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Youth Substance Use: State Estimates from the 1999 National Household Survey on Drug Abuse

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Youth Substance Use: State Estimates from the 1999 National Household Survey on Drug Abuse

by

Douglas Wright
Teresa R. Davis

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration

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HIGHLIGHTS

This report on substance use among youths is the second presenting State estimates from the 1999 National Household Survey on Drug Abuse (NHSDA). The *Summary of Findings from the 1999 NHSDA* presented national estimates, as well as State estimates, for all persons aged 12 or older. This report examines State estimates of the use of alcohol, tobacco, and marijuana by youths aged 12 to 17 and their perceptions and behaviors that may be related to that use. The national sample included approximately 25,000 youths, including samples of 1,000 youths for the eight largest States and 300 youths for each of the remaining 42 States and the District of Columbia. Estimates of substance use by States were categorized into quintiles, or fifths.

Alcohol Use

- The State with the highest rate of past month use of alcohol among youths aged 12 to 17 was North Dakota (24.7 percent, Table B.1B). The State with the lowest rate was Utah (10.3 percent, Table B.1B). Most of the States in the highest ranked group were northern, while most of the States in the lowest ranked group were southern (Figure A.1). Nine of the States in the highest ranked group for past month *binge use of alcohol* for youths were also in the highest group for past month use of alcohol (Figure A.1).

- There was a strong negative correlation at the State level between prevalence of past month use of alcohol and perceived risk of alcohol use (Figure A.1). In other words, those States with the highest prevalence rate for past month alcohol use were the same States that had the lowest perceived risk of alcohol use. Similarly, States with high rates of reporting great risk in having five or more drinks of an alcoholic beverage once or twice a week tended to have low rates of alcohol use (Tables B.1B, B.2B, and B.3B). The State reporting the highest rate of this type of perceived risk was Utah (51.5 percent of youths) (Table B.3B). Most of the States reporting high rates of risk among youths were southern (Figure A.2). Seven States that reported the highest rates of great risk were the same ones in the lowest category for past month alcohol use (Figures A.1 and A.2).

- Among persons who first initiated alcohol use in 1995 to 1997 at age 25 or younger, the average age at first use ranged from 14.8 years old in Montana to 16.5 years in the District of Columbia (Table C.1). The national average age of first alcohol use in this group was 15.7 years old (Table C.1). Of the 10 States in the lowest quintile for age at first use, only five—Montana, Colorado, North Dakota, South Dakota, and Wyoming—were also in the highest prevalence group for past month use of alcohol among youths (Table C.1 and Figure A1).

Tobacco Use

- Nationally, 17.3 percent of youths had used some form of tobacco in the past month (SAMHSA, in press). Cigarette use (14.9 percent of youths) was the main component of tobacco use, but use of cigars also was significant (5.4 percent). States that had high rates of past month cigarette use among youths also had high rates of tobacco use (Figure A.3). Of the 10 States in the highest group for past month cigarette use, 8 States were also in the highest group for past month use of tobacco (Figure A.3). Similarly, 9 of the 10 States in the lowest group for past month cigarette use were also in the lowest group for past month tobacco use (Figure A.3).

Marijuana Use

- The national average annual incidence rate for marijuana use among youths was 6.3 percent (Table B.7B) At the State level, Arizona had the highest average annual incidence rate (8.9 percent). Five of the States in the highest quintile for past month marijuana use among youths were also in the top quintile for new use of marijuana: Massachusetts, Nevada, Delaware, Colorado, and Alaska (Figure A.5). Of the 10 States with the highest estimated rates of incidence, 4 were in the West (Arizona, Nevada, Colorado, and Alaska), 2 were in the Northeast (Massachusetts and Vermont), 2 were in the Midwest (North Dakota and Wisconsin), and 2 were in the South (Oklahoma and Delaware) (Figure A.5).

- The national average age at first use for persons who initiated use in 1996 or 1997 at age 25 or younger was 16.2 years of age (Table C.5). The average age at first use of marijuana ranged from a low of 15.1 years of age in Montana and Nevada to 17.1 years of age in Maine (Table C.5). Four of the States that fell into the highest quintile for rates of past month use of marijuana among youths had lower than average ages at first use of marijuana: Montana, Nevada, Minnesota, and Washington. Three of the States in the lowest quintile of past month prevalence had higher than average ages at first use: Iowa, Tennessee, and Idaho.

Risk and Protective Factors

Risk and protective factors involve attitudes and behavior associated with the higher likelihood of use or nonuse of drugs. The 1999 NHSDA collected data on risk and protective factors in several content domains, including four constructs in the "peer/individual" domain: antisocial behavior, favorable attitudes toward substance use, peer attitudes favorable toward substance use, and peer substance use. Each construct was based on averaging responses to multiple questions (for the questions on each measure, see Appendix I).

- The peer substance use scale (four questions) was based on questions about how many friends used different substances, including alcohol, cigarettes, and marijuana. The following scale responses were used: 1 (none of them), 2 (a few of them), 3 (most of them), and 4 (all of them). The national mean was 1.69, with State estimates ranging from 1.46 (Utah) to 1.88

(West Virginia) (Table C.11). Because West Virginia fell into the top fifth on this list, but not in the top fifth for either past month alcohol use or past month marijuana use, its high ranking on the composite measure is probably due to its ranking near the top for past month cigarette use.

Sequence of Substance Use Initiation

- Most persons who will ever initiate the use of cigarettes, alcohol, or tobacco have already done so by the time they are 20 to 25 years old. However, no sequence of use was predominant in that age group in 1999. Approximately 10 percent had not used any of the substances. About 19 percent had used only one substance (i.e., either cigarettes or alcohol). About 24 percent had used only alcohol and cigarettes: 14 percent using cigarettes before alcohol and 10 percent with the opposite pattern. Of those persons who had used all three substances (about 44 percent), the predominant patterns were (a) cigarettes, then alcohol, and then marijuana (14 percent) or (b) alcohol, then cigarettes, and then marijuana (about 13 percent).

- Nationally, about 80 percent of all persons who initiated the use of marijuana in 1996 or 1997 at age 25 or younger had previously used either alcohol or cigarettes (or both) (data not shown in tables). The remainder had not previously used any alcohol and cigarettes. The 80 percent is composed of three groups: 8.6 percent had initiated only alcohol before marijuana, 16.2 percent had initiated only cigarettes first, and the majority—55.4 percent—had initiated both alcohol and cigarettes prior to their first marijuana use (data not shown in tables). Overall, therefore, 71.6 percent had initiated cigarettes before marijuana (about 64 percent had initiated alcohol before marijuana).

- Among the eight States with large samples, there were significant differences in the average age at first use and in the lag between the initiation of cigarettes and marijuana (Table C.16). For example, the following average ages at first use were found in New York for the group who initiated both alcohol and cigarettes before marijuana: alcohol, 13.6 years; cigarettes, 14.4 years; and marijuana, 17.3 years. Florida, by contrast, displayed the more typical pattern among large States, with an age at first use of cigarettes, 13.8 years, fairly close to the age at first use of alcohol, 14.1 years, and followed by marijuana, 16.7 years.

- There was no single cigarette "gateway" to first marijuana use in that (a) the average age at first use of cigarettes differed at the national level between the cigarette-only initiates (age 13.0) and the alcohol-and-cigarettes initiates (age 14.0); (b) the lag between first use of cigarettes and first use of marijuana differed between the cigarette-only group (1.9 years) and the cigarette-and-alcohol initiate group (3 years); and (c) the age and pattern of first use of alcohol, cigarettes, and marijuana varied across the large States (Tables C.16 to C.18).

1. INTRODUCTION

This report contains 1999 State estimates of the prevalence of use of alcohol, cigarettes, and marijuana among youths aged 12 to 17. It also presents information about risk and protective factors for youth substance use at the State level. These estimates are from the National Household Survey on Drug Abuse (NHSDA), an ongoing survey of the civilian, noninstitutionalized population of the United States, 12 years of age or older.

The *Summary of Findings from the 1999 NHSDA* (Substance Abuse and Mental Health Services Administration [SAMHSA], 2000b) presented national estimates of substance use and, for the first time, State estimates, for seven priority variables: past month use of any illicit drug, past month use of marijuana, past month use of any illicit drug except marijuana, past month cigarette use, past month binge use of alcohol, past year dependence on any illicit drug, and past year dependence on any illicit drug or alcohol for all persons aged 12 or older and three age groups (12 to 17, 18 to 25, and 26 or older).

This is the second presentation of State-level estimates based on the 1999 NHSDA. This report presents newly available model-based estimates for six measures associated with substance use among youths. These variables include past month use of alcohol, past month use of tobacco, average annual incidence of marijuana, perceived risk of binge drinking, perceived risk of using marijuana once a month, and perceived risk of smoking one or more packs of cigarettes a day. In addition, this report provides standard sample-weighted estimates of a number of variables related to substance use, such as average age at first use and various risk and protective factor scale scores. Also included in this report for comparison purposes, though not discussed, are model-based estimates for the same six measures for the other age groups: ages 18 to 25, ages 26 or older, and all persons aged 12 or older.

Based on the 1999 NHSDA data and the modeling procedure, State estimates for five additional substance use measures (for ages 12 or older, 12 to 17, 18 to 25, and 26 or older) have been estimated and are available on the SAMHSA website (see acknowledgments page). The estimates produced include both the estimate for each State and the 95 percent prediction interval. The five substances include past year use of cocaine, past year receipt of treatment for illicit drugs, past year receipt of treatment for illicit drugs or alcohol, past year need of treatment for illicit drugs, and past year treatment for illicit drugs or alcohol. Together with the items estimated in the first and second reports, these additional five measures represent the complete set of State model-based estimates calculated for 1999.

1.1 Summary of NHSDA Methodology

The NHSDA is the primary source of statistical information on the use of illicit drugs by the U.S. civilian population aged 12 or older. Conducted by the Federal Government since 1971, the survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence. The survey is sponsored by SAMHSA, and

data collection is carried out by Research Triangle Institute (RTI), under the direction of SAMHSA's Office of Applied Studies (OAS). This section contains a brief description of the methodology. A more complete description is provided in Appendix E.

The survey covers residents of households, noninstitutional group quarters (e.g., shelters, rooming houses, dormitories), and civilians living on military bases. Persons excluded from the survey include homeless people who do not use shelters, active military personnel, and residents of institutional group quarters, such as jails and hospitals. Appendix H describes surveys that include populations that are not part of the NHSDA sampling frame.

Prior to 1999, the NHSDA was administered in about an hour and used paper-and-pencil interviewing (PAPI) methods. The NHSDA PAPI instrumentation consisted of a questionnaire booklet that was completed by the interviewer and a set of individual answer sheets that were completed by the respondent. All substance use questions and other sensitive questions appeared on the answer sheets so that the interviewer was not aware of the respondent's answers. Less sensitive questions, such as demographics, occupational status, household size, and composition, were asked aloud by the interviewer and recorded in the questionnaire booklet.

The 1999 NHSDA marked the first survey year in which the national sample was interviewed using a computer-assisted interviewing (CAI) method. The survey used a combination of computer-assisted personal interviewing (CAPI) conducted by the interviewer and audio computer-assisted self-interviewing (ACASI). For the most part, questions previously administered by the interviewer are now administered by the interviewer using CAPI. Questions previously administered using answer sheets are now administered using ACASI. CAI has many advantages over PAPI, including more efficient collection and processing of the data and improved data quality. Use of ACASI is designed to provide the respondent with a highly private and confidential means of responding to questions and should increase the level of honest reporting of illicit drug use and other sensitive behaviors. For further details on the development of the CAI procedures for the 1999 NHSDA, see SAMHSA (2001).

The 1999 NHSDA sample employed a 50-State design with an independent, multistage area probability sample for each of the 50 States and the District of Columbia. The eight States with the largest population (which together account for 48 percent of the total U.S. population aged 12 or older) were designated as large sample States (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas). For these States, the design provided a sample large enough to support direct State estimates. For the remaining 42 States and the District of Columbia, smaller, but adequate, samples were selected to support State estimates using small area estimation (SAE) techniques (described in Appendix G). The design also oversampled youths and young adults, so that each State's sample was approximately equally distributed among three major age groups: 12 to 17 years, 18 to 25 years, and 26 years or older.

Nationally, 169,166 addresses were screened and 66,706 persons were interviewed within the screened addresses. The survey was conducted from January through December 1999. The weighted response rate for household screening was 89.6 percent. The weighted interview response rate for

youths aged 12 to 17 was 78.1 percent. Unweighted response rates for individual States for youths aged 12 to 17 ranged from 69 to 90 percent.

Estimates in this report have been adjusted to reflect the probability of selection, record nonresponse, poststratification to known benchmarks, item imputation, and other aspects of the estimation process.

Subsequent to the publication of *Summary of Findings from the 1999 NHSDA* (Substance Abuse and Mental Health Services Administration [SAMHSA], 2000b), an error was discovered in the imputation procedure that affected some of the national and state prevalence estimates. There is an expanded discussion of the impact of that error in the new *Summary of Findings from the 2000 National Household Survey on Drug Abuse* (SAMHSA, in press). Revised 1999 national estimates are available in the 2000 Summary of Findings report and in the associated summary tables available on the SAMHSA website (see acknowledgments). Revised 1999 model-based state estimates for 12 measures will also be available on the SAMHSA website. These measures are as follows: past month any illicit drug use, past month marijuana use, past month any illicit drug other than marijuana use, past year cocaine use, past month alcohol use, past month "binge" use, past month any tobacco use, past month cigarette use, annual average marijuana incidence, and perceptions of great risk of marijuana, alcohol, and cigarettes. A report on State estimates from the 2000 NHSDA, to be released in the fall of 2001, will also include revised 1999 State estimates. All estimates presented in this report are based on the corrected imputation procedure, and the general procedure for imputation is described in Section E.2 of Appendix E.

1.2 Format of Report and Presentation of Data

The findings presented in this report are divided into five main chapters: alcohol use, tobacco use, marijuana use, risk and protective factors for substance use, and sequences in the initiation of cigarettes, alcohol, and marijuana. The discussions of alcohol, cigarettes, and marijuana in Chapters 2 through 4 are further divided into two sections within each chapter. The first includes estimates referred to in this report as model-based estimates. These are produced by combining the prevalence rate based on the State sample data and the prevalence rate based on a national regression model applied to local-area county and Census block group/tract-level estimates from the State. The methodology, validation, and discussion of data limitations for these estimates are discussed further in Appendix G.

The State model-based estimates are portrayed in the maps showing all 50 States and the District of Columbia (Appendix A), in tables that include all 50 States and the District of Columbia by four age categories (Appendix B), and in individual State tables arranged to display all of the estimates discussed in this report by the four age categories for a given State (Appendix D). The color of each State on the maps in Appendix A indicates how the State ranks relative to other States for each indicator. States could fall into one of five groups according to their ranking by quintiles. Because there are 51 areas to be ranked, the middle quintile was assigned 11 areas and the remaining groups 10 each. In some cases, a group may have contained more or fewer areas than this number because the estimates were the same as for other States in the group. Those States with the highest rates for a given

variable are in red; those with the lowest estimates are in white. Although the tables show estimates rounded to one decimal place, the rankings for the maps are based on estimates calculated to two decimal places. For the model-based estimates, when two or more States fell on the border between adjoining quintiles and had identical estimates to two decimal places, those States were assigned to the lower quintile.

At the top of each table in Appendix B is a "national" total that represents the (weighted) sum of the estimates from the 50 States and the District of Columbia. Those totals are generally slightly different from the corresponding national estimates calculated by summing the sample-weighted records across the entire sample. The latter estimates are the preferred unbiased estimates for the Nation and are used in the text for comparison with the State-level estimates.

The second sections in Chapters 2 through 4 include related information based on direct sample-weighted estimates. Chapter 5 on risk and protective factors includes scale scores that are also based on sample-weighted estimates. Chapter 6 analyzes national and State data with respect to the progression of substance use, particularly the relationship between the use of cigarettes and/or alcohol and the use of marijuana. The State sample-based estimates are provided in Appendix C.

The estimates based only on the State sample data have been largely restricted to averages and other scales that are more precisely estimated than estimates of proportions, such as the past month prevalence rate for marijuana. The State sample mean estimates tend to vary in a relatively narrow range around the national mean, with a number of States sharing the same estimate, even to three or four decimals. As a result, in the discussion of the quintiles based on sample estimates, as many decimals as necessary were used to break ties so as not to distort the distribution of 10 (or 11 for the middle group) areas per group.

Associated with each State estimate based on the sample data and sampling weights is a 95 percent confidence interval. Also, associated with each State estimate based on the modeling approach is a 95 percent prediction interval. These intervals indicate the precision of the estimate. For example, the State with the highest estimated past month alcohol rate for youths (a model-based estimate) was North Dakota, with a rate of 24.7 percent (Table B.1B). The 95 percent prediction interval on that estimate is from 20.6 to 29.1 percent. Therefore, the probability is 0.95 that the true prevalence for North Dakota will fall between 20.6 and 29.1 percent. The prediction interval indicates the uncertainty due to both sampling variability and model bias. The interpretation of the 95 percent confidence interval is fairly similar; however, the estimates are assumed to be unbiased and the interval measures uncertainty due only to sampling.

1.3 Explanation of Substance Use Measures

Some of the estimates in this report are based on special calculations. Each set of estimates presented in this report is explained in further detail below.

1.3.1 Average Annual Incidence of Marijuana Use

Incidence rates are typically calculated as the number of new initiates of a substance during a period of time (such as in the past year) divided by the estimate of the number of person years of exposure (in thousands). The incidence measure in this report is the result of a similar definition but is based on the model-based methodology mentioned in Section 1.2 and discussed further in Appendix G. The following definition is used in this report:

$$\left(\frac{\text{Initiates}}{\text{Initiates} * 0.5 + \text{Never users}} \right) / 2 \text{ , where}$$

"initiates" is the count of persons in 1999 who first used marijuana in the past 24 months, and "never users" is the count of persons in 1999 who had never used marijuana.

Note that this estimate uses a 2-year time period to accumulate incidence cases. By assuming further that the distribution of first use for the incidence cases is uniform across the 2- year interval, the total number of person years of exposure is 1 year on average for the incidence cases plus 2 years for all the never users at the end of the time period. This approximation to the person years of exposure permits one to recast the incidence rate as a function of two population prevalence rates, namely, the fraction of youths who first used marijuana in the past 2 years and the fraction who had never used marijuana. Both of these prevalence estimates were estimated using the survey-weighted hierarchical Bayes estimation approach. Also note that for estimates for age groups, the age is based on the age at the time of the interview, whereas the usual estimates of incidence based on direct estimation use the age at the time of first use to determine the age group.

