



2007 MARYLAND ADOLESCENT SURVEY

2007
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Maryland State Department of Education
Division of Student, Family and School Supports
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The 2007 Maryland Adolescent Survey is a collaborative effort of the Maryland State Department of Education and the Maryland Department of Health and Mental Hygiene.

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EXECUTIVE SUMMARY

Periodically, Maryland's sixth, eighth, tenth, and twelfth graders are surveyed to determine the nature, extent, and trend of alcohol, tobacco, and other drug (ATOD) use among adolescents. The *2007 Maryland Adolescent Survey (MAS)* presents the latest findings regarding ATOD use by Maryland's adolescents and compares State and local findings with national findings and trends. The survey also provides data about: protective factors; adolescents' knowledge about the consequences of ATOD use; parenting and peer influences; impaired driving among twelfth graders; and how safe adolescents feel at school, going to or from school, and in their neighborhoods. State and local prevention professionals plan and evaluate Maryland's ATOD prevention efforts by using information contained in this report.

Participants were drawn from the sixth, eighth, tenth, and twelfth grades in Maryland's public elementary, middle and high schools, using a multi-stage, stratified cluster sampling procedure. This method allows the generalization of results for each grade at both the local jurisdiction and State levels. The survey was completed by 33,057 adolescents and represents 12 to 14 percent of the State's enrollment at each surveyed grade level and an 84% overall response rate.

ATOD usage levels in 2007 (for the last 30 days) decreased from 2004 for many substances and increased for very few. Adolescents in all surveyed grade levels reported a decrease in the use of alcohol and cigarettes; for marijuana there was a decrease in use in grades eight, ten, and twelve and no change among sixth graders. Twelfth graders reported a decrease or no change in 30 day usage of other drugs for every substance except prescription narcotics. For tenth graders, there was a decrease or no change for every substance except LSD and cocaine (other than crack). Eighth graders reported a decrease or no change in use for every substance. Sixth graders reported the same usage level for most other drugs but higher usage levels for, methamphetamines, amyl/butyl nitrates, and heroin. Even when 2007 levels increased compared to 2004, they were consistently down over the long term.

Respondents continue to report that ATOD are more available off of school property than on school property. Similarly, adolescents who use alcohol, cigarettes, and marijuana report that these substances are safer to consume than students who do not use them.

While the continued decrease in usage trends is encouraging, the findings of the *2007 MAS* still show that adolescents have tried and continue to use many substances. It is also important to note that substance use rates among Maryland's adolescents are consistent with national trends as reported in the most recent *Monitoring the Future Study*.

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CHAPTER I
INTRODUCTION

CHAPTER I

INTRODUCTION

Substance use by our young people has proven to be a rapidly changing phenomenon that requires frequent assessments and reassessments. Since the mid-1960s, substance abuse has been a major concern for our Nation and State. Smoking, drinking, and illicit drug use are leading causes of morbidity and mortality during adolescence as well as later in life. How vigorously we respond to youth substance use, how accurately we identify the substance abuse problems that are emerging, and how well we understand the effectiveness of our policy and intervention efforts largely depend on the ongoing collection of valid and reliable data. Since 1992, the Maryland Adolescent Survey (MAS) has provided an accurate picture of what is happening in this domain and why.

Before 1992, the MAS only examined the use patterns of 10th graders. Now it includes adolescents in grades 6, 8, 10, and 12, and it provides data on a variety of risk and protective factors. The 2007 survey, like those of recent years, provides information on current use patterns and attitudes that are believed to be associated with substance use. It also addresses students' perceptions about safety, including whether they feel unsafe at school, going to or from school, and in their neighborhood. This critical and timely information is essential for effective program planning, implementation, and evaluation.

The data collected by the 2007 MAS parallels Monitoring the Future, the annual national survey conducted by the National Institute on Drug Abuse. Chapter IV presents information about substance use among Maryland's 12th graders and compares it with the 2007 national data. Previous comparisons show that Maryland usage patterns are similar to those of the Nation.

Changes to the questionnaire, sampling methods, and target population over the past 25 years require that trend statistics be interpreted carefully within the unique parameters of each survey. To assist in this interpretation, each survey report contains a detailed description of administration procedures. Local jurisdictions may also examine usage trends of specific substances within their own population over the 1994 and 2007 MAS administrations. The sampling strategy used for the 1994, 1996, 1998, 2001, 2002, 2004, and 2007 surveys permits generalizations about usage patterns at the local and State level. However, survey data can only be generalized to youth in public schools and not to adolescents of a comparable age who do not attend public schools.

Chapter II describes the research methodology, including the sampling design, characteristics of the population studied, and structure of the questionnaire. The remaining chapters of the report present the survey results from each section of the questionnaire. The report also includes appendices that contain relevant supporting materials. Included are the survey questionnaire, administration instructions, and tabular results on substance use for each local jurisdiction.

CHAPTER II
METHODOLOGY

CHAPTER II

METHODOLOGY

POPULATION

The 2007 Maryland Adolescent Survey (MAS) was administered to samples of 6th, 8th, 10th, and 12th graders in public elementary, middle, and high schools in every school system in Maryland. Certain special schools, such as home and hospital schools and evening schools, were not included in the study nor were schools with less than 10 students in the sampled grades. The schools excluded from this sampling frame are listed in Appendix A.

SAMPLING PLAN

To ensure a statistically generalizable result and comparability with previous MAS data collections, for each grade at the school system level the study used a multistage stratified cluster sample. The sample design was slightly different for small, medium and large counties. First, the required sample size for each local school system (LSS) was determined based on the system enrollments in each grade and the desired level of measurement precision (i.e., 95% confidence interval of +/- 5%). This sample size was adjusted based on the desirability of selecting two classes from most schools, an average class size of 25, with the assumed absentee and refusal rate. In order to account for the latter, the desired number of respondents was increased by using the response rate of the previous survey to project how many students might not respond. Then the results from those calculations were adjusted to multiples of 50 (e.g., if 537 were needed the number was rounded to 550). Finally, the number of schools required in the sample was dictated by the number of classes to be selected and the specific design for the LSS. The sample was designed to ensure an equal probability of selection for every student at each grade level in each LSS.

Selection of Schools

Schools were selected differently for small, medium, and large counties.¹ For small counties, the schools were assigned a number of classes based on their size. A random procedure was used to round the number of classes. Every school was represented, except that very small schools could be allocated zero classes (this has happened in the past, but not this year). This procedure guaranteed that each student would have the same probability of selection within an LSS.

For medium-sized counties, the schools were selected separately for each grade level, with probabilities proportional to size. In these school systems, stratification was unnecessary because the majority of schools were included in the sample. A procedure known as Pareto sampling with Permanent Random Numbers was used to maximize overlap of the samples. A school was allowed to be selected more than once if it was very large, which can cause more

¹ Large school systems were Anne Arundel, Baltimore City, Baltimore, Montgomery, and Prince George's. Medium school systems were Allegany, Calvert, Carroll, Cecil, Charles, Frederick, Harford, Howard, St. Mary's, Washington, and Wicomico. Small school systems were Caroline, Dorchester, Garrett, Kent, Queen Anne's, Somerset, Talbot, and Worcester. This year, Calvert and St. Mary's were recategorized from small to medium.

than two classes from the school to be selected per grade. This was necessary to guarantee an equal probability of selection at every grade level.

For larger counties, the need to stratify by socioeconomic status (SES) as required by the plan created some difficulties. The SES measure, defined by the percentage of minority enrollment and the percentage of students receiving free and reduced-price meals, had different medians for different grade levels. Implicit stratification at each grade level seemed desirable (this is done by sorting the schools by SES and selecting the sample using a sampling interval), but that precludes Pareto sampling. As in recent years, the decision was made to focus on SES distribution and not on overlap, such that more schools were again sampled for large school systems.

Selection of Classes

Classes were designated as eligible for selection based on the criteria that students in the school within the survey grades were enrolled in them and that no student could be enrolled in more than one selected class. Thus, schools could select either all students in a given subject—most often classes such as English or Language Arts—or all students in a given time slot (period or block). Each school provided a list of classes for the designated subject or time slot such that all survey-eligible students were enrolled in one class or another, but none were enrolled in more than one.

Classes were then clustered into virtual classes – a combination of smaller classes that are combined into one “virtual” class of approximately 25 students. This was particularly important for the high school grades, as classes frequently include students from more than one grade, and there was a need to give students taking a class where students in a different grade level predominated an opportunity of being selected.

The virtual classes were then randomly drawn from the lists of virtual classes compiled.

Within each selected virtual class, every survey-eligible 6th, 8th, 10th, and 12th grader was asked to complete a survey form. Other enrollees were excused from participation (i.e., 7th, 9th, and 11th graders). Exhibit 2.1 indicates that between 14 percent and 16 percent of enrolled students in each of the grades were in the initial statewide sample, and between 12 percent and 14 percent were in the final sample.

**Exhibit 2.1:
Eligible Population, Initial Sample, and Final Sample¹**

Grade	Total Enrolled Population in Maryland ¹	Initial Sample (Surveys sent to schools)		Final Sample (Completed surveys returned from schools)	
	N	N	%	N	%
6th	62,259	9,719	16%	8,353	13%
8th	64,737	10,248	16%	8,838	14%
10th	68,452	9,701	14%	8,156	12%
12th	61,766	9,683	16%	7,710	12%

¹ SOURCE: Maryland Public School Enrollment by Race/Ethnicity, Gender and Number of Schools September 30, 2007; MSDE

Weighting of Responses

In accordance with the sampling procedures, each school system was selected as a stratum. Within each school system, schools were selected for participation; within each school, classes were designated; and within each class, all eligible students were requested to participate. Survey administrators were instructed to assure students of the voluntary nature of their participation and the confidentiality of their responses. This approach led to equal probabilities of selection for each student at each grade level. However, in order to control for differential participation rates, responses were weighted to account for the race/ethnicity and gender totals in each school system. Thus, the weights were adjusted so as to add up to each total. In other words, if the sum of the weights of a combination of race, gender, grade and county is lower than the census figures, the weights will be multiplied by a constant to make them the same. The weights of every member of a given combination will be multiplied by a constant to make the sum of the weights equal to the figure reported in the State Department of Education enrollment tables.

For students with missing race/ethnicity or gender, the missing category was imputed using a hotdeck approach. Using the hotdeck approach, a student from the same school, class, and grade was randomly selected and, for weighting purposes only, the ethnicity or gender category of the randomly selected student was assigned to the student with a missing value. Some MAS 2007 respondents described themselves as belonging to more than one racial/ethnic category, although the survey question did not specifically invite multiple responses. This could be attributed to the increasing number of multiracial children in the school systems, as well as the increasing acceptance of multiracial designations in general and their request in a variety of surveys. As a result, refinements were instituted in the procedures for determining a single racial/ethnic designation to be consistent with MSDE demographic reports.

The procedure first prioritized race/ethnicity for multiracial respondents. In order of priority, students were classified as Hispanic if any of their multiple responses were Hispanic. Then the remaining respondents were similarly classified as African American, Asian, White, and American Indian. Thus, only students who answered none of the race questions had to have an imputed response based on the hotdeck procedure.

Steps were also made to account for those respondents who chose not to take the survey instruments seriously, lost interest in completing the survey, or may have been unable to finish

the survey for a variety of reasons. Respondents who did not complete selected demographic information and/or at least 50 percent of Section II (a key section involving self-reporting of substance abuse involvement), were deleted from the final data analysis.

The weights were calculated based on the gender and race counts. Since we had designed the study so as to give each student the same probability of selection, preliminary weights were obtained by dividing the number of students in each gender/race/grade/LSS combination by the number of students in that cell found in the sample. If the sample exceeded the population in a cell, a weight of 1 was assigned.

The final weights were obtained by trimming the preliminary weights. The distribution for the grade/LSS combination was examined, and the weights were capped at twice the median of the distribution. The weights equal to 1 were left alone, but the remaining weights were adjusted proportionally so that the sum of all weights yielded exactly the number of students in that LSS and grade. Thus the sum of the weights for every racial group approximated its population at the grade/LSS level, but adjustments avoided extreme weights. The weights were trimmed using the combination of grade and county as an adjustment class. Any weight greater than twice the median of the adjustment class was set to twice the median of the adjustment class. Then all the adjusted weights were multiplied by a constant to bring their sum to the MSDE reported total for that grade and county.

Survey Return Rates

Survey instruments were provided for a total of 39,351 sampled students enrolled in the selected classrooms in selected schools. Of these, 33,057 were returned and analyzed. Exhibit 2.2 shows the initial sample and percentage of forms returned for each participating school system. At the LSS level, return rates varied from a high of 90 percent—in Baltimore County, Montgomery County, and Talbot County—to a low of 75 percent in Baltimore City and Prince George's County. The statewide return rate was 84 percent.

**Exhibit 2.2:
Survey Return Rates for 2004 MAS by School System¹**

School System	Grade								Total	
	6th		8th		10th		12th			
	Initial Sample	Percent Returned								
Allegany	332	83%	336	83%	357	82%	335	78%	1,360	81%
Anne Arundel	598	91%	625	90%	622	83%	686	86%	2,531	88%
Baltimore City	601	76%	898	82%	630	73%	635	65%	2,764	75%
Baltimore	599	93%	621	93%	614	86%	655	87%	2,489	90%
Calvert	432	92%	393	87%	433	85%	478	87%	1,736	88%
Caroline	200	81%	236	81%	246	86%	235	84%	917	83%
Carroll	546	87%	515	93%	377	92%	412	75%	1,850	87%
Cecil	370	88%	390	89%	417	87%	401	79%	1,578	86%
Charles	419	89%	477	88%	428	94%	454	83%	1,778	89%
Dorchester	173	83%	224	85%	196	64%	131	80%	724	78%
Frederick	542	84%	477	87%	513	89%	532	81%	2,064	85%
Garrett	225	84%	243	91%	214	94%	161	62%	843	84%
Harford	492	88%	485	80%	450	84%	461	75%	1,888	82%
Howard	527	85%	528	86%	544	87%	569	81%	2,168	85%
Kent	141	94%	165	92%	89	74%	186	70%	581	82%
Montgomery	670	93%	696	91%	664	89%	698	88%	2,728	90%
Prince George's	661	75%	634	85%	711	72%	742	71%	2,748	75%
Queen Anne's	277	83%	310	81%	293	82%	263	82%	1,143	82%
St. Mary's	399	85%	442	69%	408	82%	422	78%	1,671	78%
Somerset	224	86%	218	83%	199	84%	100	73%	741	83%
Talbot	184	86%	244	89%	226	87%	156	102%	810	90%
Washington	474	85%	493	91%	415	84%	343	81%	1,725	86%
Wicomico	424	88%	386	85%	387	92%	390	84%	1,587	87%
Worcester	209	81%	212	89%	268	82%	238	70%	927	80%
Total	9,719	86%	10,248	86%	9,701	84%	9,683	80%	39,351	84%

¹Unusable responses not included.

SAMPLE CHARACTERISTICS

As indicated in Exhibit 2.3, the proportions of males and females that participated in the study from each of the four grades surveyed reflect those enrolled in these grades in the State as a whole.

Exhibit 2.3:
Comparison of School Enrollment¹ and Number of Respondents by Gender

Gender	Grade								Total	
	6th		8 th		10th		12th			
	State	MAS	State	MAS	State	MAS	State	MAS	State	MAS ²
Males	51.0%	49.3%	51.6%	50.1%	51.0%	48.1%	49.5%	49.9%	50.8%	49.4%
	31,745	4,093	33,436	4,378	34,883	3,836	30,555	3,859	130,619	16,166
Females	49.0%	50.7%	48.4%	49.9%	49.0%	51.9%	50.5%	50.1%	49.2%	50.6%
	30,514	4,214	31,301	4,360	33,569	4,136	31,211	3,880	126,595	16,590
Total	62,259	8,307	64,737	8,738	68,452	7,972	61,766	7,739	257,214	32,756

¹ SOURCE: Maryland Public School Enrollment by Race/Ethnicity, Gender and Number of Schools, September 30, 2007; MSDE

² 301 respondents did not provide information on gender

The proportions of respondents from each of the categories of race/ethnicity on which data were collected (Exhibit 2.4) also reflect the proportion of the students enrolled in each of the grades studied. Exhibit 2.4, however, suggests a small degree of over-sampling of White students and a corresponding under representation of African American students. This slight imbalance is rectified in the data analysis when responses are weighted. Note that multi-racial responses were not used in the data made available by MSDE for use in this survey, although their use has become more prevalent.²

² As the racial profile in America has changed in recent history, so have the methods of reporting racial background(s). Parker and Madans (2002) note that as a result of the 1997 revision of racial and ethnic reporting directives from the Office of Management and Budget (OMB), individuals could report one or more race groups when responding to racial identity questions. Thus, trends toward the identification of multi-racial participants began. About 2.4 percent of the US population, nearly 7 million people, reported two or more race groups in the 2000 decennial census. For MAS 2007 2.2 percent of students provided multiple race/ethnicity responses. (Parker, J.D. and Madans, J. H. 2002. The correspondence between interracial births and multiple-race reporting. *American Journal of Public Health*, 92 (12), 1976-1980.)

Exhibit 2.4:
Comparison of School Enrollment¹ and Number of Respondents² by Race/Ethnicity

Race/Ethnicity	Grade								Total	
	6 th		8 th		10 th		12 th			
	State	MAS	State	MAS	State	MAS	State	MAS	State	MAS
White	47.7%	59.5%	46.8%	57.0%	48.3%	61.8%	53.1%	62.4%	48.9%	60.1%
	29,695	4,861	30,317	4,940	33,059	4,905	32,805	4,799	125,876	19,505
African American	37.4%	27.6%	39.4%	31.2%	38.3%	27	34.7%	26.9%	37.5%	28.3%
	23,282	2,252	25,512	2,705	26,199	2,145	21,410	2,072	96,403	9,174
Asian/Pacific Islander	5.6%	4.9%	5.3%	4.1%	5.5%	4.8%	5.6%	4.6%	5.5%	4.6%
	3,503	401	3,415	357	3,731	378	3,465	350	14,114	1,486
Hispanic	9.0%	6.0%	8.1%	5.8%	7.6%	5.0%	6.3%	5.1%	7.7%	5.5%
	5,580	491	5,244	499	5,236	399	3,874	395	19,934	1,784
American Indian ³	0.3%	2.0%	0.4%	2.0%	0.3%	1.3%	0.3%	1.0%	0.3%	1.6%
	199	165	249	172	227	105	212	76	887	518
Total	62,259	8,170	64,737	8,673	68,452	7,932	61,766	7,692	257,214	32,467

¹ **SOURCE:** Maryland Public School Enrollment by Race/Ethnicity, Gender and Number of Schools, September 30, 2007; MSDE.

² 716 respondents providing multi-racial responses were recoded to a single race/ethnicity; 590 did not respond and are excluded.

³ Data obtained for students reporting American Indian ethnicity were not reliable.

QUESTIONNAIRE FORMS

The survey consisted of three questionnaire forms. Form 1 was designed for administration to 6th graders, Form 2 for 8th and 10th graders, and Form 3 for 12th graders. All three forms included sections on students' background characteristics; drug knowledge, attitudes, and use patterns; family relationships; drug availability; and perceived safety. In addition, students completing Forms 2 and 3 were asked about any negative effects they had experienced from substance use; parental and peer approval of substance use; and estimates of degrees of risk associated with substance use. Twelfth graders completing Form 3 were asked additional questions about alcohol, drugs, and driving. Form 3 is included in Appendix B.

The questions comprising the 2007 MAS were identical to the 2004 and 2002 MAS. These MAS instruments were printed on scannable sheets to facilitate the transmission of data from the paper-and-pencil instrument into an electronic format for analysis.

ADMINISTRATION PROCEDURES

In each participating school, forms were administered in the classes that were identified by sampling procedures. The 2007 MAS administration date was December 11, 2007. The MAS is usually conducted in December, as was the case in 2002 and 2004. Since the administration date was so close to the winter break, some schools that did not administer the surveys on time were given permission to do so in January. This most often occurred in Baltimore City and Prince George's County.

Survey packets were distributed to each participating school point of contact with instructions as to which classes were selected for the survey. The school point of contact distributed the materials, which contained forms, pencils, administration instructions, and return envelopes to the designated survey administrator (teachers or others) for each class. The 2007 MAS administration materials are located in Appendix C.

In most cases, teachers administered the forms, although in a few instances other school personnel administered them. Survey administrators were responsible for requesting student participation, distributing forms, delivering instructions, and returning the completed forms to the school point of contact. In addition, they were instructed to assure students of the voluntary nature of their participation and the confidentiality of their responses.

In each classroom, the forms were collected from the students and returned to the school's point of contact. School points of contact were instructed to return all survey forms (completed and blank) via United Parcel Service to the designated survey repository site.

GENERALIZING THE SURVEY RESULTS

As described earlier in this chapter, the survey sampling methodology allows generalization of responses at the school system level. Johnston, O'Malley, Bachman, and Schulenberg (2007),³ in their report of the national survey results on drug use from the Monitoring the Future Study, found that survey results, such as those from the MAS, represent an accurate estimate of drug use, despite the fact that the estimates rely on self-reported measures of drug use. They believe there is a high level of validity in the measures obtained.

Johnston, O'Malley, Bachman, Schulenberg, and Kumar (2006)⁴ also noted in a paper, "How Substance Use Differs among American Secondary Schools," that most of the variance in drug use and related variables lies within schools; only a small amount of variance is between schools. In several overviews of the Monitoring the Future Study, the point was also made that although the variance lies primarily within schools, important school-to-school differences remain in the extent to which students are exposed to drug use.

³ Johnston, L. D., P. N. O'Malley, J. G. Bachman, and J. E. Schulenberg. 2007. *Monitoring the future national results on adolescent drug use: Overview of key findings*. Bethesda, MD: National Institute on Drug Abuse (NIH Publication No. 07-6202).

⁴ O'Malley, P. M., L. D. Johnston, J. G. Bachman, J. E. Schulenberg, and R. Kumar. 2006. How substance use differs among American secondary schools. *Prevention Science*, 7, 409–420.

CHAPTER III
ALCOHOL, TOBACCO, AND OTHER ILLICIT DRUG
USE BY MARYLAND ADOLESCENTS

CHAPTER III
ALCOHOL, TOBACCO, AND ILLICIT DRUG USE
BY MARYLAND ADOLESCENTS

The 2007 findings provide the nature and extent of alcohol, tobacco, and other drug use by sixth, eighth, tenth, and twelfth graders. These adolescents were asked to indicate if they had ever used each of twenty-two substances and, if so, how often they had used them over the last 12 months and in the last 30 days. These statistics are also reported for each local jurisdiction in Appendix D.

The reported substance use patterns provide insight into societal values and mores. Parents and other care-giving adults serve as role models and arbiters of right and wrong. Not surprisingly, the substance use behavior of adolescents is much like that of the adult population.

This chapter presents an analysis of substance users in terms of frequency of use and race/ethnicity, gender, and age at adolescents' first substance experience. These analyses are designed to provide policy makers, program planners, and practitioners with information that will help target their prevention/education messages and programs to assure the greatest impact.

Overview of Alcohol Use

Extent of Use:

USE OF ANY FORM OF ALCOHOL

Grade	Ever Used	Last 30 Days	Last 12 Months
6th	8.8	3.8	6.1
8th	25.7	12.7	21.3
10th	48.7	27.8	43.5
12th	66.6	42.2	60.6

Alcohol use is higher in higher grades

- Two-thirds of twelfth graders have tried some form of alcohol; about two thirds of those used it in the last 30 days
- Half of tenth graders have tried alcohol; just over half of those drank during the last 30 days
- One quarter of eighth graders have tried alcohol; about half of them have used it in the last 30 days
- Less than one in ten sixth graders report ever having used alcohol

Characteristics of Drinkers:

Gender

- Females outnumber males as occasional drinkers of beer/wine and liquor
- Males outnumber females as frequent users of beer/wine and liquor
- Male and female students are equally as likely to be binge drinkers

Age at First Use

- 10.7% of twelfth graders who ever used alcohol started drinking beer/wine/wine coolers at age 12 or younger
- The largest percentage of twelfth graders (48.9%) report having first tried liquor between ages 15 and 16.

Race/Ethnicity

- White and Hispanic twelfth grade students are more likely to be frequent beer drinkers than their African American and Asian/Pacific Islander peers
- White twelfth graders were more likely to be occasional users of liquor than their African American, Asian, and Hispanic peers

Binge Drinking

- Nearly half (46.9%) of twelfth graders report having had five or more servings of alcohol on the same occasion. Thus about 7 out of 10 twelfth graders who have ever used alcohol have tried binge drinking.

Definitions:

Occasional Drinking: Drank alcohol on 1 or 2 occasions in the last 30 days

Frequent Drinking: Drank alcohol on 3 to 5 occasions in the last 30 days

Heavy Drinking: Drank alcohol on 6 or more occasions in the last 30 days

Binge Drinking Drank 5 or more servings of alcohol on the same occasion

Note: Asian/Pacific Islanders are referred to as Asian in the remainder of this document.

ALCOHOL

Extent of Use

Alcohol remains the most widely used of the substances surveyed, although use is slightly lower in 2007 than it was in 2004. Exhibit 3.1 shows that two-thirds of twelfth graders reported having at least tried an alcoholic beverage, compared to about half of tenth graders and one quarter of eighth graders.⁵ A considerable number of the eighth (12.7%) and tenth (27.8%) graders report use of some type of alcoholic beverage during the last 30 days as well. Nine out of ten of twelfth graders who reported trying alcohol (61% of all twelfth graders) drank sometime during the past year while two thirds (42.2% of all twelfth graders) said they drank during the last 30 days. Only a small percentage of the sixth graders (8.8%) indicated they had tried alcohol.

**Exhibit 3.1:
Summary of Extent of Alcohol Use by Grade Level**

Any form of alcohol	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
2007 MAS	8.8%	3.8%	6.1%	25.7%	12.7%	21.3%	48.7%	27.8%	43.5%	66.6%	42.2%	60.6%

As shown in Exhibit 3.2, many adolescents report heavy alcohol consumption, especially twelfth and tenth graders. Nearly half of seniors (46.9%) have engaged in binge drinking (five or more servings on the same occasion) and more than one quarter (28.6%) have done so in the last 30 days. More than one quarter (27.4%) of tenth graders reported ever binge drinking with about half of those (15.3%) having done so in the last 30 days. The percentages of binge drinking in lower grades were much smaller.

