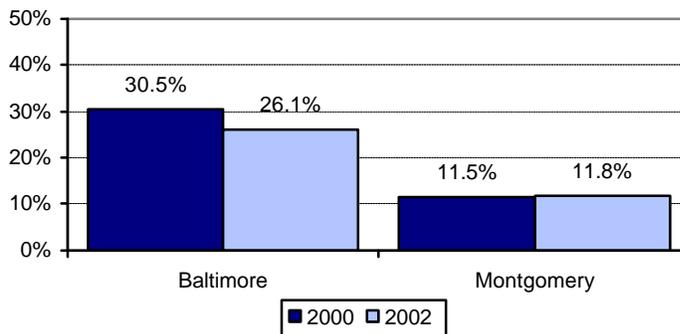
**Income:** In 2000, in Baltimore, those earning less than \$25,000 per year were significantly more likely at 37.6 percent to smoke cigarettes than those earning more than \$25,000 per year at 24.8 percent. However, by 2002, with the lower earnings group at 29.5 percent and the higher earnings group at 21.2 percent, there was no longer a statistically significant difference between the two groups. In Montgomery County, those in the low income group in 2000 were more likely at 16.7 percent to smoke cigarettes than those in the high income group at 9.8 percent. However, in 2002 the two income groups were virtually identical at approximately 10 percent.

**Figure 86. Females  
Current Use of Cigarettes**



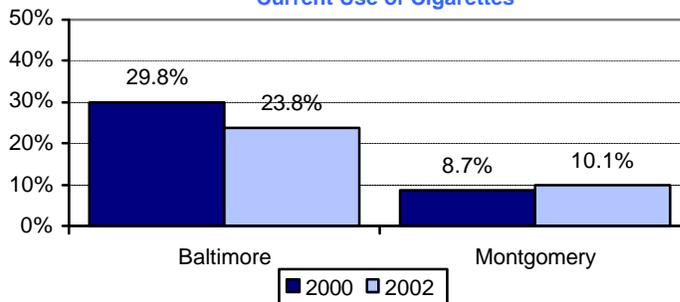
**Females:** In Baltimore, cigarette use among adult females appears to be on the decline, with use falling from 26.5 percent in 2000 to 21.6 percent in 2002. In Montgomery County, tobacco use among females is unchanged at slightly less than 8 percent.

**Figure 87. Males  
Current Use of Cigarettes**



**Males:** Cigarette use among males in Baltimore appears to decline from 2000 to 2002. In Montgomery County, cigarette use among males is unchanged at slightly under 12 percent.

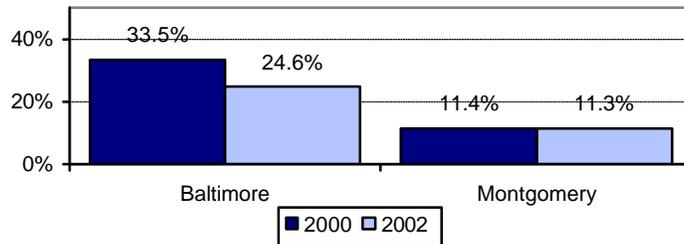
**Figure 88. Target Minorities  
Current Use of Cigarettes**



**Targeted Minorities:** In Baltimore, the percentage of targeted minority adults who currently smoke cigarettes declined significantly from 29.8 percent in 2000 to 23.8 percent in 2002 (t-test at p<.05). In Montgomery County, tobacco use among targeted minorities is essentially unchanged.

# Adult Cigarette Use

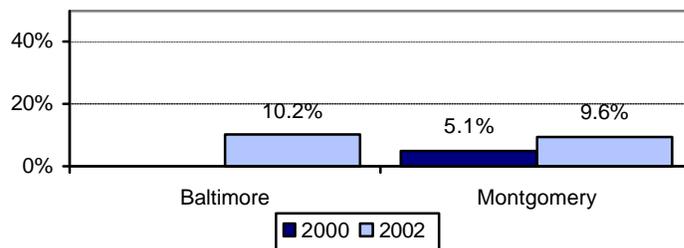
Figure 89. African Americans  
Current Use of Cigarettes



## African Americans:

In Baltimore, the percentage of African American adults who currently smoke cigarettes declined significantly from 33.5 percent in 2000 to 24.6 percent in 2002 (t-test at  $p < .01$ ). In Montgomery County, tobacco use among African American adults is unchanged at approximately 11 percent.

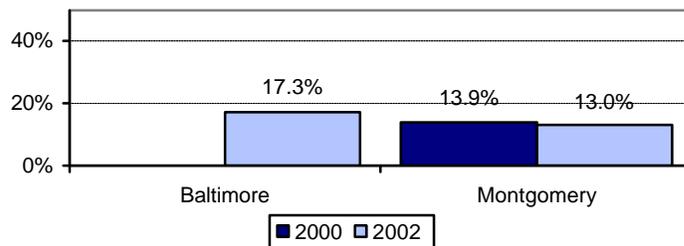
Figure 90. Asians  
Current Use of Cigarettes



**Asians\*:** In Montgomery County, cigarette smoking among Asian adults appears to be increasing, with use rising from 5.1 percent in 2000 to 9.6 percent in 2002. However, the small sample size for Asians in 2000 provided unreliable data with large confidence intervals.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

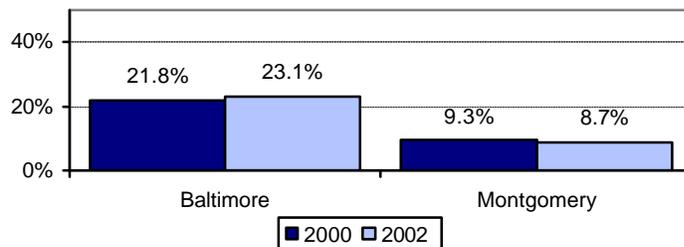
Figure 91. Hispanics  
Current Use of Cigarettes



**Hispanics\*:** In Montgomery County, tobacco use among Hispanic adults remained essentially unchanged from 2000 to 2002.

**\*Note:** Due to the extremely small number of Hispanic respondents in Baltimore in 2000, no data are shown for this population.

Figure 92. Whites  
Current Use of Cigarettes



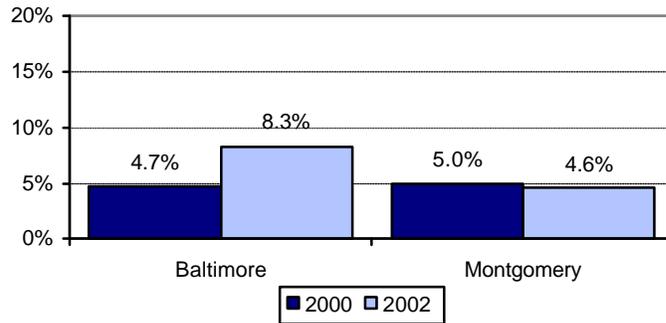
**Whites:** Among White adults in both jurisdictions, tobacco use remained essentially unchanged from 2000 to 2002.



# Adult Cigar Use

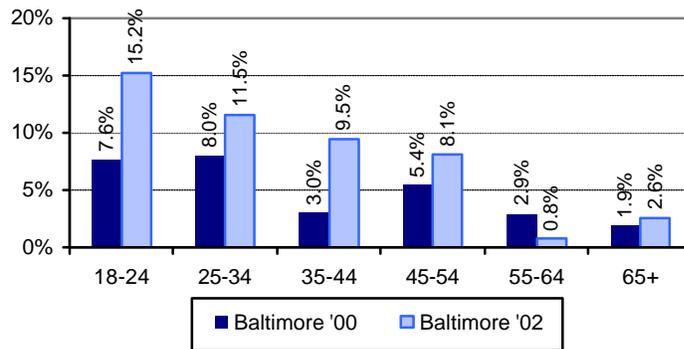
Adults were asked about their use of cigars. Adults were considered current cigar smokers if they reported smoking cigars within the past 30 days.

Figure 93. Overall  
Current Use of Cigars



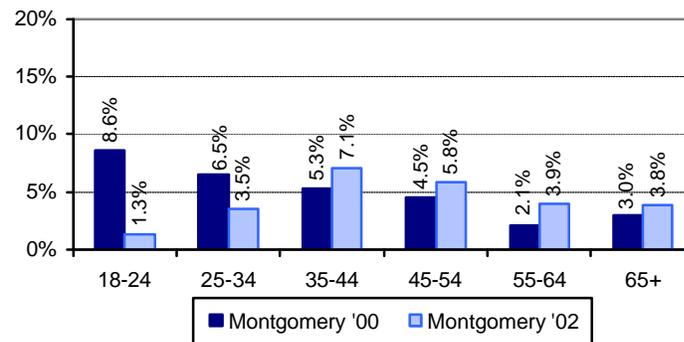
**Overall:** In Baltimore, cigar use increased from 4.7 percent in 2000 to 8.3 percent in 2002. In Montgomery County, the percentage of adults currently smoking cigars remained the same at both points in time at approximately five percent.

Figure 94. Age - Baltimore City  
Current Use of Cigars



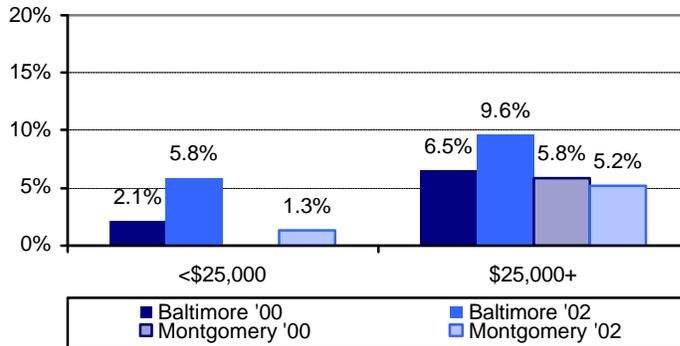
**Age:** In Baltimore, cigar use appears to be on the rise in virtually all age groups. Also, in Baltimore, cigar use appears to be inversely related to age, with the percentage smoking cigars declining with each successive age group. In Montgomery County, neither pattern is evident, and cigar use in 2002 appears to peak in 35-54 year olds.

Figure 95. Age - Montgomery County  
Current Use of Cigars



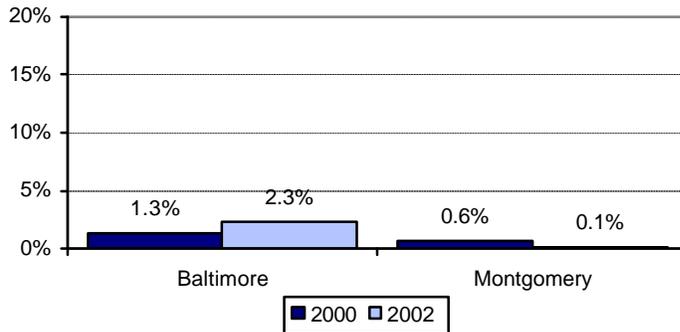
# Adult Cigar Use

**Figure 96. Income Current Use of Cigars**



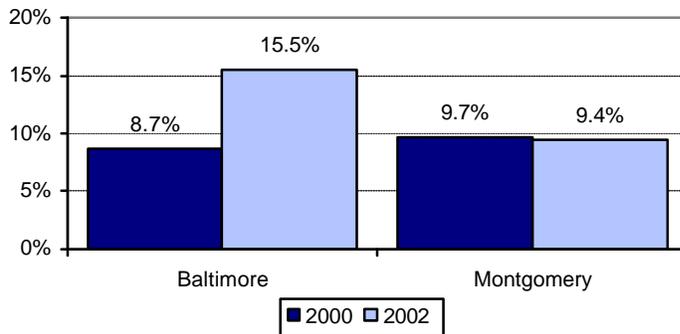
**Income:** In Baltimore, 2.1 percent of those earning less than \$25,000 per year smoke cigars, compared to 6.5 percent of those earning more than \$25,000 per year. In 2002, cigar smoking remained a high income behavior, with both low and high income groups increasing their cigar smoking. In Montgomery County, no respondents earning less than \$25,000 per year smoke cigars, compared to 5.8 percent of those in the higher earnings group.

**Figure 97. Females Current Use of Cigars**



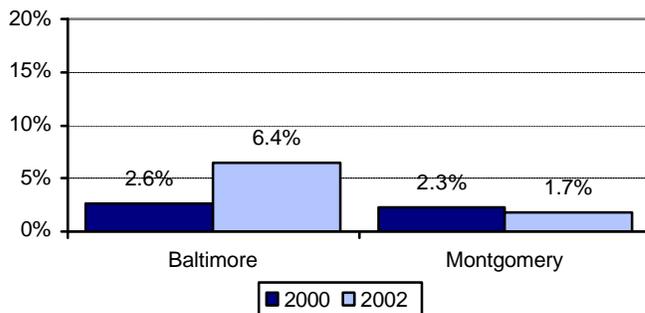
**Females:** Very few females in Baltimore and Montgomery County report smoking cigars. Approximately 1 to 2 percent of females residing in Baltimore smoke cigars compared to less than 1 percent of females in Montgomery County for both survey years.

**Figure 98. Males Current Use of Cigars**



**Males:** Cigar smoking among males in Baltimore increased from 2000 to 2002. In Montgomery County, cigar use among males remains constant at approximately 9.5 percent.

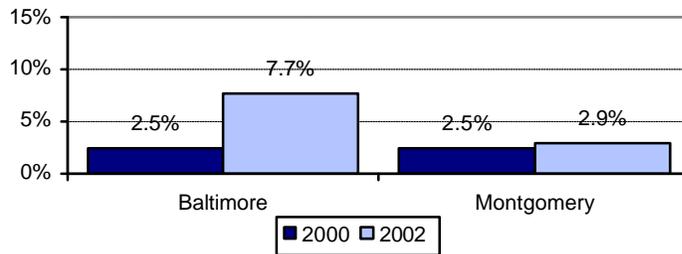
**Figure 99. Target Minorities Current Use of Cigars**



**Targeted Minorities:** Cigar smoking in Baltimore among targeted minorities increased from 2000 at 2.6 percent to 2002 at 6.4 percent. In Montgomery County, cigar use among targeted minorities remained constant at approximately 2 percent.

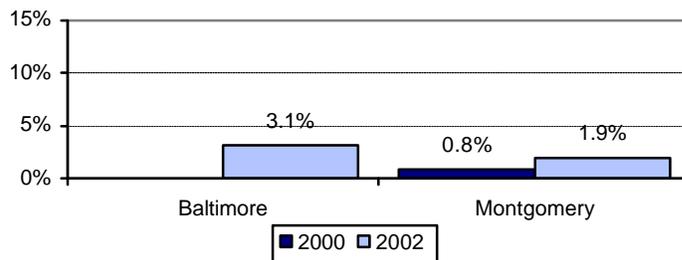
# Adult Cigar Use

Figure 100. African Americans  
Current Use of Cigars



**African Americans:** Cigar smoking among African Americans in Baltimore increased from 2000 at 2.5 percent to 2002 at 7.7 percent. In Montgomery County, cigar use among males remains constant at less than 3 percent.