The count of youths who first used marijuana in the past 2 years is based on a "moving" 2-year period that ranges over 3 calendar years. Youths were asked when they first used marijuana. If a youth indicated first use of marijuana between the day of the interview and 2 years prior, the youth was included in the count. Thus, it is possible for a youth interviewed in the first part of 1999 to indicate first use as early as the first part of 1997 or as late as the first part of 1999. Similarly, a youth interviewed in the last part of 1999 could indicate first use as early as the last part of 1997 or as late as the last part of 1999. Therefore, the reported period of first use ranged from early 1997 to late 1999 and was "centered" in 1998. About half of the youths reported first use in 1998, while a quarter each reported first use in 1997 and 1999. Youths who responded in 1999 that they had never used marijuana were included in the count of "never used." For further information on the general procedures for calculating incidence rates and other limitations, see Section F.4 in Appendix F.

1.3.2 Average Age at First Use

Each survey respondent who reported having used a particular substance was asked at what age he or she first used the substance. An early age at first use has been associated with increased likelihood of problem use later in life and early use of other substances (Kandel & Yamaguchi, 1993;

Kandel, Yamaguchi, & Chen, 1992). A low estimated State average age at first use may offer a partial explanation for States that have high prevalence levels among youths.

The average age at first use (AFU) of a substance was defined to be the average over all persons who initiated first use at age 25 or younger and who had initiated their first use in 1995, 1996, or 1997. Although the 1999 NHSDA obtained information about initiation for 1998, estimates of the number of initiates for such substances as alcohol and cigarettes for 1998 would be inaccurate because they would exclude a significant number of youths who began use at ages 10 and 11. Therefore, it was decided not to use the 1998 data relating to age at first use for any of the substances discussed in this report in order to have consistent definitions when comparing alcohol, cigarettes, and marijuana (see Appendix C for further discussion).

The confidence intervals based on 3 years' data are quite large despite the relatively large sample sizes. Average age at first use was calculated for alcohol, cigarettes, and marijuana. Because marijuana had the lowest prevalence of the three substances, it also had the smallest sample size. However, even the number of persons who reported first use of marijuana in the smaller States was respectable, ranging from 59 to 118 (data not shown in table). In the eight largest States, sample sizes ranged from 234 to 420 (data not shown in table). These sample sizes are usually considered adequate for the estimation of most statistics. Therefore, the underlying (large) size of the standard deviation is diagnostic of the generally wide variation in the reported age at first use among youths.

1.3.3 Problems Due to the Use of Alcohol, Tobacco, or Marijuana

The 1999 NHSDA questionnaire included seven questions about problems due to substance use that were asked of each person who had used the substance in the past year. The respondent could answer "yes" (i.e., they had the problem) or "no." These seven questions were based on criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., DSM-IV) for diagnosing whether a person is dependent on a substance (American Psychiatric Association [APA], 1994).

Sample sizes in most States were not sufficient to produce reliable estimates of dependence for youths. An alternative measure of "problem" substance use was therefore developed. This "dependence score" was determined for each youth in the sample based on the youth's responses to the seven DSM-IV questions. Reasoning that the likelihood of having a problem with a substance was less for those who did not use the substance in the past year than it was for those who did, a score of 0 was assigned to youths who were not past year users. Past year users with no problems (i.e., a "no" response on all seven questions) were assigned a score of 1. For each "yes" response to one of the questions, the score was incremented by 1. Therefore, a person who answered all seven questions "yes" would have a score of 8.[1]

[1]Respondents with missing data ("don't know" or "refused") for one or more of the questions were handled in two ways. Those who had missing data for four or more answers were eliminated from the analysis. Those who were only missing one to three answers were retained in the analysis, and their responses for missing items were imputed based on their percentage of "yes" responses to the questions that were answered.

The full text of the questions on dependence is provided in Appendix I. These questions deal with the time spent on activities associated with the substance, the extent of use, the development of tolerance, interference with work, emotional and psychological health problems, and inability to reduce use. The dependence scores for alcohol, cigarettes, and marijuana were analyzed using the same seven questions for each so that the scores would be comparable across the three substances.

It should be noted that there are other methods of combining youth scores that may be useful, such as only assigning scores to youths who were past year users. Although that score would not be comparable from State to State, it would provide a State with a measure of the size of the dependence problem *within the set of past year users of the substance*. Other measures could include scores that are just based on the *heavier users* or *those with scores above a specified threshold*, perhaps relative to a national percentile.

1.3.4 Risk and Protective Factors

The 1999 NHSDA collected information on a number of risk and protective factors for substance use. Risk and protective factors involve attitudes and behavior associated with the higher likelihood of use or nonuse of drugs. These factors are typically classified into a number of domains, such as peer/individual, school, family, and community. A detailed report on these factors based on the 1999 data is to be released later in 2001; however, a short discussion is included here of four of the constructs in the peer/individual domain because that domain typically has a large impact on whether youths use illicit drugs. For additional information, see also the report on *Risk and Protective Factors for Adolescent Drug Use* (Lane, Gerstein, Huang, & Wright, 2001), which presents findings from the 1997 NHSDA.

The four constructs discussed are peer antisocial behavior, favorable attitudes toward substance use, peer attitudes favorable toward substance use, and peer substance use (for the exact wording of questions, see Appendix I).

The construct for antisocial behavior was based on an average of six NHSDA items. "During the past year have you...gotten into a serious fight at school or work; taken part in a group fight of your friends against another group; carried a handgun; sold illegal drugs; stolen or tried to steal something worth more than $50; attacked someone with the intent to seriously hurt them?"

The construct to measure favorable attitudes toward substance use had three items: "How do you feel about someone your age...smoking one or more packs of cigarettes a day; trying marijuana or hashish once or twice; having one or two drinks of an alcoholic beverage nearly every day?"

The construct for peer attitudes favorable toward substance use had the same three items as above, except the question was worded as follows: "How do you think your close friends would feel about you..."

The construct on peer substance use had four items depending on the substance: "How many of your friends...smoke cigarettes; use marijuana or hashish; drink alcoholic beverages; get drunk at least once a week?"

1.4 Other NHSDA Reports and Products

In August 2000, the first report of the 1999 NHSDA data was released—the *Summary of Findings from the 1999 NHSDA* (SAMHSA, 2000b). In addition to national results, that report included estimates for the 50 States and the District of Columbia for seven model-based variables by four age groups (ages 12 or older, ages 12 to 17, ages 18 to 25, and ages 26 or older). Additional tabulations have been generated from the 1999 data and are available at the SAMHSA website. Further methodological information will be posted to the website as it becomes available. Analytic reports focusing on specific issues or population groups will continue to be produced by SAMHSA. A few of the reports in progress focus on the following topics:

- substance dependence, abuse, and treatment;
- tobacco use;
- underage alcohol use;
- characteristics of recent marijuana initiates; and
- risk and protective factors for substance use (using data from the 1999 NHSDA).

A complete listing of previously published reports from the NHSDA and other data sources is available from OAS. Most of these reports are also available through the Internet (see Acknowledgments page). In addition, OAS makes public use data files available to researchers through the Substance Abuse and Mental Health Data Archive (SAMHDA, 2001). Currently, files are available from the 1979 through the 1998 NHSDAs. The 1999 public use file will be available in the fall of 2001.

2. ALCOHOL USE

A number of measures of alcohol use are available from the NHSDA. This chapter discusses past month use of alcohol, past month binge use of alcohol, perceived risk of binge use of alcohol, average age at first use, and dependence on alcohol. Alcohol is the most commonly used illicit substance among youths aged 12 to 17. Nationally, 16.5 percent of youths reported use of alcohol in the past month, and 10.1 percent reported binge use of alcohol (SAMHSA, in press).

2.1 Model-Based Estimates

- The State with the highest rate of past month use of alcohol in 1999 among youths aged 12 to 17 was North Dakota (24.7 percent) (Table B.1B). The State with the lowest rate was Utah (10.3 percent) (Table B.1B). The majority of States in the highest ranked group were northern, while most of the States in the lowest ranked group were southern. Nine of the States in the highest ranked group for past month *binge* use of alcohol for youths were also in the highest group for past month use of alcohol (Figure A.1).

- There was a strong negative correlation at the State level between prevalence of past month use of alcohol and perceived risk of alcohol use (Figures A.1 and A.2). In other words, those States with the highest prevalence rate for past month alcohol use were also the same States that had the lowest perceived risk of alcohol use. Similarly, States with high rates of reporting great risk in having five or more drinks of an alcoholic beverage once or twice a week tended to have low rates of alcohol use (Tables B.1B, B.2B, and B.3B). The State reporting the highest rate of this type of perceived risk was Utah (51.5 percent of youths) (Table B.3B). Most of the States reporting high rates of risk among youths were southern (Figure A.2). Seven States that reported the highest rates of great risk were the same ones in the lowest category for past month alcohol use (Figures A.1 and A.2). Seven of the States that reported the lowest rates of risk were in the group with the highest rates of past month alcohol use (Figures A.1 and A.2). The States in the lowest tier of perceived risk were all northern except for West Virginia (Figure A.2). Being somewhat of an anomaly, West Virginia had a low percentage of youths who perceived a great risk of alcohol use (36.0 percent, Table B.3B), yet this State *also* ranked in the next-to-lowest category for past month use of alcohol among youths (15.5 percent, Table B.1B). West Virginia's rate of *binge* use of alcohol fell in the middle category (Figure A.1).

2.2 Sample-Based Estimates

Some research indicates that youths who begin to use substances at an early age are more likely to have substance use problems later in life (Babor et al., 1992). Therefore, the average age at first use reported by youths in each State was calculated. In general, the confidence intervals associated with the average ages at first use in the States were fairly large and may not provide much

information on a State's true relative ranking. Comparisons to the national average are probably more useful. A number of States may need to utilize 2 years' data to obtain more precise estimates.

- Among persons who first initiated alcohol use in 1995 to 1997 at age 25 or younger, the average age at first use ranged from 14.8 years old in Montana to 16.5 years in the District of Columbia (Table C.1). The national average age for first alcohol use among these persons was 15.7 years (Table C.1). Of the 10 States in the lowest quintile for age at first use, only six—Montana, Colorado, South Dakota, North Dakota, Nevada, and Wyoming—were also in the highest prevalence group for past month use of alcohol among youths (Table C.1 and Figure A.1). Of the nine States in the category with the highest average age for first use of alcohol, seven were southern (six States and the District of Columbia (Table C.1). The eight largest States showed average age for first use in a narrow band around the national average, from 15.5 (New York and Ohio) to 15.9 (Florida) (Table C.1).

- Nationally, the dependence score for alcohol among youths was 0.58 (Table C.2). The State with the highest scale score was North Dakota (0.96), while Utah had the lowest score (0.37) (Table C.2). At the State level, there was a relatively high correlation between the dependence score and the prevalence of past month alcohol use among youths. Seven of the States in the high past month alcohol prevalence group also were in the highest group for the alcohol dependence score; seven of the States in the lowest prevalence group were also in the lowest dependence score group (Figure A.1 and Table C.2).[2]

[2]The relatively high correlation of the dependence score with the prevalence rate is built in to a certain degree because the higher the prevalence, the smaller the number of youths who had not used the substance in the past year (who are assigned a 0 score).

3. TOBACCO USE

Preceded by alcohol, cigarettes were the second most commonly used substance with 14.9 percent of youths having used cigarettes in the past month (SAMHSA, in press). In addition to use of cigarettes, respondents were asked about other forms of tobacco use, such as chewing tobacco, snuff, cigars, and pipes. Nationally, 17.3 percent of youths had used some form of tobacco in the past month (SAMHSA, in press). Other measures discussed in this chapter include perceived risk of use, average age at first use, and dependence on cigarettes.

3.1 Model-Based Estimates

- Cigarette use was the main component of past month tobacco use among youths aged 12 to 17, but past month use of cigars also was significant (5.4 percent) (SAMHSA, in press). States that had high rates of past month cigarette use among youths tended to have high rates of tobacco use as well (Figure A.3). Of the 10 States in the highest group for past month cigarette use, 8 States were also in the highest group for past month use of tobacco (Figure A.3). Similarly, 9 of the 10 States in the lowest group for past month cigarette use were also in the lowest group for past month tobacco use (Figure A.3). Although the estimates are not statistically different, it is worth noting that some States, such as Nevada and Delaware, exhibit rates of past month use of tobacco that are only 1 to 2 percent higher than their rates for past month cigarettes, while for other States, such as Missouri, South Dakota, Mississippi, Montana, Arkansas, and Kentucky, the difference is over 4 percent (Tables B.4B and B.5B). Thus, in States with the higher percentage differences, it appears that there is a predominant use of either cigars or smokeless tobacco among youths who do not use cigarettes.

- In general, States that showed high youth rates of past month tobacco and cigarette use also reported low rates of perceived risk of cigarette use (Figures A.3 and A.4). The latter was measured using the following question: "How much do people risk harming themselves physically and in other ways when they smoke one or more packs of cigarettes per day?" Kentucky, for example, reported the lowest rate of perceived risk (52.7 percent reported great risk) among States, and it had the highest past month rates for cigarette use (23.5 percent) and any tobacco use (27.7 percent) (Tables B.6B, B.5B, and B.4B). However, other States such as Virginia and Nebraska were also in the group reporting the lowest risk of cigarette use, but they fell into the lowest or second-to-lowest group for past month cigarette use and past month tobacco use among youths (Figures A.4 and A.3).

3.2 Sample-Based Estimates

- For cigarettes, the average age at first use was lowest for Nevada (14.1 years) and highest for New Hampshire (16.6 years) (Table C.3). Only a few of the States that were categorized in the highest quintile for the prevalence of past month cigarette use among youths also reported a low average age at first use (Figure A.3 and Table C.3). These States included Kentucky

(14.2 years), Montana (14.4 years), and Delaware (14.4 years) (Figure A.3 and Table C.3). The average age at first use for the Nation was 15.0 years (Table C.3). Five States that had the lowest youth prevalence rates of past month cigarette use also were in the top quintile of States with the highest average age at first use: District of Columbia, New York, Hawaii, California, and New Jersey (Figure A.3 and Table C.3). In contrast, Idaho had an average age at first use of 14.5 years (in the lowest quintile) and past month youth prevalence rates of cigarette use also in the lowest quintile (Figure A.3 and Table C.3).

- The average national youth cigarette dependence score of 0.56 (Table C.4) was very similar to the 0.58 score for alcohol (Table C.2). Likewise, for alcohol and cigarettes, the ranges between the lowest and highest State dependence scores were analogous. For cigarette dependence, the States with the highest scores were Delaware (0.93) and West Virginia (0.91), and the lowest score was in the District of Columbia (0.31) (Table C.4). As with alcohol, there was a high correlation at the State level between the average dependence score and the prevalence of past month use of cigarettes. Eight of the States in the top quintile for past month use of cigarettes were also in the top quintile for their cigarette dependence score (Figure A.3 and Table C.4). In a similar manner, 8 of the 10 States in the lowest quintiles for each measure were the same (Figure A.3 and Table C.4).

4. MARIJUANA USE

In 1999, 7.2 percent of youths aged 12 to 17 reported using marijuana in the past month (SAMHSA, in press). Past month use of marijuana by youths peaked in the late 1970s at around 14 percent and reached a low in 1992 of approximately 3 percent (SAMHSA, 2000a). The measures discussed in this chapter include past month marijuana use, average annual incidence of marijuana use, perceived risk of marijuana use, average age at first use, dependence on marijuana, and difficulty of obtaining marijuana.

4.1 Model-Based Estimates

- In 1999, the estimated national average annual incidence rate for marijuana use among youths was 6.3 percent (see Section 1.3.1 for definitions of incidence rates) (Table B.7B). At the State level, Arizona had the highest average annual incidence rate (8.9 percent) over the previous 2 years (Table B.7B). Five of the States that were in the highest quintile for past month marijuana use among youths were also in the top quintile for new users of marijuana: Massachusetts, Nevada, Delaware, Colorado, and Alaska (Figure A.5). Of the 10 States with the highest estimated rates of incidence, 4 were in the West (Arizona, Nevada, Colorado, and Alaska), 2 were in the Northeast (Massachusetts and Vermont), 2 were in the Midwest (North Dakota and Wisconsin), and 2 were in the South (Delaware and Oklahoma).

- Four of the States in the highest quintile for youth incidence of marijuana use had youths who reported the lowest perceived great risk from smoking marijuana once a month (Figures A.5 and A.6, Table B.9B): Vermont (25.8 percent), Colorado (27.0 percent), Massachusetts (29.3 percent), and Nevada (29.8 percent). The other States reporting the lowest perceived risk included Montana (27.8 percent), Connecticut (28.3 percent), New Hampshire (29.9 percent), Oregon (30.6 percent), Washington (31.4 percent), and New Mexico (32.2 percent).

4.2 Sample-Based Estimates

- The national average age for first use of marijuana by persons who initiated use in 1995 to 1997 at age 25 or younger was 16.2 years (Table C.5). The average age at first use of marijuana ranged from a low of 15.1 years in Montana and Nevada to 17.1 years in Maine, a range of 2.0 years. Four of the States that fell into the highest quintile for past month rates of use of marijuana among youths had lower than average ages at time of first use of marijuana: Montana (15.1 years), Nevada (15.1 years), Minnesota (15.6 years), and Washington (15.8 years). Three of the States in the lowest quintile of past month prevalence also had a higher than average age at first use: Iowa and Tennessee (16.9 years) and Idaho (16.7 years). Some of the confidence intervals for the State average age at time of first use of marijuana were quite large (anywhere from 0.6 to 3.7 years depending on the State); therefore, the estimates should be used with caution.

- The average dependence score for marijuana for the Nation was 0.30 (Table C.6), somewhat lower than those for alcohol (0.58) or cigarettes (0.56). The State with the lowest score was Nebraska (0.12), and the State with the highest dependence score was Delaware (0.57). The correlation of these State estimates with the estimated past month use of marijuana was less than those for alcohol and cigarettes. Six of the States in the highest quintile of marijuana dependence scores were also in the highest quintile for past month use of marijuana. Similarly, six of the States in the lowest quintile of marijuana dependence scores were also in the lowest quintile for past month use of marijuana.

- The average scale score for youths' difficulty in obtaining marijuana, if they wanted this drug, was 3.41 on a scale of 1 (probably impossible) to 5 (very easy) (Table C.7). The range between the lowest and highest State scores for the difficulty of obtaining marijuana was quite small. Youths in South Dakota reported the most difficulty in obtaining marijuana (score = 3.09), while youths in Delaware and Colorado reported the least difficulty (3.70). Both scores were significantly different from the national average (3.41). Youths in four of the States with the lowest rates of past month marijuana use among youths also reported higher than average difficulty in obtaining marijuana (Nebraska, Utah, Florida, and Texas). Similarly, youths in four of the States with the highest rates of past month marijuana among youths also reported less than average difficulty in obtaining marijuana (Delaware, Connecticut, Nevada, and Colorado).