**Exhibit 3.2:
Binge Drinking by Grade**

Grade	Ever Occurred	Within the Last 30 Days	Within the Last 12 Months
6th	2.0%	0.9%	1.4%
8th	9.0%	4.7%	7.3%
10th	27.4%	15.3%	24.0%
12th	46.9%	28.6%	41.6%

Respondents who ever drank were also asked to indicate the extent of their use of either of two categories of alcoholic drinks. Beer/wine/wine coolers made up one group and any type of liquor made up the other. Among drinkers, adolescents in each grade level were about as likely to consume alcohol in the beer category⁶ (59.9% of drinkers have used beer in the last 30 days) as in the liquor category (60.9%). (Note that these figures are not shown in an exhibit.) There are

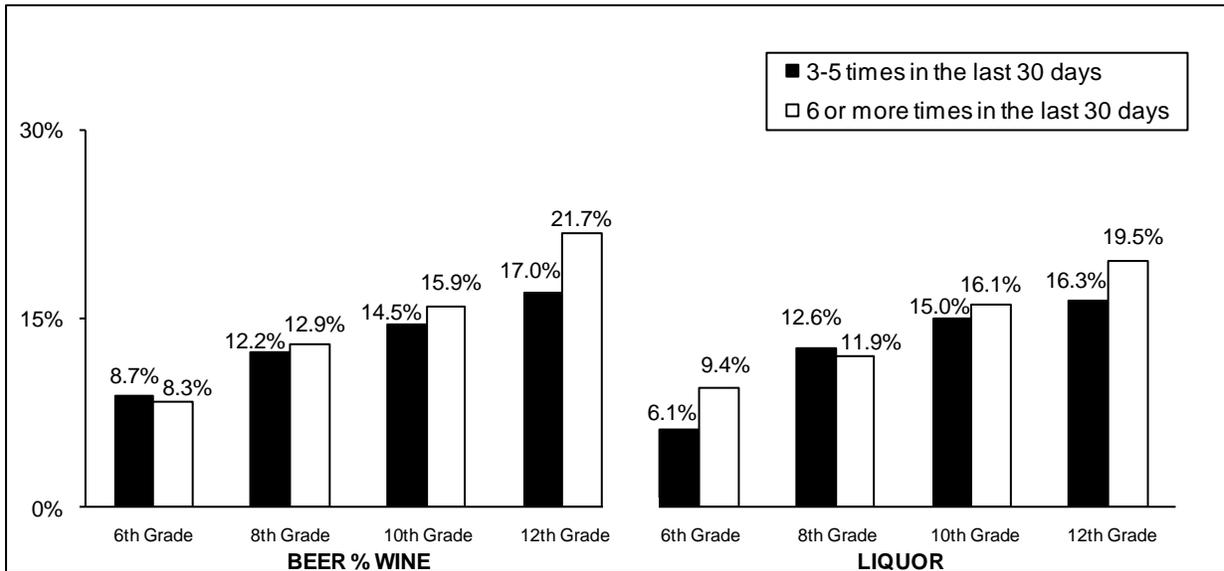
⁵ Excluding religious use or a sip from an adult's drink.

⁶ Beer/wine/wine coolers are referred to by the term *beer* or *beer/wine* in the text.

only modest increases by grade; for example beer drinking in the last 30 days among those who have ever used alcohol increased from 52.1% among sixth graders to 64.9% among twelfth graders.

Exhibit 3.3 below depicts frequent drinking of beer and liquor. Almost one out of every five twelfth grade students who have ever tried beer or liquor report drinking on at least six or more occasions in the last 30 days. Nearly one in every ten 6th and 8th graders say that they drink this often. In general, frequent drinking of either beer or liquor increases with grade; percentages of frequent drinking are similar for both beer and liquor.

Exhibit 3.3:
Frequent Drinking by Type of Alcohol for Those Who Reported Drinking



Characteristics of Those Who Have Used Alcohol

GENDER

The findings show that among those who have ever used alcohol and occasional users, males and females use beer/wine/wine coolers and liquor at approximately the same rate. However, among frequent users males use both beer and liquor at a higher rate than females. Exhibit 3.4 presents the proportion of twelfth grade males and females who have ever used beer/wine/wine coolers or liquor and use by gender among occasional and frequent users. Frequent users of both liquor and beer are more likely to be males than females (55.2% males for liquor and 57.8% males for beer); however females slightly outnumber males among occasional users and those who have ever used, regardless of frequency.

**Exhibit 3.4:
Alcohol Use by Gender Among Twelfth Graders**

Substance	Ever Used		Occasional Use		Frequent Use	
	Males	Females	Males	Females	Males	Females
Liquor	48.7%	51.3%	48.6%	51.5%	55.2%	44.8%
Beer/Wine/Wine Coolers	49.1%	50.1%	45.7%	54.2%	57.8%	42.2%

The data for younger grades are not depicted here but eighth and tenth grade users follow a similar pattern in use by gender as twelfth graders. However, 6th graders report a different pattern. In contrast to their older peers, sixth graders who have ever used alcohol are far more likely to be males (61.4% for beer use and 60.4% for liquor) than females (38.6% for beer and 39.6% for liquor).

Another indicator of heavy alcohol consumption is binge drinking, where an individual has five or more servings of alcohol on the same occasion. The findings reveal that nearly half (48.1%) of male twelfth graders report binge drinking and nearly as many females (45.9%). For other grades male and female levels of binge drinking are also close.

RACE/ETHNICITY

There are racial/ethnic differences among students who have tried alcohol. The highest percentage of those who had tried some type of alcohol at least once were White students (74.6%) followed by Hispanic (63.2%), African American (57.9%), and Asian (50.8%) students.

There are some differences across racial/ethnic lines among twelfth graders who are categorized as occasional drinkers (drinking one to two times in the last 30 days) or frequent drinkers (Exhibit 3.5). Frequent use of beer is highest among White and Hispanic students; frequent use of liquor is lower among African American students than those of other racial/ethnic groups. Among tenth graders (not shown) frequent use of beer is similarly highest among White and Hispanic students, but at somewhat lower percentages. Among tenth graders it is Asians that report the lowest percentage of frequent use, with the other groups similar.

**Exhibit 3.5:
Frequency of Alcohol Use by Race/Ethnicity Among Twelfth Graders**

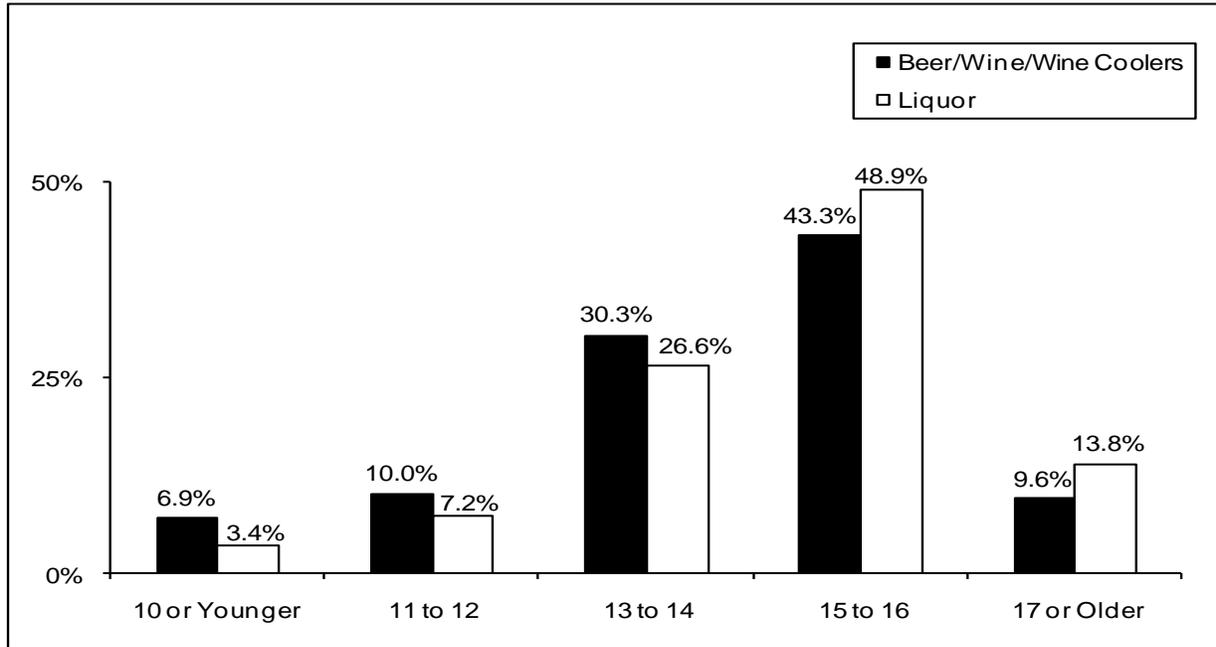
Frequency of Drinking	Asian		African American		White		Hispanic	
	Beer	Liquor	Beer	Liquor	Beer	Liquor	Beer	Liquor
Non-Users	37.3%	42.2%	48.9%	43.6%	29.7%	31.8%	35.2%	37.5%
Occasional	31.5%	22.3%	24.1%	26.9%	26.7%	29.8%	26.7%	26.5%
Frequent	31.2%	35.5%	27.0%	29.5%	43.6%	38.4%	38.2%	36.0%

AGE AT FIRST USE

The survey findings indicate that first use of alcohol most frequently occurred between 13 and 16 years of age. As shown in Exhibit 3.6, among the twelfth grade adolescents reporting that they tried beer/wine/wine coolers, more said that this first experience was later in this period. Specifically, 43.3 percent said that they first tried beer between the ages of 15 and 16 while 30.3 percent said they first drank it when they were 13 to 14. Only a small percentage of 12th grade

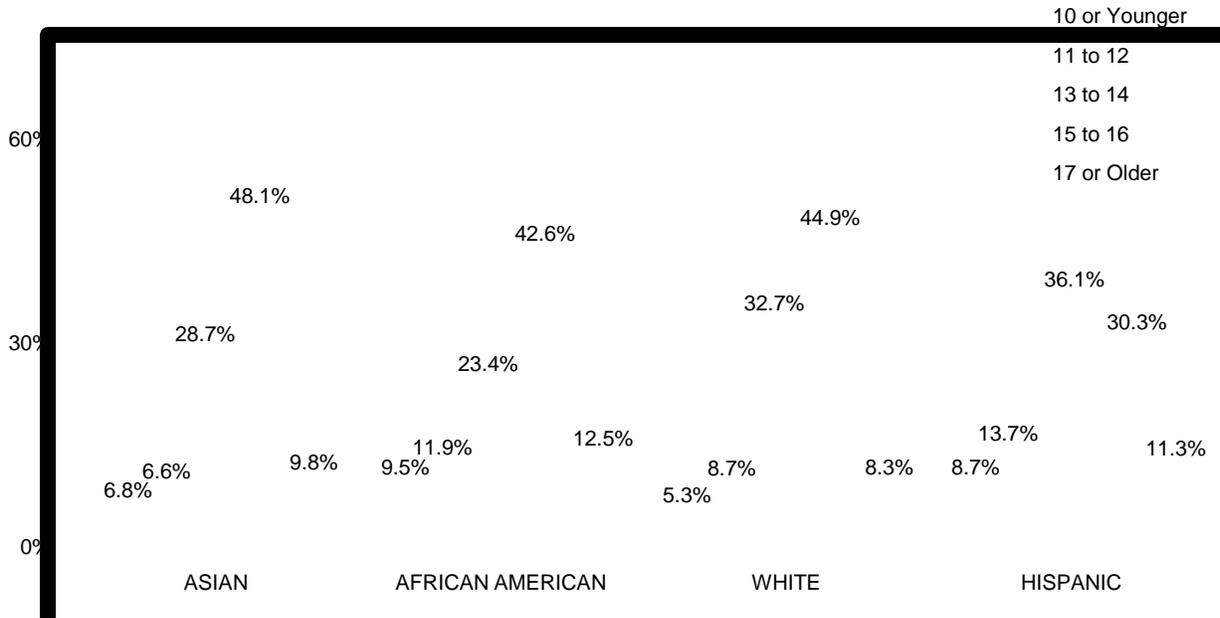
adolescents indicate that they had their first drink of beer before age 10 (6.9%) or at age 17 or older (9.6%). Age at first use was similar for tenth graders. Age at first use among sixth and eighth graders is limited by their young age and thus less revealing.

Exhibit 3.6:
Age at First Use of Alcohol
Percent of Twelfth Graders Reporting Ever Used

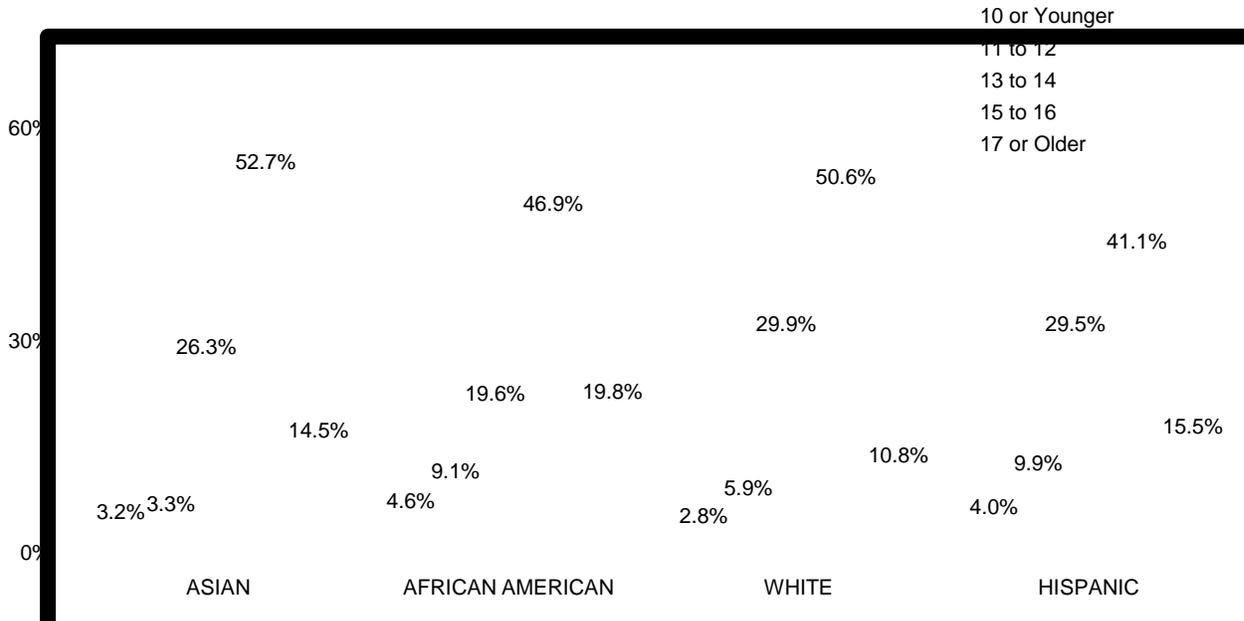


Exhibits 3.7 and 3.8 show age at first use for beer and liquor respectively by race/ethnicity. The data indicate that a smaller proportion of Hispanic students wait to age 15 or more to start drinking beer than students in other groups and that African American students and Hispanic students are somewhat more likely to start drinking beer in the youngest age groups (11 to 12 and 10 or younger). For liquor, more Asian and African American students wait until age 15 for their first use than Hispanic or White students. More early use of liquor (age 12 or younger) is found among African American and Hispanic students than among Asian or White students.

**Exhibit 3.7:
Age at First Use of Beer/Wine by Race/Ethnicity
Percent of Twelfth Graders Reporting Ever Used**



**Exhibit 3.8:
Age at First Use of Liquor by Race/Ethnicity Percent of Twelfth Graders Reporting Ever Used**

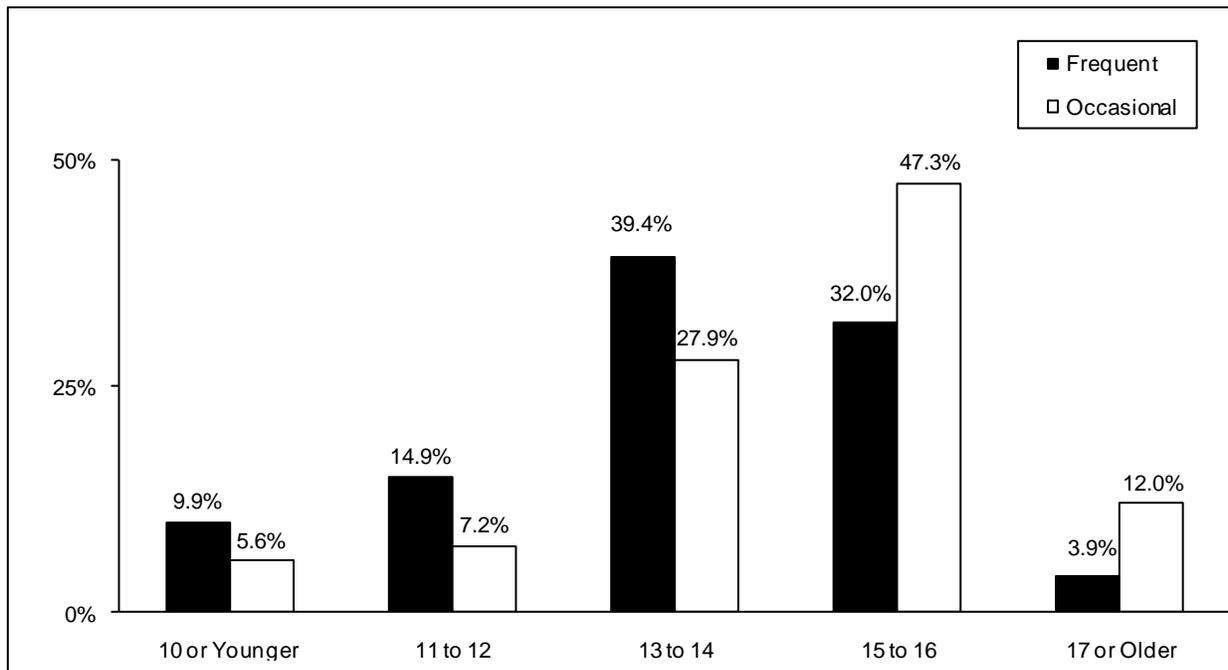


Comparison of Occasional and Frequent Drinkers

As previously indicated in Exhibit 3.4, there are some gender differences for occasional and frequent users of beer/wine and liquor among twelfth graders. Females are more likely to report occasional use of beer/wine and liquor relative to males. Males, on the other hand, are more likely to report frequent use of these substances relative to their female peers.

Exhibit 3.9 depicts age of first use of beer/wine/wine coolers among occasional and frequent drinkers in the twelfth grade. It shows that youth who are classified as frequent drinkers are more likely to have started drinking at a younger age (age 13 to 14 is the peak) than occasional users (age 15-16 is the peak). The results for liquor are very similar. For tenth graders, most of whom were age 15 when the survey was administered, the findings are more complex and suggest that their younger age limits the ability to observe trends in age at first use.

Exhibit 3.9:
Age at First Use of Beer by Frequency of Use
Percent of Twelfth Graders Reporting



Comparison to 2004 Survey Data

Exhibit 3.10 shows that use of alcohol (of any type) consistently decreased from 2004 to 2007 for all time periods of use (ever used, used in last 30 days, and used in last 12 months.) The decline in those ever using alcohol was 6.7 percentage points in grade eight, 4 to 5 percentage points in grades six and ten and 3.1 percentage points in grade twelve. Declines for the other time periods were somewhat lower (as expected given the lower percentages in more recent use) and also were greatest in grade eight.

**Exhibit 3.10:
Use of Alcohol in 2007 and 2004 by Grade and Time Period of Use**

Any form of alcohol	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
2007 MAS	8.8	3.8	6.1	25.7	12.7	21.3	48.7	27.8	43.5	66.6	42.2	60.6
2004 MAS	13.3	5.4	9.0	32.4	16.2	27.0	53.1	31.4	47.7	69.7	44.1	63.0

As in 2004, beer/wine was the form of alcohol most frequently used by adolescents in all grade levels. However, fewer adolescents in all grade levels sampled report ever having tried beer/wine/wine coolers in 2007 compared to 2004. Declines in the percentage of adolescents who have ever used beer/wine/wine coolers were quite substantial; usage went down 3.9 percent among sixth graders, 7.2 percent among eighth graders, 4.9 percent among tenth graders and 4.8 percent among twelfth graders. Declines in the percentage of adolescents ever using liquor were more modest: 1.9 percent among sixth graders, 2.8 percent among eighth graders, 2.5 percent among tenth graders, and 0.9 percent among twelfth graders.

As in 2004, for those reporting frequent use, males are more likely to report using beer and liquor than females. While males and females appear to be equally likely to have tried alcohol, females are more likely to become occasional drinkers as compared to males who are more likely to become frequent drinkers.

When examining alcohol use by race/ethnicity among twelfth graders, differences emerge compared to 2004 data among those adolescents who are categorized as occasional drinkers (drinking alcohol one to two times in the last 30 days) of beer/wine and liquor or frequent drinkers (drinking alcohol on 3 to 5 occasions in the last 30 days). Frequent use of liquor by African American adolescents is down 2 percentage points to 29.5 percent, giving that group the lowest rate of frequent use. Frequent use is up among Asian and Hispanic adolescents by 4 and 6 percentage points respectively, but they still exhibit less frequent use than White adolescents (highest at 38.4%), who showed no change since 2004. When looking at beer/wine/wine cooler consumption, the results were similar. Frequent use among African American adolescents is down 2 percentage points to 27.0 percent, lowest among the race/ethnic groups, and frequent use is highest among White adolescents (little changed at 43.6%). Frequent use among Asian and Hispanic adolescents is up by 2 and 6 percentage points respectively.

Overview of Cigarette Use

Extent of Use:

USE OF CIGARETTES

Grade	Ever Used	Last 30 Days	Last 12 Months
6th	3.4	1.0	1.7
8th	10.6	4.2	6.7
10 th	20.1	9.1	13.7
12th	30.8	16.3	2.3

Cigarette use increases by grade

- Cigarettes are the third most used substance by Maryland adolescents.
- About one third of twelfth graders have tried smoking cigarettes; about half of those used them in the last 30 days
- One in five tenth graders have tried smoking cigarettes; nearly half of them smoked in the last 30 days
- More than one out every ten eighth graders have tried smoking cigarettes
- Few sixth graders have tried cigarettes

Attempts to quit

- Half of regular smokers have tried to quit smoking but could not

Characteristics of Smokers:

Gender

- Males outnumber females among regular smokers and greatly outnumber females among heavy smokers

Age at First Use

- One quarter of twelfth graders who ever smoked cigarettes started smoking at age 12 or younger

Race/Ethnicity

- Asian and African American tenth and twelfth graders are less likely to have tried cigarettes than their White and Hispanic peers
- Among smokers, White and Asian adolescents are most likely to be regular or heavy smokers

Definitions:

Occasional smokers: Less than 1 cigarette daily in the past 30 days

Casual smokers: 1-5 cigarettes daily in the past 30 days

Regular smokers: One half pack to one pack of cigarettes daily in the past 30 days

Heavy smokers: More than one pack of cigarettes daily in the past 30 days

CIGARETTES

Extent of Use

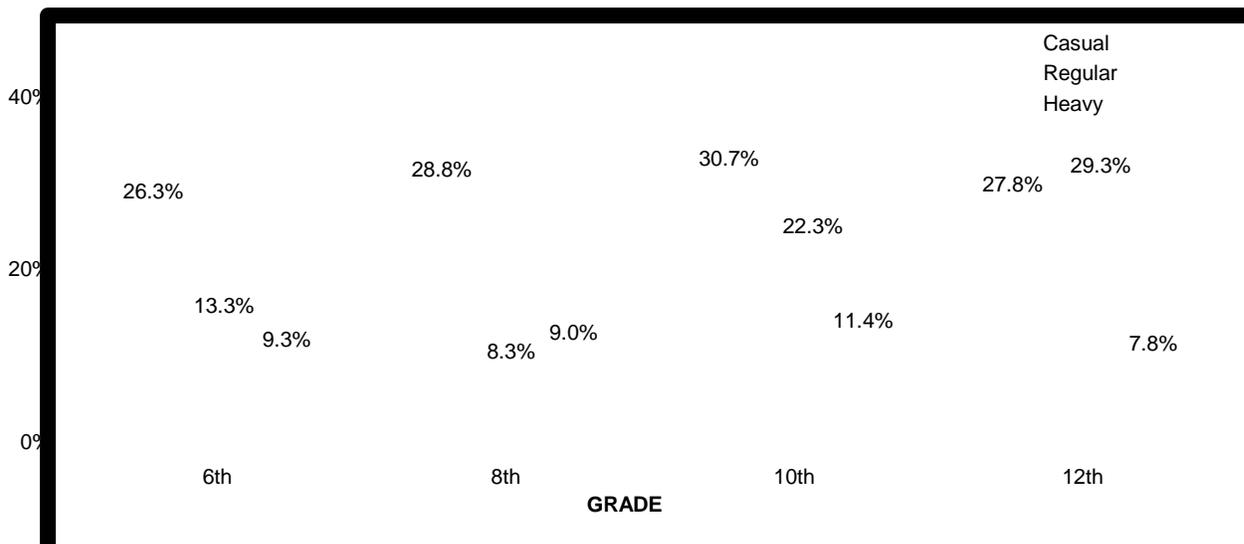
Cigarettes are the third most used substance by Maryland’s youth. In eighth grade, 10.6 percent of students report having tried cigarettes, a percentage that doubles by tenth grade and increases by fifty percent by twelfth grade. Less than half of those in eighth and tenth grade and just over half in twelfth grade have smoked in the last 30 days.

**Exhibit 3.11:
Summary of Extent of Cigarette Use by Grade Level**

Cigarettes	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
2007 MAS	3.4	1.0	1.7	10.6	4.2	6.7	20.1	9.1	13.7	30.8	16.3	22.3

Among students surveyed, most recent smokers (those who smoked in the past 30 days) reported being casual smokers, smoking five or fewer cigarettes daily in the past 30 days (Exhibit 3.12). Only in the twelfth grade do regular smokers slightly outnumber casual smokers.

**Exhibit 3.12:
Percent of Recent Smokers Who Are Casual, Regular and Heavy Smokers by Grade Level**



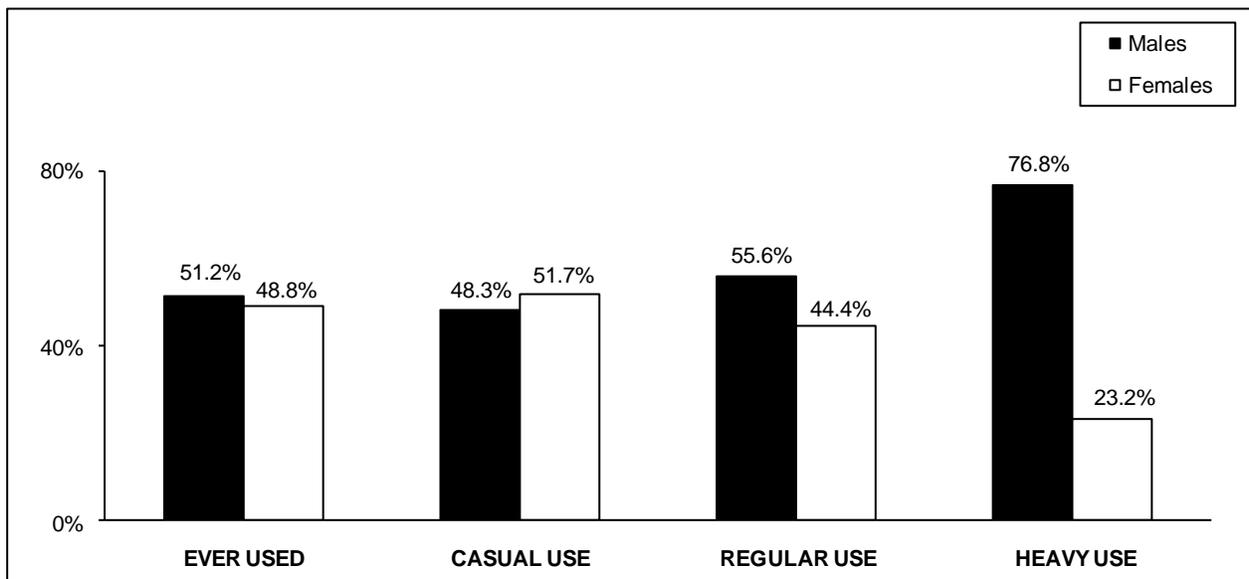
Cigarette smoking is highly addictive and therefore a difficult habit to break. Just over half (52%) of regular smokers tried to quit smoking but failed. Differences by grade varied from 40 to 60 percent attempting to quit but in no consistent pattern.