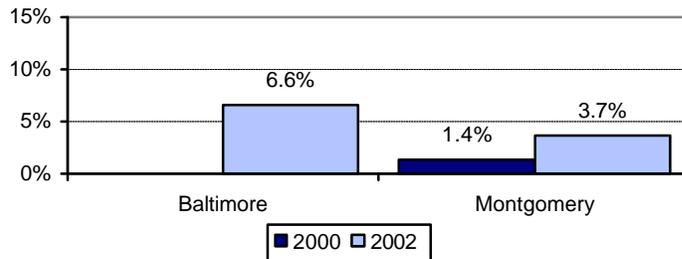
Figure 101. Asians  
Current Use of Cigars



**Asians\*:** Cigar use among Asian adults is less than 2 percent in Montgomery County for both survey years. However, the small sample size for Asians in 2000 provided unreliable data with large confidence intervals.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

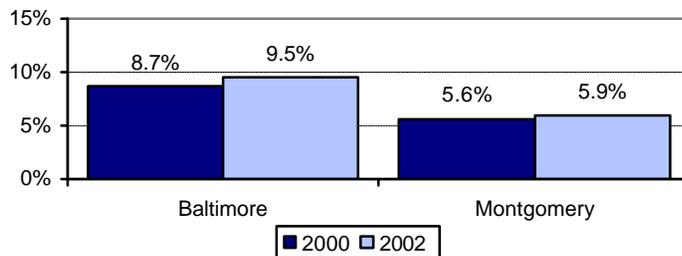
Figure 102. Hispanics  
Current Use of Cigars



**Hispanics\*:** Cigar use appears to increase from 1.4 percent to 3.7 percent among Hispanics in Montgomery County from 2000 to 2002. However, the small sample size for Hispanics in 2000 provided unreliable data with large confidence intervals.

**\*Note:** Due to the extremely small number of Hispanic respondents in Baltimore in 2000, no data are shown for this population.

Figure 103. Whites  
Current Use of Cigars



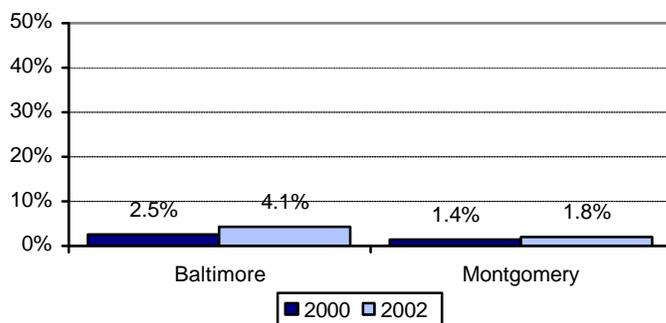
**Whites:** For Cigar use remained essentially unchanged in both Baltimore and Montgomery County from 2000 to 2002.



# Adult Initiation of Cigarette Use

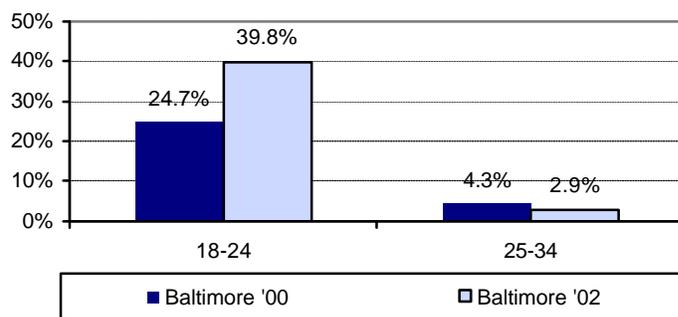
Two variables were used to determine if an adult had begun using cigarettes within the past two years preceding the survey, making them a recent initiator. The first was current age; the second was the age at which they began smoking cigarettes.

Figure 104. Overall Initiation of Cigarette Use



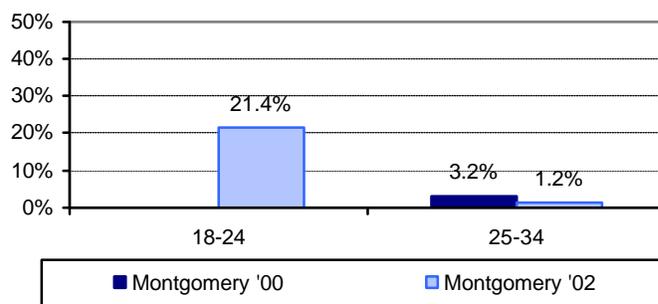
**Overall:** The percentage of adults in Baltimore who began smoking cigarettes within the past two years increased from 2.5 percent in 2000 to 4.1 percent in 2002. Among adults in Montgomery County, the percentage who began smoking cigarettes within the past two years remained essentially the same from 2000 to 2002.

Figure 105. Age - Baltimore County Initiation of Cigarette Use



**Age\*:** In both jurisdictions, only adults ages 18-34 started smoking cigarettes within the past two years. In Baltimore City, the proportion of 18-24 year old adults initiating smoking within the past two years increased from 24.7 percent in 2000 to 39.8 percent in 2002; the proportion of 25-34 year olds decreased from 4.3 percent in 2000 to 2.9 percent in 2002.

Figure 106. Age - Montgomery County Initiation of Cigarette Use

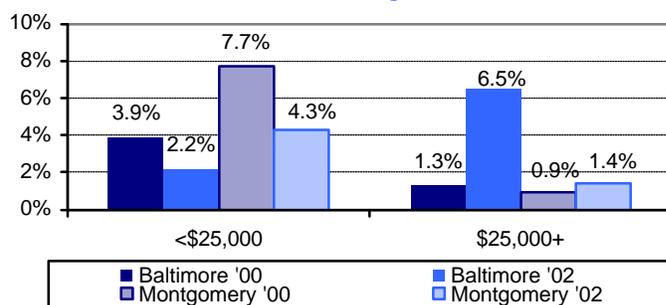


Among 25-34 year olds in Montgomery County, the proportion of adults who began smoking cigarettes in the past two years decreased from 3.2 percent in 2000 to 1.2 percent in 2002.

**\*Note:** Due to the small number of respondents in the Montgomery '00 18-24 age group, no conclusions can be drawn from the data. See tables for N and 95 percent confidence interval.

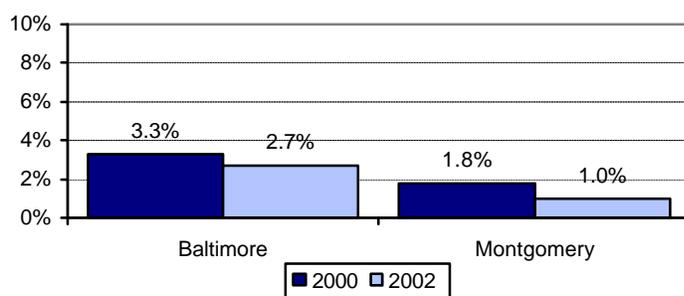
# Adult Initiation of Cigarette Use

Figure 107. Income  
Initiation of Cigarette Use



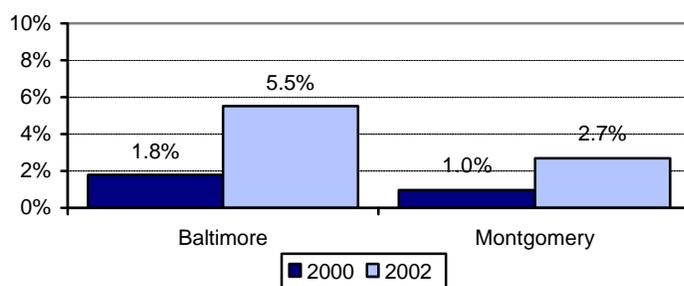
**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were more likely at 3.9 percent to be recent initiators of cigarette smoking than those earning more than \$25,000 per year at 1.3 percent. By 2002, the two groups reversed, with the higher income group more likely to be recent initiators. In Montgomery County, the low income group was more likely to contain recent initiators in 2000, but the two groups looked more similar in 2002.

Figure 108. Females  
Initiation of Cigarette Use



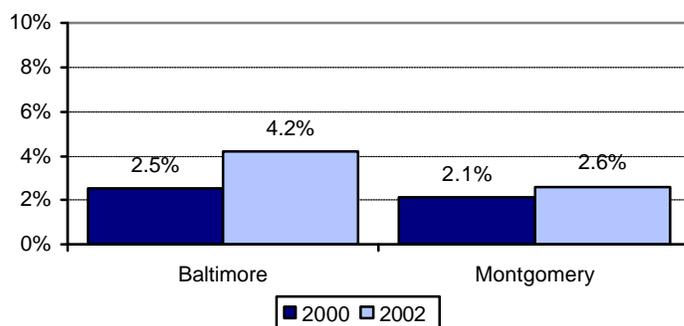
**Females:** In Baltimore, 3.3 percent of females recently initiated cigarette smoking in 2000 compared to 2.7 percent in 2002. In Montgomery County, 1.8 percent of females recently initiated cigarette smoking in 2000 compared to 1.0 percent in 2002.

Figure 109. Males  
Initiation of Cigarette Use



**Males:** In Baltimore, the recent initiation of cigarette use increased among males from 1.8 percent in 2000 to 5.5 percent in 2002. In Montgomery County, 1.0 percent of males recently initiated cigarettes smoking in 2000 compared to 2.7 percent in 2002.

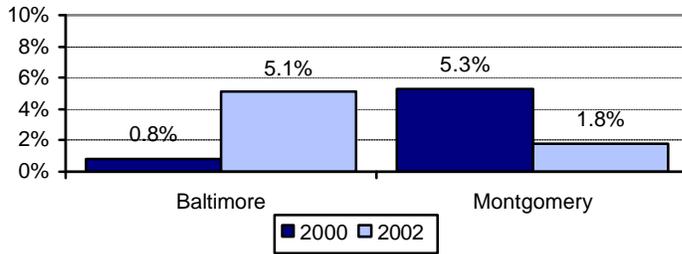
Figure 110. Target Minorities  
Initiation of Cigarette Use



**Targeted Minorities:** Recent initiation of cigarette smoking by targeted minorities in Baltimore increased from 2.5 percent in 2000 to 4.2 percent in 2002. In Montgomery County, recent initiation of cigarette smoking increased from 2.1 percent to 2.6 percent.

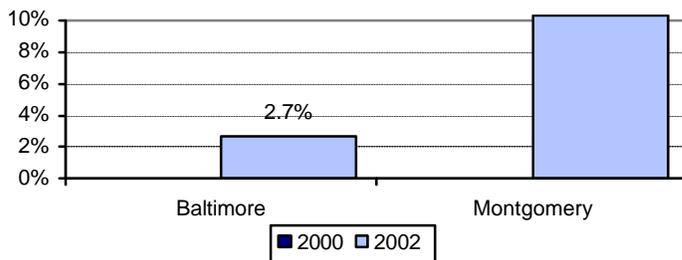
# Adult Initiation of Cigarette Use

**Figure 111. African Americans  
Initiation of Cigarette Use**



**African Americans:** African Americans residing in Baltimore were more likely to have initiated cigarette smoking in 2002 (5.1%) compared to 2000 (0.8%). African Americans in Montgomery County were less likely to have initiated cigarette use in 2002 (5.3%) than in 2000 (1.8%).

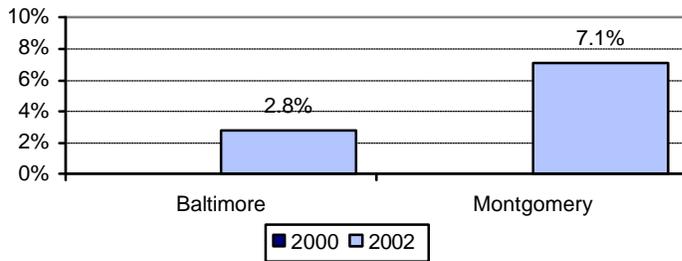
**Figure 112. Asians  
Initiation of Cigarette Use**



**Asians\*:** The percent of Asian adults recently initiating cigarette use was 2.7 percent in Baltimore and 10.3 percent in Montgomery County.

*\*Note:* Due to the extremely small number of Asian respondents in both jurisdictions in 2000, no data are shown for these populations.

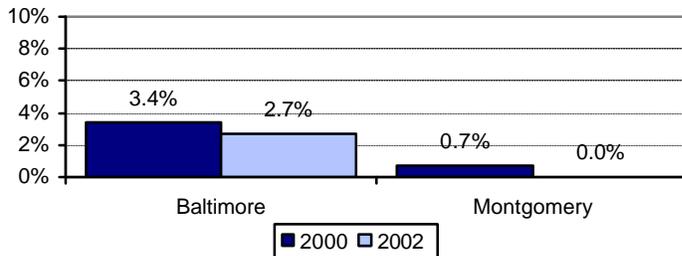
**Figure 113. Hispanics  
Initiation of Cigarette Use**



**Hispanics\*:** The percent of Hispanic adults recently initiating cigarette use was 2.8 percent in Baltimore and 7.1 percent in Montgomery County.

*\*Note:* Due to the extremely small number of Hispanic respondents in both jurisdictions in 2000, no data are shown for these populations.

**Figure 114. Whites  
Initiation of Cigarette Use**

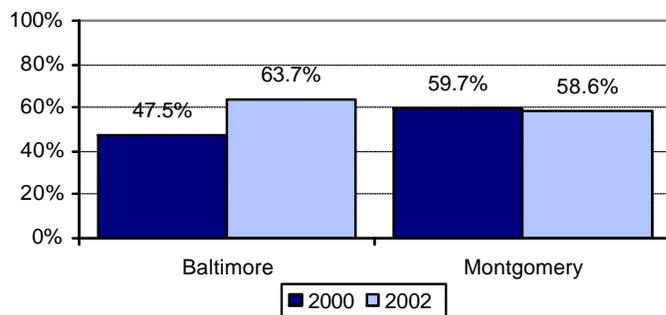


**Whites:** Recent initiation of cigarette smoking stayed relatively stable among White adults living in Baltimore at around 3 percent. Among White adults living in Montgomery County, recent initiation remained below one percent and approaches complete elimination.

# Adult Cessation of Cigarette Use

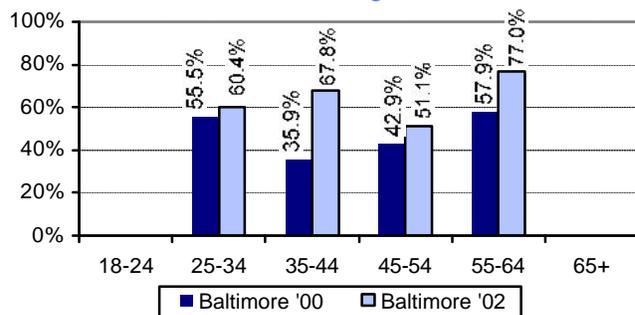
Adults were asked if they had stopped smoking cigarettes for one day or longer because they were trying to quit.