5. RISK AND PROTECTIVE FACTORS

The 1999 NHSDA collected information on a number of risk and protective factors for youth substance use. Risk and protective factors involve attitudes and behavior associated with a higher likelihood of use or nonuse of alcohol, cigarettes, and illicit drugs. These factors are typically classified into a number of domains, such as peer/individual, school, family, and community. A detailed report on these factors based on the 1999 data is to be released later in 2001; however, a short discussion is included here of four of the constructs in the peer/individual domain because that domain has a large impact on whether youths use illicit drugs (also see Lane et al., 2001).

This report presents estimates for risk and protective factors in several content domains, including four constructs in the peer/individual domain: antisocial behavior, favorable attitudes toward substance use, peer attitudes favorable toward substance use, and peer substance use. Each construct was based on averaging responses to multiple questions (for questions on each measure, see Appendix I).

The antisocial behavior scale (six questions) ranges from 1 (a youth who had no delinquent actions in the past year) to 5 (a youth who engaged in each delinquent action 10 or more times in the past year).

The scale measuring favorable attitudes toward substance use (three questions) is based on ratings of 1 (a youth who strongly disapproved of drug use among same-aged individuals), 2 (youth somewhat disapproved), and 3 (youth neither approved nor disapproved).

The scale for determining peer attitudes favorable toward substance use (three questions) has the same scale and items as the scale for favorable attitudes toward substance use, except that the questions are about their close friends' attitudes toward the respondent using these substances.

The peer substance use scale (four questions) is based on questions about how many friends use different substances. The following scale responses are used: 1 (none of them), 2 (a few of them), 3 (most of them), and 4 (all of them).

- The national mean scale score was 1.15 for antisocial behavior (Table C.8). There was little variation between the States with the lowest and highest scores. Wisconsin and Nebraska were lowest with 1.10, and Delaware was highest with 1.21. Although the differences between these States were statistically significant, the 95 percent confidence interval for the differences was wide, from about 0.01 to 0.21. Therefore, apparent differences between States should be interpreted very cautiously.

- The national mean score for favorable attitudes toward substance use was 1.55 (Table C.9). The State estimates had a range of 0.43 between the lowest State (Utah at 1.30) and the highest State (Delaware at 1.73). Note that these scores are a composite measure of attitudes

about cigarettes, marijuana, and alcohol; therefore, one should be careful about comparing these scores to State prevalence estimates that are based on the use of a single substance.

- The national mean of peer attitudes favorable toward substance use was 1.61 (Table C.10.). The State scores ranged from 1.34 in Utah to 1.78 in Colorado. Comparing the States with high scores to the national mean, one can be 95 percent certain that States with scores of 1.73 or higher are higher than the national mean. As with the individual attitudes toward substance use, these measures were based on a composite of cigarettes, marijuana, and alcohol, and care should be taken when comparing these to prevalence estimates of individual substances.

- Finally, the national mean for peer substance use was 1.69 (Table C.11). Peer substance use is a composite measure of alcohol, cigarettes, and marijuana. Utah had the lowest score (1.46), and West Virginia had the highest (1.88). Because West Virginia falls in the top fifth on this list, but not in the top fifth for either past month alcohol use or past month marijuana use, its high ranking on this composite measure is probably due to its ranking near the top for past month cigarette use.

6. SEQUENCE OF SUBSTANCE USE INITIATION

A common question is, "What role does the early initiation of cigarettes and alcohol play, if any, in the first use of marijuana?" This question was addressed by analyzing the pattern of age at first use of alcohol, cigarettes, and marijuana at the national level, then across all 50 States and the District of Columbia. Subsequently, the analysis was conducted using solely the eight largest States, where the sample sizes were large enough to statistically distinguish different patterns.

In the preceding discussions of initiation of cigarettes, alcohol, and marijuana (Chapters 2 to 4), the average age at first use was analyzed among persons who initiated use at age 25 or younger and during 1995 through 1997. These results are summarized in Table C.12.

The sequence of substance use initiation was examined from a number of different perspectives. First, the data were analyzed at the national level for the pattern of average ages at first use as defined in Chapters 2 to 4. Second, the analysis focused on a relatively narrow range of post-teen years, having allowed sufficient time for most young persons to have tried all three substances. Here, the analysis was limited to just those persons aged 20 to 25 in 1999, and all possible sequences of use of cigarettes, alcohol, and/or marijuana were enumerated.[3] Third, the analysis was restricted to youths who recently initiated marijuana and focused on whether these youths all conformed to a similar pattern of first use of cigarettes, alcohol, and marijuana.

Also of interest was whether the first use of alcohol or cigarettes could be said to act as a "trigger" for subsequent first use of marijuana and whether the time between the first use of alcohol or cigarettes and the first use of marijuana is reasonably constant for most youths. Earlier work has established that youths who have used cigarettes are much more likely to use marijuana than youths who have not used cigarettes (Kandel & Yamaguchi, 1993; Kandel et al., 1992).

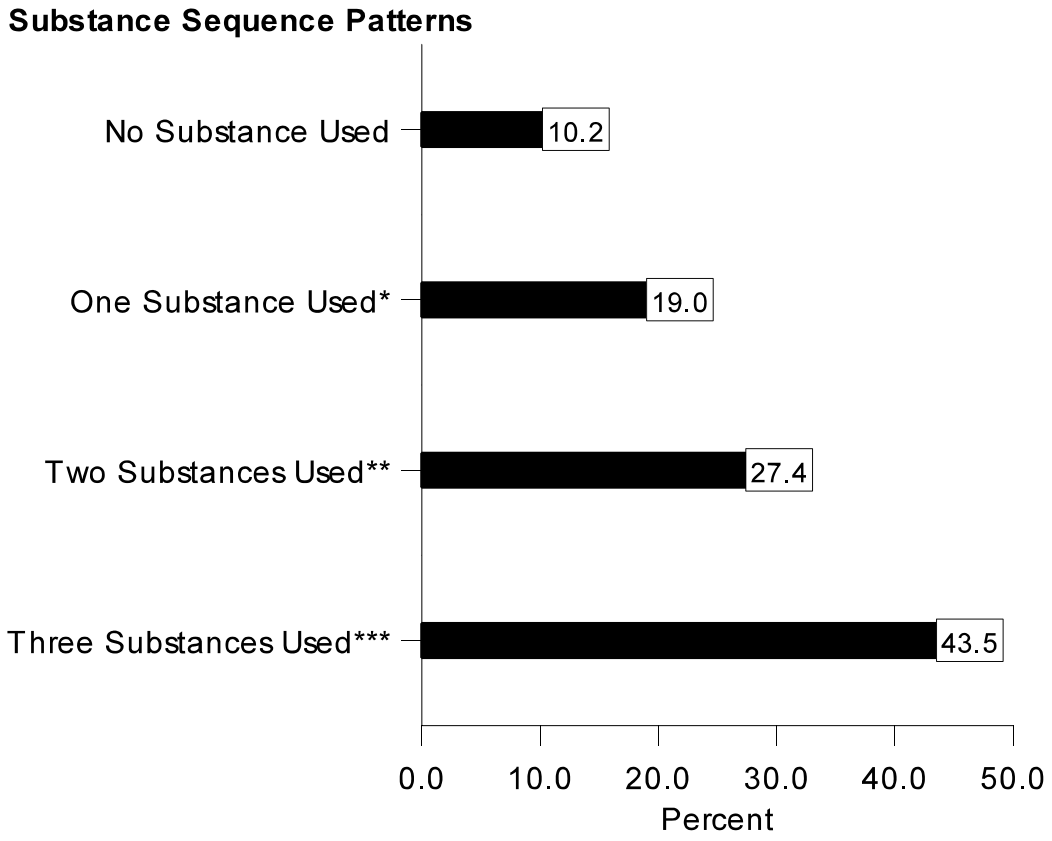
6.1 National Patterns

- The average age at first use of cigarettes was 15.0 (Table C.12). For alcohol, it was 15.7 years, and for marijuana, it was 16.2 years. Therefore, the national "pattern" of *average* age at first use was cigarettes first, then alcohol, and then marijuana.

The *average* national pattern, however, conceals a great variety of patterns of individual initiation of cigarettes, alcohol, and marijuana use, or combinations thereof (Tables C.13 and

[3] The choice of ages 20 to 25 was somewhat arbitrary; however, it was aimed at reflecting the majority of initiation for these substances and was based on the fact that relatively few persons initiate use after age 25. Among all persons in 1999 who reported ever having used marijuana, 81.3 percent had used it by age 20 and 92.9 percent had used it by age 25. For alcohol, the comparable percentages were 85.0 percent by age 20 and 96.6 percent by age 25. For cigarettes, the percentages were 92.0 and 97.8 percent, respectively. Therefore, this age group represents most of the initiates of all three substances.

Exhibit 6.1 Percentages Reporting Substance Sequence Patterns for the Use of Cigarettes, Alcohol, or Marijuana Among Persons Aged 20 to 25, by National Data: 1999



Note: Percentages may not sum to 100 due to rounding.

*In the group using one substance, 18.8 percent used only cigarettes or only alcohol and 0.2 percent used only marijuana.
**In the group using two substances, 13.5 percent used cigarettes before alcohol, 9.9 percent used alcohol before cigarettes, 2.9 percent used cigarettes or alcohol before marijuana, and 1.1 percent used marijuana before cigarettes or alcohol.
***In the group using three substances, 12.7 percent used alcohol before cigarettes before marijuana, 5.7 percent used alcohol before marijuana before cigarettes, 6.1 percent used cigarettes before marijuana before alcohol, 14.1 percent used cigarettes before alcohol before marijuana, and 4.9 percent used marijuana first then either alcohol before cigarettes or cigarettes before alcohol.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

C.14, Exhibit 6.1). About 10 percent of persons aged 20 to 25 in 1999 reported they had never used any of the three substances, 19 percent reported having used only one of the substances, 27 percent reported having used exactly two of the substances, and the remaining 44 percent reported having used all three substances. So, although the largest single percentage (44 percent) had used all three substances (indicating a possible pattern of use of the three), most persons (56 percent) in that age range had only used two or fewer of the substances.

- About 19 percent had previously used only cigarettes or only alcohol, and most of those (16.2 percent) were alcohol-only users. Only 0.2 percent reported having ever used only marijuana. In other words, almost all of those who reported use of only one of those substances had used either alcohol or cigarettes and had not used marijuana. In this group, there was no "pattern" of transition from alcohol or cigarettes to marijuana. Instead, either alcohol or cigarettes represented the "final" stage.

- Of the 27 percent who reported past use of exactly two of the three substances, those who had used both alcohol and cigarettes, but not marijuana, constituted the majority combination (23.4 percent) (Table C.14). More persons (13.5 percent) reported having used cigarettes before alcohol than alcohol before cigarettes. The remaining 4.0 percent had used marijuana in combination with either cigarettes or alcohol. Approximately 3 percent had used either alcohol or cigarettes before marijuana, and 1 percent had used marijuana first. Therefore, the majority (23.4 of 27 percent) of persons aged 20 to 25 had used only alcohol and cigarettes and had not moved on to marijuana. For only 3 percent, there appeared to be a "pattern" of transition from alcohol or cigarettes to marijuana.

- Among those who had used all three substances (44 percent), the largest percentage (14.1 percent) reported having used cigarettes first, then alcohol, and then marijuana (Table C.15, Exhibit 6.1). Almost as many (12.7 percent) reported using alcohol first, then cigarettes, and then marijuana. The next two patterns were (a) cigarettes, then marijuana, then alcohol (6.1 percent) and (b) alcohol, then marijuana, then cigarettes (5.7 percent). The final two patterns were approximately equal in size, 2.4 percent each: (a) marijuana first, then alcohol, then cigarettes, and (b) marijuana first, then cigarettes, then alcohol (data not displayed in table or exhibit). Therefore, with respect to the group who had used all three substances, almost 5 percent of all persons aged 20 to 25 in 1999 had used marijuana before either alcohol or cigarettes, thus indicating no "pattern" in the expected direction. The remainder (about 39 percent) used either alcohol or cigarettes or both before marijuana. An estimated 32.5 percent had used alcohol before marijuana, with 32.9 percent using cigarettes before marijuana.

In summary, among persons aged 20 to 25 in 1999, there was great variation in the patterns of initiation of cigarettes, alcohol, and marijuana at the national level. An estimated 10.2 percent had never used any of the substances, and 42.2 percent had only used cigarettes or alcohol, or both. The remaining 47.5 percent had used marijuana, usually in some combination with alcohol or cigarettes or both. Overall, 32.9 percent had used cigarettes before marijuana, and a slightly smaller percentage (32.5 percent) had used alcohol before marijuana. Therefore, at the national level, neither cigarettes

nor alcohol appeared to be a compelling "trigger" for subsequent marijuana use because over half (52.4 percent) reported never having used marijuana and only one third reported either starting with cigarettes and going on to marijuana or starting with alcohol and going on to marijuana.

6.2 State-Level Patterns

Tables C.13 and C.14 also present the percentages *by State* for each of the sequences of alcohol, cigarette, and marijuana use for persons aged 20 to 25 in 1999. Because the number of persons at the State level who indicated a particular pattern was often based on a small sample size, the confidence intervals for the percentages were quite large. Nevertheless, the estimates have been provided as a general indication of the variety of patterns across States. If the focus remains on the eight States with large populations (and samples), statistically significant differences in a number of the categories can be discerned.

- Not only were there significant differences among persons in the patterns of initiation at the *national* level, there also were differences among persons in the patterns of initiation *among States*. For example, 14.5 percent of persons aged 20 to 25 in California reported never having used alcohol, cigarettes, or marijuana, while only 6.6 percent in Michigan reported no use of these substances.

- Returning to look at *State* differences (Table C.12) in the average age at first use of alcohol, cigarettes, and marijuana among persons who first initiated those substances in 1995 to 1997 and were age 25 or younger at the time of initiation, the most common pattern was a national one: cigarettes first, then alcohol, and then marijuana. Forty-two (42) States conformed to the *national* pattern. Three States exhibited the alcohol, then cigarettes, then marijuana pattern, and five had the cigarettes, then marijuana, then alcohol pattern. Given that the samples in many States were quite small and that the confidence intervals for the three substances often overlapped, a number of States could easily show a different pattern in the full population. However, among the eight States with larger samples, the patterns could be distinguished. For example, in New York the average ages at first use for cigarettes and alcohol were similar and significantly lower than the average age at first use for marijuana. However, in Illinois there was no statistical difference between the average age at first use of alcohol and marijuana when compared with the national data.

Collectively, the evidence indicates that among the population aged 20 to 25 in 1999, there was no fixed pattern of progression from cigarettes or alcohol to marijuana at the national level. In fact, large percentages never used marijuana, or if they used it, they did not necessarily use it after having used cigarettes or alcohol. Nor did the patterns at the State level appear to be the same with respect to a fixed progression. Regarding State patterns in the average age at first use, different patterns are discernible in the States where the sample of respondents was relatively large. However, when talking about average age at first use for each of the three substances, the first users of one substance were not necessarily the same as the first users of another substance. A comparison of average ages does not represent an accurate picture of the sequencing of *individual* use.

6.3 Sequences Among Recent Initiates of Marijuana

Narrowing the focus to only those who had used marijuana can help to determine whether, at the individual level, first use of cigarettes or alcohol can be said to stimulate subsequent use of marijuana at a certain age or after a fixed period of time.

- Nationally, about 80 percent of all persons who initiated the use of marijuana in 1996 or 1997 at age 25 or younger had previously used either alcohol or cigarettes, or both (not shown in tables). This estimate is very similar to the percentage of persons aged 20 to 25 in 1999 who had used either cigarettes or alcohol, or both, before they first used marijuana (83.5 percent, Tables C.13 to C.15). The remainder had not previously used any alcohol and cigarettes. Therefore, cigarette or alcohol use cannot be said to be a universal trigger for marijuana initiation among youths because 20 percent of marijuana initiates either never first used alcohol or cigarettes before marijuana or started marijuana use *before* their first use of alcohol or cigarettes.

- The 80 percent could be divided into three groups: 8.6 percent had begun using only alcohol before marijuana, 16.2 percent had begun using only cigarettes first, and the majority—55.4 percent—had used both alcohol and cigarettes prior to their first marijuana use. Overall, therefore, 71.6 percent had initiated cigarettes before marijuana (about 64 percent had initiated alcohol before marijuana).

- The national *average* age at first use of marijuana was statistically different in the three groups. For those who used both alcohol and cigarettes first, the average age at first marijuana use was 16.9 (Table C.16). For the group who used cigarettes first, the average age at first marijuana use was 14.9 years (Table C.17). For the group who initiated alcohol first, the average age at first use of marijuana was 16.3 years (Table C.18).

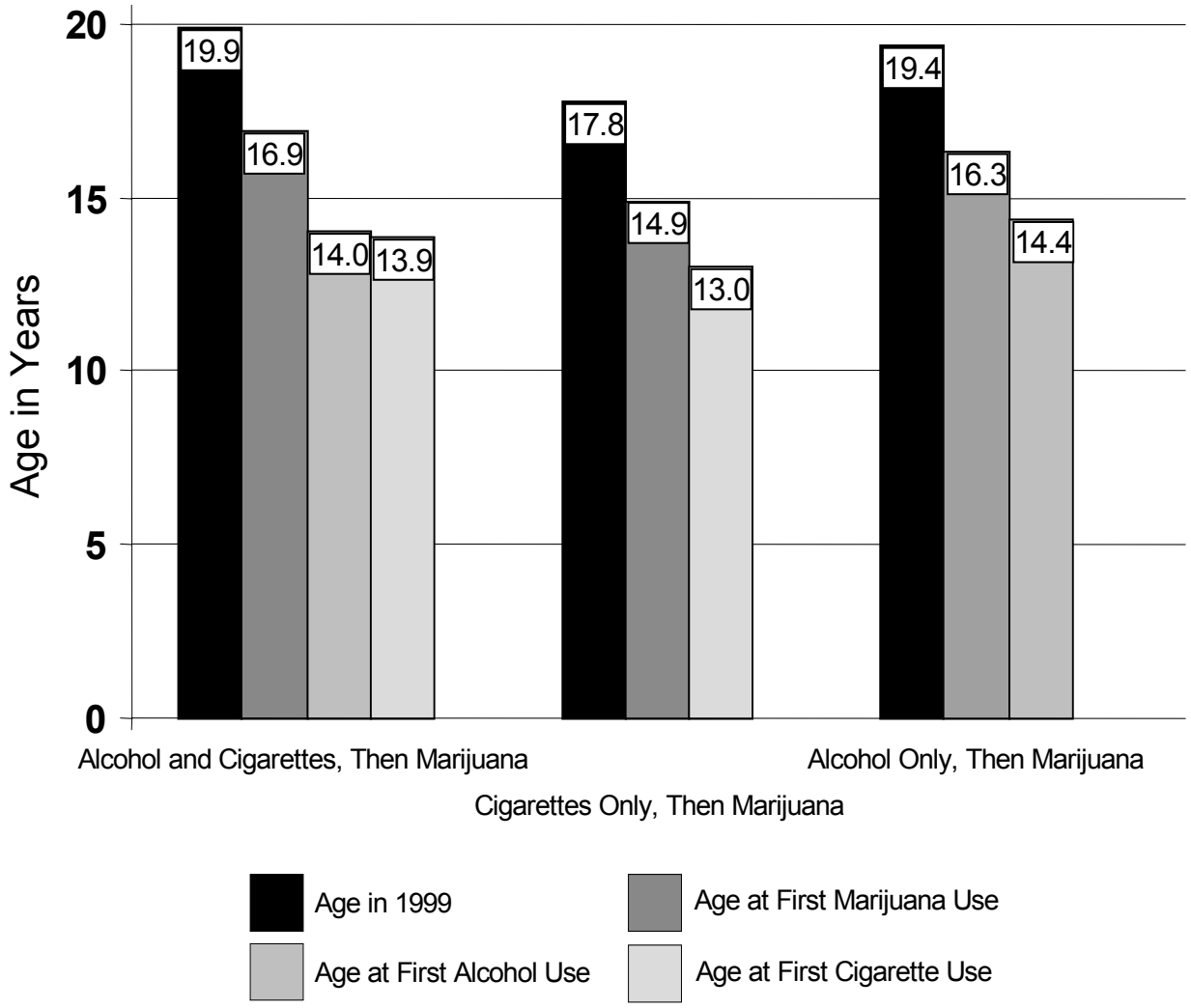
- For the group who used both alcohol and cigarettes before marijuana, the average age at first use of cigarettes was 13.9 years, and the average age at first use of marijuana was 16.9 years, a lag of 3 years. However, for the group who used only cigarettes before marijuana, the average age at first use of cigarettes was only 13.0 years, and the average age at first use for marijuana was 14.9 years, a lag of about 2 years. The picture is similar with respect to alcohol and marijuana. Therefore, not only do the *ages at first use* for the same substance in the different subgroups differ significantly, but the *lags* between the average age at first cigarette or alcohol use vary as well. This would seem to indicate that the notion of a fixed age for the "trigger" substance and a fixed lag before marijuana use is not supported.