Characteristics of Students Who Have Ever Smoked Cigarettes

GENDER

Exhibit 3.13 shows that among twelfth graders who have ever used cigarettes, just over half are males (51.5%). However, females are slightly more likely to be casual smokers than males. In contrast, males outnumber females modestly among regular smokers and greatly among heavy smokers. Males and females generally split the percentages of smokers in each of the grade levels, with the exception of sixth graders. Sixth grade male regular smokers outnumber females who regularly smoke by 16.2 percentage points (58.1% for males vs. 41.9% for females).

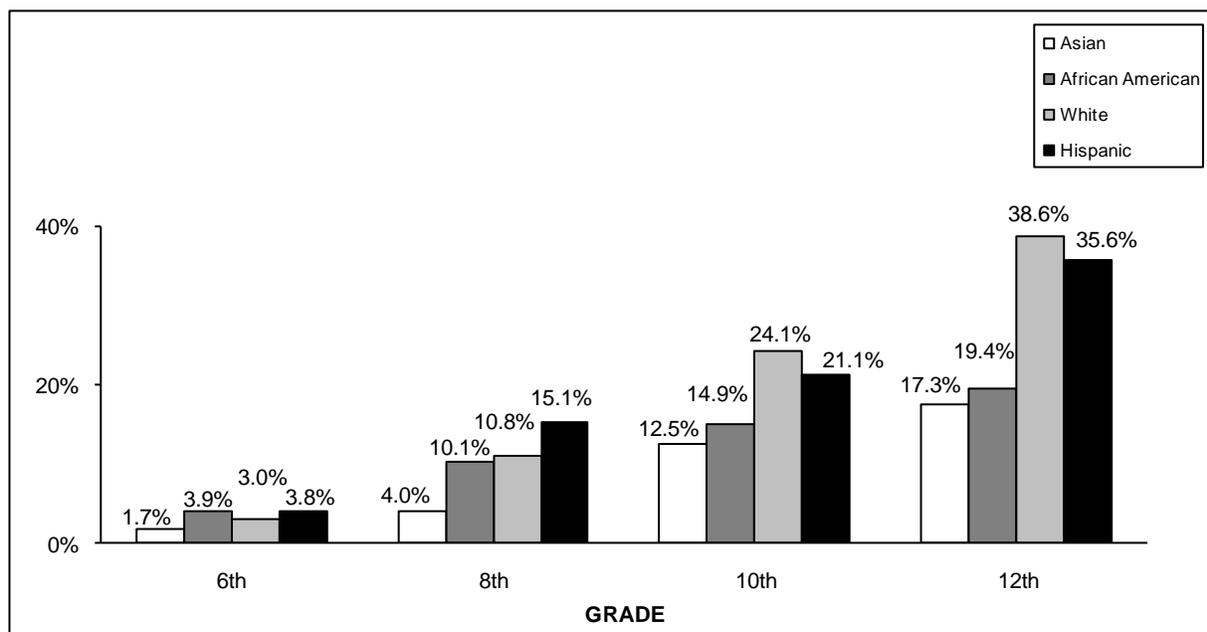
Exhibit 3.13:
Frequency of Smoking Use by Gender
Percent of Twelfth Graders



RACE/ETHNICITY

The percentage of each racial/ethnic group who say that they have at least experimented with smoking increases with grade level. By tenth grade, Whites outnumber all other ethnic groups in the percentage who have tried smoking, followed by Hispanics. Asian students were the lowest in overall percentages of cigarette experimenters.

Exhibit 3.14:
Percent of Each Racial/Ethnic Group Who Tried Smoking



AGE AT FIRST USE

As shown in Exhibit 3.15, most twelfth graders who have tried cigarettes first did so in their mid teens. In the twelfth grade sample of those who say they tried cigarettes, more than half (62.7%) began their experimentation between the ages of 13 and 16, with the peak at age 15 to 16. More than a quarter (25.9%), however, had their first smoking experience before they were 13 years of age. Equal percentages of twelfth graders (11.4%) reported first smoking at age 10 or younger or at age 17 or older. Since fewer students smoke by tenth grade and the ages at which they could start are limited, the results are of less interest; thus, as expected, greater percentages of tenth graders than twelfth graders start at younger ages.

Exhibit 3.15:
Age at First Use of Cigarettes by Gender*
Twelfth Graders Reporting Ever Used

Age	All	Males	Females
10 or Younger	11.4%	14.6%	8.1%
11 to 12	14.5%	13.5%	15.6%
13 to 14	27.3%	25.6%	29.1%
15 to 16	35.4%	34.1%	36.8%
17 or Older	11.4%	12.3%	10.5%

* Columns do not always add up to 100% due to rounding

GENDER

As indicated above in Exhibit 3.15, males and females are very similar in their pattern of age at first use of cigarettes. The only difference worth noting is that more males than females start at age 10 or younger.

RACE/ETHNICITY

Whereas the highest percentages of Asian, African American and White twelfth graders first tried cigarettes at ages 15 to 16, among Hispanics, the highest percentage of twelfth graders first tried cigarettes at ages 13 and 14. African American and Hispanic students are more likely to first experiment with cigarettes at age 10 or younger than either Asian or White students.

**Exhibit 3.16:
Age at First Use of Cigarettes by Race/Ethnicity*
Twelfth Graders Reporting Ever Used**

Age	Asian	African American	White	Hispanic
10 or Younger	11.4%	18.1%	8.3%	14.9%
11 to 12	16.5%	14.1%	14.1%	14.6%
13 to 14	21.0%	23.8%	27.9%	38.7%
15 to 16	36.8%	29.5%	38.8%	24.0%
17 or Older	14.3%	14.4%	10.9%	7.7%

Frequency of Use

GENDER

As indicated previously in Exhibit 3.13, males outnumber females in their report of regular cigarette use, while females slightly outnumber males for casual use. Exhibit 3.17 shows that an early starting age is associated with higher levels of use for twelfth grade males and females, but even more strongly for males with two thirds of male heavy smokers starting at age 10 or younger compared to about half of female heavy smokers.

**Exhibit 3.17:
Age at First Use of Cigarettes by Gender*
Twelfth Graders Reporting Casual, Regular or Heavy Use**

Age	Casual Users		Regular Users		Heavy Users	
	Males	Females	Males	Females	Males	Females
10 or Younger	7.1%	6.8%	11.6%	10.0%	66.7%	48.6%
11 to 12	11.3%	14.9%	20.3%	24.6%	12.4%	13.2%
13 to 14	27.6%	35.6%	31.8%	44.2%	5.5%	27.5%
15 to 16	38.7%	35.8%	30.5%	19.8%	8.6%	6.2%
17 or Older	15.3%	7.0%	5.9%	1.4%	6.8%	4.4%

* Columns may not add up to 100% due to rounding

RACE/ETHNICITY

Across ethnicities, more than half of all twelfth graders who smoke are occasional or casual smokers, report having smoked five or fewer cigarettes a day in the last 30 days. Interestingly, a larger percentage of Hispanic twelfth graders are only occasional smokers than those in other race/ethnic groups. White and Asian twelfth graders are most likely to be regular smokers.

There are some differences in these patterns among tenth grade smokers. Compared to twelfth graders, fewer tenth grade Hispanic students are occasional smokers (30.1%) and more tenth grade Asian students are heavy smokers (32.9%).

**Exhibit 3.18:
Cigarette Use by Race/Ethnicity
Twelfth Graders Reporting Casual, Regular or Heavy Use**

Frequency of Use	Asian	African American	White	Hispanic
<1/day	32.9%	37.7%	33.9%	46.8%
Casual Smoker	26.7%	35.2%	26.8%	17.5%
Regular Smoker	27.2%	16.8%	33.5%	16.5%
Heavy Smoker	13.2%	10.3%	5.7%	18.2%

Purchase Behavior

The survey also included questions about cigarette purchase. One question asked how young smokers acquire cigarettes. Of all twelfth graders who had smoked, 16.3 percent (Exhibit 3.21) did so in the past month. Of this group, 37.1% say they most often obtain their cigarettes by purchasing them in convenience stores or supermarkets (Exhibit 3.19). Heavy smokers are somewhat less likely to buy cigarettes in a store (30.1%), as their most prevalent method of obtaining cigarettes is to steal them (38% of heavy smokers steal cigarettes compared to approximately 2 to 3 percent for casual and regular smokers).

**Exhibit 3.19:
Cigarette Acquisition Method*
Twelfth Graders**

Method	All**	Casual	Regular	Heavy
Store	37.1%	47.7%	49.8%	30.1%
Vending machine	0.8%	1.2%	0.9%	2.4%
Someone else bought for me	27.3%	33.2%	36.5%	20.7%
Borrowed from someone else	21.0%	11.3%	3.0%	0.5%
Stole them	4.5%	1.8%	3.3%	38.0%
Other way	6.3%	4.8%	6.0%	6.2%

* Column percentages may not add up to 100 due to rounding and deletion of multiple responses

** This category also includes students who smoke less than 1 cigarette a day

A second purchasing behavior question asked whether students were ever required to show proof of age when buying cigarettes during the last 30 days (Exhibit 3.20). Again, data reveal there is a difference among levels of use and experiences with obtaining cigarettes. Heavy smokers were most likely not to be asked for proof of age (61.4%), with prevalence of not being asked declining with cigarette use (41.8% of regular smokers and 28.2% of casual smokers).

**Exhibit 3.20:
Asked to Show Proof of Age*
Percent of Twelfth Graders Reporting Casual or Regular Use**

Asked for Proof	All**	Casual Smokers	Regular Smokers	Heavy Smokers
Did not buy in store (not applicable)	34.0%	32.6%	21.1%	11.4%
Yes, was asked	30.0%	38.7%	35.4%	25.8%
No, was not asked	31.9%	28.2%	41.8%	61.4%

* Column percentages may not add up to 100 due to rounding and deletion of multiple responses

** This category also includes students who smoke less than 1 cigarette a day

Comparison to 2004 Survey Data

Compared to 2004 data, the number of students who have ever used cigarettes has decreased across all grade levels. As shown in Exhibit 3.21, the rate of adolescents who have ever smoked declined approximately 5 to 7 percentage points among eighth, tenth, and twelfth graders; this corresponds to a decrease of about one third among eighth graders, one quarter among tenth graders, and one fifth among twelfth graders. The 2 percent decline in use among sixth graders is a decrease of nearly 40 percent.

Among smokers, frequency of use among those who do smoke is down for tenth and twelfth graders with more occasional smokers and fewer heavy users. There is little change for eighth graders, but for sixth graders there is an increase in regular/heavy users (from 11.2% in 2004 to 22.6% in 2007) and a decrease in occasional users (from 63.6% to 51.2%). As in 2004, those in all but one category of smokers are more likely to obtain cigarettes from a store than from anywhere else; the exception is heavy smokers⁷, who are most likely to obtain cigarettes by theft.

**Exhibit 3.21:
Extent of Cigarette Use by Grade Level and Survey Year**

	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
Cigarettes												
2007 MAS	3.4	1.0	1.7	10.6	4.2	6.7	20.1	9.1	13.7	30.8	16.3	22.3
2004 MAS	5.5	1.5	2.7	15.9	5.9	10.3	26.1	11.2	17.3	38.6	19.8	26.8

The percentage of males and females reporting that they have ever smoked remained about the same from 2004 to 2007 with about 48 percent males and 51 percent of females reported ever having smoked cigarettes. While casual smokers are about equally likely to be male or female in both 2004 and 2007, regular/heavy smokers are more likely to be male (60 percent) in 2007 than they were in 2004 (52.8%). Heavy smokers, examined separately in 2007 but not in 2004, are far more likely to be male (76.8%) than female.

⁷ In 2004, heavy smokers were combined with regular smokers in most tables and figures.

The percentages of twelfth graders who experimented with cigarettes declined among all racial/ethnic groups at all grade levels. Asian students are least likely to have tried cigarettes in 2007 across all grade levels, as was the case in 2004. Countering the positive trends from 2004 to 2007, higher percentages of Hispanic and African American twelfth grade students reported first trying cigarettes at age 10 or younger in 2007 compared to 2004.

In 2007 as in 2004, about half of both casual and regular smokers report obtaining cigarettes at a store. However, there was an increase in the number of students who acquired cigarettes by getting someone else to purchase cigarettes for them. These percentages increased from 25.5 percent to 33.2 percent for casual smokers and from 26.0 percent to 36.5 percent for regular smokers. As in 2004, over a third (34.3% in 2004 vs. 38.7% in 2007) of all 12th grade casual smokers said that they were asked to show proof of age, however, over a quarter (28.2%) were not, a decrease from 37.5% in 2004. For 2007, the likelihood of being asked for proof of age declines with increased level of smoking; this differs from 2004 when being asked for proof increased with use.

Overview of Marijuana Use

Extent of Use:

- Marijuana is the second most used substance by Maryland students in eighth, tenth, and twelfth grades
 - 38.7% of twelfth graders have tried some form of marijuana
 - One in five tenth graders have used marijuana during the last year
 - For those reporting that they used marijuana, 27.2% of twelfth graders used marijuana six or more times within the last 30 days.
 - Less than two percent of sixth graders report ever having tried marijuana

Characteristics of Marijuana Users:

Gender

- Twelfth grade females outnumber males as occasional users of marijuana
- Twelfth grade males outnumber females as frequent users of marijuana

Age at First Use

- 20.7% of twelfth grade marijuana users started using marijuana at age 12 or younger
- 38.2% of twelfth grade marijuana users started using marijuana at age 13-14

Race/Ethnicity

- White twelfth graders are more likely to have tried marijuana than their African American, Hispanic and Asian peers
- White and Hispanic twelfth graders had the greatest percentage of frequent marijuana users when compared to their Asian and African American peers

Definitions:

Occasional Use: Smoked marijuana on one or two occasions in the last 30 days

Frequent Use: Smoked marijuana on three to five occasions in the last 30 days

Very Frequent Use: Smoked marijuana on six or more occasions in the last 30 days

MARIJUANA

Extent of Use

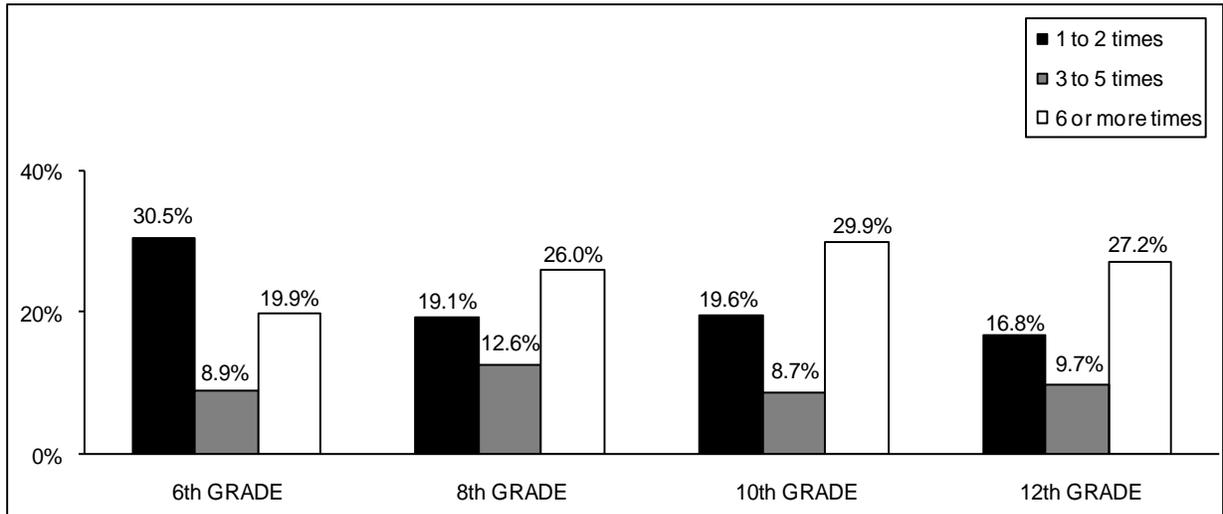
Marijuana ranks as the second most used substance for eighth, tenth, and twelfth graders surveyed in the 2007 MAS. Nearly 4 out of 10 twelfth grade students and 1 out of 4 tenth grade students report they had tried marijuana or hashish at some point; almost half of them report they have used marijuana or hashish in the last 30 days. Relatively few eighth graders and very few sixth graders indicated they had ever tried marijuana.

**Exhibit 3.22:
Summary of Extent of Marijuana Use by Grade Level**

Marijuana	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
2007 MAS	1.3	0.8	1.0	8.0	4.6	7.0	24.0	13.9	20.6	38.7	20.7	31.8

As shown in Exhibit 3.23, among eighth, tenth and twelfth graders, the largest percentage of students who have used marijuana in the last 30 days used the drug very frequently (6 or more times in that period). Students in all grades are least inclined to report frequent use of marijuana (use on 3 to 5 occasions). Rather, they tend toward either occasional or very frequent use.

**Exhibit 3.23:
Frequency of Marijuana Use in the Last 30 Days by Grade***



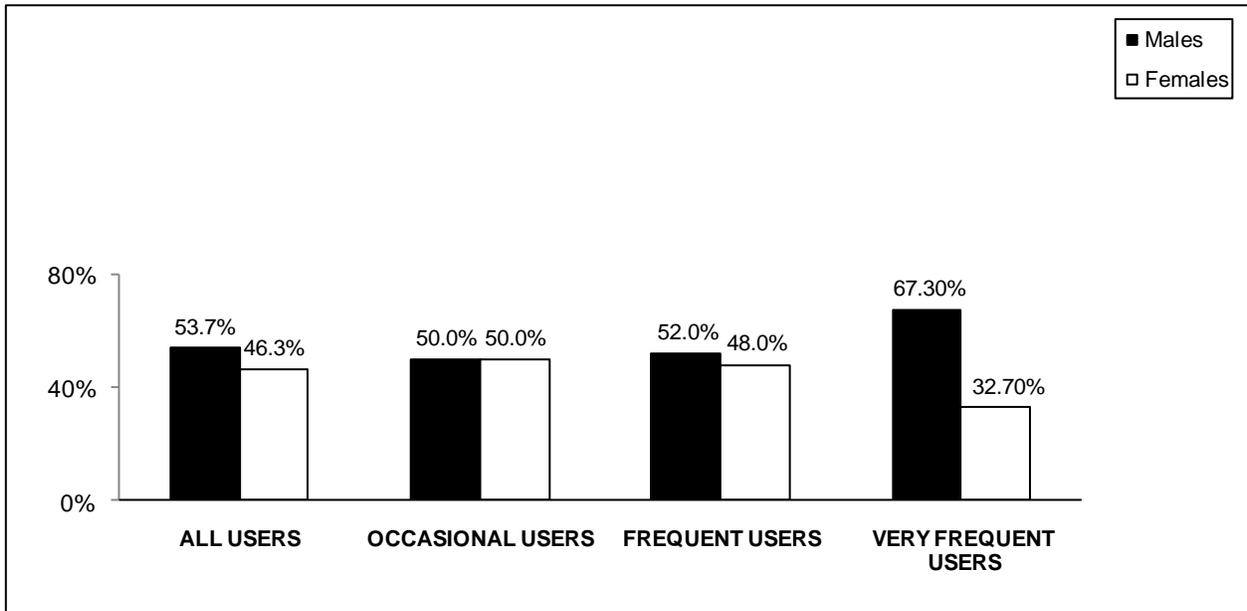
*Percents do not total 100% because Exhibit does not include data for those who never used marijuana.

Characteristics of Students Who Have Used Marijuana

GENDER

Of those twelfth graders who have used marijuana in the last 30 days, males slightly outnumber females (53.7% male vs. 46.3% female, Exhibit 3.24). About half of both males and females report being occasional users or frequent users. However, males are twice as likely to be very frequent users of marijuana (67.3%) than females (32.7%).

**Exhibit 3.24:
Frequency of Marijuana Use by Gender
Percent of Twelfth Graders Reporting Marijuana Use in the Last 30 Days**



RACE/ETHNICITY

Exhibit 3.25 indicates that there are differences in the percentage of twelfth grade students who have ever tried marijuana when these data are examined by the self-reported race/ethnicity of the surveyed students. White and Hispanic students are most likely to have ever used marijuana (44.0% and 38.3% respectively) while Asian students are the least likely (21.1%).

**Exhibit 3.25:
Percent of Each Racial/Ethnic Group That Have Ever Used
and Never Used Marijuana***

Frequency of Marijuana Use	Asian	African American	White	Hispanic
Ever Used	21.1%	33.2%	44.0%	38.3%
Never Used	78.9%	66.5%	55.9%	61.7%

* Due to missing data, column percentages may not add to 100%.

TWELFTH GRADERS

Of twelfth graders who have ever used marijuana, use within the last 30 days is shown in Exhibit 3.26. Among all groups about 4 out of 10 users have not used marijuana in the past 30 days. The ethnic groups with highest percentage of occasional users in the past 30 days are Asians (23.4%) and Hispanics (19.7%). Relatively few users of any group are frequent users, as very frequent use is far more prevalent; however, Hispanic students are least likely to be very frequent users (21%).

**Exhibit 3.26:
Marijuana Use by Race/Ethnicity in the Last 30 Days
Twelfth Graders**

Frequency of Recent Marijuana Use	Asian	African American	White	Hispanic
None	40.0%	44.0%	43.5%	40.6%
Occasional	23.4%	16.2%	16.5%	19.7%
Frequent	8.1%	8.4%	9.8%	15.5%
Very Frequent	27.1%	24.8%	28.5%	21.0%

* Due to missing data, column percentages may not add to 100%.

AGE AT FIRST USE

The data presented in Exhibit 3.27 indicates that most twelfth graders who have tried marijuana, do so between the ages of 13 to 16 (74.7%). Few students indicated they first used marijuana when either 10 years old or younger or when age 17 or older. Note that age at first use is not shown for lower grade levels as it is limited by the younger age of the respondents.

There are some differences in age at first use when examined by gender. Almost twice as many males as females first used marijuana at 12 years of age or younger (16.0% of males compared to 8.2% of females) while slightly more females than males first used marijuana between the ages of 13 and 16 (78.8% of females compared to 71.2% of males).

**Exhibit 3.27:
Age at First Use of Marijuana by Gender
Twelfth Graders Reporting Ever Used**

Age	All	Males	Females
10 or Younger	3.8%	5.5%	1.8%
11 to 12	8.6%	10.5%	6.4%
13 to 14	30.3%	30.7%	29.9%
15 to 16	44.4%	40.5%	48.9%
17 or Older	12.9%	12.9%	13.0%

The data also show gender differences in the age at first use by frequency of use (Exhibit 3.28). Among very frequent users, more than twice as many males first used marijuana at age 10 or younger, than did females. Among occasional and frequent users, similar percentages of females and males began using marijuana between the ages of 13 to 16.

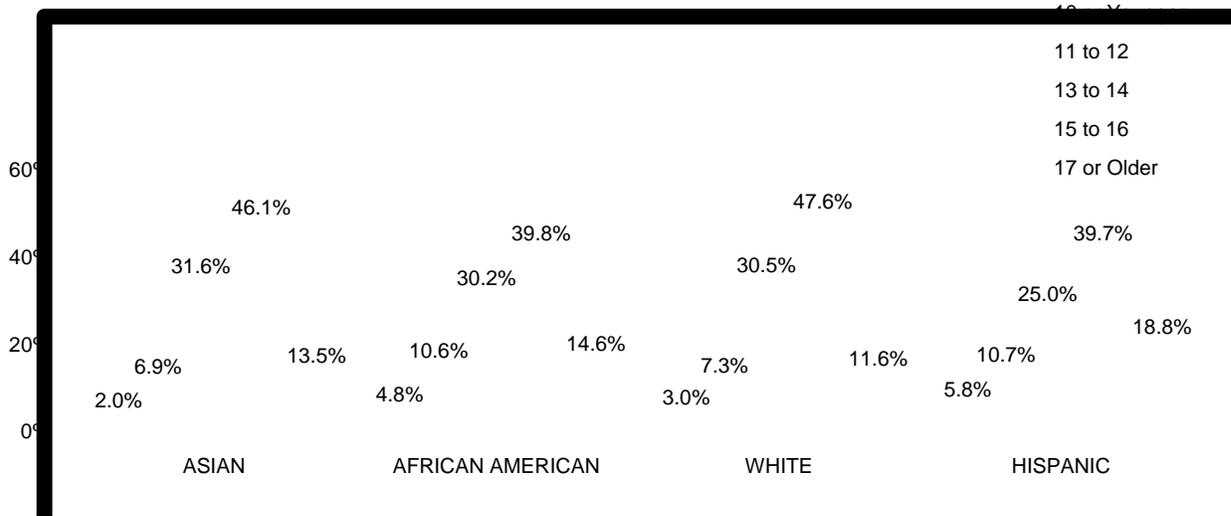
**Exhibit 3.28:
Age at First Use of Marijuana by Gender*
Twelfth Graders Reporting Occasional or Frequent Use**

Age	Occasional Users		Frequent Users		Very Frequent Users	
	Males	Females	Males	Females	Males	Females
10 or Younger	2.1%	0.3%	0.8%	2.6%	12.7%	5.5%
11 to 12	5.1%	3.6%	9.9%	10.5%	14.7%	11.6%
13 to 14	26.2%	21.3%	35.4%	30.7%	36.0%	46.0%
15 to 16	47.1%	49.3%	42.8%	43.8%	29.4%	32.4%
17 or Older	19.5%	25.4%	11.2%	12.4%	7.2%	4.5%

* Columns may not add to 100% due to rounding and some students declined to supply their age at first use

When age of first use is examined by race/ethnicity (Exhibit 3.29), it shown that for all racial groups, twelfth grade students were most likely to have first used marijuana between the ages of 15 and 16, followed by 13 to 14 and then 17 or older.

**Exhibit 3.29:
Age at First Use of Marijuana by Race/Ethnicity*
Percent of Twelfth Graders Reporting Ever Used**



*Bars do not always add to 100% due to rounding

Comparison of Occasional and Frequent Users of Marijuana

Differences by frequency of use of marijuana have been presented in the discussions of gender, age at first use, and by race/ethnicity. These findings are summarized here.