Figure 115. Overall Cessation of Cigarettes



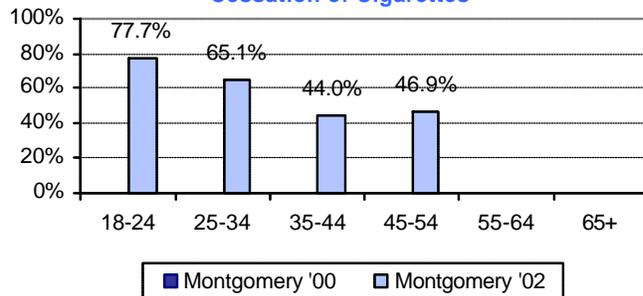
**Overall:** The percentage of adults in Baltimore who attempted to quit smoking cigarettes increased significantly from 47.5 percent in 2000 to 63.7 percent in 2002. Meantime, the percentage of adults in Montgomery County who tried to quit was constant at approximately 59 percent at both points in time.

Figure 116. Age - Baltimore City Cessation of Cigarettes



**Age\*:** In Baltimore, the percentage of smokers who said they tried to quit smoking cigarettes increased in all of the age groups for which the number of respondents was sufficient to allow the reporting of data. The only statistically significant increase in cessation attempts was in the 35-44 age group, whose quit attempts increased from 35.9 percent in 2000 to 67.8 percent in 2002.

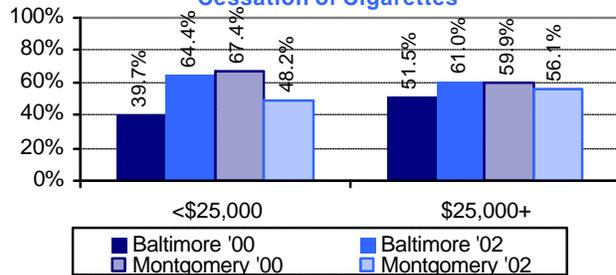
Figure 117. Age - Montgomery County Cessation of Cigarettes



**\*Note:** Due to the extremely small number of cigarette smoking respondents in Montgomery County in 2000 who attempted to quit smoking cigarettes in all age groups, and for respondents from Baltimore in the 18-24 year old and 65+ age groups in both years, no data are shown for this population.

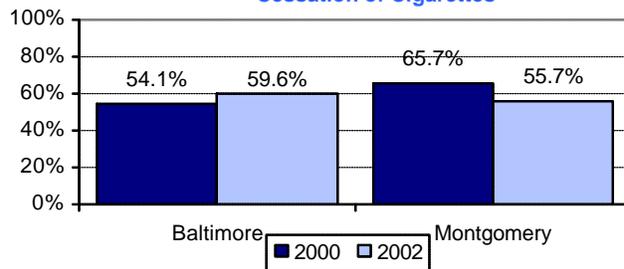
# Adult Cessation of Cigarette Use

Figure 118. Income Cessation of Cigarettes



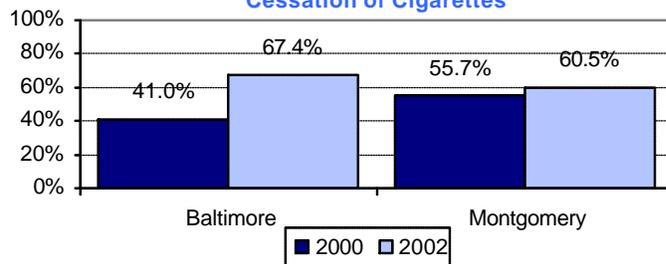
**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were less likely at 39.7 percent to have tried to quit cigarette use than those earning more than \$25,000 per year at 51.5 percent. By 2002, the two groups looked similar, with the low income group having increased to 64.4 percent while the high income group decreased to 61.0 percent. In Montgomery County, the two income groups looked fairly similar at both points in time, with the low income group trying to quit at a higher rate in 2000, but the high income group trying to quit at a higher rate in 2002.

Figure 119. Females Cessation of Cigarettes



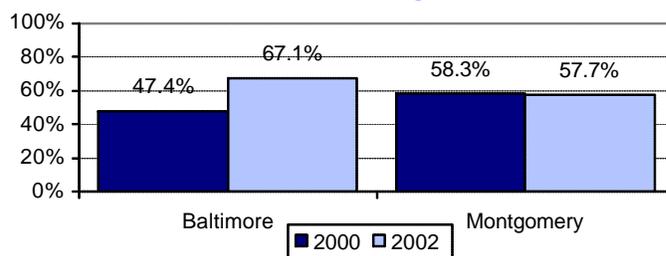
**Females:** While the rate quit attempts among adult females in Baltimore increased from 54.1 percent in 2000 to 59.6 percent in 2002, the rate of quit attempts among adult females in Montgomery County decreased from 65.7 percent in 2000 to 55.7 percent in 2002.

Figure 120. Males Cessation of Cigarettes



**Males:** In Baltimore, the rate of quit attempts among adult males increased significantly from 41.0 percent in 2000 to 67.4 percent in 2002. In Montgomery County, the rate of quit attempts increased from 55.7 percent in 2000 to 60.5 percent in 2002.

Figure 121. Target Minorities Cessation of Cigarettes

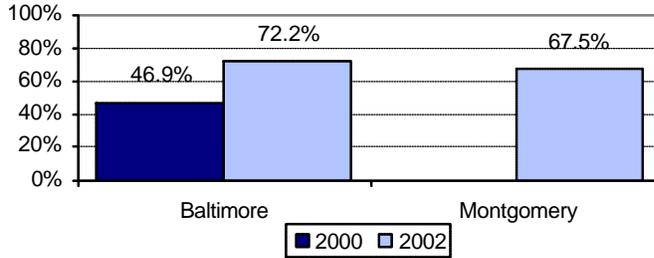


**Targeted Minorities:** In Baltimore, the rate of quit attempts among targeted minority adults increased significantly from 47.4 percent in 2000 to 67.1 percent in 2002. In Montgomery County, the rate of quit attempts among targeted minority adults remained constant at approximately 58 percent in both years.



# Adult Cessation of Cigarette Use

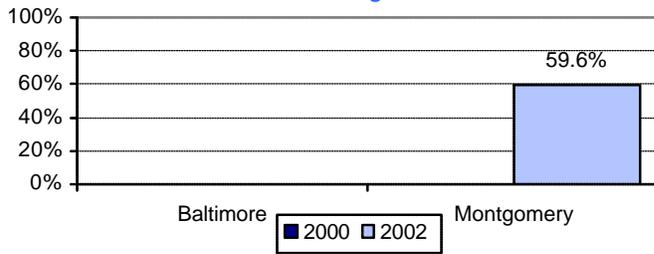
**Figure 122. African Americans Cessation of Cigarettes**



**African Americans\*:** In Baltimore, the rate of quit attempts among African American adults increased significantly from 46.9 percent to 72.2 percent.

**\*Note:** Due to the extremely small number of African American respondents in Montgomery County in 2000, no data are shown for this population.

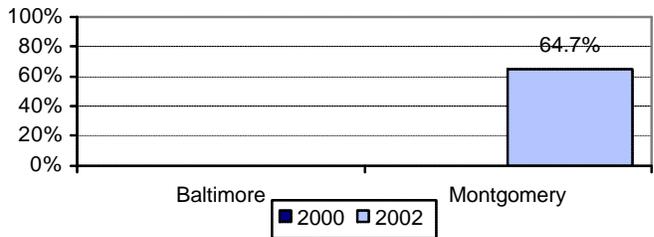
**Figure 123. Asians Cessation of Cigarettes**



**Asians\*:** The 2002 data for Montgomery County represent the first valid estimates of Asian adult smokers who have tried to quit smoking cigarettes.

**\*Note:** Due to the extremely small number of Asian respondents who smoked in Baltimore during both years, and in Montgomery County in 2000, no data are shown for this population.

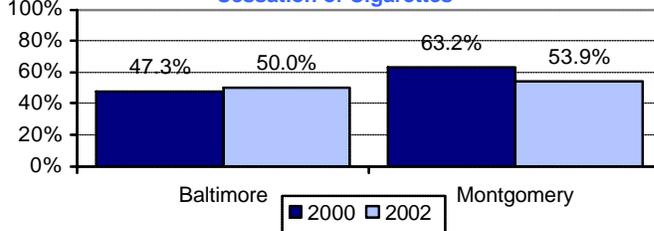
**Figure 124. Hispanics Cessation of Cigarettes**



**Hispanics\*:** The 2002 data for Montgomery County represent the first valid estimates of Hispanic adult smokers who have tried to quit smoking cigarettes.

**\*Note:** Due to the extremely small number of Hispanic respondents who smoked in Baltimore during both years, and in Montgomery County in 2000, no data are shown for this population.

**Figure 125. Whites Cessation of Cigarettes**



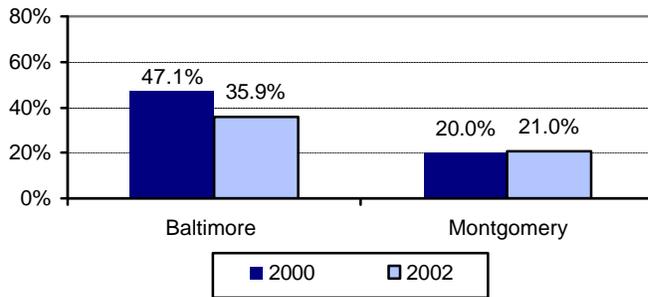
**Whites:** In Baltimore, the rate of quit attempts among White adults increased slightly from 47.3 percent in 2000 to 50.0 percent in 2002. In Montgomery County, the rate of quit attempts decreased from 63.2 percent in 2000 to 53.9 percent in 2002.



# Environmental Tobacco Smoke: Households

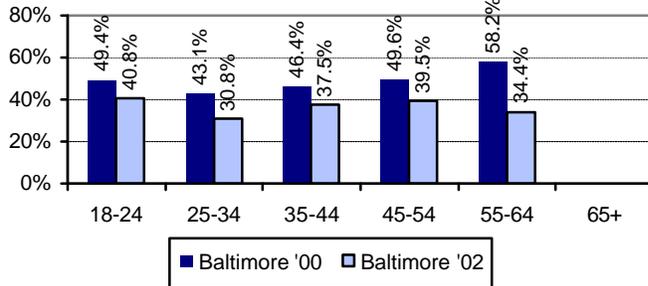
Two variables were used to determine if children lived with an adult smoker. The first was whether there was an adult in the household who smoked, and the second was whether there were children under the age of 18 living in the household.

**Figure 126. Overall Adult Smokers with Children**



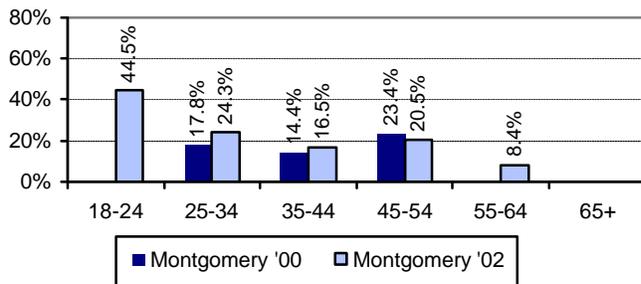
**Overall:** In Baltimore, exposure of minor children to adult cigarette smoke in the home dropped from 47.1 percent in 2000 to 35.9 percent in 2002 and approaches statistical significance. In Montgomery County, the percentage of households with at least one adult smoker and at least one minor child remained constant at approximately 20 percent.

**Figure 127. Age - Baltimore City Adult Smokers with Children**



**Age\*:** In Baltimore, in all age groups, there was a decline from 2000 to 2002 in the percent of households reporting an adult smoker and one or more minor children. In Montgomery County, a mixed pattern of increases and decreases occurred from 2000 to 2002 in the percent of households with an adult smoker and one or more minor children

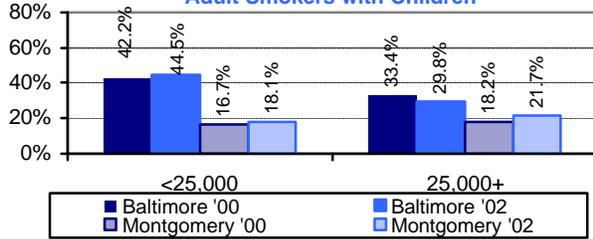
**Figure 128. Age - Montgomery County Adult Smokers with Children**



**\*Note:** Due to the extremely small number of 65+ age group respondents from Montgomery County in 2000, no data are shown for this population.

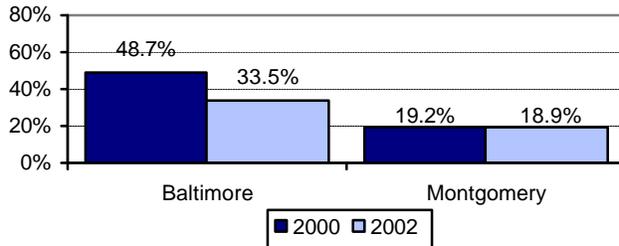
# Environmental Tobacco Smoke: Households

**Figure 129. Income Adult Smokers with Children**



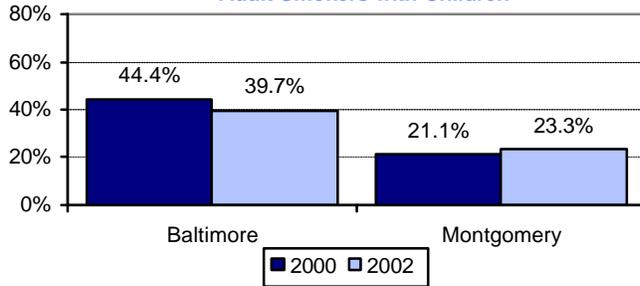
**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were more likely at 42.2 percent live in a household containing an adult smoker and at least one minor child than those earning more than \$25,000 per year at 33.4 percent. By 2002, the two groups were even further apart, with the low income group at 44.5 percent and the high income group at 29.8 percent. In Montgomery County, the two income groups were virtually identical in both years.