- Among the eight States with large samples, there were significant differences in the average age at first use and in the lag between cigarette and marijuana initiation (Tables C.16 to C.18). For example, New York reported the following average ages at first use for the group who initiated both alcohol and cigarettes before marijuana: alcohol, 13.6 years; cigarettes, 14.4 years; and marijuana, 17.3 years. Florida, by contrast, displayed the more typical pattern among large

States, with an age at first use of cigarettes, 13.8 years, fairly close to the age at first use of alcohol, 14.1 years, and followed by marijuana, 16.7 years. Therefore, in addition to the average ages at first use and lags differing for the same substance in different subgroups of the national population, they also differ within the same subgroup *among States*.

- Not only did the average *ages at first* use differ among the three groups, but the *average age profile* at the time of interview for each group differed as well (Table C.19, Exhibit 6.2). The average current ages for those who used only alcohol before first use of marijuana was 19.4 years. The average current age for those who used only cigarettes before marijuana was 17.8 years. The average current age for those who used both alcohol and cigarettes before marijuana was 19.9 years.

Exhibit 6.2 Average Ages for Those Who Initiated Alcohol and/or Cigarette Use Before Marijuana Use, by Age in Years: 1999



Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

There was no similarity in the paths from cigarettes (or alcohol) to first use of marijuana among recent initiates: (a) the average age at first use of cigarettes differed at the national level between the cigarette-only initiates (age 13.0) and the alcohol-and-cigarettes initiates (age 13.9); (b) the lag between first use of cigarettes and first use of marijuana differed between the cigarette-only group (1.9 years) and the cigarette-and-alcohol initiate group (3 years); (c) the age at first use and pattern of first use of alcohol, cigarettes, and marijuana varied across the large States; and (d) the age profiles of youths exhibiting the different sequences of the three substances differed as well.

As shown in Exhibit 6.2, the substance use profile for those who had initiated alcohol and/or cigarettes before marijuana was that they averaged 19.9 years of age in 1999 and reported first use of marijuana 3 years earlier in 1995 to 1997 at an average age of 16.9. This group had previously initiated both cigarettes and alcohol in 1992 to 1994 at the average age of about 14 (13.9 years for cigarettes and 14.0 years for alcohol). The group who initiated only cigarettes before marijuana had an average age of 17.8 in 1999, had initiated marijuana about 3 years earlier in 1995 to 1997 at an average age of 14.9, and had initiated cigarettes on average 2 years before that in 1993 to 1995 at an average age of 13.0. The group who initiated only alcohol before marijuana averaged 19.4 years of age in 1999, started using marijuana 3 years earlier in 1995 to 1997 at an average age of 16.3, and had previously started the use of alcohol about 2 years earlier in 1993 to 1995 at an average age of 14.4. Therefore, the substance initiation profile for these three groups was quite different in terms of average ages.

Finally, an examination of the raw data revealed that the distributions of the sequence of use among individuals within (and among) these three groups varied widely. Within the group of those who first used alcohol and cigarettes before their first use of marijuana, the lag between the first use of alcohol and first use of marijuana, or between the first use of cigarettes and first use of marijuana, varied widely—from no lag to lags of 17 years, depending on the substance and the youth's age. Approximately the same number of youths reported starting cigarettes and marijuana at age 12 as the number who reported starting cigarettes at age 11 and marijuana at age 12. However, for youths who began the use of marijuana at ages 13 through 22, a larger number had started to use cigarettes 1 to 2 years prior than the numbers who had started cigarettes and marijuana in the same year.

7. DISCUSSION

This report has examined the use of alcohol, tobacco, and marijuana among youths aged 12 to 17 in each of the 50 States and the District of Columbia in 1999, including risk and protective factors associated with use and the sequence of initiation of alcohol, cigarettes, and marijuana. State estimates that were examined include both model-based estimates and sample-based estimates. The latter were restricted to scales and other continuous data that result in more precise estimates than questions having just "yes" or "no" answers. Still, the smaller sample sizes in the 42 States and the District of Columbia and the wide range of responses for some of the variables resulted in estimates with sizable sampling errors.

The estimates in this report are useful in obtaining a more complete picture of an individual State's substance use problem. In general, the States differed in substance use and related measures. Differences in these measures between States may provide some insights into the reasons that some States have high levels of substance use and others have low levels.

At the State level, there was a high correlation between the small area estimation (SAE) model-based measures for specific substances. For example, there was a strong correlation between State rankings of past month alcohol use and past month binge alcohol use. (Nine States were high for both.) There was also a strong negative relationship between past month alcohol and perceived risk of binge use (six to seven States were the same). There was little relationship at the State level between average age at first use (AFU) of alcohol and past month alcohol prevalence.

The rankings of States on past month use of tobacco were highly correlated with those for past month use of cigarettes. Eight of the States in the top quintile were the same for both substances. The perceptions of low risk of cigarette use was strongly associated with high rates of both cigarettes and tobacco use. There was not a strong relationship at the State level between age at first use of cigarettes and past month cigarette use.

Rankings for past month use of marijuana were moderately correlated with rankings for incidence of marijuana. Five of ten States were in the high group for both. There was a fairly strong relationship between incidence of marijuana use and perceived risk of marijuana. There was also a fairly strong relationship between age at first use of marijuana and past month use of marijuana.

In analyzing the relative standing of a State with respect to these variables, it is important to consider the size of the prediction (or confidence) intervals and the relative spread of the distribution. Some of the variables, such as the average age at first use of marijuana, were based on relatively small samples and had large variations in responses, resulting in rather large confidence intervals. Other variables, such as antisocial behavior, exhibited a narrow range of State estimates, making it hard to make statements about the relative position of a State. Because the true average State level of a specific variable can be somewhat obscured by the sampling error, one should be cautious in dismissing the possibility of a strong relationship even when the correlation among related variables appears to be

weak. One should also consider the fact that some of the variables are composite scales based on a number of substances, such as alcohol, cigarettes, and marijuana, and are not substance specific, making inferences about a single substance difficult.

For these reasons, although it is reasonable to consider the possibility of a relationship between any two variables, one should attempt to confirm this (a) by looking at estimates for other age groups for the same substances (included in this report); (b) by looking at estimates for other substances that may be related (these are currently available on the SAMHSA website); and (c) by supplementing the data with other State sources of information. If, for example, the estimates for the age groups 18 to 25 and 26 or older are similarly high, this can confer some assurance that the estimate for ages 12 to 17 is reasonable.

State estimates for risk and protective factor construct scales did not show much variation. Therefore, it is unclear at this point whether the variations in these scales are capable of explaining the differences among States. One of the issues is that some of the factors represent alcohol, tobacco, and other drug (ATOD) scales. However, we know from earlier results that some States (e.g., Kentucky) are high in one substance (such as cigarettes), but low in other substances, such as marijuana. The forthcoming report on risk and protective factors based on the 1999 NHSDA may shed more light on this.

It is beyond the scope of this report to try to interpret the set of data for any State. The focus has primarily been restricted to comparisons of two variables at a time. However, it is important for each State to analyze what the collection of estimates may say about its substance use problem. In Exhibit 7.1, some of the information in the report for the top one fifth of the States has been summarized for past month use of marijuana. Estimates for other variables related to substance use are also presented for these States. The exhibit also includes the national average and the range of State estimates for each variable in order to put the State estimates into perspective. Each variable is labeled with an H for HIGH whenever the State was in the highest category. It is often the case that States may not have had an H for a variable, but were quite close to that level, so this needs to be taken into account. For age at first use, an H was assigned when a State had an average that was in the *lowest quintile*. If States were tied for the high ranking, those States were conservatively excluded from the high ranking.

Other Hierarchical Bayes estimates have been generally excluded from Exhibit 7.1 because there is a degree of "built-in" correlation among those variables in that the models draw from the same set of independent variables and the same variables are often in a number of models. Two exceptions were the inclusion of two variables—incidence of marijuana and the perceived risk of using marijuana once a month. The sample-based estimates for a number of variables were included even though at times the sampling error may have been large, the range of estimates small, or the scale not specific to the substance.

Exhibit 7.1 Estimates of Past Month Marijuana Use in Comparison with Other Related Items Among the States with the Highest Past Month Marijuana Rates: 1999

	Past Month Use[1]	Average Annual Incidence[1]	Perceived Risk Marijuana[1]	Average AFU Alcohol	AverageAFU Cigarettes	Average AFU Marijuana	Difficulty Obtaining Marijuana	Antisocial Behavior	Favorable Attitudes to Drugs	Friends' Attitudes on Drugs	Peer Drug Use
National	7.4	6.3	37.3	15.7	15.0	16.2	3.41	1.15	1.55	1.61	1.69
DE	13.9 H	7.9 H	32.3	15.6	14.4 H	16.2	3.70 H	1.21 H	1.73 H	1.73 H	1.84H
MA	11.9 H	8.7 H	29.3 H	15.6	14.6	16.2	3.53	1.17	1.57	1.60	1.77
NV	11.6 H	8.0 H	29.8 H	15.1 H	14.1 H	15.1 H	3.67 H	1.15	1.65 H	1.64	1.79
MT	11.4 H	7.1	27.8 H	14.8 H	14.4 H	15.1 H	3.47	1.19 H	1.62 H	1.66	1.79 H
RI	10.8 H	7.0	33.9	14.9 H	14.2 H	16.3	3.42	1.18 H	1.58	1.63	1.69
NH	10.7 H	7.2	29.9 H	15.5	16.6	16.5	3.48	1.12	1.46	1.55	1.67
AK	10.4 H	7.8 H	32.8	15.3	14.4 H	16.0	3.49	1.18	1.53	1.59	1.72
CO	10.3 H	7.5 H	27.0 H	15.1 H	14.2 H	15.9	3.70 H	1.15	1.70 H	1.78 H	1.80 H
MN	9.9 H	6.6	32.8	15.6	14.8	15.6 H	3.55	1.19 H	1.61	1.66	1.74
WA	9.9 H	7.3	31.4 H	15.4	15.1	15.8 H	3.52	1.16	1.53	1.61	1.70
Range	5.2-13.9	4.5-8.9	25.8-45.7	14.8-16.5	14.1-16.6	15.1-17.1	3.09-3.70	1.10-1.21	1.30-1.73	1.34-1.78	1.46-1.88

NOTE: The letter "H" placed after an estimate indicates when a State has an average in the top quintile for that item, except for the three age at first use (AFU) items, where the estimates are designated with an "H" when a State has an average that is in the lowest quintile for that item.

[1] Estimates presented in these columns are model-based estimates.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Some States were in the highest group for a number of variables other than past month marijuana. Delaware was high in 7 of the 10 variables; Nevada for 7; Montana for 7; and Colorado for 8. For the remaining States, Massachusetts had 2 high; Rhode Island had 3; New Hampshire had only 1; Minnesota had 2; Alaska had 2; and Washington had 2.

For all of the 11 measures, the majority of the 10 States had (point) estimates that were "worse than" the national average, although statistically some of the State estimates would be indistinguishable from it. The measures were generally consistent with each other. New Hampshire was an exception to the above, having estimates that were "better" than the national average for 5 of the 11 variables. This would seem to indicate that those variables would not be responsible for its past month prevalence of marijuana ranking in the top quintile.

In analyzing the 1999 data, researchers may find it useful to look at other possible scale measures. For example, a "substance dependence scale" was created by assigning a "zero score" to each youth who indicated that he or she had not used the substance in the past year. However, those records could also have been eliminated from the measure, resulting in an average dependence score of only those youths who had used the substance in the past year. Thus, the measure would just be applicable to past year users in that State and not comparable to other States.

Because the sample sizes for the small States were relatively small for some of the variables, researchers may find it helpful to combine 2 or more years of data in order to obtain better precision for the sample-based estimates. Using both the 1999 and 2000 data, sample sizes of youths for those States would be approximately 600.

The data indicate that the sequence of initiation of cigarettes, alcohol, and marijuana can vary widely among persons, among different subgroups at the national level, and across States. Based on a single years' data, it is difficult to accurately assess how different the patterns are among States, and it may be necessary to combine 2 or more years of data to obtain more precise estimates. The fact that there are a number of variations in the pattern of initiation among the large States indicates a distinct possibility of similar differences among the small States. Because of the stability of the national estimates, knowledge that a State is significantly above or below the national average should be instructive.

The variety of different patterns of substance initiation, ages at first use, and lags between first use of alcohol or cigarettes and later marijuana use at the national level and other levels do not seem to support the hypothesis that either alcohol or cigarettes acts as a "biological trigger" for marijuana use at a fixed age or after a fixed period of time. However, other research *has shown* that youths who have used cigarettes or alcohol are more likely to have used marijuana compared with youths who have not used cigarettes or alcohol (Kandel & Yamaguchi, 1993; Kandel et al., 1992). The fact that the relationship between cigarette initiation and use *and* later use of marijuana can vary widely seems to imply that *factors other than cigarette or alcohol use* may play a large role in determining if and when that use is associated with marijuana use.

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Appendix A: State Maps

Figure A.1 Alcohol Use Among Persons Aged 12 to 17: 1999

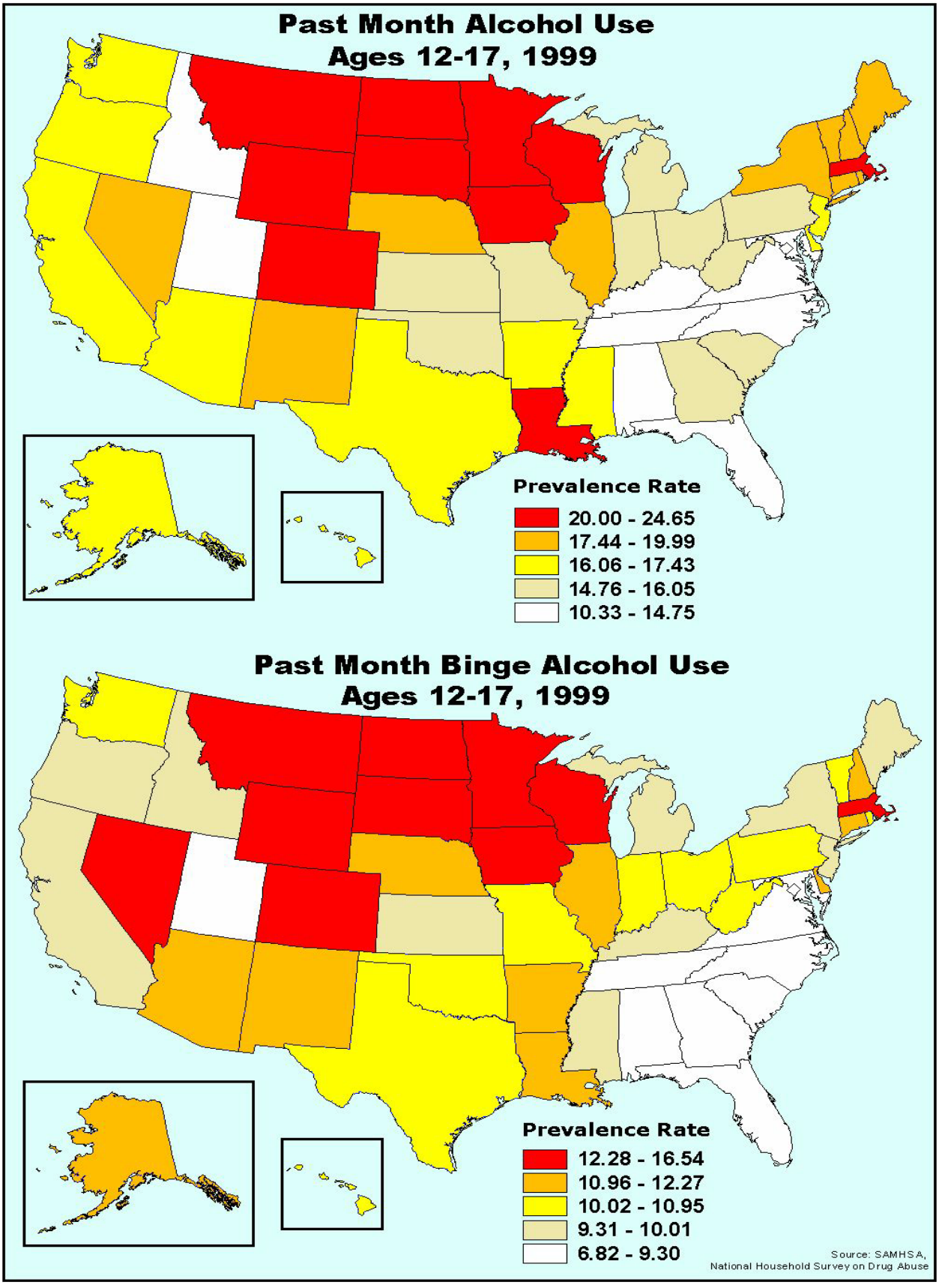


Figure A.2 Perceived a Great Risk in Having Four or Five Drinks of an Alcoholic Beverage Once or Twice a Week Among Persons Aged 12 to 17: 1999