Occasional and frequent users are about equally males and females. Among very frequent users, males dominate.

There is a clear relationship between frequency of use and age at first use. Among twelfth graders, as frequency of use increases, age at first use declines. This relationship holds for both males and females, although more males start at early ages than females.

Differences by race/ethnicity and level of use are relatively modest. For each race/ethnicity, the largest percentage of users is very frequent users, followed by occasional users, and finally frequent users.

Comparison to 2004 Survey Data

According to the MAS 2007 survey data, marijuana use has decreased among students in all grade levels surveyed. Students who report having ever tried marijuana have decreased in number, from 1.9 percent to 1.3 percent for 6th graders, 11.7 percent to 8.0 percent for 8th graders, 28.2 percent to 24.0 percent for 10th graders, and 43.0 to 38.7 percent for 12th graders. Student reports regarding recent 30 day usage as well as 12 month usage have also decreased compared to 2004 data.

Exhibit 3.30
Grade Level and Time Period

Marijuana	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
2007 MAS	1.3	0.8	1.0	8.0	4.6	7.0	24.0	13.9	20.6	38.7	20.7	31.8
2004 MAS	1.9	0.8	1.2	11.7	6.4	10.2	28.2	15.6	24.5	43.0	21.9	34.9

Lower percentages of twelfth grade students in each race/ethnicity category reported ever using marijuana compared to 2004. The decline was largest for African American students (from 40.3% in 2004 to 33.2% in 2007). As in 2004, Asians are most likely to report that they have never used marijuana (79% in 2007 versus about 75% in 2004).

Changes in frequency of use in the last 30 days were somewhat mixed, with a trend toward lower frequency of use among twelfth graders and slightly higher frequency of use among eighth and tenth graders.

Overall, there was relatively little change in use by gender from 2004 to 2007.

Age at first use is higher on average for 2007 compared to 2004. Those who reported first use at age 12 or younger declined from 14.8 percent to 12.4 percent. There was a concomitant increase in the percentage reporting first use at age 15 or older (from 53.9 percent to 57.3 percent).

USE OF MORE THAN ONE SUBSTANCE

Experimentation or use of one substance may lead to experimentation or use of other substances in various combinations. An investigation of the extent of the use of alcohol, cigarettes, and marijuana in combination by MAS students confirms this. Exhibit 3.31 presents the percentage of sixth, eighth, tenth, and twelfth graders who say they have tried two or three substances, either at the same or at different times. These data show that regardless of the particular substances tried, the percentage trying more than one substance increases with grade level. Almost one-fourth of twelfth graders say that they have tried the three substances of tobacco, alcohol, and

marijuana. The study findings also show that the most frequently used combination among sixth and eighth graders is cigarettes and alcohol while among older students, marijuana and alcohol is the combination of choice.

**Exhibit 3.31:
Percent Ever Using More Than One Substance**

Combination	Grade			
	6th	8th	10th	12th
Cigarettes & Alcohol	2.1%	8.6%	18.2%	29.2%
Cigarettes & Marijuana	0.8%	4.8%	14.0%	24.0%
Marijuana & Alcohol	1.1%	6.9%	21.3%	36.9%
All Three Substances	0.7%	4.4%	13.4%	23.6%

Among sixth graders who use multiple substances, as indicated in Exhibit 3.32, males considerably outnumber females in their use of more than one substance. For eighth and tenth grades, the percentages of males and females trying most combinations is about equal, except for marijuana and alcohol, where males use this pair considerably more than females. By twelfth grade, males use most of the combinations by about 5 to 7 percentage points more than females, except for the combination of cigarettes and alcohol, where the genders are close to even in their use.

**Exhibit 3.32:
Percentage Reporting Ever Using More Than One Substance by Gender
Percentages of Those Using Multiple Substances**

Combination	Grade							
	6th		8th		10th		12th	
	Males	Females	Males	Females	Males	Females	Males	Females
Cigarettes & Alcohol	61.1%	38.9%	49.7%	50.3%	49.2%	50.8%	50.7%	49.3%
Cigarettes & Marijuana	64.7%	35.3%	52.5%	47.5%	52.9%	47.1%	52.6%	47.4%
Marijuana & Alcohol	61.9%	38.1%	54.4%	45.6%	54.9%	45.1%	53.7%	46.3%
All Three Substances	64.6%	35.4%	50.5%	49.5%	52.7%	47.3%	52.3%	47.7%

The analysis of survey responses for use of more than one substance in the last 30 days (Exhibit 3.33) also shows that the use of substance combinations increases as grade increases. For the last 30 days, as with combinations ever used, the most commonly reported substance combinations for the older students are marijuana and alcohol followed by cigarettes and alcohol. Sixth and eighth grade students report very little use of these combinations in the last 30 days.

**Exhibit 3.33:
Percent of Students Who Used More Than One
Substance in the Last 30 Days**

Substances Used in Last 30 Days	Grade			
	6th	8th	10th	12th
Cigarettes & Alcohol	0.6%	3.1%	7.2%	13.9%
Cigarettes & Marijuana	0.3%	2.0%	5.8%	9.8%
Marijuana & Alcohol	0.4%	3.4%	17.5%	17.5%
Used All Three Substances in Last 30 Days	0.2%	1.8%	9.1%	9.1%

An examination of adolescents who smoked cigarettes, drank, or used marijuana in the last 30 days (Exhibit 3.34) reveals that, generally, users of combinations of these substances increase by grade level. Overall, marijuana users and cigarette smokers were most likely to have also consumed alcohol in the last 30 days, and at similar rates. For example more than one-half (56.7%) of all sixth graders who smoked cigarettes also drank, and more than four-fifths (85.5%) of all twelfth graders who smoked also drank in the last 30 days; rates among marijuana users who drank were comparable.

**Exhibit 3.34:
Percent of Last 30 Day Users Who Used More Than One
Substance in the Last 30 Days**

Substance Used in Last 30 Days	Grade			
	6th	8th	10th	12th
Smoked cigarettes in last 30 days and:				
also drank in last 30 days	56.7%	75.2%	79.8%	85.5%
also used marijuana in last 30 days	33.2%	48.3%	64.6%	60.4%
Drank in the last 30 days and:				
also smoked cigarettes in last 30 days	15.7%	24.8%	26.0%	33.0%
also used marijuana in last 30 days	11.1%	26.6%	37.5%	41.6%
Used marijuana in last 30 days:				
also smoked cigarettes in last 30 days	44.9%	43.5%	41.9%	47.5%
also drank in last 30 days	54.4%	72.5%	74.6%	84.7%

USE OF OTHER SUBSTANCES

Use of smokeless tobacco and other illicit drugs is shown in Exhibit 3.35. For comparison purposes, this exhibit also includes a recap of data (in a gray font) on cigarettes, alcohol, and marijuana already presented. Use of illicit drugs is generally low, although it increases by grade level. At the twelfth grade level, the most often reported illicit drugs ever used are, in decreasing order: narcotics (8.2%), other hallucinogens (7.4%), amphetamines (6.8%), designer drugs (6%), other forms of cocaine (5.5%), barbiturates (5%), LSD (4.6%), and Ritalin (4.4%). Usage of each of these is down from the levels reported in 2004: use of amphetamines down sharply (from 9.7% to 6.8%) and use of the others down by approximately one percentage point or less.

Use of smokeless tobacco is now at 8.9 percent among twelfth graders, up from 7.8 percent in 2004.

About 4 out of 10 twelfth graders (42.2%) have used any drug other than alcohol or tobacco, down from 46.8 percent in 2004. Most of this other drug use is attributable to marijuana, which is used by 38.7 percent of twelfth graders.

**Exhibit 3.35:
Percent of Students Reporting Substance Use by
Grade Level and Time Period**

Substance	Grade											
	6th			8th			10th			12th		
	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months	Ever Used	Last 30 Days	Last 12 Months
Cigarettes	3.4	1.0	1.7	10.6	4.2	6.7	20.1	9.1	13.7	30.8	16.3	22.3
Beer, wine (other than for religious use), or wine coolers	8.0	3.3	5.4	22.3	10.3	17.8	43.0	22.5	37.2	59.7	36.3	52.4
Liquor (such as rum, vodka, or whiskey)	3.3	1.3	2.5	16.3	8.0	14.0	40.7	22.1	36.0	60.1	36.0	53.9
Any form of alcohol	8.8	3.8	6.1	25.7	12.7	21.3	48.7	27.8	43.5	66.6	42.2	60.6
Five or more servings of alcohol on the same occasion	2.0	0.9	1.4	9.0	4.7	7.3	27.4	15.3	24.0	46.9	28.6	41.6
Marijuana (pot, grass, hashish)	1.3	0.8	1.0	8.0	4.6	7.0	24.0	13.9	20.6	38.7	20.7	31.8
Smokeless tobacco (chewing tobacco, snuff)	0.9	0.3	0.5	1.8	1.0	1.5	4.5	2.2	3.4	8.9	3.9	6.5
Amyl or Butyl nitrates (locker room, rush)	0.8	0.4	0.6	1.0	0.7	0.8	1.2	1.0	1.1	1.2	0.8	1.0
Crack (rock)	0.6	0.4	0.4	1.5	1.1	1.3	2.3	1.6	2.1	2.7	1.7	2.2
Other forms of cocaine	0.4	0.3	0.3	1.1	0.9	1.0	3.4	2.0	3.0	5.5	2.5	4.2
LSD (acid, stickers)	0.6	0.4	0.5	1.0	0.6	0.8	2.9	1.9	2.6	4.6	2.2	3.9
PCP (angel dust, love boat, green)	0.6	0.3	0.4	1.6	1.0	1.3	2.7	1.5	2.2	2.9	1.4	2.2
Other hallucinogens (mescaline, 'shrooms)	0.2	0.1	0.2	1.3	0.8	1.2	4.3	2.2	3.8	7.4	2.7	6.0
Steroids for body building	0.7	0.3	0.4	0.9	0.5	0.7	1.5	1.0	1.2	1.7	1.1	1.5
Methamphetamines (meth, speed, crank, ice)	0.8	0.5	0.6	1.0	0.6	0.9	2.1	1.4	1.8	2.8	1.6	2.3
Designer drugs (MDMA, ecstasy)	0.4	0.3	0.3	1.3	0.8	1.2	3.4	1.8	3.1	6.0	2.6	4.9
Heroin (smack, stuff)	0.6	0.4	0.5	1.0	0.6	0.8	1.4	1.1	1.3	1.8	1.3	1.5
Needle to inject cocaine, heroin, or other illegal drugs	0.3	0.2	0.2	0.7	0.6	0.7	1.3	0.9	1.1	1.4	1.0	1.2
Amphetamines (uppers, bennies, speed, dexies)	0.9	0.5	0.7	2.4	1.3	2.1	4.6	2.6	3.9	6.8	3.4	5.4
Barbiturates and/or tranquilizers (downers, reds, Valium)	0.2	0.1	0.1	0.7	0.4	0.6	2.2	1.4	2.1	5.0	2.5	4.2
Narcotics (Codeine, Morphine, Methadone, Percodan)	0.3	0.2	0.2	1.2	0.8	1.2	4.4	2.6	4.0	8.2	4.5	6.9
Ritalin	0.6	0.3	0.4	1.3	0.7	0.9	2.9	1.6	2.2	4.4	1.7	3.1
Any drug other than alcohol or tobacco	6.7	3.6	5.0	15.0	8.6	12.4	28.8	17.1	24.8	42.2	24.0	35.8

Source: 2007 Maryland Adolescent Survey

Finally, students were asked if they had used alcohol and marijuana on the same occasion. From the data in Exhibit 3.34, it becomes apparent that using both types of substances at one time is not uncommon and increases with grade level. Exhibit 3.36 shows that students who had ever used marijuana are more likely to use alcohol concurrently than the reverse (alcohol users using marijuana concurrently). Among marijuana users, concurrent use of alcohol increased from nearly half (48.5%) at the eighth grade level to nearly three fourths (72.3%) at the twelfth grade level. Fewer numbers of students who had ever used alcohol report using marijuana while they were drinking. For example, 16.9 percent of eighth graders who used alcohol also used marijuana on the same occasion, increasing to 43.0 percent among twelfth grade alcohol users.

**Exhibit 3.36:
Percent of Students Using Alcohol and/or Marijuana
Who Used These Substances on the Same Occasion**

Based on Students Who Are	Grade		
	8th	10th	12th
Alcohol Users	16.9%	30.8%	43.0%
Marijuana Users	48.5%	61.8%	72.3%

CHAPTER IV
TRENDS IN SUBSTANCE USE IN MARYLAND
1998 – 2007

CHAPTER IV

TRENDS IN SUBSTANCE USE IN MARYLAND 1998–2007

To monitor substance use by Maryland adolescents over time, trend data from 1994 to 2007 are examined at all grade levels. Exhibit 4.1 provides percentages of 6th, 8th, 10th, and 12th graders who used any of 18 substances in the 30 days before they were surveyed. It is noteworthy that since 2004, alcohol use has declined substantially among students of all grade levels. This trend is evident in the self reports of student use within the last year, as well in the smaller proportions of those who have ever tried alcohol.

In 2007, sixth graders reported decreased 30-day usage rates for the three most-abused substances for that age group, continuing a decade-long downward trend. Alcohol use dropped nearly one-third since 2004 (from 5.4% in 2004, to 3.8% in 2007), as did cigarette use (from 1.5% in 2004, to 1.0% in 2007); use of inhalants also declined considerably (from 2.2% in 2004, to 1.8% in 2007). All other substance use among sixth graders is already quite low (below 1%) and shows little or no meaningful change since 2004.

Eighth graders show considerable decreases in the use of nearly all 18 substances, with five of the most prevalently used substances (cigarettes, alcohol, marijuana, amphetamines, and crack) showing declines in use of about one-quarter (more or less) since 2004. Inhalant use also dropped appreciably, but not by as large a margin. For the remaining substances, use is now 1 percent or less, with declines since 2004 from somewhat above that level in the use of methamphetamines, PCP, and designer drugs.

Tenth graders in Maryland reported notable declines in 30-day use of four of the five most-abused substances: Cigarettes (from 11.2% in 2004, to 9.1% in 2007), alcohol (from 31.4% in 2004, to 27.8% in 2007), marijuana (from 15.6% in 2004, to 13.9% in 2007), and amphetamines (from 3.3% to 0.5%, respectively). Also worth noting is a decrease in the reported use of PCP (from 2.0% in 2004, to 1.5% in 2007) and methamphetamines (from 1.8% to 1.4%, respectively). Use of most other substances was about the same for 30-day rates, except for LSD and other forms of cocaine, each of which showed a small increase of 0.3 percentage points from 2004 to 2007. With few minor exceptions, from 1994 to 2007 the reported 30-day substance use by 10th graders shows a general decline across all substances.

Twelfth grade 30-day substance users also report a decline for all but two substances: Narcotics (an increase of 0.3 percentage points) and smokeless tobacco (an increase of 0.2 percentage points). A notable decrease in 30-day usage rates occurred in the reported use of cigarettes (19.8% in 2004, to 16.3% in 2007) and amphetamines (from 4.6% to 1.3%, respectively) for 12th graders.

PERCENTAGE REPORTING USE IN THE LAST 30 DAYS BY GRADE LEVEL

**Exhibit 4.1:
Trends in Substance Use by Maryland Adolescents**

Substance	6							8						
	1994	1996	1998	2001	2002	2004	2007	1994	1996	1998	2001	2002	2004	2007
Cigarettes	5.4	4.6	4.2	2.5	1.3	1.5	1.0	20.8	17.0	14.8	10.6	6.6	5.9	4.2
Smokeless tobacco (chewing tobacco, snuff)	1.6	1.5	1.3	0.7	0.4	0.4	0.3	5.1	2.7	3.2	1.9	0.9	1.2	1.0
Any form of alcohol	10.4	7.9	9.1	6.3	5.0	5.4	3.8	31.0	27.1	26.6	22.8	16.4	16.2	12.7
Marijuana (pot, grass, hashish)	1.8	1.8	1.8	1.2	0.8	0.8	0.8	13.0	11.6	10.0	10.6	6.9	6.4	4.6
Amphetamines (uppers, bennies, diet pills, dexies)	0.8	0.6	0.8	0.7	0.4	0.4	0.5	3.4	3.6	3.0	2.4	1.8	1.7	1.3
Methamphetamines (meth, speed, crank, ice)	0.9	0.6	0.7	0.5	0.4	0.3	0.5	3.1	2.3	1.9	1.3	1.0	1.3	0.6
LSD (acid, stickers)	0.7	0.8	0.8	0.6	0.4	0.3	0.4	4.2	2.9	2.6	2.2	0.8	1.0	0.6
PCP (angel dust, love boat, green)	0.7	0.5	0.8	0.5	0.5	0.3	0.3	2.7	1.8	2.3	2.0	1.3	1.4	1.0
Narcotics (Codeine, Morphine, Methadone, Percodan)	0.7	0.5	0.4	0.3	0.2	0.2	0.2	2.1	1.6	1.7	1.0	0.9	1.0	0.8
Barbiturates and/or tranquilizers (downers, ritalin, reds, Valium)	0.6	0.2	0.4	0.3	0.1	0.1	0.1	2.2	1.4	1.4	0.8	0.7	0.7	0.4
Inhalants (paint thinner, sprays, aerosols, gasoline)	3.6	*	2.4	2.2	1.9	2.2	1.8	10.8	*	4.4	3.0	3.1	3.3	2.9
Amyl or butyl nitrates (locker room, Rush)	0.7	0.3	0.6	0.3	0.3	0.2	0.4	1.2	1.4	1.0	0.9	0.4	0.8	0.7
Crack (rock)	0.6	0.5	0.8	0.6	0.4	0.3	0.4	2.4	2.0	2.3	1.5	1.1	1.4	1.1
Other forms of cocaine	0.4	0.5	0.7	0.5	0.2	0.3	0.3	1.9	1.6	1.9	1.2	0.9	1.2	0.9
Steroids for body building	0.7	0.4	0.6	0.6	0.5	0.4	0.3	1.0	0.8	1.6	1.1	0.8	0.9	0.5
Designer drugs (MDMA, ecstasy)	0.6	0.4	0.6	0.4	0.4	0.3	0.3	1.6	1.9	1.3	2.4	1.4	1.2	0.8
Heroin (smack, stuff)	0.6	0.4	0.7	0.3	0.3	0.2	0.5	2.0	1.6	1.8	1.1	0.7	0.8	0.6
Needle to inject cocaine, heroin, or other illegal drug	0.7	0.4	0.5	0.3	0.2	0.2	0.2	1.6	1.0	1.1	0.7	0.5	0.7	0.6
Any drug other than alcohol and tobacco	5.9	4.0	5.2	4.5	3.7	4.2	3.6	21.4	16.3	15.0	15.2	11.4	11.3	8.6

Substance	10							12						
	1994	1996	1998	2001	2002	2004	2007	1994	1996	1998	2001	2002	2004	2007
Cigarettes	26.7	25.1	23.9	16.6	12.7	11.2	9.1	29.9	32.0	28.6	25.5	19.8	19.8	16.3
Smokeless tobacco (chewing tobacco, snuff)	5.7	4.4	4.0	2.3	2.1	2.4	2.2	7.0	5.1	4.2	3.0	3.4	3.7	3.9
Any form of alcohol	45.0	43.7	42.9	35.9	35.0	31.4	27.8	53.3	52.4	48.4	47.5	44.3	44.1	42.2
Marijuana (pot, grass, hashish)	22.8	22.4	22.7	19.8	16.7	15.6	13.9	25.3	27.4	24.2	22.7	21.0	21.9	20.7
Amphetamines (uppers, bennies, diet pills, dexies)	4.4	5.5	4.6	5.1	4.2	3.3	0.5	5.2	5.3	4.3	5.5	5.8	4.6	1.3
Methamphetamines (meth, speed, crank, ice)	3.1	2.5	3.4	2.2	2.2	1.8	1.4	3.5	3.0	1.8	1.8	2.1	1.9	1.6
LSD (acid, stickers)	7.5	5.8	5.0	3.7	2.4	1.7	1.9	6.9	5.6	4.8	3.7	2.7	2.1	2.2
PCP (angel dust, love boat, green)	3.7	2.6	3.1	2.1	2.1	2.0	1.5	2.9	2.1	1.7	1.6	2.0	2.0	1.4
Narcotics (Codeine, Morphine, Methadone, Percodan)	3.3	3.0	3.3	3.4	3.1	2.6	2.6	3.9	3.9	3.1	3.6	4.4	4.2	4.5
Barbiturates and/or tranquilizers (downers, ritalin, reds, Valium)	3.0	2.6	2.9	2.3	2.3	1.8	1.4	3.0	3.5	2.6	3.1	3.2	3.1	2.5
Inhalants (paint thinner, sprays, aerosols, gasoline)	6.2	*	3.1	2.7	2.7	2.3	2.4	4.7	*	2.1	1.6	2.2	2.0	1.9
Amyl or butyl nitrates (locker room, Rush)	1.4	2.2	1.9	1.2	1.1	0.9	1.0	1.0	2.8	1.2	0.9	1.3	1.1	0.8
Crack (rock)	1.7	1.8	3.3	1.8	1.8	1.5	1.6	1.9	2.0	1.9	1.3	2.1	2.3	1.7
Other forms of cocaine	1.7	2.3	3.2	2.0	2.1	1.7	2.0	2.9	3.1	2.9	2.0	3.1	2.9	2.5
Steroids for body building	1.2	1.1	1.7	1.6	1.2	1.2	1.0	1.2	1.1	1.0	1.6	1.3	1.2	1.1
Designer drugs (MDMA, ecstasy)	2.2	2.9	3.6	4.8	3.1	1.9	1.8	2.7	2.7	3.1	4.8	3.6	2.7	2.6
Heroin (smack, stuff)	1.0	1.5	2.2	1.1	1.1	1.1	1.1	1.3	1.6	1.1	0.9	1.4	1.5	1.3
Needle to inject cocaine, heroin, or other illegal drug	0.9	1.0	1.4	1.0	1.0	0.9	0.9	0.9	1.0	0.7	0.7	1.2	1.0	1.0
Any drug other than alcohol and tobacco	27.4	26.4	26.6	24.3	21.3	19.6	17.1	29.9	31.2	28.1	28.2	26.2	26.0	24.0

* Data not available.

Exhibit 4.2 graphically depicts the trends in sixth graders' use of cigarettes, alcohol, and marijuana since 1994. From this figure, it can be seen that the overall trend in 30-day alcohol use is a downward one. Marijuana use among sixth graders declined through 2002 and has been flat since then. Cigarette use among sixth graders also shows a downward trend that continues in 2007, following a slight uptick in 2004.

Exhibit 4.2:
Trends in Substance Use in Maryland
Percent of Adolescents Reporting – Last 30 Days Use: Sixth Grade

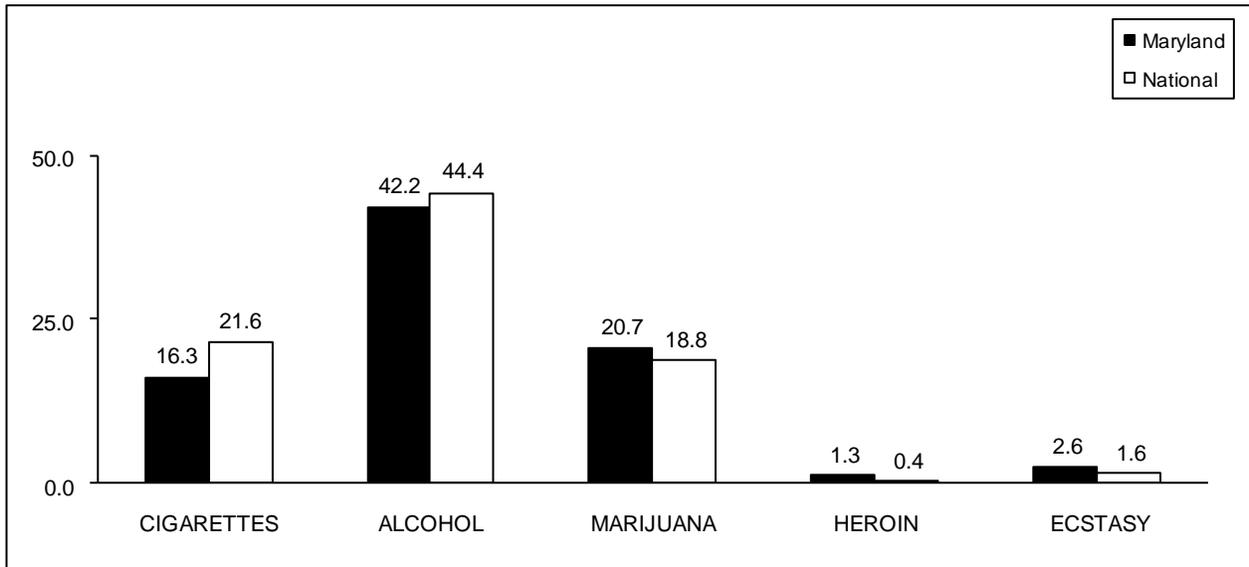
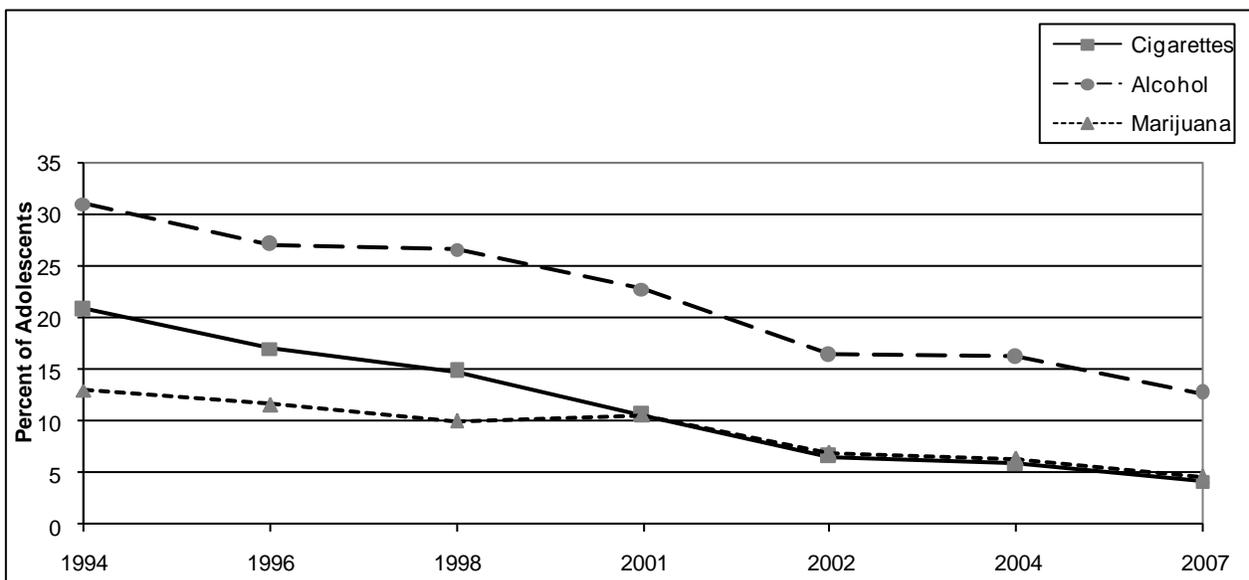


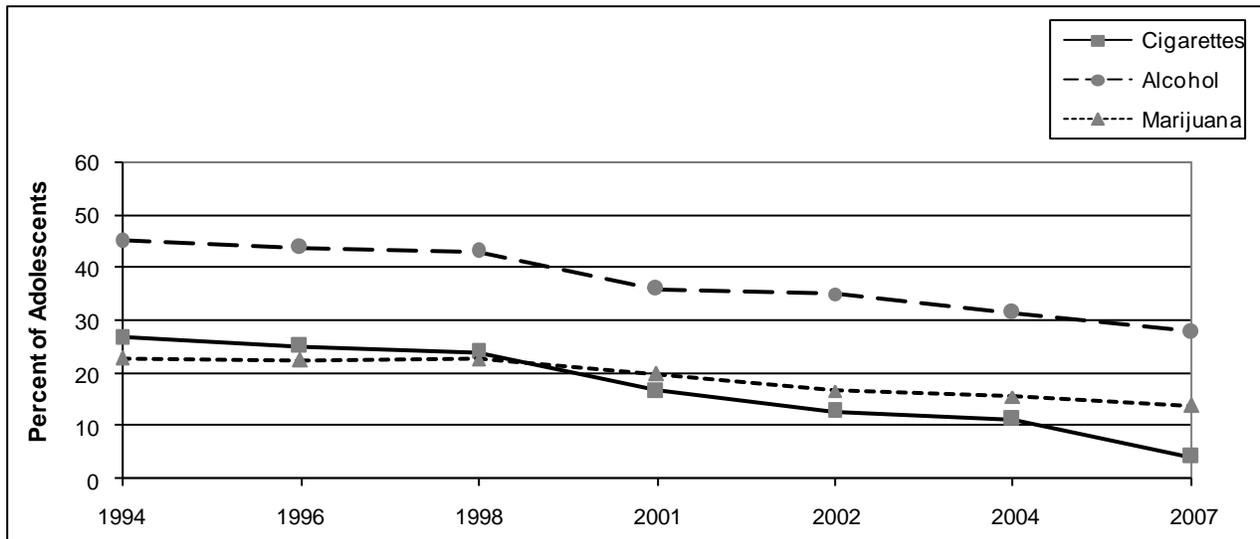
Exhibit 4.3 illustrates the trends in eighth graders' use of cigarettes, alcohol, and marijuana from 1994 to 2007. From this figure, it can be seen that use of all three substances decreased steadily from 1994 through 2007, with substantial percentage point decreases between 2004 and 2007. Alcohol use has declined 18.3 percentage points between 1994 and 2007, while cigarette use has declined 15.6 percentage points; marijuana use has declined 8.4 percentage points over the same period of time.