**Figure 130. Females Adult Smokers with Children**



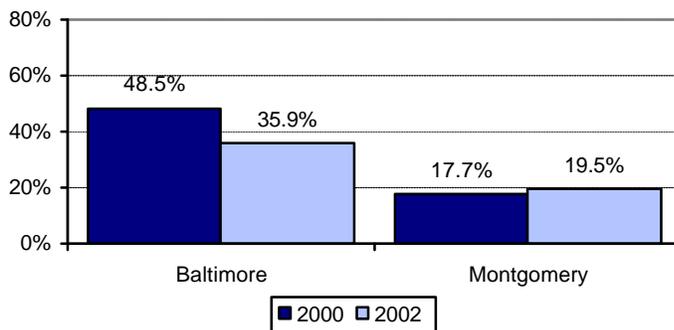
**Females:** The proportion of adult females in Baltimore who live in households containing at least one adult smoker and at least one minor child decreased significantly from 2000 at 48.7 percent to 2002 at 33.5 percent. In Montgomery County, the number of females living in households containing one or more adult smokers and one or more minor children remained constant at approximately 19 percent from 2000 to 2002.

**Figure 131. Males Adult Smokers with Children**



**Males:** In Baltimore, the number of males living in households containing one or more adult smokers and one or more minor children decreased from 2000 to 2002. In Montgomery County, the number of males living in households containing one or more adult smokers and one or more minor children remained constant at approximately 22 percent from 2000 to 2002.

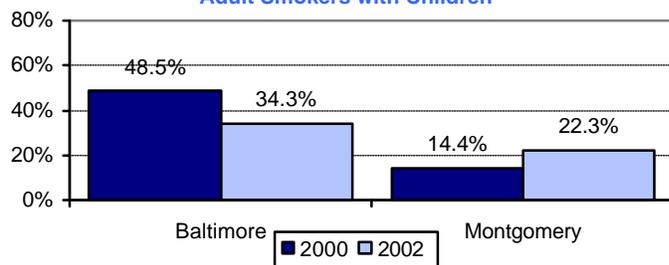
**Figure 132. Target Minorities Adult Smokers with Children**



**Targeted Minorities:** In Baltimore, the number of targeted minorities living in households containing one or more adult smokers and one or more minor children decreased from 48.5 percent in 2000 to 35.9 percent in 2002. In Montgomery County, the number of targeted minorities living in households containing one or more adult smokers and one or more minor children remained constant at approximately 18 percent from 2000 to 2002.

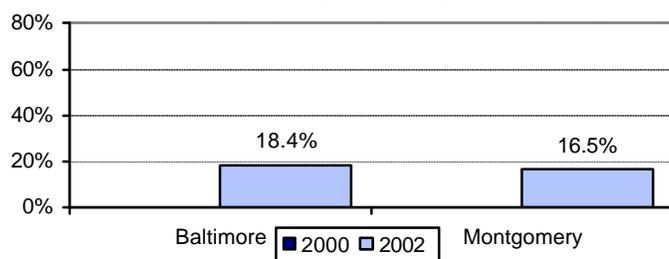
# Environmental Tobacco Smoke: Households

Figure 133. African Americans  
Adult Smokers with Children



**African Americans:** In Baltimore, the number of African Americans living in households containing one or more adult smokers and one or more minor children decreased from 48.5 percent in 2000 to 34.3 percent in 2002. In Montgomery County, the number of females living in households containing one or more adult smokers and one or more minor children increased from 14.4 percent in 2000 to 22.3 percent in 2002.

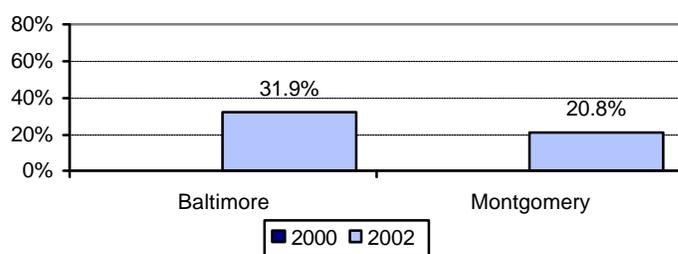
Figure 134. Asians  
Adult Smokers with Children



**Asians\*:** The 2002 data represent the first valid estimates of Asians living in households with adult smokers and minor children for Baltimore City at 18.4 percent and Montgomery County at 16.5 percent.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

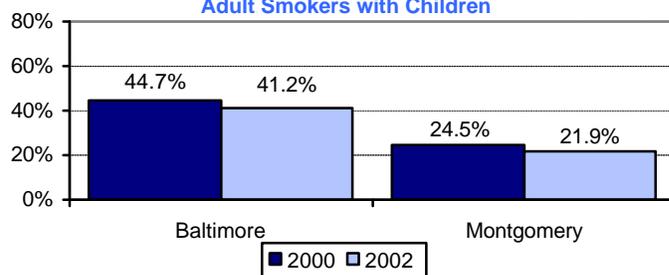
Figure 135. Hispanics  
Adult Smokers with Children



**Hispanics\*:** The 2002 data represent the first valid estimates of Hispanics living in households with adult smokers and minor children in Baltimore City at 31.9 percent and Montgomery County at 20.8 percent.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

Figure 136. Whites  
Adult Smokers with Children



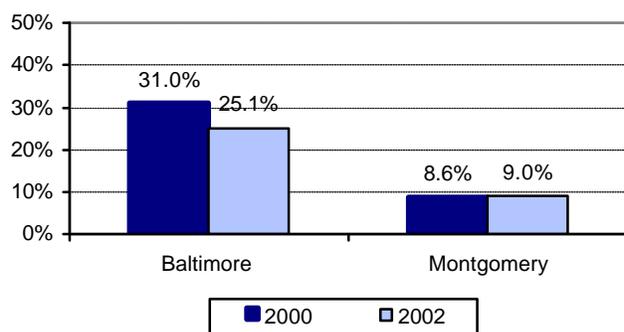
**Whites:** The number of White respondents in households with adult smokers and minor children decreased slightly from 2000 to 2002 in both jurisdictions.



# Adult Exposure to ETS in the Home

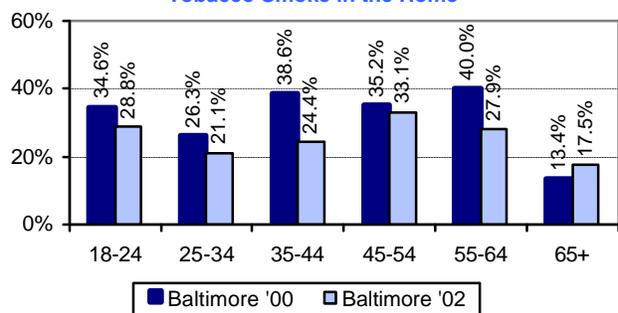
Adults were asked whether anyone had smoked tobacco products in their home during the previous seven days.

Figure 137. Overall Tobacco Smoke in the Home



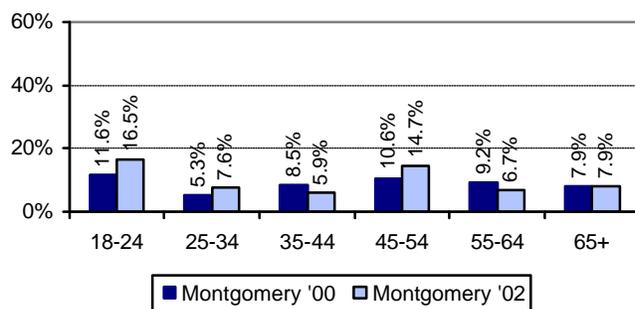
**Overall:** In Baltimore, the percentage of adults exposed to tobacco smoke during the previous seven days decreased from 31.0 percent in 2000 to 25.1 percent in 2002. Meantime, the proportion of adults in Montgomery County reporting that anyone had smoked in their homes during the past seven days remained constant from 2000 to 2002 at approximately nine percent.

Figure 138. Age - Baltimore City Tobacco Smoke in the Home



**Age:** In Baltimore, the proportion of adults reporting that anyone had smoked in their homes during the past seven days decreased for all age groups except the 65+ age group. In Montgomery County, there is a mixed pattern of increases and decreases in the proportion of adults who report anyone had smoked in their homes during the past seven days.

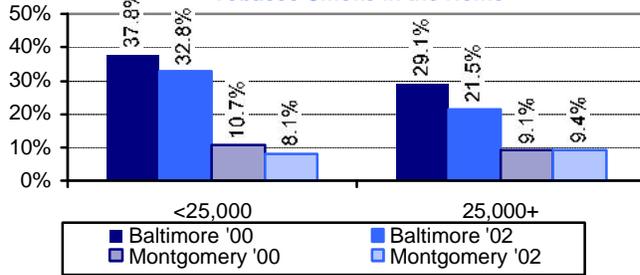
Figure 139. Age - Montgomery County Tobacco Smoke in the Home





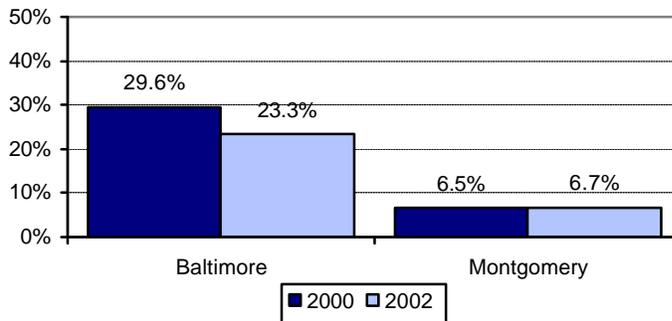
# Adult Exposure to ETS in the Home

**Figure 140. Income Tobacco Smoke in the Home**



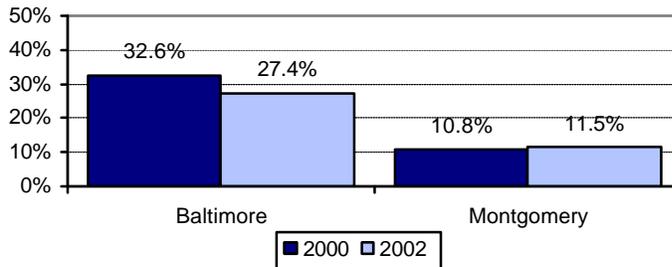
**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were more likely at 37.8 percent to have been exposed to tobacco smoke in their homes during the prior seven days than those earning more than \$25,000 per year at 29.1 percent. By 2002, both groups had declined, but the low income group maintained a higher rate of exposure to tobacco smoke. In Montgomery County, the two income groups were virtually identical in both years.

**Figure 141. Females Tobacco Smoke in the Home**



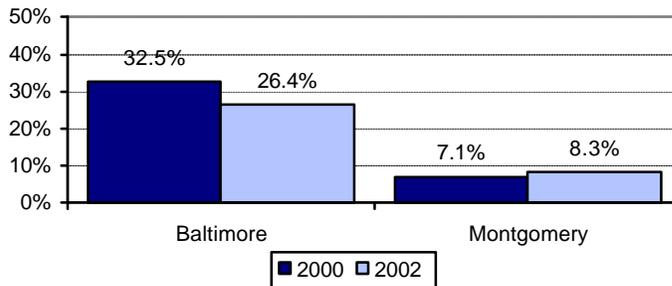
**Females:** In Baltimore, the proportion of adult females who said they were exposed to tobacco smoke in their homes during the prior seven days decreased from 29.6 percent in 2000 to 23.3 percent in 2002. In Montgomery County, the proportion remained virtually unchanged at less than seven percent.

**Figure 142. Males Tobacco Smoke in the Home**



**Males:** In Baltimore, the proportion of adult males who said that they were exposed to tobacco smoke in their homes during the prior seven days decreased from 32.6 percent in 2000 to 27.4 percent in 2002. In Montgomery County, the proportion remained virtually unchanged at approximately 11 percent.

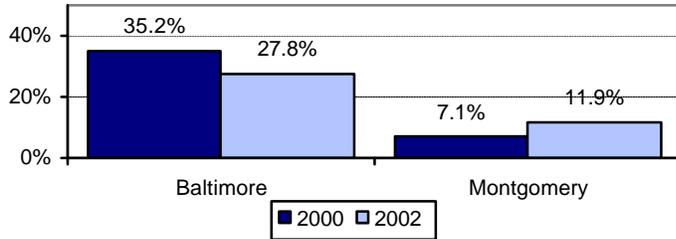
**Figure 143. Target Minorities Tobacco Smoke in the Home**



**Targeted Minorities:** In Baltimore, the proportion of targeted minorities who said they were exposed to tobacco smoke in their homes during the prior seven days decreased from 32.5 percent in 2000 to 26.4 percent in 2002. In Montgomery County, the proportion remained virtually unchanged.

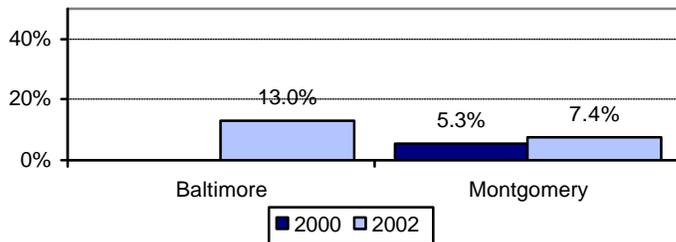
# Adult Exposure to ETS in the Home

**Figure 144. African Americans Tobacco Smoke in the Home**



**African Americans:** In Baltimore, the proportion of African American adults who said they were exposed to tobacco smoke during the prior seven days decreased from 35.2 percent in 2000 to 27.8 percent in 2002. In Montgomery County, the proportion increased from 7.1 percent in 2000 to 11.9 percent in 2002.

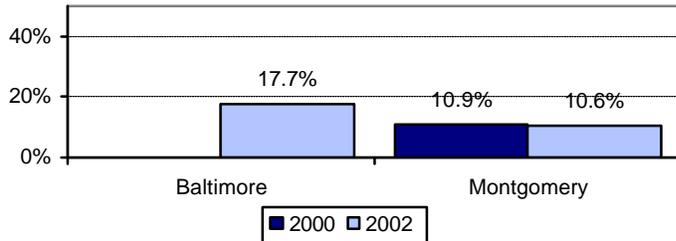
**Figure 145. Asians Tobacco Smoke in the Home**



**Asians\*:** In Montgomery County, the proportion of Asian adults who said they were exposed to tobacco smoke during the prior seven days increased from 5.3 percent in 2000 to 7.4 percent in 2002. The 2002 data represent the first valid estimates of the exposure of adult Asians to tobacco smoke in their homes at 13.0 percent for Baltimore and 7.4 percent for Montgomery County.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

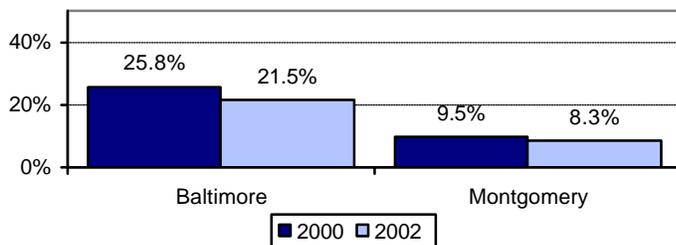
**Figure 146. Hispanics Tobacco Smoke in the Home**



**Hispanics\*:** In Montgomery County, the proportion of Hispanic adults who said they were exposed to tobacco smoke in their homes remained constant at under 11 percent from 2000 to 2002. The 2002 data represent the first valid estimates of the exposure of adult Hispanics to tobacco smoke in their homes at 17.7 percent for Baltimore 10.6 percent for Montgomery County.