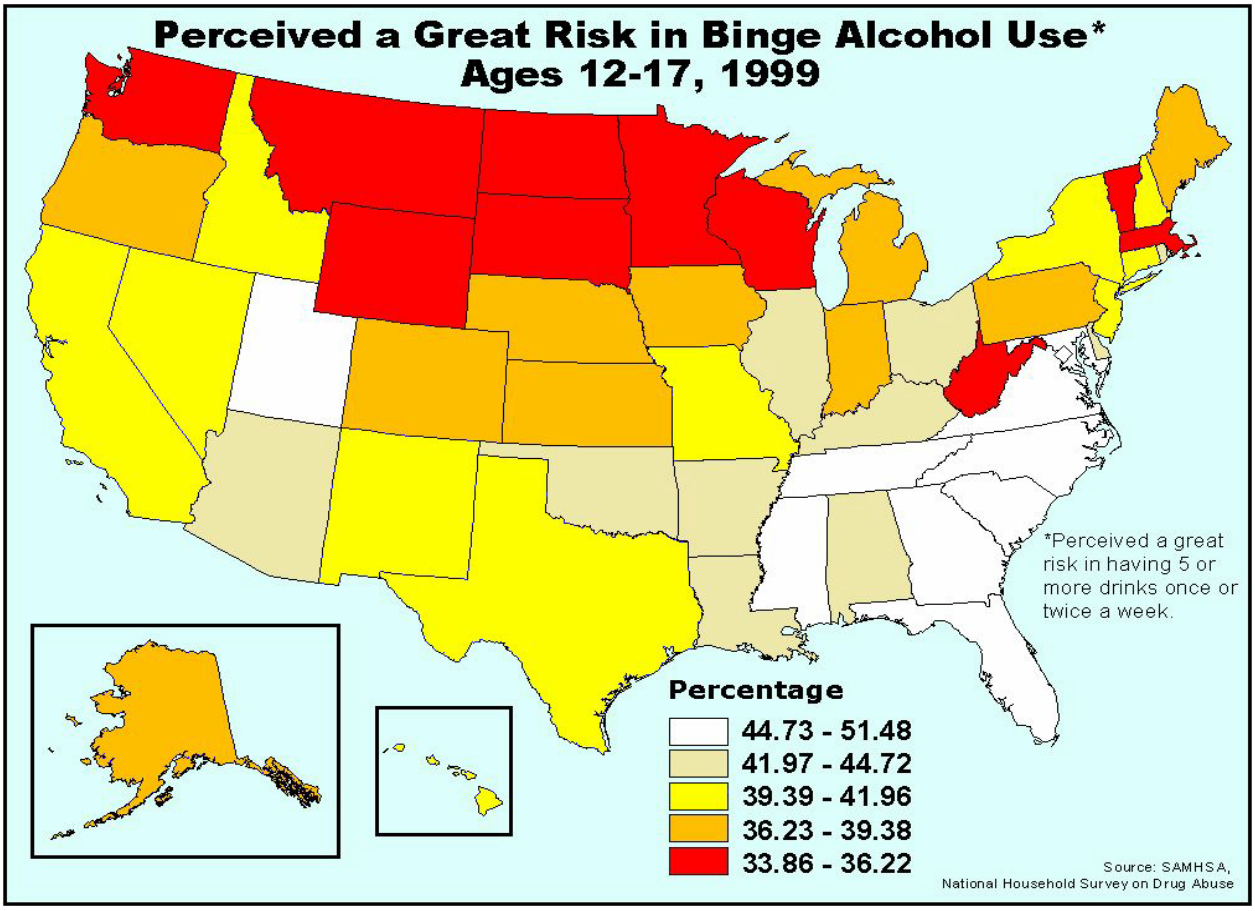


Figure A.3 Tobacco Use Among Persons Aged 12 to 17: 1999

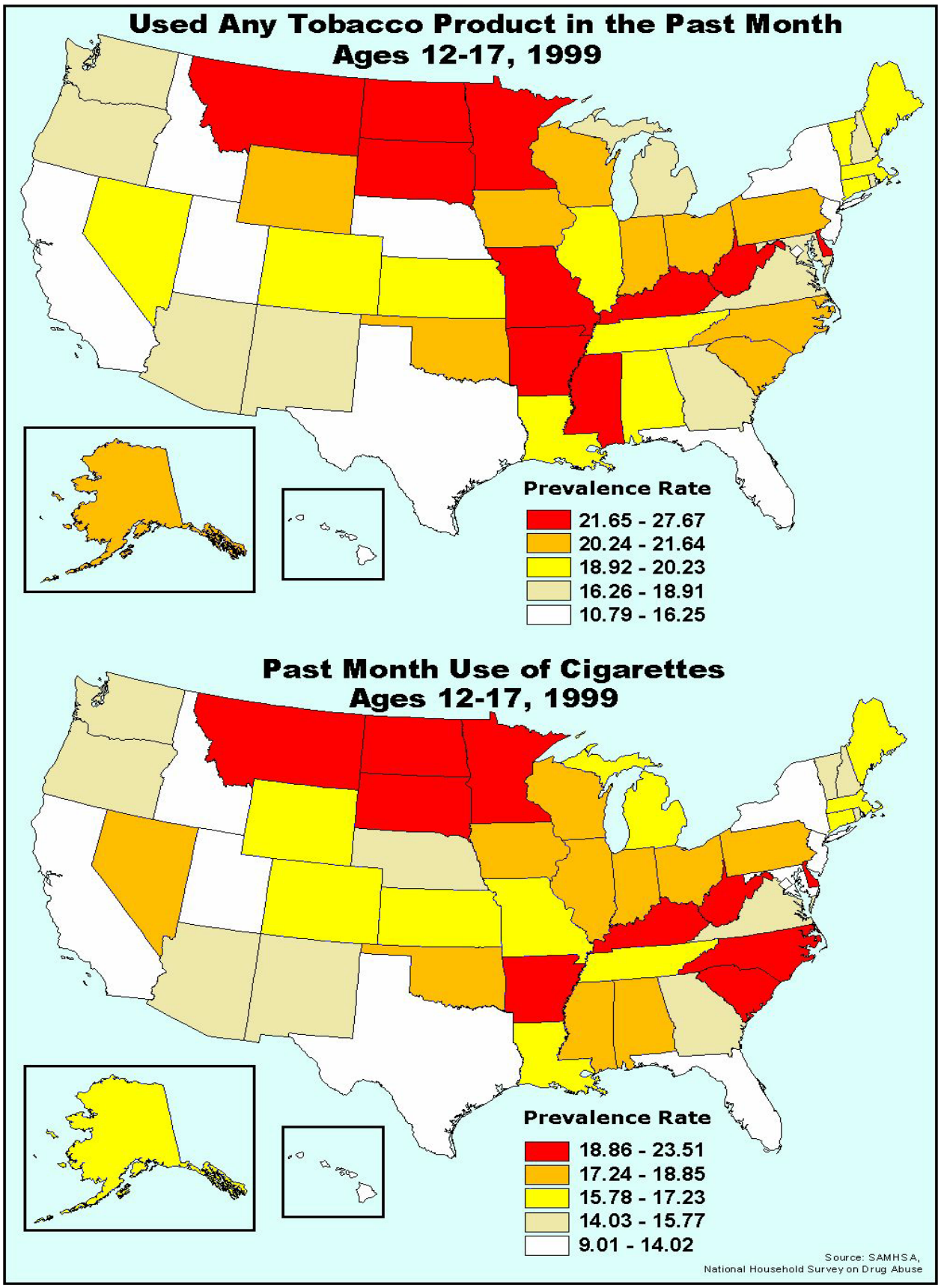


Figure A.4 Perceived a Great Risk in Smoking One or More Packs of Cigarettes Per Day Among Persons Aged 12 to 17: 1999

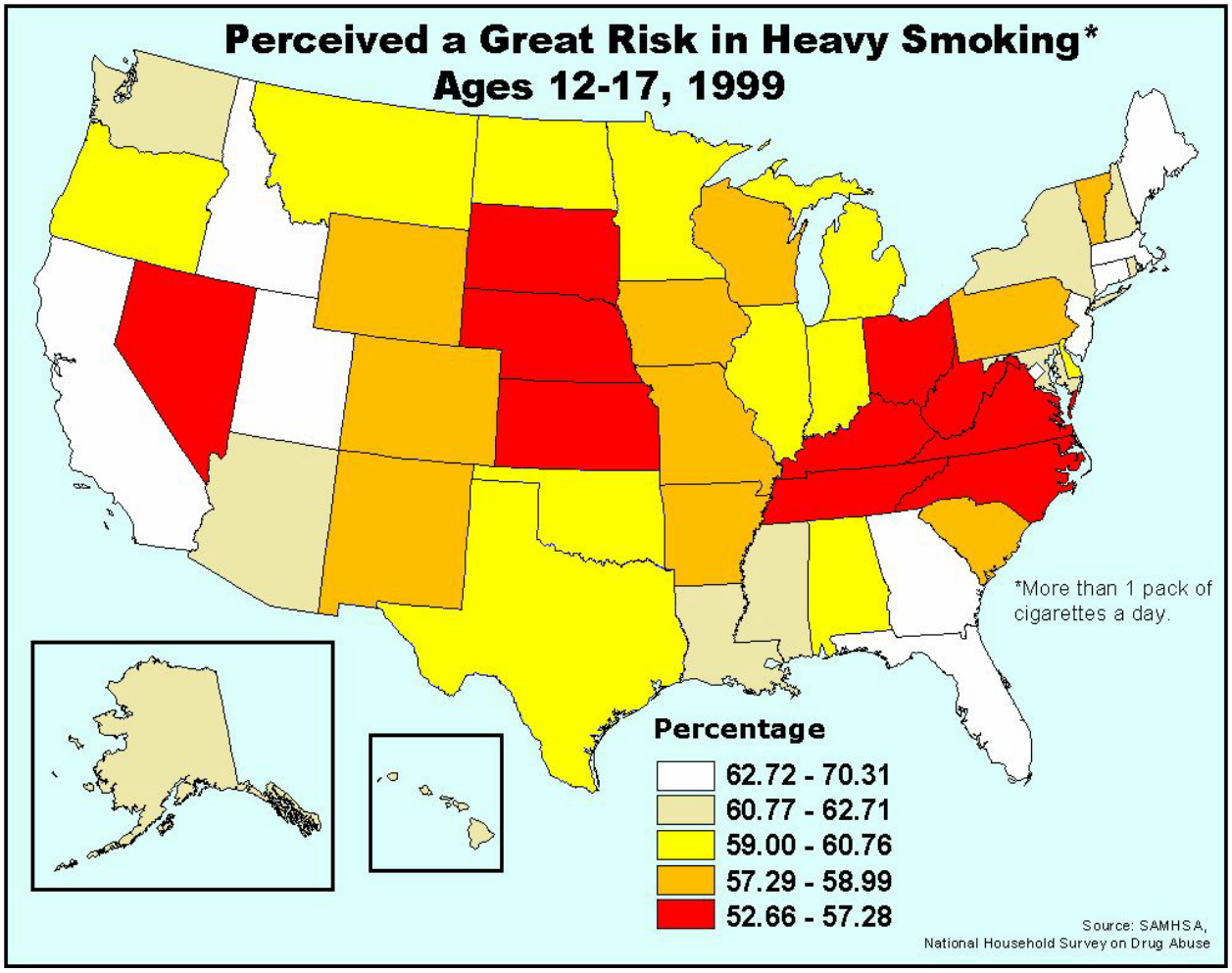


Figure A.5 Marijuana Use Among Persons Aged 12 to 17: 1999

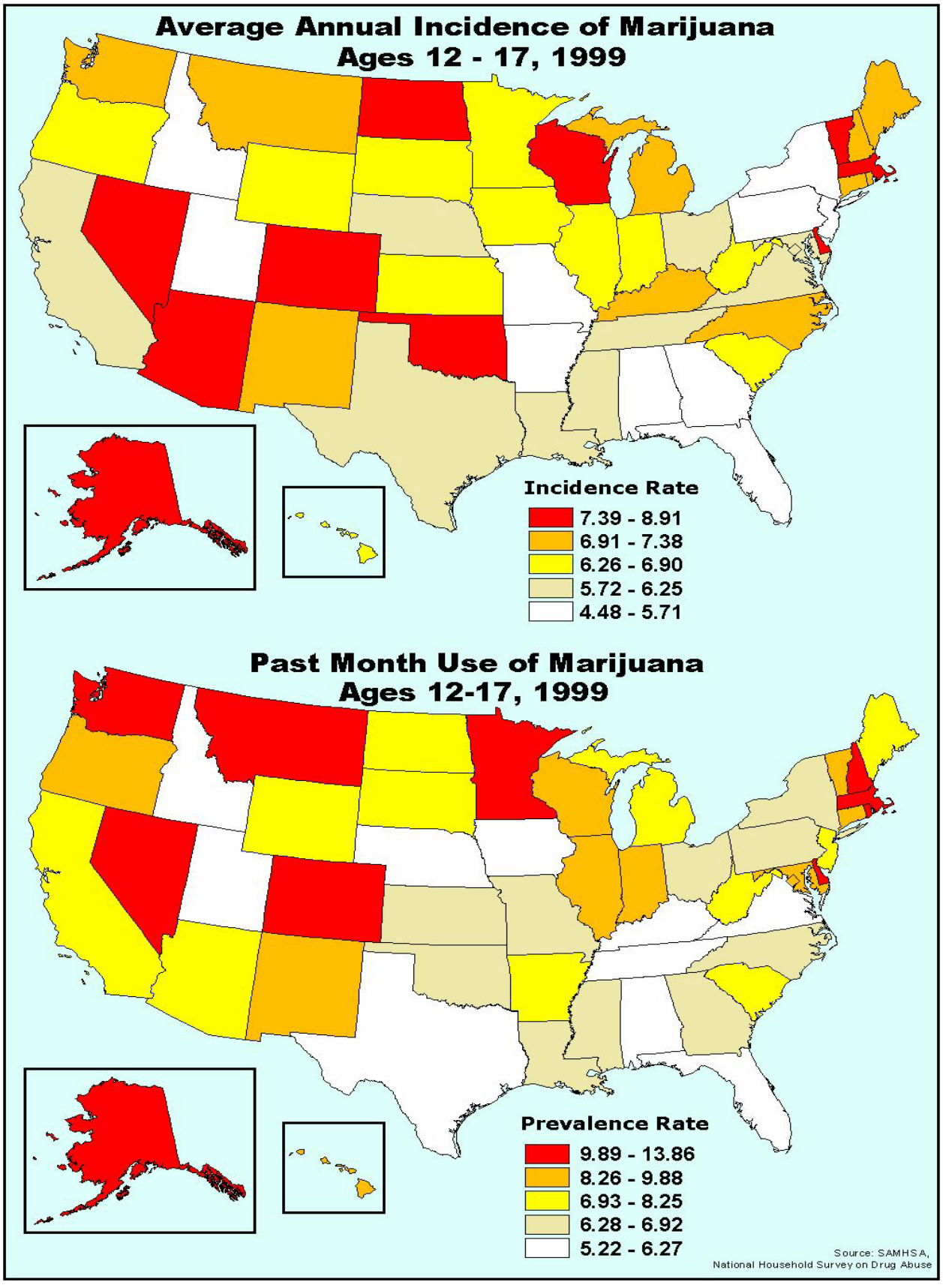
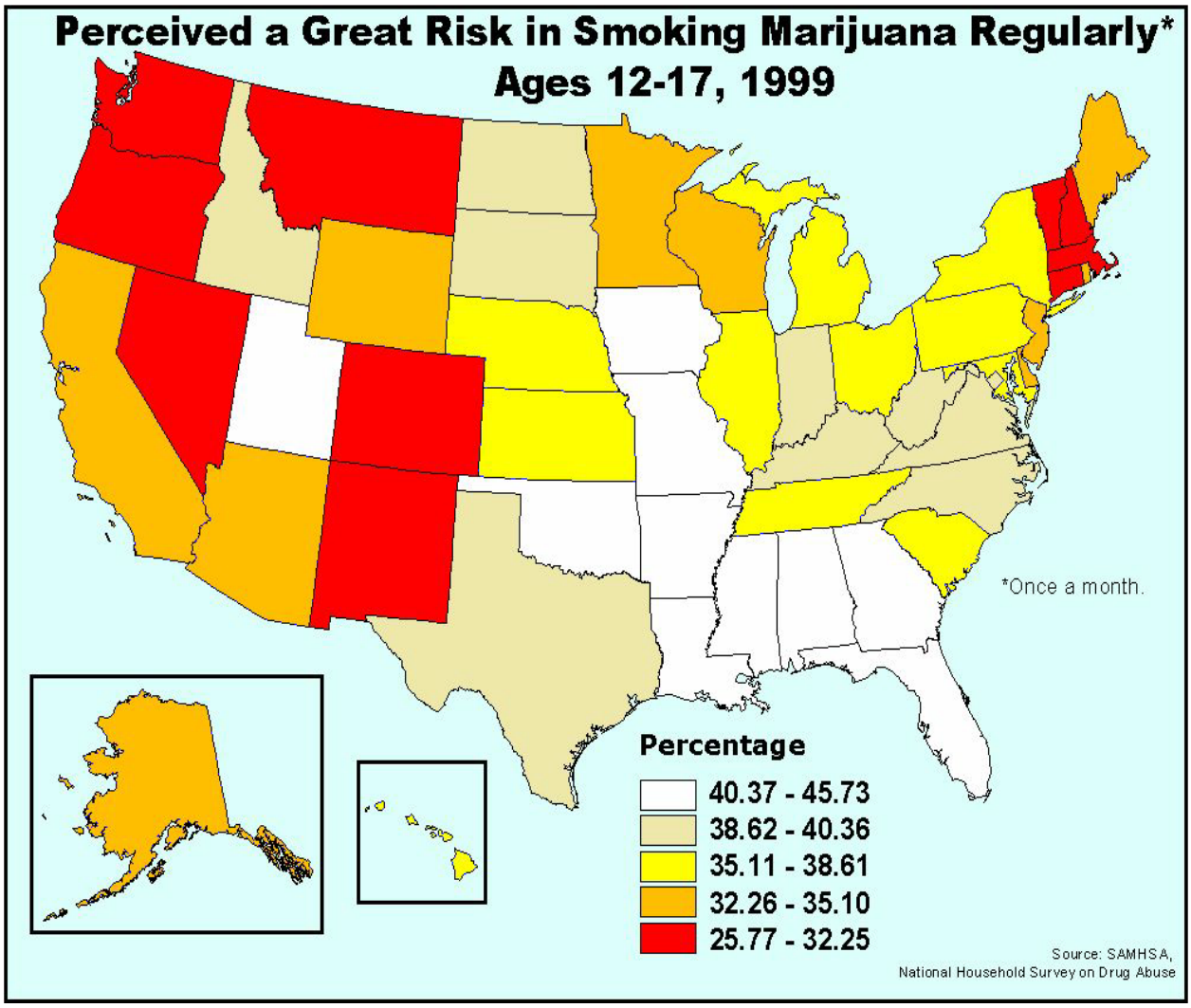


Figure A.6 Perceived a Great Risk in Smoking Marijuana Once a Month Among Persons Aged 12 to 17: 1999



Appendix B: Model-Based Estimates

Appendix B: Model-Based Estimates

This appendix includes tables of model-based estimates for the 50 states and the District of Columbia. They have been estimated using the hierarchical Bayes process as described in Appendix G.