Exhibit 4.3:
Trends in Substance Use in Maryland
Percent of Adolescents Reporting – Last 30 Days Use: Eighth Grade



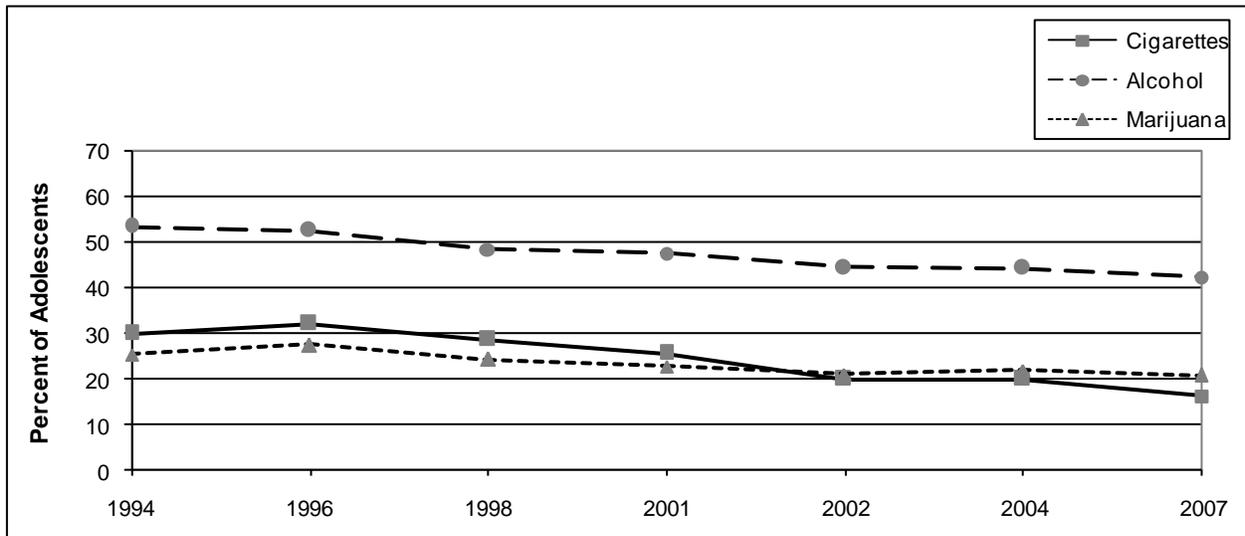
As depicted in Exhibit 4.4, fewer 10th graders report using cigarettes, alcohol, and marijuana in 2007, as compared to 10th graders in 2004. The trend toward reduced use of all three substances is a continuation of the trend that began in 1994. The rate of decline in use for all three substances has been substantial in recent years, particularly for cigarette and alcohol use.

Exhibit 4.4:
Trends in Substance Use in Maryland
Percent of Adolescents Reporting – Last 30 Days Use: Tenth Grade



As Exhibit 4.5 illustrates, 12th graders also show a pattern of decreased use, though the downward trend is more moderate than for their younger peers. Twelfth-grade students show slight decreases in the use of alcohol (1.9 percentage points) and marijuana (1.2 percentage points) from 2004 to 2007. The reported use of cigarettes experienced an even larger decline (3.5 percentage points) from 2004 to 2007.

Exhibit 4.5:
Trends in Substance Use in Maryland
Percent of Adolescents Reporting – Last 30 Days Use: Twelfth Grade



AGE AT FIRST USE FOR SUBSTANCE USERS

Age at first use is an important measure in examining trends over time. In this section, changes between 2004 and 2007 are highlighted for each of three substances—alcohol, cigarettes, and marijuana. The following statistics relate to those adolescents who report using the various substances.

The impact of changes in age at first use of alcohol is driven by the context of the findings. It is apparent that declines in percentage of users at the youngest ages and increases of users at the oldest ages are positive developments. For those in the middle period (age 13–14), however, whether a change is positive or not depends on where the movement seems to be coming from.⁸

Based on Figure 3.6 presented in Chapter 3, 12th graders in 2007 reported first use of alcoholic beverages at an older age than did 12th graders in 2004.

In 2007, larger numbers of Asian, African American, and White 12th graders were most likely to report that they first drank beer, wine, or wine coolers at the age of 15 or 16 (see Exhibit 3.7). In contrast, among Hispanic students, fewer reported their age at first use as 15 to 16 in 2007 than in 2004. For each race/ethnicity, there were declines in the percentage of students reporting age at first use as 10 or younger. In 2007, the largest group reported their age at first use as 13 to 14. Additionally, more Asian and White students delayed first use to age 17 or older.

Age at first use of liquor for all racial groups follows a rather similar pattern to that of beer and wine (see Exhibit 3.8). In both 2004 and 2007, the most common response among 12th graders by far is that they used liquor for the first time at the age of 15 to 16; this was the case for all racial groups. There were some differences among racial groups, however. The trend toward

⁸ Thus, if an increase in first-time use in this middle period is accompanied by a decrease at younger ages, it is a positive development as more students are waiting until an older age to experiment. However, a decrease in percentages at this middle period can also be positive if it is accompanied by an increase in students waiting until even older ages to first use alcohol.

older first use was generally encouraging for African American, White, and Hispanic students. Among Asian students, use declined among the youngest groups but far fewer students waited until age 17 or older in 2007 compared to 2004.

As previously shown, Exhibit 3.16 summarizes the age of first cigarette use by self-reported race/ethnicity category for 12th graders who had ever used cigarettes. Compared to 2004, Asian students clearly show a delay in first use of cigarettes, with a decline in those starting at age 10 or younger and a substantial increase in those starting at age 15 to 16. The pattern for White students is similar, although less pronounced. Among African American and Hispanic students, the evidence of change is mixed and does not suggest any particular trend.

In 2007 (see Exhibit 3.29 in Chapter 3) there is evidence of some change in age at first use of marijuana among 12th grade users by racial group. For Asian students, there is a sharp decline in those first using at age 10 or younger and an increase among those first using at age 13 to 14 and age 15 to 16. Changes were modest among African American students. Among White students, there are modest declines in first use in the youngest two age groups, and increases in age of first use among all older age groups. The data for Hispanic students also suggest increases in age at first use, but not consistently so.

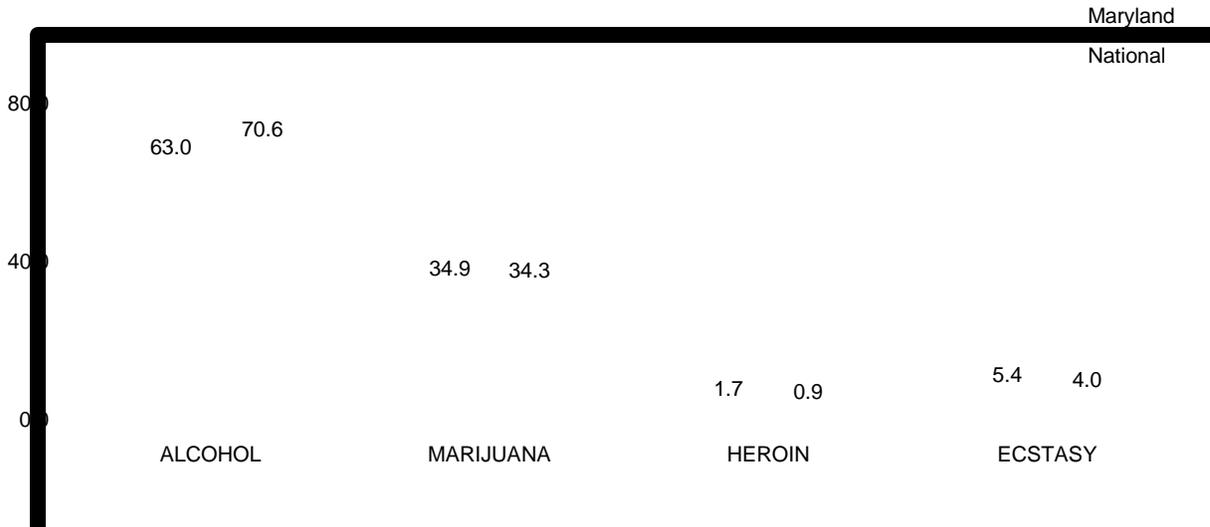
Age at first use of marijuana by gender (see Exhibit 3.27) shows modest decreases in the percentages starting at the youngest ages and modest increases in the percentages starting at the oldest ages.

COMPARISON OF MARYLAND DATA TO NATIONAL RATES OF SUBSTANCE USE

The National Institute on Drug Abuse conducts an annual survey, Monitoring the Future, which addresses substance use by youth across the country. Data from the survey provide long-term trend information as well as current use rates for alcohol, tobacco, and other drugs. The Maryland Adolescent Survey is modeled on Monitoring the Future and thus permits comparison between Maryland youth and their national peers in evaluating use of various types of drugs. Exhibits 4.5 and 4.6 present comparisons between Maryland and the nation on the substances most frequently used by 12th graders.

Exhibit 4.6 demonstrates that Maryland 12th graders used alcohol less than their peers did nationally (60.6% vs. 66.4%) in the last year. Maryland 12th graders reported using marijuana, heroin, and ecstasy at similar percentages to their national counterparts.

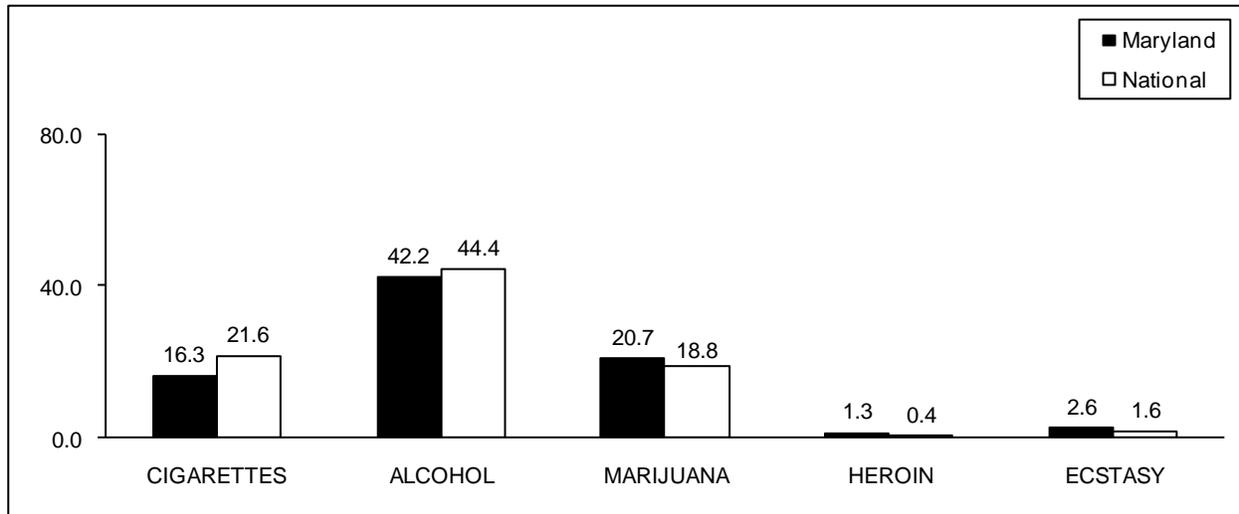
Exhibit 4.6:
Comparison of 2007 Maryland and 2007 National Use Rates
Percent of Twelfth Graders Reporting Use in the Last Year



* Maryland students were surveyed in December 2007. National responses represent students surveyed in the spring of 2007.

When use within the last 30 days is considered, Maryland 12th graders are less likely to report using alcohol and cigarettes than 12th graders nationally (Exhibit 4.7). However, Maryland 12th graders are slightly more likely to have used marijuana, heroin, or ecstasy than their peers were nationally in the last 30 days.

Exhibit 4.7:
Comparison of 2007 Maryland and 2007 National Use Rates*
Percent of Twelfth Graders Reporting Use in the Last 30 Days



* Maryland students were surveyed in December 2007. National responses represent students surveyed in the spring of 2007.

Exhibit 4.8 indicates that the findings for Maryland 12th graders compared to national youth also apply to 8th and 10th graders. Specifically, fewer Maryland youth at the 8th, 10th, and 12th

grade levels used cigarettes and alcohol in the last 30 days than their peers did nationally, and a slightly higher percentage of Maryland adolescents used heroin and ecstasy in the last 30 days than their national peers. For marijuana the results are mixed, with 8th and 10th graders reporting lower use than their national peers, while Maryland 12th graders report higher use than their national peers.

**Exhibit 4.8:
Maryland and National Substance Use by Grade Use in the Last 30 Days**

Substance	Maryland			National ¹		
	Grade			Grade		
	8th	10th	12th	8th	10th	12th
Cigarettes	4.2%	9.1%	16.3%	7.1%	14.0%	21.6%
Alcohol	12.7%	27.8%	42.2%	15.9%	33.4%	44.4%
Marijuana	4.6%	13.9%	20.7%	5.7%	14.2%	18.8%
Heroin	0.6%	1.1%	1.3%	0.4%	0.4%	0.4%
Ecstasy	0.8%	1.8%	2.6%	0.6%	1.2%	1.6%

¹ Source: Overview of Key Findings from Monitoring the Future Study, 2007..Rockville, MD: National Institute on Drug Abuse
Note: Monitoring the Future does not survey 6th-grade students.

CHAPTER V
REPORTED CONSEQUENCES OF
SUBSTANCE USE

CHAPTER V

REPORTED CONSEQUENCES OF SUBSTANCE USE

Even the moderate use of alcohol and other drugs by young people is grounded in supportive subcultures and countercultures. Drinking and drug use behaviors, anchored in reference group norms, are resistant to change by outside influences. While young people often find themselves in conflict with the prevailing societal norms regulating acceptable behavior, they are ultimately influenced by them. Among the best examples are the declines in percentages of adolescents driving with those who are driving under the influence or driving under the influence.

This survey assessed the degree to which 8th, 10th, and 12th graders who have ever tried alcohol and/or other drugs experienced interpersonal, health, legal, and educational problems directly attributable to their substance use. Sixth graders were not asked to respond to these items.

Exhibit 5.1 presents the percentages of surveyed students who report ever using alcohol who responded that they experienced problems because of their alcohol use.

Exhibit 5.1:
Percentage of Respondents* Reporting Alcohol-Related Problems

Problem	Grade		
	8	10	12
Absent from School	2.7%	6.0%	11.0%
Health Problems	1.8%	3.6%	5.5%
Been Drunk at School	3.1%	7.5%	11.4%
Family Problems	2.0%	5.5%	7.5%
Arrested	1.5%	2.9%	4.1%
Poor School Performance	2.5%	4.0%	5.3%
Unsuccessfully Tried to Stop Drinking	2.7%	4.3%	5.3%
Drove Under the Influence	2.3%	4.3%	16.3%
Been a Passenger with a Drinking Driver	17.9%	26.1%	33.3%

*Students who have ever tried alcohol

These data show that, by far, the most frequently experienced alcohol-related problem of eighth graders who had tried alcohol was riding in cars with drinking drivers (17.9%). Only a small percentage of eighth graders indicate they had any of the other problems listed in the survey. The percentage who report riding with drinking drivers was higher for 10th graders (26.1%) and higher still further for seniors (33.3%). For 10th graders, the next most prevalent alcohol-related problem was being drunk at school (7.5%) followed by absent from school (6.0%). For 12th graders, driving under the influence was the second greatest alcohol-related problem (16.3%) followed by being drunk at school (11.4%) or absent (11.0%). For each grade, the problem least

experienced was being arrested due to alcohol use (1.5% for 8th graders, 2.9% for 10th graders, and 4.1% for 12th graders).

Respondents were asked if they had tried to stop drinking but were unsuccessful in their efforts. Twelfth graders were most likely to report they had tried, but could not stop drinking (5.3%). The percentage was somewhat lower at the 10th grade level (4.3%) and lower still for 8th graders (2.7%).

Similar to the patterns associated with alcohol use, older students who report that they had tried drugs experienced more problems, as depicted in Exhibit 5.2. Among the surveyed eighth graders who had used drugs, the situation they report most frequently was riding with a driver who was using drugs (7.6%). Slightly less than 4 percent report that they were *high* at school.

Exhibit 5.2:
Percentage of Respondents* Reporting Drug-Related Problems

Problem	Grade		
	8	10	12
Absent from School	2.8%	5.8%	9.5%
Health Problems	1.9%	3.6%	4.9%
Been <i>High</i> at School	3.9%	10.4%	15.7%
Family Problems	2.1%	5.1%	7.1%
Arrested	1.5%	3.3%	4.3%
Poor School Performance	2.6%	5.4%	7.4%
Unsuccessfully Tried to Stop Using Drugs	2.2%	4.0%	5.3%
Drove Under the Influence	1.9%	4.4%	15.3%
Been a Passenger with a Drug-Using Driver	7.6%	16.2%	27.0%
Two or More Drugs	3.3%	8.4%	14.3%

*Students who have ever tried other drugs

Among 10th graders who had used drugs, the same two problems were most reported: 16.2 percent report that they rode in cars with drug-using drivers, while 10.4 percent report they came to school *high*. In addition, 8.4 percent of 10th graders reported problems from using two or more drugs on one occasion. The most likely problem situation that 12th graders reported was riding as a passenger with a drug-using driver (27.0%), followed by being *high* at school (15.7%), driving under the influence (15.3%), using two or more drugs on the same occasion (14.3%), and being absent from school as a result of drug use (9.5%).

Respondents were also asked if they had attempted to stop using drugs but found that they could not. The data in Exhibit 5.2 indicate this was somewhat more problematic for 12th graders (5.3%) than for 10th graders (4.0%) and 8th graders (2.2%).

COMPARISON TO 2004 SURVEY DATA

Overall, slightly fewer students in the 2007 Maryland Adolescent Survey experienced problems related to drug or alcohol use than did students surveyed in 2004. This represents a continuation

of trends identified between 1998 and 2004, where the percentage of youth in each grade who had experienced a specific problem associated with their alcohol or other drug use declined between survey administrations.

For example, in 1998, 58.0 percent of 12th graders reported having been a passenger with a drug-using driver. In 2001, that percentage fell to 32.7 percent; in 2004, it declined to 30.6 percent; and in 2007, it declined still further to 27.0 percent. Throughout all grade levels surveyed, the number of drug-related problems decreased. For example, in 2007, 9.5 percent of 12th graders report that drug-related problems caused absence from school compared with 11.4 percent in 2004.

For students who report alcohol-related problems, the most noteworthy change was a drop in the percentage of seniors who report that they had been a passenger with a drinking driver from 35.2 percent in 2004 to 33.3 percent in 2007. In the grades 8 and 10, the number of those who had been a passenger with a drinking driver decreased slightly as well (for 8th graders, 20.0% in 2004 vs. 17.9% in 2007; for 10th graders, 28.3% in 2004 vs. 26.1% in 2007). For students who report ever using alcohol, most reports of alcohol-related problems declined, with few exceptions. In 2007, the decline in problems from the use of two or more drugs on the same occasion among respondents in 10th and 12th grade continues a downward trend; however, because of earlier sharp declines, the declines from 2004 to 2007 were modest (about 1%).

CHAPTER VI
AVAILABILITY OF SUBSTANCES

CHAPTER VI

AVAILABILITY OF SUBSTANCES

In Section VI of the Maryland Adolescent Survey form, respondents were asked to indicate Yes or No to three questions pertaining to their access to alcohol, tobacco, and other drugs. The first two questions were asked separately for each substance. The questions were—

- *In school or on school grounds, since the beginning of the school year, has someone offered to give you, buy for you, or sell you _____?*
- *Outside of school, since the beginning of the school year, has someone offered to give you, buy for you, or sell you _____?*

The third question was asked only for drugs:

- *Have you ever been asked to sell drugs?*

Exhibit 6.1 provides the percentages of users and non-users who have access to substances while on school property. A user of a substance was defined as a student who had ever tried the substance. A non-user was defined as a student who reported never using the substance. Results show that, at all grade levels, the percentages for users who have access to alcohol, tobacco, and other substances are appreciably higher than for non-users. In 8th, 10th, and 12th grade, drugs are most often offered to both users and non-users at school. Among sixth grade users, cigarettes are the most commonly offered substance, with other drugs following closely as the second most offered substance. Across all grade levels, for both users and non-users, alcohol is least likely to be offered to students on school property.

Exhibit 6.1:
Availability of Substances on School Property

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	19.6%	1.3%	25.7%	4.3%	45.5%	12.3%	43.2%	14.2%
Alcohol	6.3%	1.0%	16.3%	2.8%	32.9%	9.2%	32.0%	11.6%
Other Drugs	14.3%	1.9%	34.3%	5.7%	53.8%	16.9%	49.7%	17.4%

The percentage of respondents offered alcohol, cigarettes, and drugs increases from 6th to 10th grade for both users and non-users. For example, for users, the percentage offered cigarettes increases from 19.6 percent in the 6th grade to 45.5 percent in the 10th grade, and the percentage of non-users offered cigarettes increases from 1.3 percent in 6th grade to 12.3 percent in 10th grade. The percentage of respondents offered alcohol and drugs also follows this pattern, increasing for both users and non-users at each increased grade level through 10th grade.

In 12th grade, the pattern changes with students who use substances—the availability of substances offered to them on school property is less than that of 10th grade (for cigarette users,

down from 45.5% in 10th grade to 43.2% in 12th grade; for other drugs, down from 53.8% to 49.7%). For alcohol users, offerings of alcohol were about the same (32.0% to 32.9%).

For non-users, the availability of substances on school property increases throughout all grade levels, but availability remains much lower than it is for users. For alcohol, 1.0 percent of 6th graders, 2.8 percent of 8th graders, 9.2 percent of 10th graders, and 11.6 percent of 12th graders reported being offered alcohol on school property. Availability of cigarettes and other drugs follows a similar pattern for non-users, but these substances are somewhat more available than alcohol, though still far less available than they are to users.

Exhibit 6.2 shows availability of these substances outside of school property. The data demonstrate that, across all grade levels and substances, for users and non-users, availability of cigarettes, alcohol, and other drugs outside school property increases from 6th to 12th grade. For users of alcohol, the availability of alcohol outside of school property increases from 21.5 percent for 6th graders to 70.9 percent for 12th graders. This pattern of increased availability as grade level increases is also true for non-users of all substances (for cigarettes, an increase of 20.2 percentage points; for alcohol, an increase of 23.2 percentage points; and for other drugs, an increase of 21.5 percentage points from 6th to 12th grade). The greatest increase in availability for users of all substances between adjacent age groups occurs between the sixth and eighth grades (for cigarettes, 29.2% in sixth grade vs. 49.6% in eighth grade; for alcohol, 21.5% in sixth grade vs. 45.7% in eighth grade; and for other drugs, 21.4% in sixth grade vs. 50.8% in eighth grade).

Comparing the availability of substances on school property and outside of school property shows that availability is considerably higher outside of school property for both users and non-users for all substances. Alcohol, which is much less available than other substances on school property for both users and non-users, is roughly as available as other substances outside of school property.

**Exhibit 6.2:
Availability of Substances Outside School Property**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	29.2%	3.0%	49.6%	8.3%	64.5%	17.5%	66.8%	23.2%
Alcohol	21.5%	3.1%	45.7%	7.3%	64.4%	19.2%	70.9%	26.3%
Other Drugs	21.4%	2.8%	50.8%	8.6%	70.7%	19.8%	72.2%	24.3%

Exhibit 6.3 presents the percentage of survey respondents who were ever asked to sell drugs. Data in the table show that the percentage of users asked to sell drugs at each grade level is appreciably higher than that of non-users and increases as the grade level gets higher through the 10th grade, when it levels off. The percentage of users asked to sell drugs nearly doubles from sixth grade (17.4%) to eighth grade (34.0%) and then increases only slightly after that. For non-users, the percentages of students asked to sell drugs are quite low, increasing from 2.5 percent in the 6th grade to 7.9 percent in 12th grade.