**\*Note:** Due to the extremely small number of Hispanic respondents in Baltimore in 2000, no data are shown for this population.

**Figure 147. Whites Tobacco Smoke in the Home**



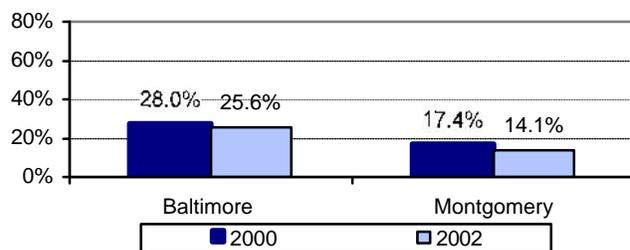
**Whites:** In Baltimore, proportion of White adults who said they were exposed to tobacco smoke during the prior seven days decreased from 25.8 percent in 2000 to 21.5 percent in 2002. In Montgomery County, the proportion of White adults reporting exposure to tobacco smoke remained fairly constant from 2000 to 2002 at approximately 9 percent.



# Adult Exposure to ETS in the Workplace

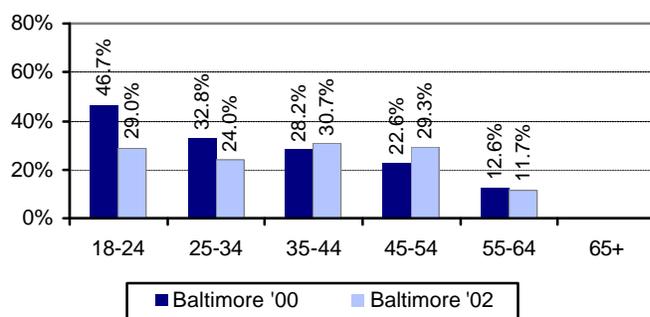
Adults were asked whether they were exposed to second-hand smoke from cigarettes, cigars, or pipes in their workplace.

Figure 148. Overall Tobacco Smoke at Work



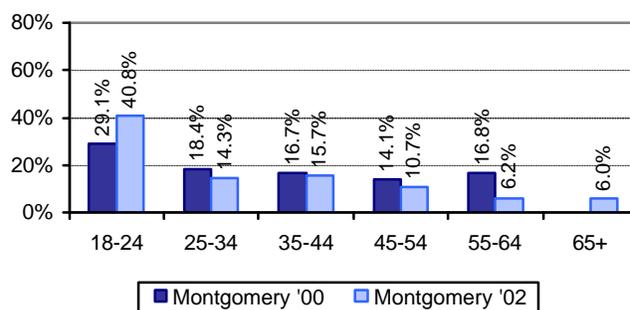
**Overall:** In Baltimore, the percentage of adults exposed to second-hand smoke at work decreased from 28.0 percent in 2000 to 25.6 percent in 2002. Meantime, the proportion of adults in Montgomery County reporting exposure to second-hand smoke at work decreased from 17.4 percent to 14.1 percent.

Figure 149. Age - Baltimore County Tobacco Smoke at Work



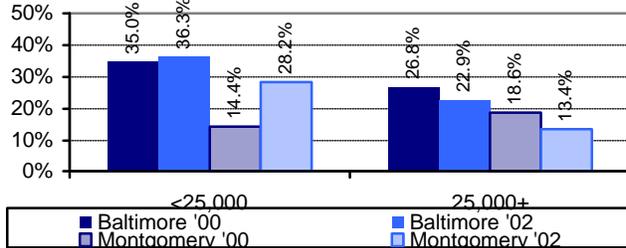
**Age:** In both Baltimore and Montgomery County, there is a mixed pattern of increases and decreases of exposure to second-hand smoke in the workplace among the various age groups.

Figure 150. Age -Montgomery County Tobacco Smoke at Work

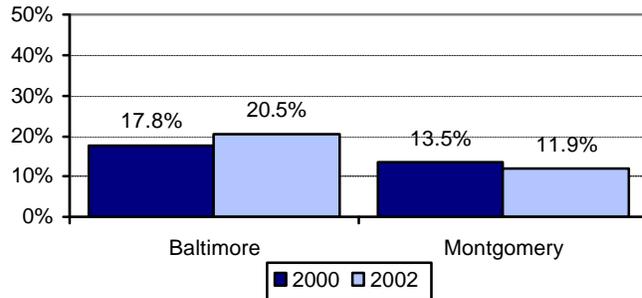


# Adult Exposure to ETS in the Workplace

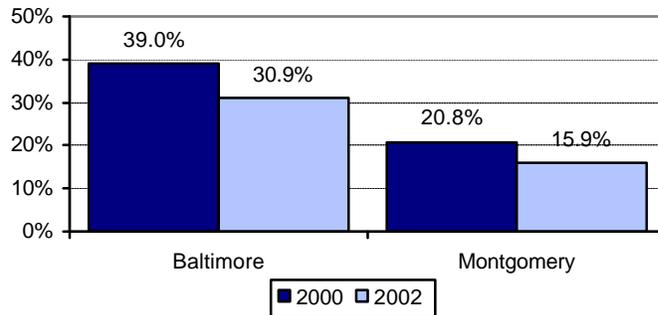
**Figure 151. Income Tobacco Smoke at Work**



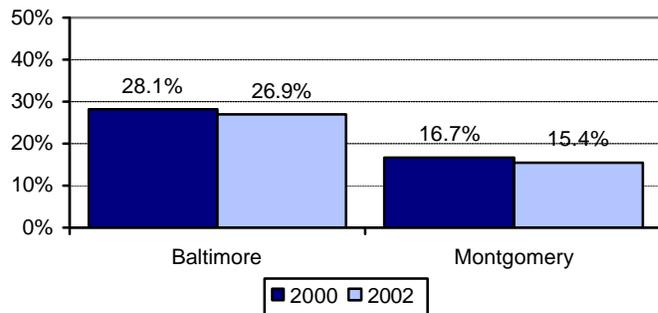
**Figure 152. Females Tobacco Smoke at Work**



**Figure 153. Males Tobacco Smoke at Work**



**Figure 154. Target Minorities Tobacco Smoke at Work**



**Income:** In Baltimore, those earning less than \$25,000 per year in 2000 were more likely at 35.0 percent to have been exposed to second-hand smoke in the workplace than those earning more than \$25,000 per year at 26.8 percent. By 2002, the two groups were even further apart, with the low income group at 36.3 percent and the high income group at 22.9 percent. In Montgomery County, the low income group began with a lower rate of exposure than the high income group, but by 2002, the low income group reported a higher rate of exposure at 28.2 percent compared to a 13.4 percent in the high income group.

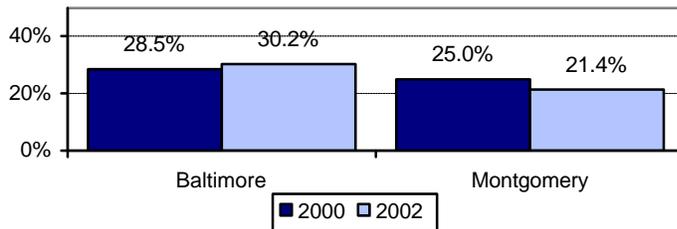
**Females:** In Baltimore, the proportion of adult females reporting they were exposed to second-hand smoke in the workplace increased slightly from 17.8 percent in 2000 to 20.5 percent in 2002. In Montgomery County, the proportion of adult females reporting they were exposed to second-hand smoke in the workplace decreased slightly from 13.5 percent in 2000 to 11.9 percent in 2002.

**Males:** In Baltimore, the proportion of adult males reporting they were exposed to second-hand smoke in the workplace decreased from 39.0 percent in 2000 to 30.9 percent in 2002. In Montgomery County, the proportion of adult males reporting they were exposed to second-hand smoke in the workplace decreased from 20.8 percent in 2000 to 15.9 percent in 2002.

**Targeted Minorities:** In Baltimore and Montgomery County, the proportion of targeted minority exposed to second-hand smoke in the workplace remained fairly constant from 2000 to 2002.

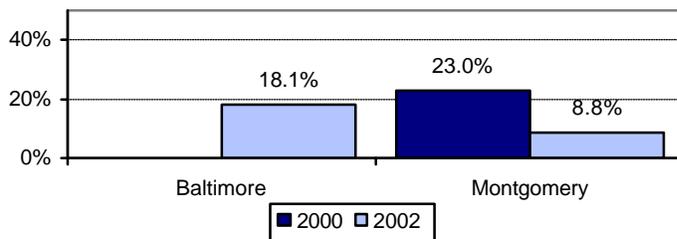
# Adult Exposure to ETS in the Workplace

**Figure 155. African Americans Tobacco Smoke at Work**



**African Americans:** In Baltimore, the percentage of African American adults exposed to second-hand smoke in the workplace increased slightly from 28.5 percent in 2000 to 30.2 percent in 2002. In Montgomery County, the percentage of African American adults exposed to second-hand smoke in the workplace decreased from 25.0 percent in 2000 to 21.4 percent in 2002.

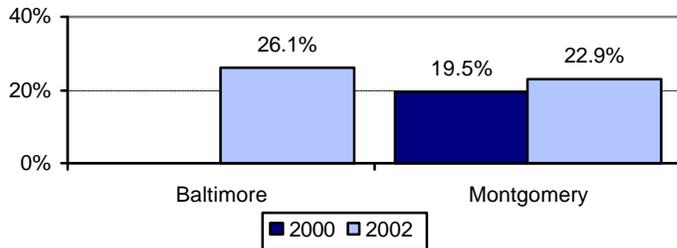
**Figure 156. Asians Tobacco Smoke at Work**



**Asians\*:** In Montgomery County, the percentage of Asian adults reporting exposure to second-hand smoke in the workplace decreased from 23 percent in 2000 to 8.8 percent in 2002. The 2002 data represent the first valid estimates of the exposure of adult Asians to second-hand smoke in the workplace at 18.1 percent for Baltimore and 8.8 percent for Montgomery County.

**\*Note:** Due to the extremely small number of Asian respondents in Baltimore in 2000, no data are shown for this population.

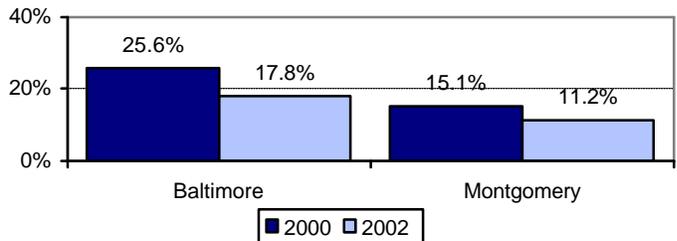
**Figure 157. Hispanics Tobacco Smoke at Work**



**Hispanics\*:** In Montgomery County, the percentage of Hispanic adults reporting exposure to second-hand smoke in the workplace increased slightly from 19.5 percent in 2000 to 22.9 percent in 2002. The 2002 data represent the first valid estimates of the exposure of adult Hispanics to tobacco smoke in their homes at 26.1 percent for Baltimore and 22.9 percent for Montgomery County.

**\*Note:** Due to the extremely small number of Hispanic respondents in Baltimore in 2000, no data are shown for this population.

**Figure 158. Whites Tobacco Smoke at Work**



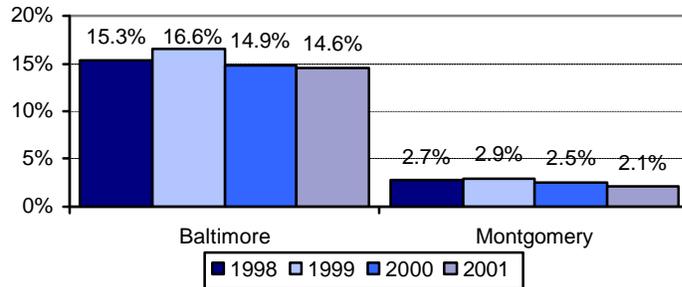
**Whites:** In Baltimore, the proportion of White adults exposed to second-hand smoke in the workplace decreased from 25.6 percent in 2000 to 17.8 percent in 2002. In Montgomery County, the proportion of White adults exposed to second-hand smoke in the workplace decreased from 15.1 percent in 2000 to 11.2 percent in 2002.



# Adult Smoking and Pregnancy

Women who had a live birth are routinely asked whether they smoked cigarettes at any time during pregnancy. The data presented below from the Maryland Vital Statistics Database provide the most complete picture of tobacco use during pregnancy because they reflect all reported live births.

Figure 159. Cigarette Smoking During Pregnancy



**Females:** Approximately 14 to 16 percent of women who gave birth in each year from 1998 through 2001 in Baltimore indicated that they smoked during pregnancy. Approximately 2 to 3 percent of women who gave birth during each of the same four years in Montgomery County indicated that they smoked during pregnancy. In both jurisdictions, it appears that few inroads have been made to decrease smoking among pregnant women.



# Appendix A: Methodology

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## 2002 Maryland Youth Tobacco Survey Methods

The purpose of the Maryland Youth Tobacco Survey (MYTS) 2002 was to gather attitude, usage, and exposure information regarding tobacco products among Maryland's private and alternative public school populations. To accomplish this, the MYTS used a paper-and-pencil questionnaire administered following CDC's methodology for the Youth Tobacco Survey (YTS).

### Questionnaire Development

The questionnaire was developed by the DHMH, in collaboration with the CDC Office on Smoking and Health, in the Fall 2000. The MYTS included a core set of YTS questions developed by CDC, first implemented by a small number of States as early as 1998, and now adopted by the overwhelming majority of States in conducting their own YTS. The questionnaire covered eight topics: initiation of cigarette smoking, intensity of current cigarette use, cigarette brand preference and purchasing behavior, use of other tobacco products, tobacco use cessation, exposure to second-hand smoke, social context of tobacco use, and background information of respondents. The 2000 questionnaire contained 86 items; four additional questions developed by the American Legacy Foundation dealing with tobacco addiction were added to the 2002 instrument, bringing the number of items to 90. The questionnaire was designed to be identical for both alternative and private schools.

### Sampling

#### *Sample Design*

Separate private high school and private middle school samples were selected with an objective of having 95 percent confidence limits of approximately  $\pm 6$  percent around key smoking variables. For each private school sample, the sampling frame consisted of all private schools with 10 or more students in grades 9-12 for the high schools and 10 or more students in grades 6-8 for the middle schools. A two-stage cluster sample design was used to produce a representative sample of high school students in grades 9-12 and middle school students in grades 6-8. The sampling program PC-Sample was used to draw both the private high school and private middle school samples.