The model-based estimates in the marijuana incidence table (Table B.7B) were generated by special calculations. Specifically, the prediction intervals for this incidence measure were based on posterior variances generated by the Markov Chain Monte Carlo (MCMC) process for both of the component prevalence rates. Because the survey-weighted hierarchical Bayes algorithm estimates the small area prevalences for each binary drug use attribute separately, it provides no direct means to estimate the posterior correlation between the two prevalences. Moreover, because this correction is required to approximate the variance of the incidence rate, the simple Pearson correlation across States was used.

Table B.1A Estimated Numbers (in Thousands) of Past Month Users of Alcohol, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	102,514		3,843		16,148		82,523	
Alabama	1,255	(1,100 - 1,416)	52	(41 - 65)	246	(223 - 268)	957	(810 - 1,113)
Alaska	258	(239 - 277)	11	(9 - 13)	42	(38 - 45)	206	(187 - 223)
Arizona	1,829	(1,652 - 2,008)	73	(59 - 88)	273	(245 - 300)	1,484	(1,312 - 1,655)
Arkansas	725	(644 - 810)	38	(31 - 47)	134	(120 - 148)	553	(476 - 634)
California	12,102	(11,418 - 12,788)	450	(406 - 497)	1,806	(1,708 - 1,903)	9,846	(9,172 - 10,518)
Colorado	1,988	(1,822 - 2,150)	74	(60 - 90)	288	(264 - 311)	1,625	(1,465 - 1,777)
Connecticut	1,420	(1,280 - 1,560)	48	(37 - 60)	196	(176 - 215)	1,176	(1,042 - 1,307)
Delaware	309	(281 - 337)	11	(9 - 13)	44	(40 - 48)	254	(227 - 280)
District of Columbia	188	(169 - 207)	5	(3 - 6)	29	(26 - 32)	155	(136 - 173)
Florida	5,779	(5,425 - 6,134)	155	(133 - 180)	724	(681 - 766)	4,900	(4,553 - 5,247)
Georgia	2,685	(2,419 - 2,958)	102	(85 - 122)	433	(390 - 475)	2,150	(1,895 - 2,409)
Hawaii	431	(388 - 474)	16	(12 - 19)	61	(54 - 68)	355	(313 - 397)
Idaho	459	(415 - 503)	18	(15 - 23)	75	(67 - 83)	365	(323 - 408)
Illinois	4,849	(4,580 - 5,119)	179	(158 - 202)	772	(734 - 810)	3,897	(3,634 - 4,159)
Indiana	2,180	(1,974 - 2,389)	79	(64 - 97)	364	(331 - 396)	1,737	(1,539 - 1,937)
Iowa	1,276	(1,169 - 1,382)	51	(42 - 61)	221	(207 - 235)	1,003	(900 - 1,105)
Kansas	1,062	(971 - 1,154)	39	(30 - 48)	175	(160 - 189)	849	(761 - 936)
Kentucky	1,098	(962 - 1,240)	45	(35 - 57)	223	(202 - 244)	829	(701 - 966)
Louisiana	1,483	(1,327 - 1,641)	88	(72 - 106)	296	(272 - 320)	1,098	(951 - 1,249)
Maine	498	(456 - 541)	18	(15 - 22)	77	(71 - 83)	403	(363 - 443)
Maryland	2,086	(1,890 - 2,281)	55	(43 - 69)	265	(238 - 292)	1,765	(1,577 - 1,952)
Massachusetts	2,967	(2,710 - 3,221)	111	(91 - 133)	411	(378 - 443)	2,445	(2,196 - 2,684)
Michigan	3,701	(3,503 - 3,901)	133	(116 - 152)	606	(573 - 638)	2,962	(2,770 - 3,155)
Minnesota	2,171	(2,007 - 2,334)	87	(72 - 103)	368	(343 - 390)	1,716	(1,558 - 1,870)
Mississippi	701	(614 - 792)	43	(34 - 53)	147	(132 - 163)	510	(428 - 598)
Missouri	2,097	(1,900 - 2,296)	75	(60 - 91)	354	(323 - 383)	1,669	(1,481 - 1,857)
Montana	420	(388 - 452)	20	(17 - 24)	61	(55 - 66)	340	(309 - 370)

See notes at end of table.

(continued)

Table B.1A Estimated Numbers (in Thousands) of Past Month Users of Alcohol, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	727	(671 - 785)	27	(22 - 33)	133	(124 - 141)	567	(513 - 621)
Nevada	807	(734 - 880)	26	(21 - 32)	96	(86 - 107)	685	(613 - 754)
New Hampshire	558	(516 - 599)	20	(16 - 24)	80	(73 - 86)	458	(418 - 496)
New Jersey	3,422	(3,107 - 3,737)	108	(89 - 129)	467	(423 - 510)	2,847	(2,541 - 3,149)
New Mexico	727	(669 - 785)	34	(28 - 42)	122	(110 - 134)	571	(516 - 625)
New York	7,140	(6,683 - 7,598)	261	(226 - 300)	1,126	(1,065 - 1,184)	5,753	(5,310 - 6,195)
North Carolina	2,298	(2,052 - 2,552)	84	(68 - 102)	383	(345 - 422)	1,831	(1,593 - 2,078)
North Dakota	289	(267 - 310)	16	(13 - 18)	57	(53 - 60)	217	(196 - 237)
Ohio	4,216	(3,982 - 4,451)	151	(133 - 171)	690	(656 - 724)	3,374	(3,145 - 3,605)
Oklahoma	1,006	(888 - 1,128)	48	(39 - 59)	190	(172 - 209)	767	(656 - 884)
Oregon	1,433	(1,298 - 1,570)	46	(37 - 56)	212	(194 - 229)	1,176	(1,043 - 1,306)
Pennsylvania	4,876	(4,597 - 5,155)	155	(135 - 177)	700	(665 - 733)	4,021	(3,747 - 4,295)
Rhode Island	414	(377 - 451)	15	(12 - 18)	60	(55 - 65)	339	(304 - 373)
South Carolina	1,077	(953 - 1,207)	48	(38 - 59)	183	(163 - 203)	847	(729 - 971)
South Dakota	316	(291 - 341)	16	(13 - 19)	59	(55 - 63)	242	(218 - 266)
Tennessee	1,561	(1,374 - 1,756)	63	(50 - 79)	266	(235 - 297)	1,232	(1,053 - 1,421)
Texas	6,796	(6,414 - 7,183)	324	(290 - 360)	1,258	(1,193 - 1,322)	5,215	(4,846 - 5,587)
Utah	478	(416 - 544)	26	(20 - 32)	103	(92 - 116)	349	(291 - 411)
Vermont	274	(252 - 296)	10	(9 - 13)	41	(38 - 44)	223	(202 - 243)
Virginia	2,510	(2,268 - 2,754)	71	(56 - 88)	385	(347 - 422)	2,054	(1,820 - 2,290)
Washington	2,364	(2,135 - 2,593)	78	(63 - 95)	324	(293 - 355)	1,961	(1,739 - 2,180)
West Virginia	505	(445 - 568)	22	(17 - 28)	95	(85 - 105)	388	(331 - 449)
Wisconsin	2,497	(2,304 - 2,688)	105	(88 - 122)	387	(359 - 413)	2,006	(1,816 - 2,188)
Wyoming	211	(193 - 230)	11	(9 - 13)	39	(36 - 42)	161	(143 - 179)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.1B Percentages Reporting Past Month Use of Alcohol, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	46.4		16.6		56.7		48.7	
Alabama	34.7	(30.4 - 39.1)	14.1	(11.1 - 17.6)	51.9	(47.1 - 56.5)	34.5	(29.2 - 40.1)
Alaska	53.4	(49.5 - 57.4)	17.2	(14.0 - 20.7)	60.2	(55.0 - 65.2)	58.5	(53.3 - 63.6)
Arizona	48.6	(43.9 - 53.3)	17.1	(13.9 - 20.6)	54.9	(49.4 - 60.3)	52.2	(46.1 - 58.2)
Arkansas	34.0	(30.2 - 38.0)	17.0	(13.7 - 20.7)	48.2	(43.3 - 53.2)	33.9	(29.2 - 38.9)
California	47.4	(44.7 - 50.1)	16.1	(14.5 - 17.7)	52.5	(49.7 - 55.4)	51.0	(47.6 - 54.5)
Colorado	59.5	(54.5 - 64.3)	20.8	(16.9 - 25.3)	66.1	(60.5 - 71.3)	63.7	(57.4 - 69.7)
Connecticut	52.8	(47.5 - 57.9)	19.0	(14.7 - 23.8)	64.7	(58.2 - 70.9)	55.0	(48.8 - 61.2)
Delaware	49.7	(45.2 - 54.2)	17.2	(13.7 - 21.1)	57.9	(52.5 - 63.1)	52.7	(47.1 - 58.2)
District of Columbia	44.3	(39.8 - 48.7)	11.2	(8.2 - 14.8)	52.4	(47.2 - 57.6)	47.2	(41.6 - 52.8)
Florida	46.3	(43.5 - 49.2)	13.4	(11.4 - 15.5)	54.3	(51.1 - 57.5)	49.1	(45.6 - 52.6)
Georgia	43.0	(38.8 - 47.4)	15.3	(12.7 - 18.3)	51.3	(46.3 - 56.3)	45.5	(40.1 - 50.9)
Hawaii	44.4	(40.0 - 48.9)	16.3	(12.9 - 20.2)	52.1	(46.0 - 58.1)	46.8	(41.3 - 52.4)
Idaho	43.5	(39.4 - 47.7)	14.2	(11.2 - 17.6)	46.8	(42.0 - 51.6)	47.7	(42.2 - 53.3)
Illinois	49.9	(47.1 - 52.6)	18.0	(15.9 - 20.2)	60.0	(57.0 - 63.0)	52.4	(48.8 - 55.9)
Indiana	44.4	(40.2 - 48.6)	15.5	(12.5 - 18.9)	55.4	(50.4 - 60.3)	46.4	(41.1 - 51.7)
Iowa	53.6	(49.1 - 58.0)	20.2	(16.6 - 24.1)	70.4	(65.8 - 74.7)	55.3	(49.6 - 60.9)
Kansas	49.7	(45.4 - 54.0)	16.0	(12.4 - 20.0)	61.1	(56.0 - 66.1)	52.8	(47.3 - 58.2)
Kentucky	33.6	(29.5 - 38.0)	13.7	(10.7 - 17.1)	51.4	(46.6 - 56.3)	33.2	(28.0 - 38.6)
Louisiana	41.8	(37.5 - 46.3)	20.9	(17.2 - 25.0)	57.8	(53.0 - 62.4)	42.1	(36.4 - 47.9)
Maine	47.8	(43.7 - 51.9)	17.6	(14.1 - 21.6)	63.6	(58.4 - 68.5)	49.3	(44.4 - 54.2)
Maryland	49.2	(44.6 - 53.8)	13.3	(10.5 - 16.6)	53.2	(47.7 - 58.6)	53.1	(47.4 - 58.7)
Massachusetts	58.3	(53.2 - 63.2)	22.5	(18.4 - 27.0)	69.2	(63.5 - 74.5)	61.0	(54.8 - 67.0)
Michigan	46.9	(44.4 - 49.4)	16.0	(13.9 - 18.2)	59.1	(55.9 - 62.3)	49.1	(45.9 - 52.3)
Minnesota	55.5	(51.3 - 59.6)	20.1	(16.7 - 23.8)	70.5	(65.8 - 74.8)	58.0	(52.6 - 63.2)
Mississippi	31.1	(27.3 - 35.2)	16.5	(13.2 - 20.3)	45.7	(41.0 - 50.5)	30.6	(25.7 - 35.9)
Missouri	46.6	(42.3 - 51.1)	15.7	(12.6 - 19.1)	60.6	(55.3 - 65.7)	48.6	(43.1 - 54.0)
Montana	55.1	(50.9 - 59.3)	23.6	(19.7 - 27.9)	61.8	(56.5 - 66.9)	58.6	(53.2 - 63.8)

See notes at end of table.

(continued)

Table B.1B Percentages Reporting Past Month Use of Alcohol, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	53.4	(49.2 - 57.5)	17.4	(13.9 - 21.5)	71.7	(67.0 - 76.1)	55.4	(50.1 - 60.6)
Nevada	54.2	(49.3 - 59.1)	18.4	(14.8 - 22.5)	55.2	(49.0 - 61.3)	58.5	(52.4 - 64.4)
New Hampshire	56.1	(51.9 - 60.2)	19.5	(15.9 - 23.6)	68.6	(62.9 - 73.9)	59.1	(54.0 - 64.1)
New Jersey	51.3	(46.6 - 56.0)	17.3	(14.3 - 20.8)	60.2	(54.5 - 65.8)	54.0	(48.2 - 59.7)
New Mexico	49.8	(45.8 - 53.7)	19.9	(16.2 - 24.0)	58.8	(53.0 - 64.5)	52.8	(47.8 - 57.8)
New York	48.4	(45.3 - 51.5)	17.9	(15.5 - 20.6)	62.3	(59.0 - 65.6)	50.0	(46.2 - 53.9)
North Carolina	36.7	(32.8 - 40.8)	13.2	(10.7 - 16.0)	50.2	(45.1 - 55.2)	37.7	(32.8 - 42.8)
North Dakota	54.3	(50.2 - 58.3)	24.7	(20.6 - 29.1)	75.4	(71.0 - 79.4)	55.0	(49.7 - 60.2)
Ohio	45.5	(43.0 - 48.1)	15.8	(13.9 - 17.9)	57.6	(54.7 - 60.4)	47.5	(44.2 - 50.7)
Oklahoma	36.9	(32.6 - 41.4)	15.7	(12.5 - 19.3)	52.7	(47.6 - 57.7)	37.4	(31.9 - 43.0)
Oregon	51.5	(46.6 - 56.4)	16.6	(13.4 - 20.3)	61.1	(56.0 - 66.1)	54.4	(48.3 - 60.4)
Pennsylvania	48.3	(45.6 - 51.1)	15.7	(13.7 - 17.9)	59.6	(56.7 - 62.5)	50.7	(47.2 - 54.1)
Rhode Island	50.6	(46.1 - 55.1)	18.0	(14.3 - 22.2)	65.1	(59.6 - 70.3)	52.6	(47.2 - 58.0)
South Carolina	34.8	(30.8 - 39.0)	14.8	(11.8 - 18.2)	47.7	(42.5 - 52.9)	35.5	(30.5 - 40.6)
South Dakota	51.7	(47.5 - 55.8)	21.2	(17.6 - 25.1)	68.6	(63.7 - 73.2)	53.4	(48.1 - 58.7)
Tennessee	34.0	(29.9 - 38.3)	13.8	(10.9 - 17.2)	45.2	(39.9 - 50.5)	34.8	(29.7 - 40.1)
Texas	43.0	(40.6 - 45.4)	17.4	(15.6 - 19.3)	54.4	(51.6 - 57.2)	44.8	(41.7 - 48.0)
Utah	28.6	(24.9 - 32.5)	10.3	(8.0 - 13.1)	32.8	(29.1 - 36.7)	31.4	(26.2 - 36.9)
Vermont	54.2	(49.8 - 58.5)	19.2	(15.6 - 23.1)	67.1	(61.5 - 72.3)	57.0	(51.6 - 62.2)
Virginia	45.0	(40.6 - 49.3)	12.8	(10.1 - 15.9)	56.4	(50.9 - 61.9)	47.3	(41.9 - 52.7)
Washington	50.2	(45.3 - 55.0)	16.1	(13.1 - 19.6)	54.9	(49.6 - 60.1)	54.0	(47.8 - 60.0)
West Virginia	32.5	(28.7 - 36.6)	15.5	(12.2 - 19.2)	47.8	(42.7 - 53.0)	32.1	(27.3 - 37.1)
Wisconsin	57.6	(53.1 - 61.9)	21.9	(18.5 - 25.6)	67.0	(62.2 - 71.6)	61.1	(55.3 - 66.6)
Wyoming	50.5	(46.1 - 55.0)	22.1	(18.5 - 26.1)	65.5	(60.3 - 70.4)	52.2	(46.3 - 58.0)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.2A Estimated Numbers (in Thousands) of Past Month "Binge" Alcohol Users, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	44,600		2,348		10,753		31,498	
Alabama	610	(509 - 721)	31	(23 - 41)	148	(127 - 170)	431	(340 - 534)
Alaska	107	(92 - 123)	7	(6 - 9)	28	(25 - 32)	71	(58 - 86)
Arizona	734	(610 - 871)	47	(36 - 60)	172	(148 - 198)	515	(403 - 643)
Arkansas	388	(332 - 448)	25	(19 - 31)	94	(82 - 107)	269	(218 - 326)
California	4,790	(4,315 - 5,293)	266	(233 - 302)	1,152	(1,060 - 1,246)	3,372	(2,919 - 3,862)
Colorado	764	(644 - 895)	44	(33 - 56)	185	(161 - 209)	536	(427 - 659)
Connecticut	551	(459 - 654)	30	(22 - 39)	130	(111 - 149)	392	(308 - 488)
Delaware	141	(120 - 164)	8	(6 - 10)	31	(28 - 36)	102	(83 - 124)
District of Columbia	74	(62 - 87)	3	(2 - 4)	17	(14 - 19)	54	(43 - 67)
Florida	2,241	(2,005 - 2,491)	92	(75 - 111)	445	(406 - 486)	1,704	(1,479 - 1,947)
Georgia	1,120	(939 - 1,319)	59	(46 - 74)	266	(226 - 309)	795	(631 - 981)
Hawaii	202	(168 - 238)	10	(7 - 13)	38	(32 - 45)	153	(122 - 188)
Idaho	202	(172 - 236)	12	(9 - 16)	49	(42 - 56)	141	(113 - 173)
Illinois	2,139	(1,947 - 2,341)	114	(98 - 132)	526	(489 - 564)	1,499	(1,316 - 1,696)
Indiana	965	(823 - 1,117)	54	(42 - 68)	247	(217 - 278)	664	(536 - 809)
Iowa	587	(511 - 667)	33	(26 - 42)	155	(139 - 171)	399	(331 - 473)
Kansas	463	(399 - 532)	24	(18 - 31)	122	(108 - 137)	316	(259 - 380)
Kentucky	599	(509 - 697)	31	(24 - 40)	165	(145 - 186)	403	(323 - 494)
Louisiana	766	(658 - 881)	48	(37 - 62)	201	(178 - 224)	516	(419 - 625)
Maine	205	(176 - 236)	10	(8 - 13)	50	(44 - 57)	144	(118 - 174)
Maryland	657	(542 - 786)	30	(21 - 40)	156	(131 - 182)	472	(368 - 592)
Massachusetts	1,221	(1,028 - 1,427)	68	(52 - 86)	295	(259 - 331)	858	(683 - 1,054)
Michigan	1,692	(1,543 - 1,849)	79	(67 - 93)	404	(373 - 436)	1,209	(1,068 - 1,360)
Minnesota	929	(809 - 1,057)	58	(46 - 72)	259	(233 - 284)	613	(503 - 734)
Mississippi	389	(329 - 456)	24	(18 - 32)	105	(91 - 119)	260	(206 - 322)
Missouri	1,024	(874 - 1,184)	49	(37 - 62)	251	(220 - 284)	724	(589 - 874)
Montana	174	(151 - 200)	13	(10 - 16)	43	(38 - 48)	118	(97 - 142)

See notes at end of table.