**Exhibit 6.3:
Percentage of Adolescents Asked To Sell Drugs**

Grade							
6		8		10		12	
User	Non-user	User	Non-user	User	Non-user	User	Non-user
17.4%	2.5%	34.0%	4.6%	38.9%	7.4%	37.7%	7.9%

COMPARISON TO 2004 SURVEY DATA

From 2004 to 2007, the percentage of users who were asked to sell drugs declined for both 6th graders (from 22.8% to 17.4%) and 12th graders (40.6% to 37.7%). For 8th and 10th graders, there was a slight increase in the percentage of users asked to sell drugs (1.6 percentage points and 1.0 percentage points respectively). The percentage of non-users asked to sell drugs declined for all except eighth graders, where there was a very slight increase (from 3.9% in 2004 to 4.6% in 2007).

Substances were less available in virtually all grades on school property in 2007 than they were in 2004. The only notable increase was in the availability of cigarettes at school for sixth graders from 16.7 percent in 2004 to 19.6 percent in 2007. The only other exceptions to the overall trend of substances being less available on school property are two instances where availability remained the same: cigarettes for users in 12th grade and alcohol for users in 10th grade.

The other substances and grade levels experienced decreases in their availability on school property. Among the most prominent decreases in availability were for cigarettes among non-users in 12th grade (down 3.0%) and cigarettes for users in 8th grade (down 5.5%).

When comparing the availability of substances outside of school property from 2004 to 2007, the results were somewhat mixed. All except one group of the non-users (10th grade non-users of alcohol) experienced decreases in the availability of substances outside of school property. Some of the users across grade levels experienced an increase in the availability of substances outside of school property. Users in 10th grade reported a slight increase in the availability of cigarettes and alcohol outside of school property (each up by almost 1 percentage point). Users of alcohol in eighth grade also reported an increase in the availability of alcohol outside of school property (up 3.1 percentage points from 2004 to 2007).

CONCLUSIONS

Based on the findings presented above, several conclusions can be drawn. First, young people who ever used substances are more often offered substances and more often asked to sell drugs than non-users, both in school and outside of school. Second, students at all grade levels have more access to substances while they are outside of school property than when they are on school property. Third, when on school property, cigarettes and other drugs are more frequently offered to students than alcohol. However, off of school property, the gap between alcohol and cigarettes and other drugs narrows or disappears. Fourth, as would be expected, high school students are approached more often to sell drugs than are sixth and eighth grade students.

Finally, the extent to which students are offered substances on school property has decreased slightly for both users and non-users between 2004 and 2007.

CHAPTER VII
PROTECTIVE FACTORS

CHAPTER VII

PROTECTIVE FACTORS

SUBSTANCE ABUSE KNOWLEDGE

One of the main strategies used by Maryland schools to reduce substance abuse is the presentation of factual information to students that details the potential harmful effects of alcohol, tobacco, and other drug use. Students in grades 6, 8, 10, and 12 were asked to respond to 18 multiple-choice items designed to assess their knowledge of alcohol, tobacco, and a number of other drugs. These items were used in the previous administrations of the Maryland Adolescent Survey (MAS) and thus provide an opportunity to examine trends in students' knowledge over time.

Exhibit 7.1 provides a comparison by grade of 2007 performance with previous responses to these questions. Analysis of the number of items correctly answered by at least 75 percent of the students shows little change since 2001, as students score remarkably well. This year, there is a decrease of 1 in the number of questions answered correctly by 75 percent of 10th graders.

Exhibit 7.1:
Number of Knowledge Questions* Answered
Correctly by at Least 75 Percent of Students

Grade	1994	1996	1998	2001	2002	2004	2007
6	4	6	6	13	13	13	13
8	7	7	7	15	15	15	15
10	11	11	8	17	17	17	16
12	18	16	15	17	17	17	17

*Out of 18 knowledge questions.

Exhibit 7.2 presents the mean knowledge scores by grade for MAS administrations from 1994 to 2007. On average, sixth-grade students answered about 10 questions correctly out of 18; the mean number of questions answered correctly increases for each grade to a maximum average of more than 14 questions answered correctly by 12th graders.

Exhibit 7.2:
Mean Knowledge Scores by Grade (Weighted)

Grade	1994	1996	1998	2001	2002	2004	2007
6	10.7	11.0	10.6	10.5	9.9	10.0	10.1
8	12.6	13.0	12.5	12.2	11.7	11.9	12.1
10	14.6	14.4	13.5	13.5	13.3	13.6	13.4
12	15.4	15.4	14.9	14.5	14.4	14.3	14.4

Exhibit 7.3 shows the percentage of correct responses to each of the 18 knowledge questions for each grade. (Questions are sorted in descending order of percentage of correct responses by 12th

graders.) For all questions, the percentage of students who gave a correct response to each question increased as grade level increased.

Two of the knowledge questions posed challenges for students across all grade levels. The item that asked students to identify the drugs that slow down all body organs, including the heart (answer: depressants), was answered correctly by only about 25 percent of 6th graders, increasing to about 70 percent 12th graders. Similarly, the question that asked students to select the most abused drug (answer: alcohol) was answered incorrectly by about 40 percent of 6th graders, increasing to about 65 percent of 12th graders.

Exhibit 7.3:
Percentage of Students with Correct Responses Each Knowledge Question by Grade

Question/Answer	6th Grade	8th Grade	10th Grade	12th Grade
If someone you know has taken an overdose of downers, you should: (4) call emergency number 911 and keep the person awake	89.9%	93.4%	94.6%	95.1%
You are at a party and a friend drinks and decides to drive home. What should you do? (1) take your friend's keys	82.7%	91.5%	94.0%	95.1%
Carol offered Debbie a cigarette and told her all of her friends smoked and if Debbie wants to be with them, she has to smoke too. What is this called? (3) peer pressure	85.7%	91.4%	93.1%	93.9%
Prescription drugs: (1) should be used according to label directions	76.1%	86.6%	91.3%	92.3%
One of the effects of long-term marijuana use is that it: (1) slows down social growth and learning	78.2%	85.2%	87.9%	89.3%
Barbiturates and alcohol taken together may: (3) cause coma or death	77.0%	80.7%	85.1%	88.1%
What effect does smoking have on the body's system? (4) all of the above	60.5%	74.3%	81.9%	87.4%
Use of steroids for body building can: (4) all of the above	53.0%	68.7%	78.7%	86.3%
The tobacco product that has been proven to cause cancer is: (4) all of the above	67.2%	72.5%	79.2%	85.7%
Use of crack cocaine can: (2) cause dependence after first use	44.2%	60.3%	75.8%	83.7%
People taking LSD, PCP, or other hallucinogens will: (3) see or hear things differently	58.1%	66.6%	76.7%	82.6%
The body system that is MOST interfered with when drinking alcohol is: (1) the brain and nervous system	65.7%	74.0%	79.2%	82.2%
A desire to continue taking a drug because of emotional reasons is called: (1) psychological dependence	39.9%	56.1%	71.3%	81.7%
People react differently to drugs: (4) all of the above	46.4%	57.8%	70.4%	81.4%
First offense for possession of marijuana in Maryland for a person 18 or older can lead to: (1) a fine and jail sentence	62.3%	67.9%	71.9%	78.2%
Use of inhalants (paint thinner, sprays, aerosol, gasoline) can: (1) cause brain damage or death	72.3%	74.4%	74.5%	75.4%
Drugs that slow down all body organs, including the heart, are called: (2) depressants.	25.4%	39.1%	55.3%	70.3%
The most abused drug is: (4) alcohol	40.3%	44.0%	51.4%	65.3%

Source: 2007 Maryland Adolescent Survey, Maryland State Department of Education.

Comparison to 2004 Survey Data

Students' mean knowledge scores remained essentially the same from 2004 to 2007. The largest decrease in correct answers for a specific knowledge question was seen in 10th graders' correct responses to the question that associated depressants with drugs that slow down all body organs, including the heart. Tenth graders' correct responses to this question decreased by nearly 8 percent (from 63.2% in 2004 to 55.3% in 2007). Students in the sixth and eighth grades also showed declines on this item since 2004 (down 3% for sixth graders and 5% for eighth graders); 12th graders showed little change since 2004.

The largest increase in correct responses to a particular question involved the question that described the detriment of steroid use: 8th-grade correct responses increased nearly 6 percent (62.8% in 2004 vs. 68.7% in 2007), 6th grade by 4.4 percent, 10th grade by 1.9 percent, and 12th grade by 2.0 percent. On alcohol as the most abused drug, sixth and eighth graders both increased in correct responses (by 3.2% and 1.1%, respectively), while 10th and 12th graders decreased (by 4.8% and 0.3%, respectively).

PERCEIVED RISKS OF SUBSTANCES

Prevention education, in part, is based on research that has shown an inverse relationship between perceptions of the dangerousness of substances and their use. The MAS solicited perceived dangerousness of eight different substances: cigarettes, smokeless tobacco, beer/wine, liquor, marijuana, crack, inhalants, and injections of illegal substances. Respondents were asked to indicate whether they considered each substance to be very dangerous, dangerous, slightly dangerous, or safe. Sixth-grade students were not asked this series of questions.

Eighth-, 10th-, and 12th-grade students all report that injections of illegal substances, inhalants, and crack are the most dangerous of all the substances. Eighth, 10th, and 12th graders also perceive that the least dangerous substances are beer/wine and liquor.

Comparison of Users and Non-users

Data on perceived risks were analyzed for both user (ever tried the substance) and non-user populations. Not surprisingly, non-users at each grade level are more likely to perceive substances as very dangerous more than their substance-using peers, and less likely to perceive them as safe. This trend holds for 8th, 10th, and 12th graders. Perceptions of the danger of these substances decreases with age.

Exhibits 7.4 and 7.5 show that among eighth-grade⁹ students who had tried beer/wine, 16.7 percent found them very dangerous compared to 47.5 percent who had not tried them. Thus, 17.6 percent of users thought beer/wine safe to drink while only 2.9 percent of non-users thought them safe to drink. Fewer 10th- and 12th-grade non-users reported that beer/wine is very dangerous (37.2% and 38.8%, respectively) than 8th-grade non-users did.

⁹ Eighth-grade data were chosen to illustrate these difference due to the notable decrease in perception of drug use as *very dangerous* between the 8th and 10th grades.

Exhibit 7.4:
Perceived Danger of Using Beer/Wine
Eighth-Grade Beer/Wine Users

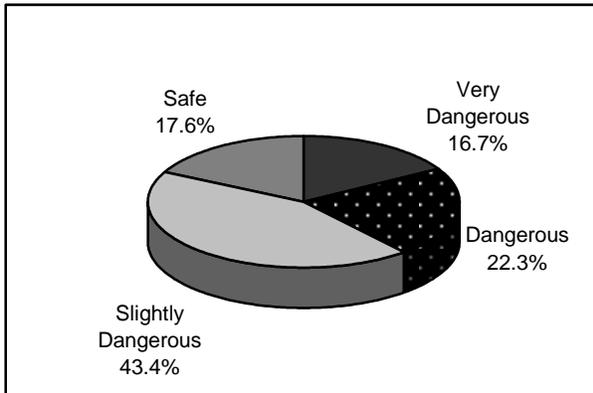
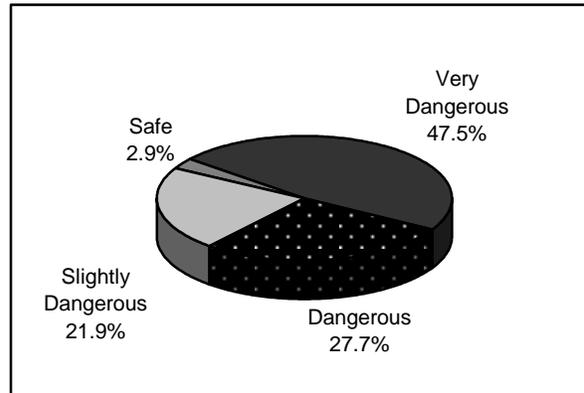


Exhibit 7.5:
Perceived Danger of Using Beer/Wine
Eighth-Grade Beer/Wine Non-Users



Similar differences are seen between eighth-grade users and non-users of liquor (Exhibits 7.6 and 7.7). Only 21.4 percent of liquor users found liquor very dangerous, while over half (56.4%) of non-users found using liquor to be very dangerous. Far more eighth-grade users of liquor report that liquor is safe (15.5%) compared to non-users (1.6%). Fewer 10th- and 12th-grade users (about 14%) report that liquor is very dangerous than did 8th graders.

Exhibit 7.6:
Perceived Danger of Using Liquor
Eighth-Grade Liquor Users

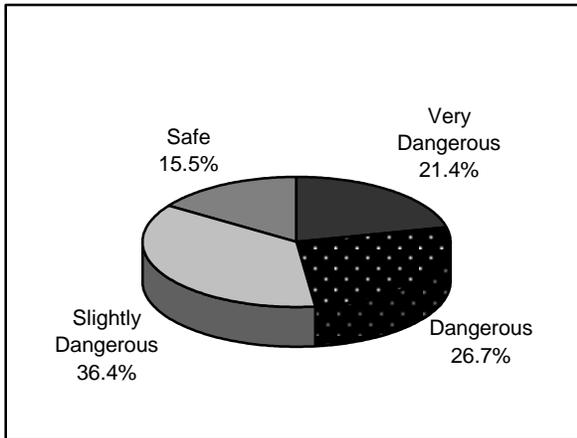
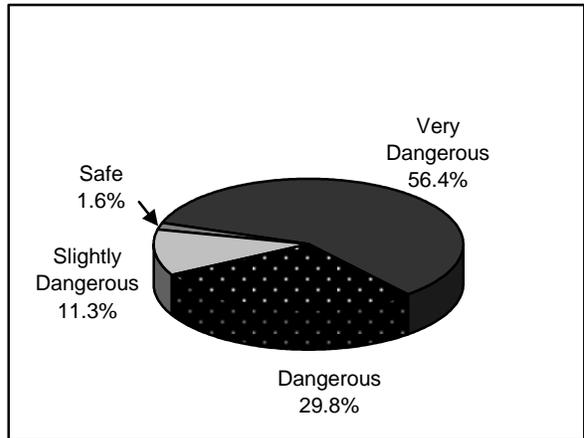
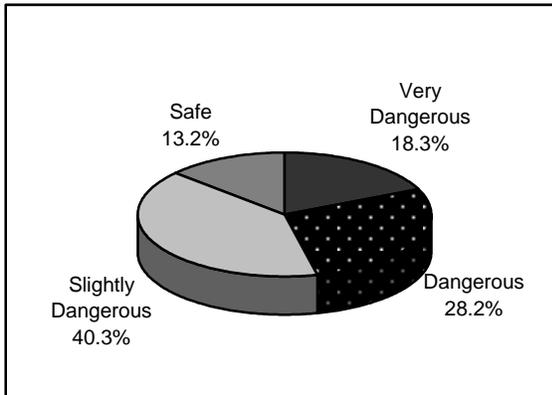


Exhibit 7.7:
Perceived Danger of Using Liquor
Eighth-Grade Liquor Non-Users

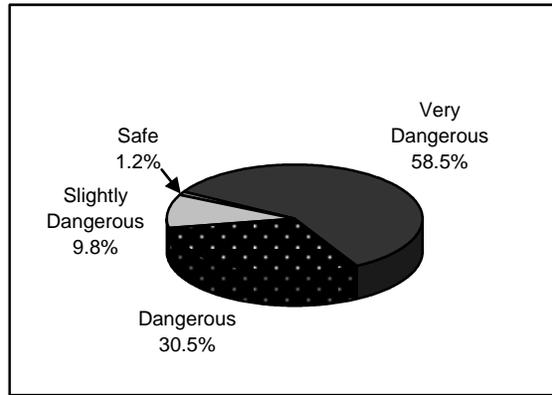


Exhibits 7.8 and 7.9 present the perceived danger of using cigarettes by eighth-grade users and non-users. These figures show that 18.3 percent of cigarette users reported cigarettes to be very dangerous, while 58.5 percent of non-users indicated they were very dangerous. Only 13.2 percent of eighth-grade users consider cigarettes safe compared to a negligible number (1.2%) of non-users. Grade level has little impact on perceived danger. Only slightly fewer 10th- and 12th-grade cigarette users (about 16% of each) report that cigarettes are very dangerous and only slight more 10th- and 12th-grade users (about 14% to 15%) consider cigarettes safe.

**Exhibit 7.8:
Perceived Danger of Using Cigarettes
Eighth-Grade Cigarette Users**

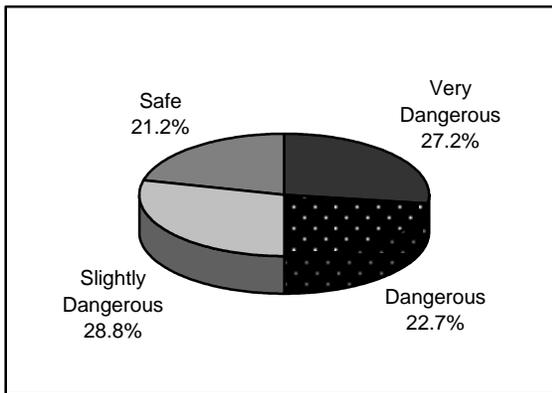


**Exhibit 7.9:
Perceived Danger of Using Cigarettes
Eighth-Grade Cigarette Non-Users**

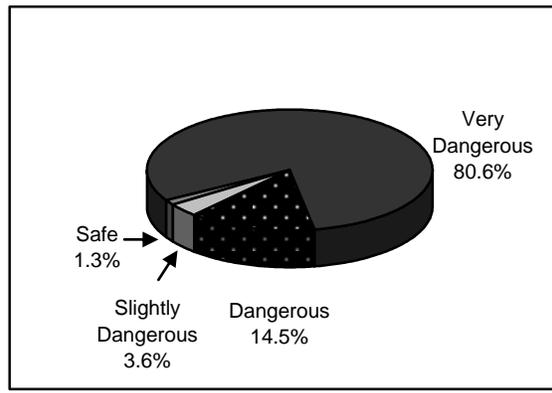


Exhibits 7.10 and 7.11 summarize the perceived danger of using marijuana for eighth-grade students. Four-fifths (80.6%) of non-users of marijuana perceive the drug to be very dangerous compared to slightly more than one-quarter of users (27.2%). Students report a substantial drop in perceived dangerousness as grade increased. Among 10th-grade non-users, 62.6 percent report that marijuana is very dangerous while 54.7 percent of 12th-grade non-users indicate the same.

**Exhibit 7.10:
Perceived Danger of Using Marijuana
Eighth-Grade Marijuana Users**



**Exhibit 7.11:
Perceived Danger of Using Marijuana
Eighth-Grade Marijuana Non-Users**



Perceived Risks of Users and Non-Users Combined

Among the most commonly used substances (cigarettes, beer, liquor, and marijuana), there is a substantial drop in the percentage (as much as 15 percentage points) of students (users and non-users combined) who perceive use of these substances as very dangerous as grade increases. Notice there is little or no change in the perception of less common drugs (crack, inhalants, injected drugs) as very dangerous between students in 8th, 10th, and 12th grades (Exhibit 7.12).

**Exhibit 7.12:
Perception of Using Substance as Very Dangerous by Grade**

Substance	Grade		
	8	10	12
Cigarettes	54.4%	41.3%	37.3%
Beer	40.8%	25.2%	21.3%
Liquor	52.8%	33.8%	27.3%
Marijuana	76.5%	51.5%	39.9%
Crack	85.5%	80.7%	82.9%
Inhalants	77.7%	76.5%	79.7%
Injected Drugs	89.8%	86.6%	88.3%

Note: Most commonly used substances in bold.

Comparison to 2004 Survey Data

The perceived danger of alcohol, cigarettes, and marijuana remained fairly constant for users and non-users at all grade levels in 2007 compared to 2004.

PARENTING PRACTICES

Parents provide the earliest formative influences on children's values, personal standards, and behavior. Even when teenage peer groups become significant forces in the lives of young people, the potential for parental influence remains strong. The 2007 MAS assesses differences in parental behavior reported by 6th, 8th, 10th, and 12th graders who do and do not use alcohol, tobacco, and other drugs. The survey included 11 items on parental behavior in four content domains: Parental Responsibility, Parental Limits and Consequences, Communication, and Family Activities.

Parental Responsibility

There is a consistent difference between users and non-users on reported levels of parental responsibility, with non-users reporting higher levels of parental responsibility as assessed by making sure the student is awake for school, worrying if late from school, and worrying about where the student was.

Parental Responsibility: Parents Make Sure That Student is Awake in Time for School.

Across all grade levels and substances, non-users are more likely to report an adult always makes sure they wake up for school than users of alcohol, tobacco, or other drugs (Exhibit 7.13). As the grade level increased from 6th to 12th grade, this table shows that there is an associated decrease in the percentage of students who report that an adult always makes sure they wake up for school. The widest margin between users and non-users reporting on this item is for eighth-grade students. For eighth graders, about 6 out of 10 users (for each of cigarettes, alcohol, and other drugs) report that an adult always makes sure they wake up for school compared to more than 7 out of 10 non-users. User/non-user differences are smaller for sixth graders (except for users/non-users of other drugs) and also smaller for 10th and 12th graders.

**Exhibit 7.13:
Percentage of Adolescents for Whom an Adult Always
Makes Sure They Wake Up for School**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	71.2%	78.4%	57.5%	72.0%	53.8%	60.7%	45.6%	49.9%
Alcohol	70.2%	78.7%	63.3%	73.0%	56.2%	62.2%	47.1%	51.9%
Other Drugs	65.6%	78.9%	61.1%	72.3%	53.8%	61.6%	45.8%	50.8%

Parental Responsibility: Adult Would Worry if Late from School. In each grade for each substance, non-users report more frequently that an adult would always worry if they were late from school or if the adult did not know where they were (Exhibit 7.14). As students progressed from 8th through 12th grade, the proportion of adults/parents who worried decreased. For instance, nearly half of eighth-grade cigarette users indicate their parents would always worry if they were late from school compared to two-thirds of non-users. By 12th grade, these percentages dropped about 7 percentage points for users and 15 percentage points for non-users.

**Exhibit 7.14:
Percentage of Adolescents Whose Parents Would
Always Worry If Late from School**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	57.2%	75.1%	46.2%	67.0%	43.4%	59.7%	39.3%	52.4%
Alcohol	60.4%	75.8%	53.0%	68.9%	49.7%	62.8%	43.3%	58.0%
Other Drugs	60.6%	75.4%	49.4%	67.6%	45.4%	60.8%	38.1%	55.7%

Parental Responsibility: Adult Would Worry if They Didn't Know Where the Student Was. Exhibit 7.15 presents information by grade for users and non-users who reported that an adult would always worry if they did not know where the student was. A greater percentage of non-users report that an adult would worry than users. For the most part, the higher the students' grade level, the less they perceive that someone would always worry if they did not know where they were.

Exhibit 7.15:
**Percentage of Adolescents Who Say Someone at Home Would
 Always Worry About Them If They Didn't Know Where They Were**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	73.5%	88.6%	62.6%	84.0%	63.9%	78.7%	61.1%	73.4%
Alcohol	75.4%	89.1%	72.0%	85.1%	70.8%	80.4%	65.1%	78.4%
Other Drugs	76.8%	88.8%	66.8%	84.4%	65.4%	79.9%	60.2%	76.4%

Parental Limits and Consequences

The survey included three questions focused on the limits parents set for their children. Two items asked respondents if they could change the minds of adults who wished to impose restrictions on their behavior. The third item asked youths if their parents have rules regarding with whom they may associate.

Parental Limits and Consequences: Family Can Be Talked Out of Punishment. Exhibit 7.16 illustrates that users at all grade levels more often report that they can *always* talk their family out of punishment more than non-users. However, differences across grades were fairly modest and did not show a consistent pattern.

Exhibit 7.16:
**Percentage of Adolescents Who Say They Can Always
 Talk Family Out of Punishment**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	20.0%	8.8%	14.9%	7.7%	16.3%	9.1%	17.1%	12.0%
Alcohol	16.6%	8.6%	13.2%	6.9%	12.9%	8.5%	14.5%	12.0%
Other Drugs	16.1%	8.8%	15.8%	7.2%	15.3%	8.8%	16.4%	11.5%

Parental Limits and Consequences: Adult's Mind Can Be Changed. Users of cigarettes, alcohol, and other drugs were asked if *they could always change the mind of an adult to get their own way* (Exhibit 7.17). More substance users than non-users across all surveyed grade levels indicate that they could *always* change the mind of an adult. Differences across grades for non-users were small; for users, there were no differences between sixth and eighth graders, but after that the ability to change the mind of an adult dropped off slightly as grade increased.

**Exhibit 7.17:
Percentage of Adolescents Who Say They Can Always
Change the Mind of an Adult to Get Their Way**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	15.7%	7.3%	16.5%	7.3%	14.7%	7.1%	12.8%	8.0%
Alcohol	15.8%	6.9%	15.7%	5.7%	11.7%	5.9%	10.3%	8.1%
Other Drugs	17.4%	7.1%	17.5%	6.6%	13.8%	6.7%	12.3%	7.4%

Parental Limits and Consequences: Parents Have Rules about People They Can Be With. More non-users than users in each grade and substance group report that their *parents have rules about the people they can be with* (Exhibit 7.18). Differences across substances are limited, except that 12th-grade non-users of alcohol are more likely to have parents with rules about people they can be with than non-users of cigarettes. Not surprisingly, the percentage of users whose parents have rules about the people they can be with decreases as grade level increases.

**Exhibit 7.18:
Percentage of Adolescents Who Say Their Parents Have
Rules About People They Can Be With**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	38.0%	49.1%	22.6%	32.3%	18.5%	23.7%	13.5%	17.8%
Alcohol	35.6%	50.0%	21.3%	34.7%	18.9%	26.4%	12.9%	23.5%
Other Drugs	37.9%	49.4%	22.3%	32.8%	16.6%	25.4%	11.8%	20.0%

Communication

Three survey items focused on communication with adults. Two pertained to communicating with adults regarding personal problems, while the third dealt with an adult at home telling respondents not to use alcohol and drugs. Exhibit 7.19 displays this information about users and non-users of alcohol and Exhibit 7.20 displays this information about users and non-users of drugs.

**Exhibit 7.19:
Percentage of Users and Non-Users of Alcohol Reporting
Communication with Adults About Problems or Drugs**

Grade	Adult Always Talk About Not Using Alcohol and Drugs		Always Can Talk About My Problems with an Adult		Adult Always Listens When I Have a Problem	
	User	Non-user	User	Non-user	User	Non-user
6	37.9%	58.2%	45.0%	59.7%	54.0%	72.4%
8	27.4%	47.7%	32.2%	48.2%	38.5%	61.0%
10	23.9%	36.6%	30.3%	43.4%	40.3%	54.4%
12	18.5%	33.6%	33.5%	43.8%	43.8%	53.7%

**Exhibit 7.20:
Percentage of Users and Non-Users of Other Drugs Reporting
Communication with Adults About Problems or Drugs**

Grade	Adult Always Talk About Not Using Alcohol and Drugs		Always Can Talk About My Problems with an Adult		Adult Always Listens When I Have a Problem	
	User	Non-user	User	Non-user	User	Non-user
6	42.3%	57.4%	40.2%	59.9%	48.9%	72.5%
8	27.0%	45.0%	30.4%	46.6%	35.5%	59.0%
10	21.6%	34.0%	28.4%	40.4%	36.2%	52.2%
12	17.6%	27.8%	31.8%	40.8%	42.3%	50.7%

Communication about Not Using Alcohol and Drugs. Across all grades, non-user students were more likely to indicate an adult always talked about not using alcohol and drugs than users. The proportion of students who indicated an adult *always* talked about not using alcohol or other drugs generally decreased from 6th to 8th grade and from 8th to 10th grade. It is interesting to note that, at best, about 58 percent of sixth-grade non-users of both substances receive a “don’t use” message from an adult at home. The reporting of a “don’t use” message drops with increasing grade level. Many youth are not receiving a clear “don’t use” message from adults.