The alternative school study was a census of all alternative schools across the State of Maryland. Initially, The Maryland State Department of Education (MSDE) developed a list of 41 alternative schools. However, 23 schools were deemed ineligible to participate based on current grade range and enrollment, populations being served (i.e., adults, home hospitals), or because they were no longer in operation. Based on discussions with local school system representatives, another two schools were identified as eligible for the study. Furthermore, one of the "schools" in a local jurisdiction was actually an umbrella organization for 12 individual alternative schools. Therefore, the final sample resulted in 32 alternative schools. All students attending these eligible schools were selected for participation in the study.

# Appendix A: Methodology

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## *Sampling Procedures*

School Level—The first-stage sampling frame consisted of all private schools containing 10 or more students in grades 9-12 for high schools and 10 or more students in grades 6-8 for the middle schools. Schools were selected with probability proportional to school enrollment size (PPS).

The private high school sample included 35 schools, and the private middle school sample included 47 schools.

The alternative school sample was a census of 32 middle schools and high schools.

Class Level—For the private schools, the second sampling stage consisted of systematic equal probability sampling (with a random start) of classes from each high school and middle school that participated in the survey. Private schools could opt for the sampling frame to include all 2<sup>nd</sup> period classes or courses required across all grades.

For the alternative schools, a census was conducted of all students enrolled in the school at the time of survey administration.

Student Level—At both the private and alternative schools, all students in a selected class were eligible to participate in the survey. Teachers were asked to complete make-up surveys for students who were absent the day of survey administration.

## **Data Collection**

### *Recruitment of Sampled Private Schools and Alternative Schools*

After the private school samples were drawn, umbrella organizations to which these schools belonged were contacted and asked to lend their support to the study. The schools under their purview received letters from the organizations recommending the school's participation. The small number of unaffiliated private schools were contacted directly and asked to participate. Once schools agreed to participate, possible dates to administer the survey were identified and participating classes were selected.

After eligible alternative schools were identified, the Maryland State Department of Education (MSDE) sent letters to the local Superintendents. These letters identified the selected schools and asked each Superintendent to appoint a Local School System (LSS) contact who would assist in coordinating activities associated with the survey. The LSS contacts provided school and principal information, which was then used to contact the schools to make arrangements for data collection activities. Alternative schools worked with schedulers to coordinate the most efficient manner in which to collect data from all members of their student population.

Teacher packets containing parent permission forms and other survey materials were mailed to the school contact person for distribution to the teachers one to two weeks prior to the date of data collection. All alternative schools and all but one private school in the MYTS agreed to use passive parental permission forms. One private school used an active parental permission form.

# Appendix A: Methodology

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## *Classroom-level Data Collection*

The MYTS was administered in both private and alternative schools between early-April and mid-June by 10 specially trained field staff. The field staff were all members of the previous data collection team who conducted the baseline MYTS. However, field staff completed an intensive training that included lectures, simulations, and group role-plays and discussions. Detailed arrangements and survey schedules were set prior to each school visit.

## **Weighting**

For both the private high school and middle school data, a weight variable was calculated for each student record to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of nonresponse. The weight used for estimation is given by:

$$W = W1 * W2 * f1 * f2 * f3 * f4$$

W1 = the inverse of the probability of selecting the school

W2 = the inverse of the probability of selecting the classroom within the school

f1 = a school-level nonresponse adjustment factor calculated by school size category (small, medium, large).

f2= a class adjustment factor calculated by school

f3 = a student-level nonresponse adjustment factor calculated by class

f4 = a post stratification adjustment factor calculated by gender and grade

Because the alternative school data represents the entire alternative school student population (or census), their data do not require weights.

## *Use of the Weighted Results*

For the private high school and middle school results, weighted results can be used to make important inferences concerning tobacco use risk behaviors of all private school students in grades 9-12 and 6-8, respectively. Unweighted alternative school results can be used to make important inferences concerning tobacco use risk behaviors of alternative middle and high school participants in grades 6-12. Table 1 outlines the MYTS 2002 response rates.

# Appendix A: Methodology

**Table 1 — MYTS Response Rates**

	Student			School			Combined
	Selected	Participated	%	Selected	Participated	%	
Private High	1,343	1,286	95.76%	35	25	71.43%	68.40%
Private Middle	2,167	2,012	92.85%	47	38	80.85%	75.07%
Alternative	2,008	1,458	72.60%	32	32	100%	72.60%

## 2002 Maryland Adult Tobacco Survey Methods

### Introduction

The 2002 Maryland Adult Tobacco Survey (MATS) was a specialized survey limited to two jurisdictions, Baltimore City and Montgomery County. The purpose of the specialized MATS was to pilot test methods for generating separate estimates with generally accepted levels of precision for racial/ethnic minority populations. The regular MATS, which strictly follows BRFSS protocol, seeks to represent racial/ethnic minority populations in the proportion in which they are found in the population; therefore, unless a particular racial/ethnic minority group represents a sizeable portion of that jurisdiction's population, the estimates for that population in the regular MATS will have a low level of precision and large confidence intervals. The two jurisdictions were selected because they represented extremes in high/low adult tobacco use on the 2000 MATS, and were regarded as having a reasonable likelihood of being able to generate separate estimates for nearly all of the targeted racial/ethnic groups. The objective of the special 2002 MATS was to develop separate estimates for both jurisdictions representing adults who self-identified as White or Caucasian, non-Hispanic; Black or African American, non-Hispanic, Asian, non-Hispanic, and Hispanic or Latino. Going into the 2002 special MATS, we recognized that the sampling and fielding procedures required to improve the precision of separate estimates for these four subpopulations would inevitably impair the precision of estimates for the jurisdiction-wide estimates. The same survey methods were used on the 2002 special MATS as on the 2000 regular MATS. The same questionnaire was used; however, the questionnaire was translated into Spanish, Vietnamese, Korean, and Chinese to facilitate generation of estimates for Hispanic and Asian populations.

### Sampling Design

The 2002 Maryland Adult Tobacco Survey sample was designed to ensure that minority groups are represented in sufficient numbers in the final sample of telephone households selected in two jurisdictions, Baltimore City and Montgomery County. The key minority groups are African Americans, Hispanics, and Asians, with required sample sizes of n=500 per group in each jurisdiction. Together with a fourth racial/ethnic group comprised of Whites, the requirements for n=500 interviews per group led to a total sample size of 2,000 completed interviews per jurisdiction.

# Appendix A: Methodology

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To ensure that the required sample sizes were met, two distinct sampling frames were used in each jurisdiction:

- 1) a telephone number sampling frame based on files of telephone exchanges, and
- 2) a surname based list of telephone numbers for each of the three key minority groups targeted by the survey.

In each jurisdiction, the two frames were unduplicated, and a stratified random sample was selected from each frame. The first sample was selected with Random Digit Dialing (RDD) methods, and the second sample was a simple random sample for each group list.

The samples were stratified according to the four groups so that in essence, the following samples were independently selected in each jurisdiction:

- 1) an RDD sample targeted to select proportionately more African Americans,
- 2) an RDD sample targeted to select proportionately more Hispanics,
- 3) an RDD sample targeted to select proportionately more Asians,
- 4) an RDD sample selected to represent the remainder of the population,
- 5) a list sample selected from the Asian list, and
- 6) a list sample selected from the Hispanic list.

These six sources may be regarded as primary sampling strata in each jurisdiction, and were taken into account in the weighting procedures described next.

## Weighting

For both jurisdictions, a weight variable was calculated for each respondent to reflect the likelihood of sampling each household respondent and to reduce bias by compensating for differing patterns of non-response. The weight used for estimation is given by:

$$W = W1 * W2 * F1 * F2$$

W1 = the inverse of the probability of selecting the sample telephone number

W2 = the inverse of the probability of selecting the adult respondent within the household

F1 = a non-response adjustment factor calculated by primary stratum

F2 = a post stratification adjustment factor calculated by gender, age, race and ethnicity

The first weighting factor accounts for the differential sampling probabilities assigned to telephone households in both the RDD and list frames. This probability of selection accounts for the multiple opportunities of selection from the multiple frames.

# Appendix A: Methodology

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Non-response adjustment factors were computed as the reciprocal of response rates separately within each stratum. Post-stratification adjustments were computed to force the weights to sum to population totals that are known from the 2000 US Census for the age, gender and race/ethnicity categories formed as post-strata.

## Sampling Activities

The MATS consisted of a random digit dialing (RDD) telephone sample, supplemented with targeted Hispanic and Asian surname lists, to produce a target of 500 interviews in each of four groups for two jurisdictions, for a total of 4,000 interviews. The sampling frame was stratified into four racial/ethnic groups:

- 1) White or Caucasian, non-Hispanic;
- 2) Black or African American, non-Hispanic;
- 3) Asian, non-Hispanic; and
- 4) Hispanic or Latino.

As with CDC's Behavioral Risk Factor Surveillance Survey (BRFSS), after which the MATS procedures are modeled, the MATS sample was drawn from the total non-institutionalized adult population residing in telephone-equipped dwelling units (DUs) in Baltimore City and Montgomery County. As with BRFSS sampling designs, the sample was drawn so that households with listed and unlisted telephone numbers were sampled in their correct proportions.

## Interviewer Training Overview

All interviewers receive initial training consisting of CATI program training, interviewing protocol training, and administrative issues before they are allowed to participate in project-specific training. Only ORC Macro's most senior interviewers, who have had extensive initial training and training in other similar projects, are allowed to join ORC Macro's health interviewing team. Some of the project-specific training methodologies that were employed on the 2002 MATS are as follows:

Purpose and Scope of the Survey—A unique training module, which consisted of an interactive computer presentation and notebook, served as a valuable and flexible tool for the project. Interviewers were informed of the necessity of completing a high percentage of interviews with the selected respondents, and the effect that a high number of refusals have on the accuracy of the study.

Review of the Questionnaire—A hard-copy version of the questionnaire was reviewed on an item-by-item basis. All terms used in the questionnaires were defined and the meaning and purpose of each item discussed. Whenever a respondent asked for clarification, the interviewer was instructed to first repeat the question, then provide definitions if the question was an approved part of the questionnaire.

Dealing with Uncooperative Respondents—Interviewers were thoroughly trained on techniques to avoid refusals and unnecessary break-offs. Use of the term “unnecessary break-offs” recognizes that some respondents may be unable to complete the interview in one session.

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## Interviewing Activities

The first date of calling was February 12, 2002, and the last date of calling was May 15, 2002. MATS interviews were conducted in English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin.

Experienced, supervised personnel conducted the MATS interviews using Computers for Marketing Corporation's (CfMC) Computer-Assisted Telephone Interviewing (CATI) software package. Interviews averaged 12.29 minutes in length. Following BRFSS protocols, within each household contacted, an adult was selected at random. If that adult was unavailable during the survey period, was unable or unwilling to participate, or did not speak English, Spanish, Korean, Vietnamese, Cantonese, or Mandarin well enough to be interviewed, no interview was conducted. If a randomly sampled number yielded a business, institution, group quarters, or other strictly non-residential space, or if it was an occupant's second residence and their stay was less than 30 days, no interview was conducted.

At least 15 attempts, over a minimum five-day period (typically 15 days), were made to reach a sampled number. Calls were made Monday through Friday from 9 a.m. to 9 p.m., on Saturdays from 10 a.m. to 9 p.m., and on Sundays from 11 a.m. to 9 p.m. The majority of calls took place on weeknights and weekends, as experience has shown that this is the most productive time to contact households.

Targets were specified at 500 for each of four race/ethnicities (White or Caucasian, Non-Hispanic; Black or African American, Non-Hispanic; Asian, non-Hispanic; and Hispanic or Latino), in both jurisdictions (Baltimore City and Montgomery County) for a combined 4,000 interviews. A total of 3,560 interviews were conducted. Targets were met in all but two groups (Asian, Non-Hispanic; and Hispanic or Latino for Baltimore City). These two targets were unachievable due to the limited numbers of Asian, Non-Hispanic, and Hispanic or Latino households in Baltimore City, coupled with a lower-than-expected incidence of Asian, non-Hispanic, and Hispanic or Latino households correctly identified in the listed surname sample.

***The refusal protocol for the 2002 MATS was designed to reduce the number of complaints from households that were upset with the number of times they were contacted to conduct the survey. Two refusals, by either a non-selected or a selected respondent, led to termination of the record from calling. The protocol also considered hang-ups by adults, before the introductory statement was completely read by the interviewer, as a refusal.***

## Quality Assurance Activities

We conducted many quality assurance activities to ensure integrity of the data. A major component included data checks. The survey instrument was programmed to automatically control skip and fill logic, as well as range checks for numeric data. The programming logic directed the flow of the questionnaire and prevented an interviewer from entering the right data in the wrong field. For any given question, the program only accepted a predetermined range or type of response. The program also required interviewers to confirm responses that conflicted with information previously entered, verifying data before survey completion.

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A second major component of ORC Macro's quality assurance activities regular monitoring of a representative sample of live interviews. We routinely monitor between 10 percent and 20 percent of completed interviews, and many more non-completed interviews, such as attempts at refusal conversion, household selection, and attempting to contact the selected respondent.

Monitoring forms were completed for each call that was monitored, and interviewers were rated on 21 items. Of the 432 interviews that were monitored, the average score was 85, with a low of 63 and a high of 100. Of the 21 specific items that interviewers were rated on, average scores for three of the items are listed below.

Introduction—The interviewer delivers the introduction professionally, quickly, smoothly, without hesitation and pauses. The introduction is the *only* area where an interviewer may deviate from absolute verbatim, but must remain within professional boundaries. The average score was an 8.71.

Reading Scale Questions—When reading scale questions, the interviewer must read the entire scale. Respondents should *never* be allowed to answer before they hear all their choices. Once a respondent gets the rhythm of a scale question, it is not necessary to read the scale every time; this usually takes three to five times through the scale. However, if a respondent is stumbling on a scale, it must be read every time to ensure we are collecting the correct data. If there are several series of scale questions, it can be confusing to the respondent. Whenever the scale changes, you must start repeating the scale until the respondent understands the new scale. The average score was an 8.79.

Overall Accuracy of the Data—The overall accuracy of the data the interviewer enters into the CATI program. The average score was an 8.98.

It is important to note that a nine on “overall accuracy of the data” does not mean that the data were 90 percent valid. A nine could be given to interviewers, rather than a 10 for many reasons, including some of the following: (1) if they had to backtrack and change an item that they coded incorrectly; (2) if the first time they typed an open-ended response, they needed to change something after they re-read it back to the respondent; or (3) if when they asked a clarification question (i.e., “just to make sure I recorded this correctly, you stated your income was between \$30,000 and \$40,000”) the respondent changed their answer and the response was changed.