(continued)

Table B.2A Estimated Numbers (in Thousands) of Past Month "Binge" Alcohol Users, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	345	(302 - 393)	18	(14 - 23)	91	(81 - 101)	237	(197 - 280)
Nevada	334	(281 - 393)	19	(15 - 24)	60	(50 - 71)	255	(205 - 311)
New Hampshire	202	(173 - 234)	11	(9 - 14)	52	(44 - 59)	139	(113 - 169)
New Jersey	1,301	(1,092 - 1,532)	60	(45 - 77)	292	(252 - 335)	949	(756 - 1,168)
New Mexico	322	(279 - 367)	20	(16 - 26)	81	(70 - 93)	220	(182 - 262)
New York	3,084	(2,768 - 3,419)	144	(119 - 173)	727	(671 - 784)	2,213	(1,913 - 2,537)
North Carolina	1,022	(859 - 1,201)	53	(41 - 66)	236	(203 - 272)	733	(584 - 903)
North Dakota	150	(131 - 170)	10	(8 - 13)	41	(37 - 45)	99	(81 - 117)
Ohio	2,054	(1,876 - 2,239)	96	(80 - 113)	483	(448 - 517)	1,475	(1,306 - 1,655)
Oklahoma	507	(429 - 593)	32	(25 - 41)	135	(117 - 153)	340	(270 - 420)
Oregon	534	(445 - 632)	27	(20 - 35)	126	(109 - 144)	381	(300 - 473)
Pennsylvania	2,158	(1,962 - 2,365)	99	(83 - 117)	486	(450 - 521)	1,574	(1,385 - 1,776)
Rhode Island	173	(147 - 200)	9	(7 - 12)	42	(36 - 47)	122	(99 - 148)
South Carolina	534	(448 - 629)	27	(21 - 35)	125	(107 - 144)	382	(304 - 471)
South Dakota	153	(134 - 173)	11	(9 - 13)	42	(37 - 46)	100	(83 - 119)
Tennessee	791	(667 - 927)	37	(28 - 48)	196	(167 - 226)	559	(447 - 686)
Texas	3,420	(3,130 - 3,723)	202	(176 - 231)	843	(784 - 904)	2,374	(2,101 - 2,666)
Utah	259	(216 - 307)	18	(13 - 24)	77	(66 - 89)	165	(127 - 209)
Vermont	107	(92 - 124)	6	(4 - 7)	29	(25 - 32)	73	(59 - 88)
Virginia	1,034	(875 - 1,208)	41	(30 - 54)	265	(228 - 303)	728	(586 - 889)
Washington	887	(742 - 1,048)	50	(38 - 63)	217	(189 - 247)	620	(486 - 774)
West Virginia	274	(234 - 316)	15	(12 - 20)	72	(62 - 81)	187	(151 - 226)
Wisconsin	1,113	(967 - 1,268)	67	(54 - 82)	271	(242 - 301)	775	(641 - 922)
Wyoming	105	(91 - 121)	8	(6 - 10)	31	(27 - 34)	67	(54 - 82)

NOTE: "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.2B Percentages Reporting Past Month "Binge" Alcohol Use, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	20.2		10.1		37.8		18.6	
Alabama	16.8	(14.1 - 19.9)	8.5	(6.3 - 11.2)	31.1	(26.8 - 35.8)	15.5	(12.3 - 19.3)
Alaska	22.1	(19.1 - 25.3)	11.7	(9.2 - 14.7)	40.3	(35.4 - 45.5)	20.3	(16.6 - 24.5)
Arizona	19.5	(16.2 - 23.1)	11.1	(8.5 - 14.2)	34.6	(29.7 - 39.8)	18.1	(14.2 - 22.6)
Arkansas	18.2	(15.6 - 21.0)	11.0	(8.4 - 14.0)	34.0	(29.6 - 38.5)	16.5	(13.4 - 20.0)
California	18.8	(16.9 - 20.7)	9.5	(8.3 - 10.8)	33.5	(30.8 - 36.2)	17.5	(15.1 - 20.0)
Colorado	22.9	(19.3 - 26.8)	12.3	(9.3 - 15.8)	42.3	(36.9 - 47.9)	21.0	(16.7 - 25.8)
Connecticut	20.5	(17.1 - 24.3)	11.7	(8.8 - 15.2)	42.8	(36.6 - 49.2)	18.3	(14.4 - 22.8)
Delaware	22.7	(19.3 - 26.4)	12.0	(9.1 - 15.4)	41.3	(36.2 - 46.6)	21.2	(17.1 - 25.8)
District of Columbia	17.4	(14.6 - 20.5)	6.8	(4.7 - 9.5)	30.4	(25.9 - 35.2)	16.5	(13.2 - 20.3)
Florida	18.0	(16.1 - 20.0)	7.9	(6.5 - 9.6)	33.4	(30.5 - 36.4)	17.1	(14.8 - 19.5)
Georgia	17.9	(15.0 - 21.1)	8.9	(6.9 - 11.1)	31.6	(26.8 - 36.6)	16.8	(13.3 - 20.7)
Hawaii	20.8	(17.3 - 24.6)	10.3	(7.7 - 13.4)	33.0	(27.6 - 38.8)	20.2	(16.1 - 24.9)
Idaho	19.2	(16.3 - 22.4)	9.5	(7.2 - 12.3)	30.5	(26.1 - 35.1)	18.4	(14.8 - 22.6)
Illinois	22.0	(20.0 - 24.1)	11.4	(9.8 - 13.2)	40.9	(38.0 - 43.8)	20.1	(17.7 - 22.8)
Indiana	19.6	(16.8 - 22.7)	10.5	(8.2 - 13.3)	37.6	(33.0 - 42.3)	17.8	(14.3 - 21.6)
Iowa	24.6	(21.5 - 28.0)	13.1	(10.2 - 16.5)	49.4	(44.3 - 54.5)	22.0	(18.2 - 26.1)
Kansas	21.7	(18.7 - 24.9)	9.9	(7.6 - 12.8)	42.9	(37.8 - 48.1)	19.7	(16.1 - 23.6)
Kentucky	18.3	(15.6 - 21.3)	9.5	(7.2 - 12.1)	38.0	(33.4 - 42.7)	16.1	(12.9 - 19.7)
Louisiana	21.6	(18.6 - 24.9)	11.5	(8.8 - 14.6)	39.1	(34.7 - 43.7)	19.8	(16.1 - 24.0)
Maine	19.6	(16.9 - 22.6)	10.0	(7.4 - 13.0)	41.3	(36.0 - 46.8)	17.7	(14.5 - 21.3)
Maryland	15.5	(12.8 - 18.6)	7.1	(5.2 - 9.5)	31.3	(26.3 - 36.6)	14.2	(11.1 - 17.8)
Massachusetts	23.9	(20.2 - 28.0)	13.7	(10.6 - 17.4)	49.7	(43.6 - 55.7)	21.4	(17.0 - 26.3)
Michigan	21.4	(19.5 - 23.4)	9.5	(8.0 - 11.2)	39.4	(36.4 - 42.5)	20.0	(17.7 - 22.5)
Minnesota	23.7	(20.7 - 27.0)	13.4	(10.6 - 16.6)	49.5	(44.6 - 54.5)	20.7	(17.0 - 24.8)
Mississippi	17.3	(14.6 - 20.3)	9.3	(7.0 - 12.1)	32.5	(28.2 - 36.9)	15.6	(12.4 - 19.3)
Missouri	22.8	(19.4 - 26.3)	10.2	(7.8 - 13.0)	43.1	(37.7 - 48.6)	21.1	(17.1 - 25.4)
Montana	22.8	(19.8 - 26.2)	15.1	(12.1 - 18.5)	44.0	(39.2 - 48.9)	20.4	(16.7 - 24.6)

See notes at end of table.

(continued)

Table B.2B Percentages Reporting Past Month "Binge" Alcohol Use, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	25.4	(22.2 - 28.8)	11.4	(8.7 - 14.6)	49.0	(43.7 - 54.3)	23.1	(19.3 - 27.3)
Nevada	22.4	(18.8 - 26.4)	13.3	(10.2 - 16.8)	34.5	(28.8 - 40.5)	21.8	(17.5 - 26.5)
New Hampshire	20.3	(17.4 - 23.5)	11.0	(8.4 - 14.0)	44.3	(38.2 - 50.5)	18.0	(14.6 - 21.8)
New Jersey	19.5	(16.4 - 23.0)	9.7	(7.3 - 12.5)	37.6	(32.4 - 43.1)	18.0	(14.3 - 22.1)
New Mexico	22.0	(19.1 - 25.2)	11.8	(9.0 - 15.1)	39.2	(33.6 - 45.0)	20.4	(16.8 - 24.3)
New York	20.9	(18.7 - 23.2)	9.9	(8.2 - 11.9)	40.2	(37.1 - 43.4)	19.2	(16.6 - 22.1)
North Carolina	16.3	(13.7 - 19.2)	8.3	(6.5 - 10.4)	30.9	(26.5 - 35.6)	15.1	(12.0 - 18.6)
North Dakota	28.1	(24.6 - 31.9)	16.5	(13.1 - 20.5)	54.3	(49.3 - 59.3)	25.0	(20.7 - 29.8)
Ohio	22.2	(20.3 - 24.2)	10.0	(8.4 - 11.8)	40.3	(37.4 - 43.2)	20.8	(18.4 - 23.3)
Oklahoma	18.6	(15.8 - 21.8)	10.5	(8.1 - 13.4)	37.3	(32.4 - 42.3)	16.6	(13.2 - 20.4)
Oregon	19.2	(16.0 - 22.7)	9.7	(7.3 - 12.5)	36.4	(31.3 - 41.7)	17.6	(13.9 - 21.9)
Pennsylvania	21.4	(19.4 - 23.4)	10.1	(8.4 - 11.9)	41.4	(38.4 - 44.4)	19.8	(17.5 - 22.4)
Rhode Island	21.1	(17.9 - 24.5)	10.9	(8.2 - 14.2)	44.9	(39.1 - 50.7)	19.0	(15.3 - 23.1)
South Carolina	17.3	(14.5 - 20.3)	8.5	(6.5 - 10.8)	32.5	(27.8 - 37.6)	16.0	(12.7 - 19.7)
South Dakota	25.0	(21.9 - 28.2)	14.7	(11.7 - 18.2)	48.8	(43.6 - 54.1)	22.1	(18.4 - 26.2)
Tennessee	17.2	(14.5 - 20.2)	8.0	(6.0 - 10.5)	33.3	(28.4 - 38.4)	15.8	(12.6 - 19.3)
Texas	21.6	(19.8 - 23.6)	10.9	(9.5 - 12.4)	36.5	(33.9 - 39.1)	20.4	(18.1 - 22.9)
Utah	15.5	(12.9 - 18.3)	7.1	(5.1 - 9.6)	24.4	(20.9 - 28.3)	14.8	(11.4 - 18.7)
Vermont	21.2	(18.2 - 24.5)	10.3	(7.9 - 13.2)	47.1	(41.5 - 52.8)	18.6	(15.1 - 22.6)
Virginia	18.5	(15.7 - 21.6)	7.4	(5.5 - 9.7)	38.8	(33.4 - 44.5)	16.8	(13.5 - 20.5)
Washington	18.8	(15.7 - 22.2)	10.2	(7.9 - 12.9)	36.8	(32.0 - 41.8)	17.1	(13.4 - 21.3)
West Virginia	17.6	(15.1 - 20.3)	10.7	(8.2 - 13.7)	36.1	(31.4 - 41.1)	15.4	(12.5 - 18.7)
Wisconsin	25.6	(22.3 - 29.2)	14.0	(11.2 - 17.1)	47.0	(41.9 - 52.2)	23.6	(19.5 - 28.1)
Wyoming	25.2	(21.8 - 28.9)	15.8	(12.6 - 19.4)	50.7	(45.5 - 55.9)	21.7	(17.4 - 26.5)

NOTE: "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.3A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	100,059		9,740		10,529		79,790	
Alabama	1,694	(1,519 - 1,872)	165	(146 - 184)	184	(162 - 206)	1,345	(1,175 - 1,517)
Alaska	215	(195 - 236)	23	(21 - 26)	26	(23 - 30)	166	(146 - 185)
Arizona	1,825	(1,644 - 2,007)	181	(161 - 202)	196	(170 - 223)	1,448	(1,271 - 1,624)
Arkansas	1,035	(947 - 1,124)	96	(85 - 107)	103	(92 - 116)	835	(749 - 921)
California	12,053	(11,351 - 12,757)	1,173	(1,113 - 1,234)	1,508	(1,407 - 1,610)	9,372	(8,682 - 10,064)
Colorado	1,484	(1,325 - 1,646)	135	(118 - 153)	133	(112 - 155)	1,215	(1,059 - 1,373)
Connecticut	1,174	(1,037 - 1,313)	101	(88 - 115)	104	(86 - 123)	969	(837 - 1,103)
Delaware	279	(251 - 308)	27	(24 - 30)	27	(24 - 31)	225	(197 - 253)
District of Columbia	236	(218 - 254)	21	(18 - 23)	28	(26 - 31)	187	(170 - 204)
Florida	6,007	(5,663 - 6,352)	551	(517 - 586)	563	(523 - 604)	4,892	(4,553 - 5,232)
Georgia	2,999	(2,720 - 3,280)	317	(290 - 344)	331	(292 - 371)	2,351	(2,083 - 2,619)
Hawaii	451	(406 - 498)	40	(35 - 44)	46	(40 - 53)	366	(321 - 411)
Idaho	454	(412 - 496)	52	(46 - 58)	58	(51 - 65)	344	(304 - 385)
Illinois	4,300	(4,035 - 4,569)	420	(393 - 448)	465	(428 - 503)	3,415	(3,154 - 3,678)
Indiana	1,966	(1,755 - 2,183)	201	(179 - 223)	229	(200 - 260)	1,536	(1,331 - 1,747)
Iowa	848	(748 - 953)	95	(84 - 107)	79	(67 - 92)	674	(578 - 775)
Kansas	881	(785 - 979)	93	(81 - 104)	96	(83 - 109)	693	(600 - 788)
Kentucky	1,623	(1,468 - 1,780)	147	(132 - 163)	148	(129 - 167)	1,329	(1,177 - 1,479)
Louisiana	1,770	(1,622 - 1,918)	184	(165 - 203)	192	(170 - 214)	1,394	(1,250 - 1,536)
Maine	427	(387 - 470)	38	(33 - 43)	30	(25 - 35)	360	(320 - 400)
Maryland	2,154	(1,956 - 2,352)	198	(177 - 220)	208	(184 - 233)	1,748	(1,555 - 1,940)
Massachusetts	2,128	(1,879 - 2,387)	179	(154 - 204)	166	(138 - 196)	1,784	(1,538 - 2,034)
Michigan	3,340	(3,134 - 3,550)	327	(304 - 350)	354	(322 - 386)	2,660	(2,459 - 2,863)
Minnesota	1,526	(1,365 - 1,692)	151	(132 - 170)	159	(136 - 183)	1,216	(1,060 - 1,377)
Mississippi	1,100	(1,003 - 1,197)	126	(114 - 138)	134	(119 - 149)	840	(746 - 934)
Missouri	1,869	(1,662 - 2,082)	196	(175 - 218)	165	(139 - 193)	1,508	(1,307 - 1,713)
Montana	302	(271 - 333)	29	(26 - 33)	29	(25 - 34)	243	(214 - 274)

See notes at end of table.