Communication about Problems. Exhibits 7.19 and 7.20 also display information regarding the communication users and non-users of alcohol and users and non-users of other drugs report having with their family about a problem. Through 10th grade, non-users in lower grades are more likely to report that they can *always* talk to an adult about their problems and that there is always an adult available to listen to them. In fact there is about a 20 percentage point drop in responses for both questions from 6th to 10th grade. For users, there is a drop in the percentage reporting that an adult is available to talk to and listen to them from sixth to eighth grade, at which point it levels off. Across all grades and users/non-users for both substances, more students report that an adult is available to listen to them than report that there is adult they can talk to about their problems; this difference is 5 to 10 percentage points for users and 10 to 12 percentage points for non-users.

Family Activities

Two items on the 2007 MAS questionnaire asked students about the frequency of activities that involve all family members. Respondents were asked how often the family ate together and how often they engaged in a weekly activity such as watching a movie together.

Family Eats Together Daily. As with other similar items in the 2007 MAS, more non-users at all grade levels responded that their families always eat at least one meal together each day (Exhibit 7.21). There are no meaningful differences by substance. The proportion of students who indicated their family ate together at least once a day generally declined as grade level increased for users and non-users.

**Exhibit 7.21:
Percentage of Adolescents Who Say Their
Family Eats Together Daily**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	33.4%	44.4%	29.0%	39.4%	27.2%	33.0%	20.2%	25.7%
Alcohol	35.5%	44.7%	28.2%	41.7%	28.1%	35.5%	20.9%	30.5%
Other Drugs	31.7%	44.9%	27.9%	40.4%	26.1%	34.2%	19.5%	27.5%

Family Shares at Least One Weekly Activity. More non-users than users say their families shared at least one weekly activity (Exhibit 7.22) with no differences across substances. Over all substances and for users and non-users, the percentage of students who indicated their families did one activity together declined as grade level increased.

**Exhibit 7.22:
Percentage of Adolescents Who Say Their Family
Does One Activity Together Weekly**

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes	27.5%	42.4%	20.8%	33.5%	17.9%	25.9%	14.8%	20.4%
Alcohol	31.9%	42.8%	21.2%	35.7%	19.6%	28.7%	15.5%	25.0%
Other Drugs	30.1%	42.7%	20.6%	34.2%	17.4%	26.9%	13.7%	22.3%

Comparison to 2004 Survey Data

PARENTAL RESPONSIBILITY

Comparing 2007 to 2004 data, most user and non-user students reported similar responses when asked if *an adult always makes sure they wake you up for school*. With few exceptions, differences were small.

Most user and non-user students reported only slight differences in responses when asked if *an adult would always worry if they were late from school* in 2007 compared to 2004. Slightly fewer non-users of almost every grade level reported having an adult who would *always worry if they were late from school*. There were declines in percentage of adults worrying for sixth-grade users of all substances (for cigarettes from 65.7% in 2004 vs. 57.2% in 2007, alcohol from 66.9% in 2004 to 60.4% in 2007, and other drugs from 64.2% in 2004 to 60.6% in 2007).

As with the other parental responsibility questions, most user and non-user students report similar responses in 2004 and 2007 when asked if *someone at home would always worry about them if they didn't know where they were*, with more non-users having parents expressing concerns.

PARENTAL LIMITS AND CONSEQUENCES

For the most part, students' responses in 2007 and 2004 were similar on whether *they can always talk their families out of punishment*. However, in 2007 about 3 to 5 percent more 6th- and 10th-grade users of cigarettes and alcohol suggest they are more able to talk their families out of punishment than was the case in 2004. There was little change among non-users.

In the last question regarding parental limits—*parents have rules about people they can be with*—students' responses in 2004 and 2007 were similar, with a single exception (3.5% more sixth-grade users of cigarettes were subject to parental rules).

COMMUNICATION

The responses of 6th-, 8th-, 10th-, and 12th-grade students regarding their communication with adults—*an adult at home talks to me about not using alcohol and drugs*—largely remained the same from 2004 to 2007. However, non-users of alcohol at each grade level reported more communication with their parents (an increase of 2 to 4 percentage points) on substance use.

For the most part responses were similar among users and non-users of alcohol and other drugs on *an adult at home listens to me about me problems*. There were scattered changes, but no indications of a trend.

FAMILY ACTIVITIES

In both 2004 and 2007, Maryland students in higher grades generally reported that they spend less time eating as a family than those in lower grades. For sixth-grade users and non-users of all substances (with the exception of alcohol users) the percentage who say their family eats together each day decreased from 2004 to 2007, by about 3 percentage points more or less.

When asked if their *family does one activity together at least once per week*, most grades of most user and non-user groups provided similar responses in 2004 and 2007, with scattered exceptions from which it is difficult to draw any trends.

INFLUENCE OF PARENTS AND FRIENDS ON SUBSTANCE USERS AND NON-USERS

In the older teen years peer groups often supplant parents as dominant influences over behavior. Previous years of the MAS document this transition through an examination of respondents' perceptions of support and approval for use of a variety of substances. Eighth, 10th, and 12th graders were asked to respond to a number of items regarding their perception of their families' and friends' approval or disapproval of substance use.

Exhibit 7.23 shows that substance users believe their friends and parents are more approving of substance use than non-users. However, to take one example, 12th graders users do see their friends as far more approving of drinking beer (87.3%) than their parents (39.2%).

Non-users overwhelmingly indicate that their parents did not approve of them using any type of substance (all near and above 90%, with beer the lowest). Based on these data, it appears the parental influence on non-users is quite strong. About half to three-quarters of non-user 12th graders indicated their friends did not support the use of all substance (except for crack, inhalants, and needles, which received overwhelming disapproval). Not surprisingly, non-user 12th graders report that their friends were more evenly divided on whether beer was okay to use than for the other substances.

Exhibit 7.23:
Perceptions of Parents and Friends Approval/Disapproval of Substance Use
Twelfth-Grade Users and Non-Users of Selected Substances

Substance	Users				Non-users			
	Parents		Friends		Parents		Friends	
	OK	Not OK	OK	Not OK	OK	Not OK	OK	Not OK
Cigarettes	25.6%	74.4%	73.9%	26.1%	4.7%	95.3%	26.6%	73.4%
Smokeless Tobacco	30.3%	69.7%	73.9%	26.1%	5.6%	94.4%	24.5%	75.5%
Beer	39.2%	60.8%	87.3%	12.7%	12.7%	87.3%	43.4%	56.6%
Liquor	28.8%	71.2%	85.1%	14.9%	7.0%	93.0%	36.1%	63.9%
Marijuana	16.0%	84.0%	78.5%	21.5%	2.5%	97.5%	28.6%	71.4%
Crack	30.9%	69.1%	59.0%	41.0%	1.7%	98.3%	6.3%	93.7%
Inhalants	16.7%	83.3%	38.0%	62.0%	1.8%	98.2%	6.2%	93.8%
Needle	34.3%	65.7%	61.6%	38.4%	1.8%	98.2%	4.9%	95.1%

* Data do not add up to 100 due to the presence of invalid responses.

Comparison to 2004 Survey Data

In 2007, there were no apparent trends of change in approval of substances by parents and friends among 12th-grade users and non-users. Among the more commonly used substances, beer again receives the greatest approval from parents (by nearly 40% of parents of users in 2007) followed by smokeless tobacco, liquor, and cigarettes (all in the 25% to 30% range). These are up about 2 percentage points (more or less) compared to 2004, as is parental approval for marijuana (about 16% of users report parental approval). Approval levels by friends of users

and non-users are largely unchanged, although non-users of cigarettes report a sharp drop (down 5%) in friends' approval of cigarettes. As in 2004, 12th-grade users of crack and needles report rather high levels of parental approval (31% and 34%, respectively) although the parental approval among needle users is down from 48 percent in 2004.

RESISTANCE TO PERSUASION

The state has implemented educational programs to advise students on the steps that may be taken to avoid being pressured into using substances such as alcohol, tobacco, and other drugs. The MAS included several items designed to examine the extent to which adolescents are aware of the avoidance strategies, would feel comfortable using them, and have used or plan to use them. Exhibits 7.24 through 7.27 show respondent reports on the items that assess knowledge and use of avoidance strategies, each for smoking, alcohol, and drug use, respectively.

Students Taught Steps to Resist Social Pressure. As shown in Exhibit 7.24, in general, the number of users and non-users who acknowledge they were taught the steps to resist social pressure is substantial (at least 74%) and similar across grade levels and substances (within 15 percentage points). Non-users were more likely than users to say they had been taught steps to resist social pressure, regardless of grade level or substance category. For example, among 12th graders, 81.9 percent of smokers, 78.7 percent of drinkers, and 82.3 percent of drug users reported they were taught these steps; 85.1 percent of non-smokers, 81.8 percent of non-drinkers, and 85.9 percent of non-drug users said that they had been taught resistance steps.

**Exhibit 7.24:
Percentage of Users and Non-Users Who Say They Were Taught Steps to
Resist Social Pressure by Substance and Grade**

Questionnaire Item	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Smoke	74.8%	88.9%	80.3%	89.2%	79.4%	86.6%	81.9%	85.1%
Drink Alcohol	75.5%	86.4%	75.6%	88.2%	77.0%	83.9%	78.7%	81.8%
Use Other Drugs	81.7%	87.1%	78.2%	88.6%	80.4%	87.3%	82.3%	85.9%

Students are Comfortable Saying No to Social Pressure. As depicted in Exhibit 7.25, at least half of all users and non-users of cigarettes, alcohol, and other drugs indicate they were comfortable saying no to social pressure to engage in substance use. In most instances, the percentages of user and non-user students who are comfortable saying no increases with grade level, reaching about 80 percent for users and more than 90 percent for non-users among 12th graders. However, among users there is a decline in reported comfort in saying no to social pressure from sixth grade to eighth grade. This change represents a 1.8 percentage point decline for users of cigarettes, a 10.8 percentage point decline for users of alcohol, and an 8.4 percentage point decline for users of other drugs.

**Exhibit 7.25:
Percentage of Users and Non-Users Who Say They Are Comfortable
Saying No by Substance and Grade**

Questionnaire Item	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Smoke	56.6%	83.9%	54.8%	82.9%	68.4%	88.3%	79.4%	91.6%
Drink Alcohol	65.8%	85.5%	55.0%	83.4%	63.8%	84.3%	74.1%	88.1%
Use Other Drugs	73.9%	87.7%	65.5%	87.6%	73.2%	89.8%	82.2%	93.1%

Have Used Steps to Resist Social Pressure. For all students, the use of the resistance strategy appears to increase from 8th to 10th grades and again from 10th to 12th grades (see Exhibit 7.26). This, however, is not the case from sixth to eighth grade among both users and non-users. For users, there were pronounced declines in use of steps to resist pressure from sixth grade to eighth grade for users of cigarettes (from nearly 60% to 41.4%) and users of alcohol (down from about 55% to 43%), and a very slight decline for users of other drugs. Among non-users, use of steps to resist social pressure was flat from sixth grade to eighth grade.

**Exhibit 7.26:
Percentage of Users and Non-Users Who Say They Have Used Steps to Resist
Social Pressure by Substance and Grade**

Questionnaire Item	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Smoke	59.6%	53.4%	41.4%	53.0%	49.2%	60.5%	54.0%	65.8%
Drink Alcohol	55.2%	54.7%	43.0%	54.4%	47.2%	59.4%	54.1%	66.2%
Use Other Drugs	56.5%	54.0%	55.7%	54.7%	56.7%	63.4%	65.4%	70.5%

Plan to Resist Social Pressure. As shown in Exhibit 7.27, plans by users to resist social pressure actually showed decreases from 6th to 8th grade and again from 8th to 10th grade (with the exception of smokers) before increasing at least slightly. The decline from sixth to eighth grade was sharpest for drinkers (from about 65% to 49%) and more modest for smokers (down by about 6%) and drug users (down 4%). From 8th to 10th grade, there were declines among drinkers (down about 3%) and users of other drugs (down about 5%), but a considerable increase among smokers (up about 7%). Non-users of cigarettes and other drugs reported consistent small increases in their plans to resist social pressure (from percentages in the 82% to 84% range increasing to more than 90%). Non-drinkers showed essentially no change in their plans to resist social pressure, varying from about 83 to 85 percent across grade levels.

**Exhibit 7.27:
Percentage of Users and Non-Users Who Say They Plan to Resist
Social Pressure by Substance and Grade**

Questionnaire Item	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Smoke	52.4%	82.2%	46.7%	85.5%	53.9%	89.9%	54.3%	91.6%
Drink Alcohol	65.3%	82.7%	49.0%	84.5%	46.2%	83.1%	47.7%	85.1%
Use Other Drugs	68.2%	84.4%	64.2%	87.7%	59.6%	89.8%	65.7%	92.0%

When survey results from users are compared to non-users, it becomes clear that across resistance to persuasion survey items, percentages are generally lower for substance users. This means that fewer substance users in each grade realize they have been taught the resistance strategies. Fewer users say they would be comfortable using resistance strategies, and even fewer say they have used them or plan to do so. However, this general trend breaks down among users in the lower grades who reported declines in their use of steps to resist pressure or their plans for resisting pressure.

Comparison to 2004 Survey Data

In 2007 compared to 2004, there were no consistent changes among users and non-users across substances in being taught the steps to resist social pressure or in feeling comfortable in saying no. In use of steps to resist social pressure there also were few patterns of change from 2004 to 2007 among either users or non-users across substances, except for modest increases in reported use of steps among non-users in 8th and 10th grade. Similarly in plans to resist social pressure, while there were isolated increases from 2004 to 2007 there were no apparent trends.

CHAPTER VIII
IMPAIRED DRIVING

CHAPTER VIII

IMPAIRED DRIVING

Impaired driving is a serious concern for adolescents, their parents, schools, and local communities. The devastation caused by driving while impaired is often equally felt by users and non-users, families, friends, and even bystanders. Among adolescents, alcohol remains a leading cause for impaired driving and is one of the most abused and, therefore, dangerous substances. Information presented earlier in Chapter 3 reveals that adolescents begin to use alcohol early in their teens. Almost 9 percent of sixth graders report that they have tried alcohol in some form. The number of drinkers increases rapidly with age, with two-thirds (66.6%) of 12th graders reporting they have tried alcohol, and nearly half (46.9%) indicating that they had consumed five or more servings of alcohol on the same occasion.

The survey administered to 12th graders (MAS Form Three) contained questions about alcohol and other drugs that can impair driving. Survey results indicate that two-thirds (66.4%) of 12th graders have a driver's license and one-quarter (24.2%) of licensed 12th graders have driven at least once after consuming one to four drinks. Among licensed respondents, 1 in 10 (10.6%) also report having driven on at least one occasion after having had as many as five or more drinks. Of the entire sample of 12th graders (those with and without licenses), 18.8 percent drove at least once after having one to four drinks, and 10.6 percent did so after five or more drinks. Alcohol use is not the only source of impaired driving among adolescents. The survey asked respondents to also indicate whether their marijuana use coincided with operating a vehicle. Among licensed drivers, 11.7 percent say they have driven a car under the influence of marijuana once or twice, while 13.2 percent had driven under the influence of marijuana on three or more occasions. Of all 12th graders in the sample (those with and without licenses), 9.8 percent say they drove under the influence of marijuana once or twice, and 11.1 percent did so on three or more occasions. Slightly fewer (10.2%) licensed 12th graders indicate they drove while using a drug other than marijuana.¹⁰ Among licensed and unlicensed 12th graders, almost 10 percent (9.3%) report that they had driven a vehicle while using a drug other than marijuana.

Whether the source of impairment is alcohol or marijuana use, impaired drivers put others at risk as well as themselves, most often other adolescents. Twelfth graders were asked if in the past year they had made the choice to accept a ride from a driver they knew had consumed alcohol or had taken drugs (Exhibit 8.1). While a majority of students (60.9%) report that they have never had to make this choice, one-fourth indicate that they had made this choice once or twice, while half that number report that they accepted a ride from an impaired driver three or more times.

¹⁰ The question did not exclude alcohol as an "other" drug; thus, student responses to the question may or may not include alcohol as an "other drug."

**Exhibit 8.1:
Percentage of 12th Graders Who Reported That Within the
Past Year They Had to Choose Whether or Not to Ride with a
Driver Who Had Been Drinking Alcohol or Taking Other Drugs***

Frequency	Had to Choose Whether to Accept a Ride
Never	60.9%
1 to 2	25.6%
3 or more	13.6%

* Columns do not always add to 100% due to rounding.

Twelfth graders were also asked how many times in the past year they refused to ride with a driver who had been drinking alcohol or taking drugs (Exhibit 8.2). Approximately one-fourth of the students respond that they had refused to ride with an impaired driver once or twice during the past year, while about half as many refused to ride with an impaired student driver on three or more occasions. The majority (62.9%) report that they never had to refuse a ride.

**Exhibit 8.2:
Percentage of 12th Graders Who Reported That Within the
Past Year They Had to Refuse to Ride with A Driver Who Had
Been Drinking Alcohol or Taking Other Drugs***

Frequency	Had to Refuse to Ride
Never	62.9%
1 to 2	25.5%
3 or more	11.6%

* Columns do not always add to 100% due to rounding.

Student awareness of the effects of substance use on driving behavior was also measured by the survey. Exhibit 8.3 presents the percentage of 12th graders who are aware of the dangers of driving within 1 hour of using various drugs, including alcohol and tobacco. Overall, the table depicts that students believe that consumption of cocaine, extreme amounts of alcohol, and marijuana pose the most danger overall within 1 hour of driving. Approximately 8 out of 10 students believe cocaine and consumption of five or more drinks was *very dangerous*. Less than one-third of surveyed students feel that using tobacco would constitute a driving danger; the lowest percentage reported for any of the substance categories except for having only one drink.

With the exception of alcohol consumption of one or two drinks, far more students rate the remaining substances as *very dangerous* compared to *dangerous* to consume prior to operating a vehicle. When comparing the percentage of students rating a substance as *dangerous* or *very dangerous*, there is only a modest difference of about 10 percentage points between those students who believed that consumption of one or two drinks was *dangerous* versus *very dangerous*. Additionally, the perception of risk with alcohol consumption increases with the amount consumed. For example, half of students perceive one drink to be *dangerous* or *very dangerous*, compared to nearly 90 percent for three to four drinks, and more than 90 percent for five or more drinks 1 hour prior to driving.

Exhibit 8.3:
Percentage of 12th Graders Aware of the Dangers of Using Various Drugs*

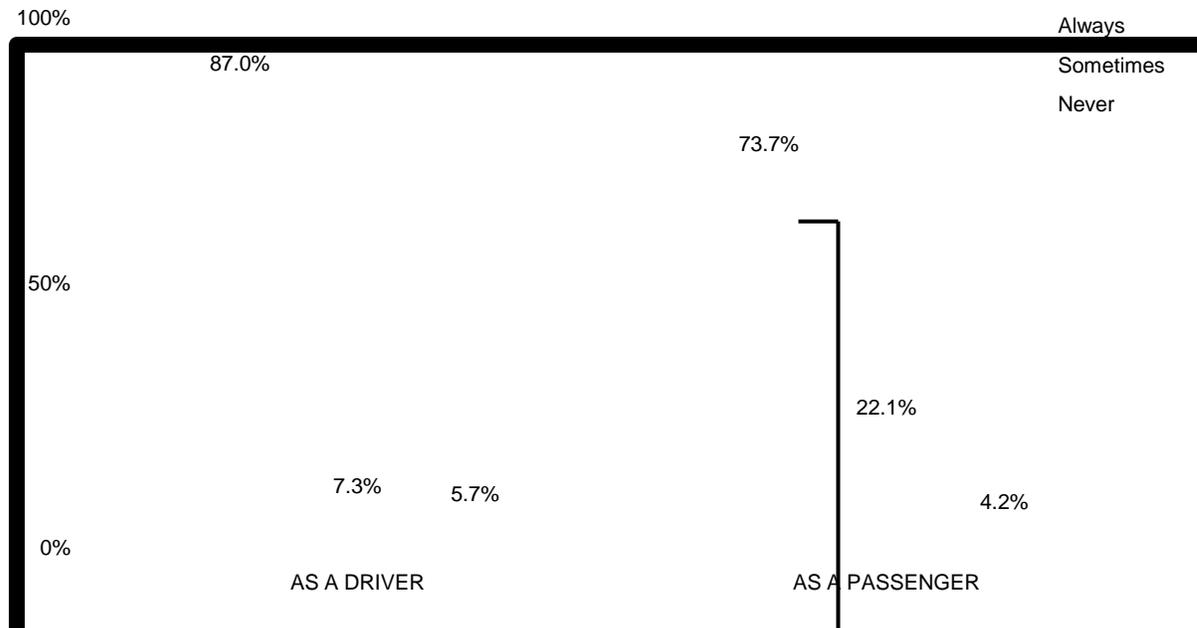
Perceived Danger	1 Drink	2 Drinks	3-4 Drinks	5+ Drinks	Tobacco	Marijuana	Cocaine
Very Dangerous	30.5%	38.8%	58.8%	79.6%	32.9%	50.2%	83.4%
Dangerous	19.6%	27.6%	28.3%	14.2%	8.8%	24.3%	11.2%
Total	50.1%	66.4%	87.1%	93.8%	41.7%	74.5%	94.6%

* Columns do not add up to 100% because categories *slightly dangerous* and *safe* are not included.

Twelfth graders were also asked about the consequences of driving under the influence and legal limits for alcohol consumption in Maryland. The vast majority (86.3%) knew that driving with a blood alcohol level of .02 could cost them their driver’s license. Most 12th graders (68.1%) knew their blood alcohol would exceed .02 after one drink.

As drivers, most of the respondents in 12th grade indicated they were aware of the importance of wearing seat belts for their safety (Exhibit 8.4). Nearly 9 out of 10 drivers say they always wear seatbelts. However, only three-quarters of passengers use their seatbelts with the same degree of consistency. Few respondents in 12th grade indicated they never used their seat belt as either a driver (5.7%) or a passenger (4.2%).

Exhibit 8.4:
Percent of Twelfth Graders Who Always Sometimes, and Never Wear Seatbelts as Drivers and Passengers



COMPARISON TO 2004 SURVEY DATA

As in 2004, 12th graders reported that cocaine, consumption of five or more drinks, and consumption of three to four drinks were the most dangerous one hour prior to driving. There were slight increases in the percentages of 12th graders who reported nearly all named substance categories as very dangerous, with the exception of cocaine. As in 2004, tobacco is perceived to be the least dangerous to use prior to driving. A slightly lower percentage of 12th graders perceived marijuana to be dangerous or very dangerous before driving in 2007 (74.5%) than in 2004 (77.0%).

Almost the same percentage (63%) of 12th graders in 2004 and 2007 reported that they *never* had to refuse a ride due to the drug or alcohol use of the driver. Similarly, there was almost no change from 2004 to 2007 in the percentage of students who indicated that they had refused to ride with a driver who had been using drugs or alcohol (one-quarter in each year made the choice one or two times, while half that number made this choice three or more times).

When examining safety behavior in a vehicle, the percentage of 12th graders who always wear their seatbelts (already quite high), either while driving or riding in a car as a passenger, has increased slightly (1% to 2%) since 2004.

CHAPTER IX
SAFETY

CHAPTER IX

SAFETY

Providing a safe, healthy climate for learning is a contributing factor in academic success. The MAS includes questions about perceptions of safety in and around schools as a means of assessing the degree to which students feel they are in a school environment that is safe, drug-free, and conducive to learning. This chapter presents the findings on perceived safety for those who use substances and non-users.

ADOLESCENTS' SAFETY AT SCHOOL AND IN THEIR NEIGHBORHOODS

The first questions that students responded to focused on safety at school and in their neighborhoods. Across all grade levels, the majority of students report feeling safe, regardless of their location. Exhibit 9.1 illustrates that approximately four-fifths of students from all grades report never or rarely feeling unsafe in their neighborhoods, going to or from school, and at school. There are only slight differences between perceived safety at school and going to/from school or in their neighborhood.

There are no consistent differences in perceived safety at school by grade level. Going to/from school there is a slight increase in the percentage of students never or rarely feeling unsafe by grade level, increasing about 2 percentage points at each grade level (from 77.4% among 6th graders to 83.8% among 12th graders). In their neighborhood, fewer sixth graders report never or rarely feeling unsafe (76.4%) than older students (ranging from 80.8% to 83.6%, though not consistently by grade).

**Exhibit 9.1:
Percentage of Respondents Who Felt Unsafe by Grade**

Felt Unsafe	Grade			
	6	8	10	12
At school				
Never	50.5%	47.8%	43.9%	50.8%
Rarely	29.2%	30.5%	33.5%	29.5%
Some days	14.4%	14.7%	15.0%	12.1%
Most days/Every day	5.9%	6.9%	7.6%	7.6%
Going to or from school				
Never	51.0%	54.8%	53.2%	56.7%
Rarely	26.4%	24.9%	28.7%	27.1%
Some days	15.0%	13.0%	11.1%	10.1%
Most days/Every day	7.5%	3.7%	3.0%	4.0
In their neighborhood				
Never	47.4%	52.8%	56.4%	56.7%
Rarely	29.0%	28.0%	27.2%	25.9%
Some days	15.3%	12.1%	10.7%	9.3%
Most days/Every day	8.3%	7.2%	5.7%	5.9%
Absent during the last four weeks**				
0 days	92.2%	93.3%	92.6%	93.1%
1 day	3.7%	2.7%	3.2%	2.8%
2 or 3 days	2.3%	2.1%	1.6%	1.8%
4 or more days	1.8%	2.0%	2.5%	2.3%

* Columns may not always add to 100 percent due to rounding.

** Because respondent felt unsafe.

Across all grade levels, approximately 92 to 93 percent of students at each grade level indicated they were not absent from school during the last four weeks because they felt unsafe. Of those who did feel unsafe, 3 to 4 percent missed one day of school and approximately 2 percent of students missed either 2 to 3 days, or 4 or more days of school.

Exhibit 9.2 presents how students perceived their degree of safety by gender. Across all locations (at school, going to and from school, and in their neighborhood), male students are more likely than their female peers to report that they never feel unsafe. For most questions in most grades, about 18 to 24 percent of females felt unsafe some or most days, compared to about 15 to 20 percent for males, with a minimum difference between the genders of at least 3 percent. Without exception, 12th grade males and females reported fewer days of feeling unsafe than younger students. Sixth graders of each gender reported more unsafe days than older students, with the exception of females at school, for whom grade differences were small.