Interviewers who scored below a threshold figure were given supplemental training and future interviews were monitored more closely. If an interviewer failed to conform to ORC Macro's standard of data collection quality, the interviewer was dismissed. It is important to note that a low score does not mean that the data collected by that interviewer is not valid; an interviewer could obtain a low score because they were not effective at refusal conversion, they moved through the questions with hesitation, or they did not keep an appropriate pace for the survey. If at any time a supervisor identifies an interviewer has entered incorrect data, the supervisor will write down the question number and correct response, and make sure that the error is fixed at the end of the interview. The interviewer will then be suspended from the study for further training, and his/her completed interviews removed from the database. There were no instances of supervisors identifying incorrect data entry of responses during the data collection for this study.

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## Response Rates

There are a number of ways to calculate survey response rates. Two commonly used measures include the *upper bound response rate*, and the *Council of American Survey Research Organizations (CASRO) response rate*.

The first measure of successful interviewing practice is the *upper bound response rate*, also known as the *cooperation rate*. This rate measures the level of cooperation among those respondents that were identified, deemed eligible, and capable of completing the survey. The *upper bound response rate* for the 2002 MATS was 43.32 percent.

The second response rate, the *CASRO response rate*, accounts for respondents who do not complete the interview for reasons other than a refusal to cooperate. They may be away from home for an extended period of time or unable to complete the interview in English, Spanish, Vietnamese, Korean, or Chinese. The *CASRO response rate* for the 2002 MATS was 33.42 percent.

## Limitations

The MYTS and MATS have the following limitations:

- Taken together, the 2000 and 2002 MYTS provide a fuller picture of tobacco use among Maryland youth than did the baseline survey by itself. By adding students in alternative and private schools, it provides information on youth excluded from the baseline survey, who may be at higher or lower risk than students originally surveyed. Unfortunately, MYTS still does not include school dropouts, students whose parents refused to allow them to participate, students absent on the date of survey administration, and students attending special education schools. The exemplary school and student participation rates in 2000 and 2002 surveys bolster the validity of results.
- The 2000 MATS sought to include a representative sample of adults aged 18 and older, again, for each of Maryland's 24 political jurisdictions. The 2002 MATS sought to do the same in two jurisdictions, with oversamples for major racial/ethnic groups. However, inevitably, MATS excludes adults living in households without telephones, adults in households that rarely answer telephone calls (or that screen calls), and adults that either refused to participate or eluded all attempts to complete a brief interview. Yet, the overall cooperation rate compares favorably to other, large-scale, health-related telephone surveys.
- While there is widespread interest in nicotine use among Maryland's officially recognized minorities, caution should be taken when examining such data on the basis of the baseline survey alone. The proportion of individuals in some of these minority groups sampled within most jurisdictions is too small to produce precise, representative estimates specific to those groups. For Baltimore City and Montgomery Counties, the 2002 MATS provides far more precise, reliable estimates for the four racial/ethnic groups than did the 2000 MATS. Because in many instances the sample sizes for particular racial/ethnic groups were small in 2000, it is not really appropriate to compare 2000 and 2002 data. For example, the number

# Appendix A: Methodology

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of Asians and Hispanics surveyed in Baltimore City in 2000 was too small to permit a valid comparison of 2000 and 2002 results.

# Appendix B

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## Detailed Statutory Tables



**TABLE 1. Prevalence of Current\* Tobacco Use Among Private School Students, Under the Age of 18, by Gender, Race/Ethnicity, Grade, and Tobacco Product**

Category	Any** Tobacco Use			Cigarette Use			Cigar Use			Bidis or Kreteks Use			Smokeless Tobacco Use		
	N	%	CI	N	%	CI	N	%	CI	N	%	CI	N	%	CI
<b>Middle School</b>															
<b>Gender</b>															
Female	622	3.5	±1.5	363	2.0	±1.4	151	0.8	±0.6	243	1.3	±0.7	99	0.6	±0.5
Male	927	5.8	±2.0	360	2.3	±1.5	360	2.3	±1.1	359	2.3	±1.1	147	0.9	±0.7
<b>Race/Ethnicity</b>															
Targeted minority	1051	4.6	±1.7	583	2.6	±1.3	268	1.2	±0.6	448	2.0	±0.9	199	0.9	±0.5
White	939	3.9	±1.4	418	1.7	±1.1	349	1.5	±0.7	280	1.2	±0.6	76	0.3	±0.3
African American	423	7.0	±3.1	181	3.0	±2.1	102	1.7	±1.1	198	3.3	±2.4	119	1.9	±1.1
<b>Grade</b>															
6 <sup>th</sup>	450	3.9	±1.5	133	1.1	±0.9	148	1.3	±0.8	264	2.3	±1.1	90	0.8	±0.7
7 <sup>th</sup>	487	4.3	±1.9	217	1.9	±1.1	140	1.2	±0.9	167	1.5	±1.0	124	1.1	±0.7
8 <sup>th</sup>	631	5.8	±2.8	389	3.6	±2.3	242	2.2	±1.4	187	1.7	±1.3	32	0.3	±0.4
<b>Total</b>	1601	4.7	±1.4	755	2.2	±1.0	546	1.6	±0.6	618	1.8	±0.7	262	0.8	±0.4
<b>High School</b>															
<b>Gender</b>															
Female	2902	18.7	±5.7	2484	16.0	±5.6	687	4.4	±2.2	371	2.4	±1.4	61	0.4	±0.5
Male	3776	25.2	±7.0	2189	14.6	±5.7	2050	13.7	±4.6	585	3.9	±2.8	1414	9.4	±4.3
<b>Race/Ethnicity</b>															
Targeted minority	3649	19.1	±4.7	2959	15.5	±4.7	1082	5.7	±2.4	543	2.8	±1.1	159	0.8	±0.8
White	5441	22.9	±5.6	3882	16.3	±5.1	2145	9.0	±3.4	741	3.1	±1.5	1376	5.8	±3.3
African American	480	12.1	±5.5	216	5.4	±3.0	321	8.1	±5.1	64	1.6	±1.7	35	0.9	±1.0
<b>Grade</b>															
9 <sup>th</sup>	1059	10.7	±4.4	569	5.8	±3.3	635	6.4	±3.7	107	1.1	±1.1	285	2.9	±2.9
10 <sup>th</sup>	1948	21.8	±4.4	1331	14.9	±5.2	689	7.7	±3.3	363	4.1	±1.6	624	7.0	±4.3
11 <sup>th</sup>	2454	30.1	±6.9	1730	21.2	±5.6	1066	13.1	±4.6	226	2.8	±1.9	509	6.2	±3.2
12 <sup>th</sup>	1149	33.6	±18.3	974	28.5	±16.7	347	10.1	±11.5	261	7.6	±8.1	56	1.6	±2.7
<b>Total</b>	6678	21.9	±4.9	4673	15.3	±4.5	2737	9.0	±3.1	957	3.1	±1.5	1474	4.8	±2.8

\* Smoked cigarettes on ≥ 1 of the 30 days preceding the survey

\*\* Composite variable: includes use of cigarettes or cigars or smokeless tobacco or pipes or bidis or kreteks on ≥ 1 of the 30 days preceding the survey

**TABLE 2. Prevalence of Current\* Tobacco Use Among Alternative School Students, Under the Age of 18, by Gender, Race/Ethnicity, Grade, and Tobacco Product**

Category	Any* Tobacco Use		Cigarette Use		Cigar Use		Bidis or Kreteks Use		Smokeless Tobacco	
	N	%	N	%	N	%	N	%	N	%
<b>Middle School</b>										
<b>Gender</b>										
Female	62	52.5	51	43.2	23	19.5	19	16.1	6	5.1
Male	171	47.1	125	34.4	80	22.0	78	21.5	45	12.4
<b>Race/Ethnicity</b>										
Targeted minority	171	47.5	127	35.3	74	20.6	76	21.1	33	9.2
White	103	57.5	81	45.3	48	26.8	37	20.7	27	15.1
African American	95	39.3	66	27.3	40	16.5	44	18.2	15	6.2
<b>Grade</b>										
6 <sup>th</sup>	37	48.1	19	24.7	18	23.4	22	28.6	9	11.7
7 <sup>th</sup>	91	49.2	68	36.8	41	22.2	36	19.5	18	9.7
8 <sup>th</sup>	115	50.7	95	41.9	50	22.0	47	20.7	29	12.8
<b>Total</b>	246	49.5	184	37.0	110	22.1	106	21.3	58	11.7
<b>High School</b>										
<b>Gender</b>										
Female	174	54.4	159	49.7	64	20.0	39	12.2	17	5.3
Male	269	61.8	218	50.1	114	26.2	90	20.7	62	14.3
<b>Race/Ethnicity</b>										
Targeted minority	302	52.9	248	43.4	119	20.8	98	17.2	50	8.8
White	244	78.7	227	73.2	97	31.3	45	14.5	40	12.9
African American	141	40.1	106	30.1	54	15.3	59	16.8	27	7.7
<b>Grade</b>										
9 <sup>th</sup>	168	60.9	139	50.4	69	25.0	43	15.6	25	9.1
10 <sup>th</sup>	151	61.9	127	52.0	58	23.8	46	18.9	25	10.2
11 <sup>th</sup>	82	55.0	72	48.3	36	24.2	24	16.1	20	13.4
12 <sup>th</sup>	41	53.2	38	49.4	16	20.8	16	20.8	9	11.7
<b>Total</b>	446	58.8	379	50.0	180	23.7	130	17.2	80	10.6

\* Smoked cigarettes on  $\geq 1$  of the 30 days preceding the survey

\*\* Composite variable: includes use of cigarettes or cigars or smokeless tobacco or pipes or bidis or kreteks on  $\geq 1$  of the 30 days preceding the survey

**TABLE 3. Initiation of Tobacco Use in Past 2 Years Among Private School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Initiation of Cigarette Use		Initiation of Smokeless Tobacco Use	
	N	%	CI	%
<b>Middle School</b>				
<b>Gender</b>				
Female	812	4.5	±1.7	0.9
Male	829	5.2	±1.5	2.6
<b>Race/Ethnicity</b>				
Targeted minority	1174	5.2	±1.7	1.4
White	1069	4.5	±1.4	1.4
African American	340	5.6	±2.1	2.6
<b>Grade</b>				
6 <sup>th</sup>	303	2.6	±2.0	0.9
7 <sup>th</sup>	458	4.1	±1.7	2.4
8 <sup>th</sup>	849	7.8	±3.1	1.7
<b>Total</b>	1641	4.8	±1.4	1.7
<b>High School</b>				
<b>Gender</b>				
Female	3337	21.5	±5.4	3.2
Male	3121	20.8	±2.9	15.1
<b>Race/Ethnicity</b>				
Targeted minority	4012	21.0	±4.3	4.4
White	5310	22.3	±3.4	10.0
African American	454	11.4	±4.2	3.3
<b>Grade</b>				
9 <sup>th</sup>	1433	14.5	±3.3	4.1
10 <sup>th</sup>	1907	21.3	±4.5	12.6
11 <sup>th</sup>	1995	24.5	±6.2	10.5
12 <sup>th</sup>	1053	30.8	±10.6	10.8
<b>Total</b>	6458	21.1	±2.9	9.0
				±3.3

**TABLE 4. Initiation of Tobacco Use in Past 2 Years Among Alternative School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Initiation of Cigarette Use		Initiation of Smokeless Tobacco Use	
	N	%	N	%
<b>Middle School</b>				
<b>Gender</b>				
Female	28	23.7	7	5.9
Male	104	28.7	41	11.3
<b>Race/Ethnicity</b>				
Targeted minority	94	26.1	23	6.4
White	54	30.2	30	16.8
African American	65	26.9	11	4.5
<b>Grade</b>				
6 <sup>th</sup>	17	22.1	8	10.4
7 <sup>th</sup>	50	27.0	20	10.8
8 <sup>th</sup>	70	30.8	21	9.3
<b>Total</b>	<b>138</b>	<b>27.8</b>	<b>49</b>	<b>9.9</b>
<b>High School</b>				
<b>Gender</b>				
Female	84	26.3	15	4.7
Male	96	22.1	58	13.3
<b>Race/Ethnicity</b>				
Targeted minority	133	23.3	29	5.1
White	74	23.9	55	17.7
African American	90	25.6	6	1.7
<b>Grade</b>				
9 <sup>th</sup>	76	27.5	24	8.7
10 <sup>th</sup>	61	25.0	30	12.3
11 <sup>th</sup>	27	18.1	11	7.4
12 <sup>th</sup>	15	19.5	8	10.4
<b>Total</b>	<b>181</b>	<b>23.9</b>	<b>73</b>	<b>9.6</b>

**TABLE 5. Smoking Cessation Attempted within the Past 12 Months Among Private School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Attempted Cessation of Cigarette Use		
	N	%	CI
<b>Middle School</b>			
<b>Gender</b>			
Female	342	46.2	±16.1
Male	409	52.9	±15.2
<b>Race/Ethnicity</b>			
Targeted minority	501	46.1	±13.7
White	564	53.6	±12.8
African American	127	48.1	±41.6
<b>Grade</b>			
6 <sup>th</sup>	132	52.9	±37.2
7 <sup>th</sup>	186	42.8	±19.5
8 <sup>th</sup>	432	51.2	±12.3
<b>Total</b>	751	48.6	±10.9
<b>High School</b>			
<b>Gender</b>			
Female	1873	53.4	±7.7
Male	2020	58.5	±8.0
<b>Race/Ethnicity</b>			
Targeted minority	2315	55.0	±8.0
White	3139	54.8	±7.1
African American	348	68.1	±26.5
<b>Grade</b>			
9 <sup>th</sup>	777	54.9	±13.9
10 <sup>th</sup>	1254	60.2	±9.0
11 <sup>th</sup>	1164	52.3	±14.2
12 <sup>th</sup>	698	56.4	±25.3
<b>Total</b>	3893	55.9	±6.6

**TABLE 6. Smoking Cessation Attempted within the Past 12 Months Among Alternative School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Attempted Cessation of Cigarette Use	
	N	%
<b>Middle School</b>		
<b>Gender</b>		
Female	34	66.7
Male	74	58.7
<b>Race/Ethnicity</b>		
Targeted minority	70	57.9
White	62	69.7
African American	32	46.4
<b>Grade</b>		
6 <sup>th</sup>	11	55.0
7 <sup>th</sup>	48	63.2
8 <sup>th</sup>	50	58.8
<b>Total</b>	109	59.9
<b>High School</b>		
<b>Gender</b>		
Female	101	67.8
Male	133	61.9
<b>Race/Ethnicity</b>		
Targeted minority	145	63.0
White	150	65.5
African American	64	64.6
<b>Grade</b>		
9 <sup>th</sup>	86	64.7
10 <sup>th</sup>	82	63.1
11 <sup>th</sup>	44	67.7
12 <sup>th</sup>	19	55.9
<b>Total</b>	234	64.1

**TABLE 7. Prevalence of Exposure to Environmental Tobacco Smoke Among Private School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Lives with Smoker		
	N	%	CI
<b>Middle School</b>			
<b>Gender</b>			
Female	4331	24.6	±5.5
Male	3682	23.9	±5.9
<b>Race/Ethnicity</b>			
Targeted minority	5732	26.0	±5.7
White	5332	22.6	±6.0
African American	1546	27.3	±10.2
<b>Grade</b>			
6 <sup>th</sup>	2796	24.7	±6.6
7 <sup>th</sup>	2775	25.2	±7.3
8 <sup>th</sup>	2436	23.0	±4.6
<b>Total</b>	8075	24.4	±5.2
<b>High School</b>			
<b>Gender</b>			
Female	3340	21.8	±4.5
Male	4101	27.8	±3.4
<b>Race/Ethnicity</b>			
Targeted minority	4520	24.1	±4.0
White	5504	23.4	±3.5
African American	1093	28.1	±7.4
<b>Grade</b>			
9 <sup>th</sup>	2358	24.1	±6.4
10 <sup>th</sup>	2319	26.5	±6.5
11 <sup>th</sup>	1778	22.2	±6.7
12 <sup>th</sup>	987	29.2	±11.1
<b>Total</b>	7441	24.8	±3.1

**TABLE 8. Prevalence of Exposure to Environmental Tobacco Smoke Among Alternative School Students, Under the Age of 18, by Sex, Race/Ethnicity, Grade, and Tobacco Product**

Category	Lives with Smoker	
	N	%
<b>Middle School</b>		
<b>Gender</b>		
Female	62	67.4
Male	170	65.9
<b>Race/Ethnicity</b>		
Targeted minority	157	61.8
White	106	77.4
African American	100	57.8
<b>Grade</b>		
6 <sup>th</sup>	29	55.8
7 <sup>th</sup>	95	72.5
8 <sup>th</sup>	106	63.9
<b>Total</b>	235	66.2
<b>High School</b>		
<b>Gender</b>		
Female	180	66.7
Male	206	63.6
<b>Race/Ethnicity</b>		
Targeted minority	282	62.9
White	191	74.6
African American	161	59.4
<b>Grade</b>		
9 <sup>th</sup>	161	74.5
10 <sup>th</sup>	117	61.3
11 <sup>th</sup>	64	52.0
12 <sup>th</sup>	40	67.8
<b>Total</b>	387	65.0

TABLE 9. Prevalence of Current\* Tobacco Use Among Adults by Sex, Race/Ethnicity, and Tobacco Product – 2002

Category	Any Tobacco Use			Cigarette Use			Cigar Use			Bidis Use			Smokeless Tobacco Use		
	N	%	CI	N	%	CI	N	%	CI	N	%	CI	N	%	CI
<b>Montgomery County</b>															
<b>Gender</b>															
Female	21,673	7.9	± 2.6	21,621	7.9	± 2.6	273	0.1	± 0.1	60	0	± 0.1	100	0	± 0.1
Male	50,240	19.6	± 4.1	29,972	11.8	± 3.1	24,132	9.4	± 3.3	1,620	0.6	± 0.8	2,873	1.1	± 1.4
<b>Race/Ethnicity</b>															
Targeted Minorities	42,442	11.2	± 2.2	38,287	10.1	± 2.1	6,357	1.7	± 0.7	901	0.2	± 0.4	515	0.1	± 0.2
White	42,572	14.0	± 3.8	26,407	8.7	± 3.1	18,048	5.9	± 2.7	779	0.3	± 0.5	2,458	0.8	± 1.2
African-American	11,948	13.8	± 3.7	9,775	11.3	± 3.4	2,524	2.9	± 1.5	81	0.1	± 0.2	100	0.1	± 0.2
Asian	7,933	10.9	± 3.5	6,986	9.6	± 3.2	1,394	1.9	± 1.6	241	0.3	± 0.4	165	0.2	± 0.4
Hispanic	9,460	14.5	± 4.4	8,425	13.0	± 4.3	2,439	3.7	± 2.4	578	0.9	± 1.7	250	0.4	± 0.5
<b>Total</b>	71,912	13.6	± 2.4	51,592	9.8	± 2.0	24,405	4.6	± 1.6	1,680	0.3	± 0.4	2,973	0.6	± 0.6
<b>Baltimore City</b>															
<b>Gender</b>															
Female	57,946	22.0	± 3.8	56,991	21.6	± 3.8	5,954	2.3	± 1.7	3,027	1.1	± 1.0	1,005	0.4	± 0.6
Male	74,366	34.0	± 6.1	56,822	26.1	± 5.7	33,793	15.5	± 4.9	2,819	1.3	± 2.0	1,755	0.8	± 0.7
<b>Race/Ethnicity</b>															
Targeted	103,291	25.7	± 3.8	95,352	23.8	± 3.7	25,489	6.4	± 2.7	5,253	1.3	± 1.3	1,080	0.3	± 0.4
White	49,885	29.4	± 4.8	39,108	23.1	± 4.5	16,066	9.5	± 3.4	1,128	0.7	± 0.7	1,680	1.0	± 0.9
African-American	79,461	26.9	± 4.9	72,440	24.6	± 4.7	22,880	7.7	± 3.6	4,651	1.6	± 1.6	1,005	0.3	± 0.6
Asian	1,261	14.4	± 5.7	884	10.2	± 5.3	269	3.1	± 1.9	67	0.8	± 1.1	0	NA	NA
Hispanic	1,704	21.2	± 6.6	1,382	17.3	± 6.2	532	6.6	± 4.0	0	NA	NA	74	0.9	± 1.8
<b>Total</b>	132,311	27.4	± 3.5	113,813	23.6	± 3.3	39,747	8.3	± 2.5	5,846	1.2	± 1.1	2,760	0.6	± 0.5

\* Smoked cigarettes on ≥ 1 of the 30 days preceding the survey

TABLE 10. Initiation of Tobacco Use Among Adults by Sex, Race/Ethnicity, and Tobacco Product - 2002

Category	Cigarette Use			Smokeless Tobacco Use		
	N	%	CI	N	%	CI
<b>Montgomery County</b>						
<b>Gender</b>						
Female	739	1.0	± 1.0	60	1.3	± 2.9
Male	2,119	2.7	± 2.0	471	1.1	± 1.1
<b>Race/Ethnicity</b>						
Targeted	2,858	2.6	± 1.7	531	4.5	± 4.8
White	0	NA	NA	0	NA	NA
Black	398	1.8	± 2.2	91	2.6	± 5.3
Asian	1,128	10.3	± 9.4	309	14.7	± 19.6
Hispanic	1,332	7.1	± 6.6	131	5.5	± 10.9
<b>Total</b>	2,858	1.8	± 1.1	531	1.1	± 1.1
<b>Baltimore City</b>						
<b>Gender</b>						
Female	2,655	2.7	± 2.6	46	0.7	± 1.3
Male	5,903	5.5	± 6.0	1,778	5.9	± 6.9
<b>Race/Ethnicity</b>						
Targeted	7,118	4.2	± 4.1	527	2.5	± 4.5
White	2,154	2.7	± 2.9	1,297	6.9	± 9.5
Black	6,295	5.1	± 5.5	481	2.8	± 5.5
Asian	46	2.7	± 5.3	46	19.3	± 33.9
Hispanic	63	2.8	± 5.4	0	NA	NA
<b>Total</b>	8,558	4.1	± 3.5	1,824	4.9	± 5.7

TABLE 11. Cessation of Tobacco Products Among Adults by Sex, Race/Ethnicity, and Tobacco Product - 2002

Category	Cigarette Use			Smokeless Tobacco Use		
	N	%	CI	N	%	CI
<b>Montgomery County</b>						
<b>Gender</b>						
Female	10,860	55.7	± 18.1	0	NA	NA
Male	18,217	60.5	± 13.7	1,578	100	?
<b>Race/Ethnicity</b>						
Targeted	19,892	57.7	± 12.0	14,100	100	?
White	14,686	53.9	± 18.4	1564	100	?
Black	5,827	67.5	± 15.8	0	NA	NA
Asian	3,727	59.6	± 19.4	14	100	?
Hispanic	4,837	64.7	± 20.2	0	NA	NA
<b>Total</b>	<b>29,077</b>	<b>58.6</b>	<b>± 11.1</b>	<b>1,578</b>	<b>100</b>	<b>?</b>
<b>Baltimore City</b>						
<b>Gender</b>						
Female	27,274	59.6	± 10.2	0	NA	NA
Male	34,029	67.4	± 11.9	250	28.7	± 71.3
<b>Race/Ethnicity</b>						
Targeted	51,618	67.1	± 8.7	0	NA	NA
White	17,478	50	± 11.5	250	31.3	± 68.7
Black	42,941	72.2	± 9.8	0	NA	NA
Asian	303	41.2	± 24.4	0	NA	NA
Hispanic	581	55.2	± 22.9	0	NA	NA
<b>Total</b>	<b>61,303</b>	<b>63.7</b>	<b>± 8.1</b>	<b>250</b>	<b>14.3</b>	<b>± 55.6</b>

TABLE 12. Households with Children Where at Least One Adult Smokes Tobacco Products – 2002

Category	Households with Smokers and Children		
	N	%	CI
<b>Montgomery County</b>			
<b>Gender</b>			
Female	21,324	18.9	±5.0
Male	23,364	23.3	±6.9
<b>Race/Ethnicity</b>			
Targeted	32,012	19.5	±3.9
White	22,122	21.9	±7.9
African America	9,315	22.3	±6.7
Asian	5,210	16.5	±5.8
Hispanic	8,042	20.8	±5.8
<b>Total</b>	44,688	21.0	±4.2
<b>Baltimore City</b>			
<b>Gender</b>			
Female	34,907	33.5	±6.9
Male	26,031	39.7	±11.2
<b>Race/Ethnicity</b>			
Targeted	54,497	35.9	±6.4
White	17,286	41.2	±10.8
African America	42,390	34.3	±7.5
Asian	216	18.4	±13.8
Hispanic	1,047	31.9	±12.9
<b>Total</b>	60,939	35.9	±6.1

TABLE 13. Prevalence of Tobacco Use Among Pregnant Women 1998 - 2001

Category	1998		1999		2000		2001	
	N	%	N	%	N	%	N	%
<b>Montgomery County</b>	335	2.7	360	2.9	327	2.5	269	2.0
<b>Baltimore City</b>	1,475	15.3	1,618	16.6	1,435	14.9	1,328	14.6

TABLE 14. Demographic Characteristics of Youth Samples

Category	2000 Regular Public Schools		2002 Private Schools		2002 Alternative Public Schools	
	N	N	N	N	N	N
<b>Middle School</b>						
<b>Gender</b>						
Female	11,116		1,065		121	
Male	11,175		938		367	
<b>Race/Ethnicity</b>						
Targeted minority	14,735		1,348		367	
White	14,686		1,422		180	
African American	5,056		355		245	
<b>Grade</b>						
6 <sup>th</sup>	7,834		647		78	
7 <sup>th</sup>	7,153		677		188	
8 <sup>th</sup>	7,128		674		231	
<b>Total</b>	22,381		2,012		505	
<b>High School</b>						
<b>Gender</b>						
Female	17,129		641		406	
Male	16,210		643		543	
<b>Race/Ethnicity</b>						
Targeted minority	22,159		801		745	
White	22,889		981		342	
African American	7,036		179		487	
<b>Grade</b>						
9 <sup>th</sup>	9,313		382		281	
10 <sup>th</sup>	9,042		427		253	
11 <sup>th</sup>	7,849		316		181	
12 <sup>th</sup>	6,875		154		219	
<b>Total</b>	33,586		1,286		953	

TABLE 15. Demographic Characteristics of Adult Samples

Category	2000	2002
<b>Montgomery County</b>	N	N
<b>Gender</b>		
Female	630	1181
Male	457	913
<b>Race/Ethnicity</b>		
Targeted Minorities	750	1887
White	790	478
African-American	150	499
Asian	56	539
Hispanic	42	578
<b>Total</b>	1087	2094
<b>Baltimore City</b>		
<b>Gender</b>		
Female	667	877
Male	412	589
<b>Race/Ethnicity</b>		
Targeted	891	1271
White	426	507
African-American	560	527
Asian	20	229
Hispanic	26	203
<b>Total</b>	1079	1466

# Appendix C: Use of Supplemental Tests in Determining Statistical Significance

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To judge whether the difference between two point estimates is statistically significant, data analysts often examine the overlap between the two associated 95 percent confidence intervals (CIs). The confidence interval around a specific statistic 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. The width of the confidence interval depends on the sample size, the variation of data values, and other factors. This method may provide a quick and easy alternative to standard statistical testing procedures. In comparing two population parameters (e.g., P(1) and P(2) at times 1 and 2), the null hypothesis of interest is whether the two parameters are equal (H: P(1)=P(2)). In the context of assessing whether some change has occurred between two time periods, the null hypothesis may be stated as “there was no change”; the alternative hypothesis of interest is that change has occurred.

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).<sup>1</sup> Compared to the standard (accurate) method, the CI-based method rejects the null hypothesis (no difference) less often when this hypothesis is true, and more often mistakenly fails to reject the null hypothesis when it is false.

The latter error is of more consequence for the testing of MATS trends as the CI-based method fails to detect several (real) differences that may be detected with the more accurate and traditional method.

The MATS 2002 analyses compensated for this conservative approach in detecting whether statistically significant changes are taking place in the two study jurisdictions. These tests were performed for a subset of those comparisons where potential significance was suggested. The approach was enhanced by the use of traditional statistical testing (t-tests) that compare the two population parameters. As indicated in the report, in Baltimore, the prevalence of tobacco use significantly ( $p < 0.05$ )<sup>2</sup> in various subgroups of interest: African Americans, Females, and Targeted Minorities (i.e., all groups except White males).

It may be noted that for a single parameter,  $D = P(1) - P(2)$  (say), hypothesis testing (5% nominal level, alpha) may be equivalent to (95%) confidence intervals. However, the confidence interval useful for this purpose takes the form of the estimate (d, say) plus or minus

$$1.96 * \sqrt{SE(1)^2 + SE(2)^2}$$

where the terms in brackets (being squared) are the standard errors of p(1) and p(2), respectively.<sup>3</sup>

<sup>1</sup> 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.

<sup>2</sup> The p-value is known as the significance level for the statistical test.

<sup>3</sup> Bickel, P. and Docksum, K. (1977). *Mathematical Statistics*. New York: Wiley.

# Appendix C: Use of Supplemental Tests in Determining Statistical Significance

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The hypothesis is rejected if and only if the CI does not contain zero.

By contrast, the CI used in the CI-based method is based on the following (half-width):

$$1.96 * \{SE(1) + SE(2)\}$$

which leads to rejection of the null “H” if and only if this CI does not contain zero (corresponds to non-overlap between the two CIs).