**Exhibit 9.2:
Percentage of Respondents Who Felt Unsafe by Grade and Gender**

Felt Unsafe	6		8		10		12	
	Male	Female	Male	Female	Male	Female	Male	Female
At school								
Never	52.6%	48.3%	50.2%	45.4%	47.5%	40.2%	55.4%	46.6%
Rarely	28.9%	29.6%	30.2%	31.0%	31.6%	35.7%	26.6%	32.1%
Some days	12.8%	16.1%	12.8%	16.7%	12.2%	18.0%	9.5%	14.4%
Most days/Every day	5.7%	6.1%	6.9%	6.9%	8.7%	6.1%	8.5%	6.8%
Going to or from school								
Never	56.8%	45.2%	61.1%	48.4%	58.5%	47.9%	63.1%	50.3%
Rarely	24.2%	28.7%	22.5%	27.3%	26.1%	31.6%	23.0%	30.9%
Some days	12.1%	18.1%	9.7%	16.8%	8.0%	14.2%	6.8%	13.1%
Most days/Every day	6.9%	8.0%	6.7%	7.5%	7.4%	6.4%	6.7%	5.7%
In their neighborhood								
Never	50.1%	44.7%	58.1%	47.1%	62.4%	50.2%	66.1%	52.3%
Rarely	28.7%	29.3%	25.5%	30.7%	23.0%	31.5%	20.6%	30.9%
Some days	14.2%	16.3%	10.1%	14.0%	8.9%	12.7%	7.3%	11.2%
Most days/Every day	7.0%	9.7%	6.2%	8.1%	5.8%	5.6%	6.1%	5.6%
Absent during the last four weeks**								
0 days	92.8%	91.6%	93.3%	93.2%	92.3%	93.0%	91.3%	94.7%
1 day	3.3%	4.0%	2.4%	2.9%	3.3%	3.3%	3.0%	2.6%
2 or 3 days	2.1%	2.5%	1.8%	2.4%	1.2%	2.1%	1.8%	1.8%
4 or more days	1.8%	1.9%	2.5%	1.4%	3.5%	1.7%	3.9%	0.9%

* Columns may not always add to 100 percent due to rounding.

** Because respondent felt unsafe.

The lower portion of Exhibit 9.2 indicates that reported absences from school because they felt unsafe within the four weeks before completing the MAS were not much different overall between males and females. For 8th, 10th, and 12th graders, males were more likely than female students to report being absent from school for 4 or more days, with this gender gap widening with age.

PERCEIVED SAFETY OF SUBSTANCE USERS AND NON-USERS

Perceived Safety at School. Across grades, user status, and type of substance, perceptions of the students' safety at school did not vary greatly. Overall, as Exhibit 9.3 illustrates, the majority of users and non-users, regardless of substance or grade level, reported that they never feel unsafe at school. These percentages ranged from a low of 42 percent for 10th grade non-users of alcohol, to a high of 54.6 percent for sixth grade users of cigarettes. The second most common response was that students rarely feel unsafe at school, followed by those who feel unsafe on some days and those who report that they feel unsafe most days or every day.

For the most part, differences between users and non-users were modest. While it is true that regardless of substance used, a greater percentage of users than non-users felt unsafe most days or every day, the difference does not apply for feeling unsafe some days. And there are no consistent differences between users and non-users in the percentage never having felt unsafe.

Exhibit 9.3:
Percentage of Users and Non-Users of Cigarettes, Alcohol
and Other Drugs Who Felt Unsafe at School

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
Never	54.6%	50.3%	46.4%	48.0%	47.4%	42.9%	52.5%	49.9%
Rarely	19.1%	29.7%	26.0%	31.2%	26.1%	35.6%	26.5%	31.0%
Some days	11.1%	14.5%	16.2%	14.5%	15.1%	14.9%	11.6%	12.3%
Most days/Every day	15.1%	5.5%	11.4%	6.3%	11.3%	6.6%	9.4%	6.8%
Alcohol								
Never	49.4%	50.6%	46.2%	48.3%	46.0%	42.0%	52.9%	46.6%
Rarely	23.4%	29.8%	27.0%	31.8%	31.8%	35.2%	27.7%	33.0%
Some days	14.4%	14.4%	16.9%	14.0%	13.8%	16.0%	11.7%	12.8%
Most days/Every day	12.8%	5.2%	9.9%	6.0%	8.4%	6.8%	7.7%	7.5%
Other Drugs								
Never	45.6%	50.8%	47.2%	48.0%	47.5%	42.5%	54.2%	48.3%
Rarely	20.5%	30.2%	23.1%	32.1%	27.3%	35.9%	25.8%	32.3%
Some days	17.4%	14.0%	17.6%	14.0%	14.4%	15.3%	11.0%	12.9%
Most days/Every day	16.5%	5.0%	12.1%	5.9%	10.8%	6.2%	9.1%	6.5%

* Columns may not add to 100 percent due to rounding.

Perceived Safety Going to or from School. Exhibit 9.4 presents ratings of perceived safety when going to or from school for Maryland students by grade and user/non-user status of cigarettes, alcohol, and other drugs. As was the case for safety at school, users are more likely than non-users to report having felt unsafe most days or every day. Except for that, there are few consistent differences between users and non-users or by substance.

Among students in the sixth and eighth grades, non-users of substances feel slightly safer than users, as higher percentages of non-using students reported never feeling unsafe going to or from school. However, this trend did not hold for 10th and 12th grade students, where slightly more users of substances report never feeling unsafe going to and from school.

**Exhibit 9.4:
Percentage of Users and Non-Users of Cigarettes, Alcohol,
and Other Drugs Who Felt Unsafe Going to or from School***

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
Never	49.6%	51.1%	49.7%	55.5%	56.3%	52.3%	58.9%	55.6%
Rarely	18.3%	26.9%	23.5%	25.1%	24.4%	30.0%	24.0%	28.6%
Some days	16.5%	14.9%	15.7%	12.8%	9.8%	11.5%	9.2%	10.5%
Most days/Every day	15.6%	7.1%	11.0%	6.6%	9.5%	6.3%	7.9%	5.4%
Alcohol								
Never	46.2%	51.6%	50.5%	56.2%	54.3%	52.3%	57.9%	54.1%
Rarely	22.4%	26.8%	22.7%	25.8%	27.2%	30.1%	26.4%	28.5%
Some days	17.4%	14.8%	15.7%	12.2%	11.0%	11.3%	9.8%	10.7%
Most days/Every day	13.9%	6.9%	11.1%	5.8%	7.5%	6.4%	5.9%	6.7%
Other Drugs								
Never	45.0%	51.4%	50.1%	55.6%	53.8%	52.8%	58.8%	55.0%
Rarely	21.7%	27.0%	20.2%	26.0%	26.0%	29.8%	24.3%	29.4%
Some days	17.3%	14.8%	15.9%	12.6%	9.9%	11.7%	9.2%	10.6%
Most days/Every day	15.9%	6.8%	13.8%	5.9%	10.2%	5.7%	7.7%	5.0%

* Columns may not add to 100 percent due to rounding.

Perceived Safety in the Neighborhood. Exhibit 9.5 summarizes students' reports of their perceived safety in their neighborhoods. The exhibit indicates that there are no differences by substance and few differences between non-users and users.

Higher percentages of sixth and eighth grade non-users, regardless of the substance, indicate that they never felt unsafe in their neighborhoods than did users, with the exception of sixth graders who use cigarettes. Most typically, about 4 percent more non-users reported never having felt unsafe than users. Among 10th and 12th graders, slightly higher percentages of substance users indicated that they never felt unsafe in their neighborhood, compared to non-users. With no exceptions, the percentage of users who felt unsafe most days/every day was higher than for non-users. The magnitude of this difference decreased as grade increased (a difference of 8 to 11 percentage points for 6th graders, declining to less than 1 to 3 percentage points for 12th graders).

**Exhibit 9.5:
Percentage of Users and Non-Users of Cigarettes, Alcohol,
and Other Drugs Who Felt Unsafe in Their Neighborhoods***

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
Never	48.7%	47.3%	45.9%	53.5%	59.9%	55.3%	59.5%	58.8%
Rarely	20.4%	29.5%	28.2%	28.1%	20.9%	29.0%	23.6%	27.0%
Some days	14.1%	15.2%	14.9%	11.7%	10.8%	10.6%	9.6%	9.1%
Most days/Every day	16.8%	8.1%	10.9%	6.6%	8.3%	5.1%	7.3%	5.2%
Alcohol								
Never	43.7%	47.6%	48.6%	54.1%	57.4%	55.4%	59.2%	58.4%
Rarely	23.5%	29.6%	26.4%	28.6%	24.9%	29.3%	25.3%	27.2%
Some days	16.1%	15.3%	13.8%	11.5%	10.9%	10.5%	9.5%	8.8%
Most days/Every day	16.7%	7.5%	11.2%	5.8%	6.7%	4.9%	6.0%	5.7%
Other Drugs								
Never	43.7%	47.7%	49.7%	53.1%	56.8%	56.2%	59.7%	58.4%
Rarely	24.3%	29.5%	24.4%	28.8%	22.3%	29.1%	23.5%	27.6%
Some days	13.5%	15.1%	13.6%	11.8%	12.0%	10.3%	9.2%	9.4%
Most days/Every day	18.6%	7.7%	12.3%	6.2%	8.8%	4.5%	7.6%	4.6%

* Columns may not add to 100 percent due to rounding.

Exhibit 9.6 shows the percentage of students, by user status, who were absent from school during the previous 4 week period because they felt unsafe. Overall, non-users of cigarettes, alcohol, and other drugs are more likely than users of these substances to have no school absences because the respondents feel unsafe. Among users of substances, the percentages reporting zero absences ranged from nearly 80 percent among sixth grade users of other drugs, to nearly 93 percent among 12th grade alcohol users, and increased by grade for each substance. Among non-users of substances, the percentages reporting zero absences ranged from about 93 to 95 percent.

Users of cigarettes, alcohol, and other drugs consistently outnumber non-users in all grade levels surveyed in reporting 4 or more days absent from school in the last 4 weeks due to safety concerns. About 3 to 5 percent of users reported such absences, compared to about 1 to 2 percent of non-users.

**Exhibit 9.6:
Percentage of Users and Non-Users of Cigarettes, Alcohol,
and Other Drugs Who Were Absent Within the Last Four Weeks
Because Respondent Felt Unsafe***

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
0 days	82.9%	92.6%	85.6%	94.3%	88.0%	93.8%	89.4%	94.7%
1 day	7.7%	3.6%	4.7%	2.3%	4.2%	3.0%	4.2%	2.2%
2 or 3 days	5.3%	2.2%	5.2%	1.7%	3.1%	1.3%	2.2%	1.5%
4 or more days	4.2%	1.6%	4.4%	1.6%	4.7%	1.9%	4.2%	1.5%
Alcohol								
0 days	82.3%	93.2%	88.4%	95.0%	91.3%	93.9%	92.7%	93.8%
1 day	7.7%	3.2%	3.8%	2.3%	3.4%	3.1%	3.0%	2.5%
2 or 3 days	5.4%	2.0%	4.7%	1.2%	2.1%	1.2%	1.8%	1.7%
4 or more days	4.6%	1.6%	3.1%	1.5%	3.1%	1.9%	2.5%	2.0%
Other Drugs								
0 days	79.8%	93.3%	86.3%	94.6%	87.8%	94.6%	90.2%	95.1%
1 day	7.2%	3.3%	4.6%	2.3%	4.6%	2.7%	3.5%	2.3%
2 or 3 days	7.6%	1.9%	5.1%	1.6%	2.6%	1.2%	2.3%	1.4%
4 or more days	5.4%	1.5%	4.1%	1.5%	5.0%	1.5%	4.0%	1.1%

* Columns may not always add to 100 percent due to rounding.

AVAILABILITY OF AN ADULT TO TALK TO

One resiliency factor associated with safety is whether or not a youth has an adult available to talk to when they have a problem or concern. The 2007 MAS asked students if there was an adult available to talk with them, either at home or at school, when they faced a problem or concern. Across all grade levels, students were more likely to have an adult they could always talk to at home than at school (Exhibit 9.7).

About three-quarters (76.6%) of sixth graders indicated that they always had an adult at home that they could talk to, declining to two-thirds of eighth graders (67.6%), and declining slightly further for 10th and 12th graders (62% and 62.5%, respectively). Somewhat fewer students believed they always had an adult to talk to while at school; two-thirds of sixth graders declining to about half of 10th and 12th graders (47.7% and 52.3%, respectively). Students were more likely to indicate they never had an adult to talk to at school compared to at home, and larger percentages of older students provided this response. For example, 15.1 percent of 10th graders indicated that they never had an adult to talk to at school, while only 9.4 percent of sixth graders provided this response.

Exhibit 9.7:
Percentage of Respondents Who Have an Adult to Talk to by Grade

Adult to Talk To	Grade			
	6	8	10	12
At home				
Always	76.6%	67.6%	62.0%	62.5%
Often	12.2%	14.5%	16.5%	16.2%
Sometimes	7.0%	11.1%	13.2%	13.9%
Never	4.3%	6.8%	8.3%	7.3%
At school				
Always	65.9%	57.7%	47.7%	52.3%
Often	13.6%	15.4%	17.5%	17.2%
Sometimes	11.1%	14.9%	19.8%	18.4%
Never	9.4%	12.0%	15.1%	12.1%

*Columns do not always add to 100% due to rounding

Exhibit 9.8 shows the results on having an adult to talk to by gender. At home, differences by gender are small (generally 1 to 2%) and show no consistent pattern by grade. At school, more female than male sixth graders always have an adult to talk to (68.7% compared to 63%), but in higher grades differences by gender are small. Across all grade levels, slightly higher percentages of males indicate that they never have an adult to talk to at school than females. This gender pattern does not hold at home.

Exhibit 9.8:
Percentage of Respondents Who Have an Adult to Talk to by Gender

Adult to talk to	6		8		10		12	
	Male	Female	Male	Female	Male	Female	Male	Female
At home								
Always	75.2%	77.8%	68.6%	66.6%	62.1%	61.8%	61.8%	63.3%
Often	13.5%	10.9%	15.6%	13.3%	17.8%	15.3%	16.7%	15.6%
Sometimes	6.5%	7.5%	8.8%	13.6%	12.0%	14.4%	12.7%	15.2%
Never	4.9%	3.7%	7.0%	6.5%	8.1%	8.5%	8.9%	5.9%
At school								
Always	63.0%	68.7%	57.7%	57.8%	48.8%	46.7%	52.5%	52.2%
Often	14.8%	12.5%	14.5%	16.2%	16.9%	18.0%	16.6%	17.8%
Sometimes	11.2%	11.0%	14.3%	15.6%	18.0%	21.6%	16.7%	19.9%
Never	11.0%	7.9%	13.5%	10.5%	16.3%	13.8%	14.2%	10.2%

* Columns do not always add to 100 percent due to rounding.

These results were also examined by the user status of the students. Exhibit 9.9 presents the percentage of students, by grade and user status, who report having an adult to talk to at home. These data show that non-users, across grade levels and substances, were more likely than users to indicate they always had an adult to talk to at home. At the sixth and eighth grade level there is about a 20 to 25 percentage point difference between users and non-users for all substances.

For example, for eighth grade users of alcohol about half (50.9%) of users always have an adult at home to talk to, compared to nearly three-quarters (73.3%) of non-users. For 10th graders the gap between users and non-users decreases to about 16 to 19 percent; for 12th grade the gap decreases further to about 9 percent. Differences across substances at the same grade level are small.

**Exhibit 9.9:
Percentage of Users and Non-Users of Cigarettes, Alcohol
and Other Drugs Who Had an Adult to Talk to at Home by Grade***

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
Always	54.5%	77.4%	45.6%	70.2%	46.7%	66.0%	56.7%	65.3%
Often	14.2%	12.2%	19.0%	14.0%	19.1%	15.9%	16.3%	16.1%
Sometimes	15.7%	6.7%	18.3%	10.3%	19.4%	11.4%	16.7%	12.7%
Never	15.6%	3.8%	17.1%	5.5%	14.8%	6.7%	10.3%	5.9%
Alcohol								
Always	59.6%	78.2%	50.9%	73.3%	53.6%	69.8%	59.6%	68.4%
Often	16.2%	11.8%	17.4%	13.6%	18.7%	14.5%	17.3%	14.1%
Sometimes	14.6%	6.2%	17.8%	8.8%	16.8%	9.8%	15.1%	11.6%
Never	9.6%	3.8%	14.0%	4.4%	10.8%	5.9%	8.0%	5.8%
Other Drugs								
Always	57.0%	77.9%	46.3%	71.4%	49.4%	67.1%	57.0%	66.7%
Often	14.5%	12.1%	16.9%	14.1%	18.9%	15.5%	17.0%	15.6%
Sometimes	16.3%	6.4%	20.5%	9.4%	17.7%	11.4%	15.9%	12.4%
Never	12.2%	3.7%	16.3%	5.1%	14.0%	6.0%	10.1%	5.3%

* Columns may not always add to 100 percent due to rounding.

Exhibit 9.10 shows the percentage of users and non-users of cigarettes, alcohol, and other drugs who had an adult to talk to at school. Across substances, non-users were more likely than users to indicate they always had an adult available to talk to them at school, with the gap between non-users and users narrowing as grade level increased. For example, among sixth grade students, about half of users and two-thirds of non-users have an adult to talk to at school (the difference ranges from about 17 to 19 percentage points depending on substance). This difference decreased a bit in subsequent grades (down to 14 to 17 percentage points in 8th grade, and 6 to 9 percentage points in 10th grade), until only about 4 percent more non-users than users in the 12th grade always have someone to talk to at school.

Users across all grade levels and substances were more likely than non-users to indicate that they never had an adult available to talk to them at school. Notably, more than twice as many sixth grade users than non-users (a gap of about 12 to 13 percentage points) and about twice as many eighth grade users than non-users (a gap of 8 to 11 percentage points) never have an adult to talk to at school. This difference narrows considerably in the 10th grade (to about 5 to 7 percentage points) and further narrows in the 12th grade.

**Exhibit 9.10:
Percentage of Users and Non-Users of Cigarettes, Alcohol
and Other Drugs Who Had an Adult to Talk to at School by Grade***

Substance	Grade							
	6		8		10		12	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Cigarettes								
Always	51.0%	66.7%	45.6%	59.4%	43.1%	48.9%	49.5%	53.8%
Often	14.7%	13.5%	14.2%	15.5%	15.9%	17.9%	15.7%	17.8%
Sometimes	12.8%	11.0%	20.3%	14.2%	20.2%	19.7%	18.7%	18.2%
Never	21.5%	8.8%	19.9%	11.0%	20.8%	13.5%	16.2%	10.2%
Alcohol								
Always	50.3%	67.4%	47.2%	61.3%	44.8%	50.4%	51.1%	54.9%
Often	15.3%	13.4%	15.4%	15.4%	17.2%	17.6%	17.0%	17.6%
Sometimes	13.5%	10.9%	19.3%	13.4%	20.1%	19.5%	19.4%	16.4%
Never	20.9%	8.3%	18.1%	9.9%	17.9%	12.5%	12.5%	11.2%
Other Drugs								
Always	48.1%	67.3%	43.1%	60.3%	41.3%	50.4%	50.1%	54.0%
Often	16.3%	13.5%	14.3%	15.6%	16.1%	18.2%	15.6%	18.3%
Sometimes	15.6%	10.6%	20.9%	13.9%	21.8%	18.8%	19.5%	17.5%
Never	20.1%	8.5%	21.6%	10.3%	20.9%	14.8%	14.8%	10.1%

* Columns may not always add to 100 percent due to rounding.

COMPARISON TO 2004 SURVEY DATA

Overall, the vast majority of Maryland students report feeling safe either at school, going to or from school, or in their neighborhoods. Substance use in the sixth and eighth grades seems to have more of an effect on perceptions of safety than substance use among high school sophomores and seniors. A majority of students report that they have an adult that they can confide in at home. In the following discussion, comparisons between the findings for 2004 and 2007 are made.

As was the case in 2004, the majority of students in 2007 reported feeling safe, regardless of their location or grade level. In 2004, across all locations, perceptions of safety generally increased with grade level. Also in 2004, the majority of students surveyed (92% or more) at each grade level indicated they were not absent from school during the last four weeks because they felt unsafe. Of those who did feel unsafe, approximately 2 percent of students missed 4 or more days of school because they felt unsafe. In 2007, the results in this area were similar, as 92 percent or more at each grade level indicated they were not absent from school during the last 4 weeks because they felt unsafe.

As with 2004, it is still a trend for the majority of users and non-users, regardless of substance and across all grade levels, to indicate that they are never absent from school due to safety concerns. Non-users, regardless of the substance, were more likely to indicate that they had not missed any school due to a lack of personal safety, as was the case in 2004.

Compared to data reported in 2004, results from the 2007 MAS are remarkably similar when examining whether students believe they have an adult that they can talk to at home or at school, even when comparing responses by gender. As in 2004, higher percentages of students across all grade levels indicated that they always have an adult to talk to at home versus school; changes since 2004 have been slight.

CHAPTER X
IMPLICATIONS FOR PROGRAM
PLANNING AND POLICY

CHAPTER X

IMPLICATIONS FOR PROGRAM PLANNING AND POLICY

Data from the Maryland Adolescent Survey (MAS) are used routinely by State and local agencies and organizations to—

- Assess trends in alcohol, tobacco, and other drug (ATOD) use among adolescents
- Monitor progress toward achieving ATOD Performance Targets outlined in the Bridge to Excellence Master Plan, the U.S. Department of Education State Performance Plan, and the Maryland Management for Results Plan
- Evaluate components of State and local ATOD prevention and intervention programs
- Provide baseline data to establish health and health promotion program goals and objectives
- Support modifications of school health curricula and other programs
- Plan and advocate for coordinated school health programs and other health-related initiatives
- Support new legislation and policies that promote the health and well-being of adolescents

Seek funding for new and ongoing initiatives.

The MAS provides “objective data,” meaning that the data is not influenced by emotion, surmise, or personal opinion. This definition is consistent with the need to have concrete information to assess problems and programs. While subjective information may play an important part in understanding implementation and other program issues, it is important to base decisions about programs, and the allocation of resources, on objective data that can form the basis for achieving consensus on activities and assessing real, measurable progress.

An example of objective data is the results from student surveys about the proportion of students engaged in binge drinking activities. In contrast, subjective data might include information collected in a focus group about teacher and parent perceptions of drug use, or student evaluations of a program that assess how much they enjoyed the lessons presented.

Activities following data collection are the most important part of the needs assessment process. Objective data collected by the MAS or gathered from other sources should be made an integral part of the planning process. For example, analysis of various pieces of data about drug use might help identify—

- Which drugs are used in the area
- Whether drugs are used by many students or if their use is concentrated in a limited segment of the population
- Whether particular drugs are used more prevalently by some student age groups

- Whether one area of the school or community is a particularly likely site for drug use
- What the existing student attitudes about perceived risk of harmfulness of drug use are
- What other prevention resources/activities are being implemented in the school or community.

Answers to these and similar questions should help recipients understand and prioritize their needs, identify a specific problem for attention, and develop measurable goals related to that problem.

APPENDIX A
SCHOOLS NOT INCLUDED IN THE
SAMPLING FRAME FOR THE 2007 MAS

Reason	LSS	School ID	Name	
Adult Ed	Anne Arundel	4084	J. Albert Adams Academy at Adams Park	
		4094	Mary E. Moss Academy	
	Baltimore City	0178	Francis M. Wood Alternative High School	
		0457	Laurence G. Paquin Middle/High School	
		0488	Alternative Learning Center	
		0884	Eager Street Academy*	
	Baltimore County	0069	Catonsville Center for Alternative Studies	
		0070	Meadowood Education Center	
		0072	Rosedale Center	
		0073	Bridge Center	
	Calvert	0500	Calvert County Alternative School	
	Carroll	0716	Gateway School	
		0717	Post Secondary Program	
	Charles	0708	Robert D. Stethem Educational Center	
	Harford	0292	Alternative Center	
	Howard	0080	Homewood School	
	Montgomery	0239	Alternative Programs	
		0524	Gateway to College Program	
		0525	MCPS Transitions School	
	Prince George's	0216	Alternative High School	
		0608	Green Valley Academy	
		2220	Community Based Classrooms	
	St. Mary's	2500	White Oak Secondary Center	
Adult Ed/Closed				
Closed	Anne Arundel	6213	KIPP Harbor Academy at Annapolis	
	Baltimore City	0222	Pimlico Middle School	
Other				
	Allegany	1002	Westmar High School**	
		2402	Beall High School**	
	Baltimore City	0413	Harbor City High School***	
Special Ed				
	Anne Arundel	5556	Transition Program at Cumberland	
		1274	Marley Glen School	
		3414	Ruth Parker Eason School	
		4304	Central Special Education Center	
		4410	Phoenix CENTER - Annapolis	
		Baltimore City	0177	George W. F. McMechen Middle/High School
			0301	William S. Baer School
			0307	Claremont School
0313	Lois T. Murray Elementary School			
	Baltimore County	0372	Woodbourne Day School	
		0451	Central Career Center at Briscoe	
		0111	Maiden Choice School	
		0922	Ridge Ruxton School	
	Calvert	0923	White Oak School	
		1215	Battle Monument School	
	Carroll	0206	Calvert Country School	
	Frederick	0712	Carroll Springs School	
		2404	Rock Creek School	

Reason	LSS	School ID	Name
	Harford	0391	John Archer School
	Howard	0522	Cedar Lane Special Center
	Montgomery	0236	Mark Twain School
		0799	Stephen Knolls School
		0916	Rock Terrace School
		0951	Longview School
		0965	Regional Institute for Children & Adolescents-Montgomery County
	Prince George'	0108	James E. Duckworth Regional Center
		0627	Jessie B. Mason Special Center
		0723	C. Elizabeth Rieg Regional Center
		0907	Tanglewood Regional Center
		1111	Regional Institute for Children & Adolescents-Southern Md
		2012	Margaret Brent Regional Center
	Washington	0705	Washington County Job Development Center
		2505	Marshall Street School
	Worcester	0401	Cedar Chapel Special School
Vocational	Baltimore City	0400	Edmondson-Westside High School
		0410	Mergenthaler Vocational-Technical High School
		0454	Carver Vocational-Technical High School
	Baltimore County	0175	Western School of Technology & Env. Sci
		0975	Carver Center for Arts & Technology
		1575	Eastern Technical High School
	Harford	0304	Harford Technical High School
	Prince George'	0303	Croom Vocational High School
		0705	Tall Oaks Vocational High School
	Washington	0305	Washington County Technical High

*Closed also

**Closed; merged to become Mountain Ridge High School

***Dropped due to logistical difficulties; has 5 campuses for 80 students

APPENDIX B
2007 MARYLAND ADOLESCENT SURVEY
FORM 3, GRADE 12

APPENDIX C
2007 MARYLAND ADOLESCENT SURVEY
TEACHER'S GUIDE

APPENDIX D
LOCAL SCHOOL SYSTEM FINDINGS