(continued)

Table B.3A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	538	(483 - 594)	61	(54 - 69)	50	(43 - 59)	426	(374 - 480)
Nevada	646	(570 - 722)	57	(50 - 64)	70	(60 - 81)	518	(446 - 593)
New Hampshire	394	(355 - 435)	42	(37 - 47)	33	(27 - 39)	319	(282 - 358)
New Jersey	2,847	(2,540 - 3,161)	260	(232 - 288)	302	(260 - 345)	2,286	(1,985 - 2,594)
New Mexico	690	(631 - 750)	70	(62 - 78)	84	(73 - 96)	536	(479 - 592)
New York	6,670	(6,219 - 7,125)	611	(565 - 658)	654	(595 - 716)	5,404	(4,960 - 5,851)
North Carolina	2,918	(2,643 - 3,197)	304	(278 - 330)	288	(254 - 324)	2,326	(2,058 - 2,597)
North Dakota	192	(171 - 215)	23	(20 - 25)	20	(17 - 23)	150	(130 - 171)
Ohio	3,856	(3,619 - 4,095)	403	(376 - 431)	391	(357 - 425)	3,062	(2,830 - 3,297)
Oklahoma	1,358	(1,227 - 1,488)	138	(123 - 153)	142	(125 - 159)	1,078	(951 - 1,204)
Oregon	1,258	(1,123 - 1,395)	102	(90 - 115)	112	(96 - 130)	1,043	(910 - 1,176)
Pennsylvania	3,931	(3,655 - 4,211)	384	(355 - 413)	350	(317 - 383)	3,197	(2,928 - 3,472)
Rhode Island	367	(330 - 405)	35	(31 - 40)	33	(28 - 38)	299	(264 - 335)
South Carolina	1,592	(1,446 - 1,737)	159	(144 - 174)	149	(130 - 168)	1,284	(1,142 - 1,424)
South Dakota	234	(209 - 260)	26	(23 - 30)	23	(20 - 27)	184	(160 - 209)
Tennessee	2,336	(2,130 - 2,542)	208	(186 - 230)	226	(197 - 256)	1,902	(1,703 - 2,099)
Texas	7,856	(7,478 - 8,234)	782	(738 - 826)	980	(918 - 1,044)	6,094	(5,727 - 6,459)
Utah	884	(817 - 951)	127	(116 - 139)	147	(134 - 160)	610	(547 - 672)
Vermont	199	(177 - 221)	18	(16 - 21)	15	(12 - 18)	165	(144 - 187)
Virginia	2,504	(2,244 - 2,768)	257	(232 - 282)	253	(219 - 289)	1,994	(1,743 - 2,249)
Washington	2,176	(1,942 - 2,414)	167	(146 - 189)	198	(171 - 226)	1,811	(1,580 - 2,043)
West Virginia	691	(627 - 756)	52	(45 - 59)	71	(62 - 80)	568	(506 - 631)
Wisconsin	1,628	(1,459 - 1,803)	170	(151 - 189)	161	(138 - 186)	1,297	(1,133 - 1,467)
Wyoming	158	(141 - 175)	18	(15 - 20)	17	(14 - 20)	124	(107 - 140)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.3B Percentages Reporting Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	45.3		42.0		37.0		47.1	
Alabama	46.8	(42.0 - 51.7)	44.6	(39.4 - 49.9)	38.8	(34.3 - 43.4)	48.5	(42.3 - 54.6)
Alaska	44.5	(40.3 - 48.8)	37.8	(33.3 - 42.4)	37.6	(32.5 - 42.9)	47.1	(41.5 - 52.7)
Arizona	48.5	(43.7 - 53.3)	42.6	(37.8 - 47.5)	39.5	(34.3 - 44.9)	50.9	(44.7 - 57.1)
Arkansas	48.5	(44.4 - 52.7)	42.7	(37.9 - 47.6)	37.2	(33.0 - 41.6)	51.2	(45.9 - 56.5)
California	47.2	(44.5 - 50.0)	41.8	(39.7 - 44.0)	43.9	(40.9 - 46.8)	48.6	(45.0 - 52.2)
Colorado	44.4	(39.6 - 49.3)	38.1	(33.3 - 43.0)	30.5	(25.7 - 35.6)	47.6	(41.5 - 53.8)
Connecticut	43.6	(38.5 - 48.7)	39.9	(34.5 - 45.4)	34.2	(28.2 - 40.6)	45.3	(39.2 - 51.6)
Delaware	44.9	(40.3 - 49.5)	42.3	(37.5 - 47.2)	35.6	(30.9 - 40.5)	46.7	(41.0 - 52.5)
District of Columbia	55.6	(51.3 - 59.7)	49.0	(43.3 - 54.8)	51.2	(46.3 - 56.1)	57.1	(51.8 - 62.3)
Florida	48.1	(45.4 - 50.9)	47.5	(44.6 - 50.5)	42.3	(39.2 - 45.3)	49.0	(45.6 - 52.4)
Georgia	48.0	(43.6 - 52.5)	47.4	(43.4 - 51.5)	39.2	(34.6 - 44.0)	49.7	(44.0 - 55.4)
Hawaii	46.6	(41.8 - 51.4)	41.6	(36.8 - 46.6)	39.4	(34.0 - 45.0)	48.3	(42.4 - 54.3)
Idaho	43.0	(39.0 - 47.0)	40.1	(35.4 - 44.9)	36.2	(31.8 - 40.6)	44.9	(39.7 - 50.3)
Illinois	44.2	(41.5 - 47.0)	42.1	(39.3 - 44.9)	36.1	(33.3 - 39.1)	45.9	(42.4 - 49.4)
Indiana	40.0	(35.7 - 44.4)	39.3	(35.1 - 43.6)	34.9	(30.4 - 39.6)	41.0	(35.5 - 46.7)
Iowa	35.6	(31.4 - 40.0)	37.7	(33.1 - 42.5)	25.1	(21.2 - 29.3)	37.2	(31.9 - 42.7)
Kansas	41.2	(36.8 - 45.8)	38.3	(33.7 - 43.1)	33.5	(29.0 - 38.3)	43.0	(37.3 - 48.9)
Kentucky	49.7	(45.0 - 54.5)	44.5	(39.8 - 49.3)	34.0	(29.6 - 38.5)	53.2	(47.1 - 59.2)
Louisiana	50.0	(45.8 - 54.1)	43.7	(39.2 - 48.2)	37.4	(33.2 - 41.6)	53.4	(47.9 - 58.9)
Maine	41.0	(37.1 - 45.1)	36.9	(32.1 - 41.8)	24.4	(20.3 - 28.9)	44.0	(39.1 - 49.0)
Maryland	50.8	(46.1 - 55.5)	47.6	(42.4 - 52.8)	41.8	(36.9 - 46.8)	52.6	(46.8 - 58.3)
Massachusetts	41.8	(36.9 - 46.9)	36.2	(31.3 - 41.4)	27.9	(23.1 - 33.0)	44.5	(38.4 - 50.8)
Michigan	42.3	(39.7 - 45.0)	39.3	(36.5 - 42.1)	34.5	(31.4 - 37.7)	44.1	(40.7 - 47.4)
Minnesota	39.0	(34.9 - 43.2)	34.8	(30.5 - 39.2)	30.5	(26.1 - 35.2)	41.1	(35.8 - 46.5)
Mississippi	48.9	(44.6 - 53.2)	48.4	(43.7 - 53.2)	41.4	(36.8 - 46.1)	50.4	(44.8 - 56.0)
Missouri	41.6	(37.0 - 46.3)	41.2	(36.7 - 45.8)	28.3	(23.9 - 33.1)	43.9	(38.0 - 49.8)
Montana	39.6	(35.6 - 43.7)	34.6	(30.4 - 39.1)	29.6	(25.2 - 34.3)	42.0	(36.9 - 47.2)

See notes at end of table.

(continued)

Table B.3B Percentages Reporting Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	39.4	(35.4 - 43.5)	39.4	(34.7 - 44.3)	27.2	(23.0 - 31.7)	41.6	(36.5 - 46.9)
Nevada	43.4	(38.3 - 48.5)	39.8	(35.1 - 44.6)	40.2	(34.5 - 46.1)	44.3	(38.1 - 50.6)
New Hampshire	39.7	(35.7 - 43.7)	40.2	(35.3 - 45.1)	28.5	(23.5 - 33.8)	41.3	(36.4 - 46.3)
New Jersey	42.7	(38.1 - 47.4)	41.8	(37.4 - 46.4)	38.9	(33.4 - 44.5)	43.3	(37.6 - 49.2)
New Mexico	47.3	(43.2 - 51.4)	40.6	(35.9 - 45.4)	40.8	(35.3 - 46.4)	49.6	(44.4 - 54.8)
New York	45.2	(42.1 - 48.3)	41.9	(38.8 - 45.2)	36.2	(32.9 - 39.6)	47.0	(43.1 - 50.9)
North Carolina	46.6	(42.2 - 51.1)	47.7	(43.6 - 51.7)	37.8	(33.3 - 42.4)	47.9	(42.3 - 53.4)
North Dakota	36.2	(32.2 - 40.3)	36.0	(31.7 - 40.4)	26.3	(22.3 - 30.6)	38.1	(32.9 - 43.5)
Ohio	41.6	(39.1 - 44.2)	42.2	(39.3 - 45.1)	32.6	(29.8 - 35.5)	43.1	(39.8 - 46.4)
Oklahoma	49.9	(45.1 - 54.6)	44.7	(39.8 - 49.8)	39.3	(34.7 - 44.1)	52.5	(46.3 - 58.6)
Oregon	45.2	(40.3 - 50.1)	37.0	(32.7 - 41.6)	32.4	(27.6 - 37.5)	48.3	(42.1 - 54.4)
Pennsylvania	39.0	(36.2 - 41.7)	39.0	(36.1 - 42.0)	29.8	(27.1 - 32.6)	40.3	(36.9 - 43.8)
Rhode Island	44.9	(40.4 - 49.5)	42.8	(37.6 - 48.2)	35.5	(30.0 - 41.3)	46.5	(41.0 - 52.1)
South Carolina	51.4	(46.7 - 56.1)	49.3	(44.7 - 53.9)	38.8	(33.9 - 43.8)	53.8	(47.8 - 59.6)
South Dakota	38.3	(34.2 - 42.5)	35.8	(31.3 - 40.5)	27.2	(23.0 - 31.7)	40.8	(35.4 - 46.3)
Tennessee	50.9	(46.4 - 55.4)	45.3	(40.6 - 50.0)	38.4	(33.5 - 43.5)	53.7	(48.0 - 59.2)
Texas	49.7	(47.3 - 52.1)	42.0	(39.6 - 44.4)	42.4	(39.7 - 45.2)	52.4	(49.2 - 55.5)
Utah	52.8	(48.8 - 56.8)	51.5	(46.8 - 56.1)	46.7	(42.4 - 51.0)	54.8	(49.2 - 60.3)
Vermont	39.2	(35.0 - 43.6)	33.9	(29.2 - 38.8)	24.5	(20.2 - 29.2)	42.3	(36.9 - 47.7)
Virginia	44.9	(40.2 - 49.6)	46.3	(41.8 - 50.8)	37.1	(32.2 - 42.3)	45.9	(40.1 - 51.7)
Washington	46.2	(41.2 - 51.2)	34.4	(30.1 - 38.9)	33.5	(28.9 - 38.3)	49.8	(43.5 - 56.2)
West Virginia	44.6	(40.4 - 48.7)	36.0	(31.0 - 41.1)	35.7	(31.1 - 40.4)	47.0	(41.8 - 52.2)
Wisconsin	37.5	(33.6 - 41.5)	35.5	(31.7 - 39.5)	27.9	(23.9 - 32.2)	39.5	(34.5 - 44.6)
Wyoming	37.7	(33.7 - 41.9)	35.3	(31.2 - 39.5)	27.8	(23.6 - 32.4)	40.1	(34.8 - 45.5)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.4A Estimated Numbers (in Thousands) of Past Month Users of Any Tobacco Product, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	67,028		4,058		12,642		50,328	
Alabama	1,265	(1,096 - 1,441)	72	(58 - 89)	200	(176 - 224)	993	(830 - 1,164)
Alaska	158	(140 - 177)	13	(10 - 15)	33	(30 - 37)	112	(95 - 129)
Arizona	1,069	(924 - 1,222)	73	(59 - 89)	223	(194 - 252)	773	(638 - 920)
Arkansas	763	(681 - 847)	55	(45 - 65)	128	(115 - 141)	580	(502 - 661)
California	5,883	(5,344 - 6,449)	303	(267 - 341)	1,163	(1,071 - 1,257)	4,417	(3,894 - 4,975)
Colorado	987	(855 - 1,127)	70	(56 - 86)	195	(170 - 220)	722	(598 - 856)
Connecticut	717	(610 - 832)	49	(39 - 62)	135	(114 - 155)	533	(432 - 644)
Delaware	203	(178 - 230)	14	(12 - 17)	37	(33 - 41)	153	(128 - 178)
District of Columbia	122	(106 - 139)	6	(4 - 7)	19	(16 - 22)	97	(82 - 114)
Florida	3,690	(3,385 - 4,005)	171	(147 - 197)	538	(495 - 581)	2,981	(2,682 - 3,293)
Georgia	1,927	(1,683 - 2,184)	118	(100 - 138)	358	(317 - 400)	1,451	(1,216 - 1,703)
Hawaii	241	(206 - 278)	12	(10 - 16)	44	(38 - 51)	184	(151 - 220)
Idaho	331	(292 - 372)	20	(16 - 25)	64	(57 - 72)	246	(209 - 285)
Illinois	3,002	(2,767 - 3,244)	190	(170 - 212)	586	(547 - 625)	2,225	(2,002 - 2,459)
Indiana	1,661	(1,471 - 1,858)	106	(89 - 124)	308	(277 - 340)	1,248	(1,066 - 1,440)
Iowa	770	(685 - 859)	52	(43 - 63)	164	(149 - 179)	554	(474 - 639)
Kansas	661	(584 - 743)	46	(37 - 56)	143	(128 - 158)	473	(399 - 552)
Kentucky	1,246	(1,114 - 1,382)	91	(77 - 107)	240	(219 - 261)	915	(788 - 1,047)
Louisiana	1,098	(969 - 1,234)	80	(67 - 95)	231	(208 - 255)	787	(665 - 917)
Maine	305	(269 - 343)	20	(16 - 24)	57	(50 - 64)	228	(194 - 265)
Maryland	1,149	(982 - 1,328)	68	(54 - 83)	190	(163 - 218)	891	(732 - 1,065)
Massachusetts	1,498	(1,289 - 1,718)	96	(76 - 117)	280	(242 - 318)	1,123	(928 - 1,335)
Michigan	2,655	(2,465 - 2,850)	150	(132 - 169)	508	(476 - 541)	1,997	(1,812 - 2,187)
Minnesota	1,314	(1,173 - 1,461)	96	(80 - 114)	287	(259 - 314)	932	(799 - 1,072)
Mississippi	776	(687 - 870)	61	(51 - 72)	143	(128 - 158)	573	(487 - 663)
Missouri	1,662	(1,477 - 1,854)	103	(86 - 122)	309	(276 - 341)	1,250	(1,074 - 1,435)
Montana	262	(233 - 292)	21	(17 - 24)	48	(43 - 53)	194	(166 - 223)

See notes at end of table.

(continued)

Table B.4A Estimated Numbers (in Thousands) of Past Month Users of Any Tobacco Product, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	424	(378 - 474)	22	(17 - 27)	91	(81 - 101)	311	(267 - 359)
Nevada	489	(422 - 559)	28	(23 - 34)	76	(66 - 87)	385	(321 - 453)
New Hampshire	289	(254 - 325)	17	(14 - 21)	54	(47 - 61)	217	(185 - 252)
New Jersey	1,798	(1,537 - 2,077)	86	(69 - 106)	349	(306 - 393)	1,363	(1,113 - 1,637)
New Mexico	452	(400 - 506)	31	(25 - 38)	104	(91 - 117)	316	(268 - 368)
New York	4,150	(3,752 - 4,566)	209	(178 - 244)	723	(661 - 787)	3,218	(2,830 - 3,628)
North Carolina	2,206	(1,962 - 2,459)	134	(113 - 158)	389	(349 - 429)	1,682	(1,448 - 1,929)
North Dakota	180	(160 - 201)	16	(14 - 19)	38	(35 - 42)	126	(107 - 145)
Ohio	3,299	(3,068 - 3,535)	195	(173 - 219)	630	(594 - 666)	2,473	(2,254 - 2,700)
Oklahoma	1,023	(907 - 1,144)	64	(53 - 77)	193	(174 - 212)	766	(655 - 881)
Oregon	887	(775 - 1,007)	50	(41 - 60)	170	(151 - 189)	667	(559 - 783)
Pennsylvania	3,268	(3,027 - 3,516)	200	(178 - 224)	559	(522 - 596)	2,509	(2,275 - 2,753)
Rhode Island	259	(226 - 294)	14	(11 - 17)	38	(33 - 44)	207	(175 - 240)
South Carolina	963	(840 - 1,093)	69	(58 - 82)	159	(140 - 179)	734	(617 - 860)
South Dakota	185	(164 - 206)	17	(14 - 20)	43	(38 - 47)	125	(106 - 145)
Tennessee	1,616	(1,430 - 1,809)	92	(75 - 110)	292	(262 - 322)	1,232	(1,055 - 1,419)
Texas	4,551	(4,230 - 4,882)	300	(267 - 334)	999	(935 - 1,064)	3,252	(2,941 - 3,577)
Utah	372	(318 - 431)	27	(21 - 34)	96	(84 - 109)	249	(200 - 304)
Vermont	140	(123 - 159)	10	(8 - 13)	29	(26 - 33)	100	(84 - 118)
Virginia	1,515	(1,326 - 1,715)	93	(76 - 111)	313	(275 - 352)	1,109	(932 - 1,301)
Washington	1,433	(1,239 - 1,639)	83	(68 - 100)	247	(217 - 278)	1,103	(917 - 1,304)
West Virginia	606	(544 - 670)	37	(30 - 43)	103	(92 - 113)	467	(407 - 529)
Wisconsin	1,363	(1,211 - 1,522)	97	(82 - 114)	285	(257 - 314)	981	(836 - 1,136)
Wyoming	131	(116 - 146)	10	(8 - 12)	30	(27 - 33)	91	(77 - 106)

NOTE: Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.
NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.4B Percentages Reporting Past Month Use of Any Tobacco Product, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	30.3		17.5		44.4		29.7	
Alabama	34.9	(30.3 - 39.8)	19.6	(15.6 - 24.0)	42.1	(37.1 - 47.2)	35.8	(29.9 - 41.9)
Alaska	32.7	(29.0 - 36.5)	20.4	(16.6 - 24.6)	47.9	(42.5 - 53.3)	31.8	(27.1 - 36.8)
Arizona	28.4	(24.5 - 32.5)	17.1	(13.8 - 20.8)	44.9	(39.1 - 50.7)	27.2	(22.4 - 32.4)
Arkansas	35.7	(31.9 - 39.7)	24.4	(20.2 - 29.0)	46.0	(41.3 - 50.8)	35.6	(30.8 - 40.5)
California	23.0	(20.9 - 25.3)	10.8	(9.5 - 12.2)	33.8	(31.1 - 36.6)	22.9	(20.2 - 25.8)
Colorado	29.5	(25.6 - 33.7)	19.8	(15.9 - 24.1)	44.7	(39.1 - 50.5)	28.3	(23.5 - 33.6)
Connecticut	26.6	(22.7 - 30.9)	19.5	(15.2 - 24.3)	44.4	(37.7 - 51.2)	24.9	(20.2 - 30.1)
Delaware	32.7	(28.7 - 37.0)	22.2	(18.4 - 26.4)	48.3	(43.0 - 53.6)	31.7	(26.7 - 37.0)
District of Columbia	28.7	(24.9 - 32.7)	13.1	(10.0 - 16.8)	34.6	(29.7 - 39.7)	29.7	(24.9 - 34.9)
Florida	29.6	(27.1 - 32.1)	14.7	(12.7 - 17.0)	40.3	(37.2 - 43.6)	29.9	(26.9 - 33.0)
Georgia	30.9	(27.0 - 35.0)	17.7	(14.9 - 20.7)	42.4	(37.6 - 47.4)	30.7	(25.7 - 36.0)
Hawaii	24.8	(21.2 - 28.7)	13.2	(10.3 - 16.5)	38.0	(32.3 - 44.0)	24.3	(19.9 - 29.0)
Idaho	31.3	(27.6 - 35.2)	15.5	(12.4 - 19.0)	40.1	(35.4 - 45.0)	32.2	(27.3 - 37.3)
Illinois	30.9	(28.4 - 33.4)	19.1	(17.0 - 21.3)	45.5	(42.5 - 48.6)	29.9	(26.9 - 33.0)
Indiana	33.8	(30.0 - 37.8)	20.6	(17.3 - 24.3)	46.9	(42.1 - 51.7)	33.3	(28.5 - 38.5)
Iowa	32.3	(28.8 - 36.1)	20.8	(17.2 - 24.8)	52.2	(47.4 - 57.0)	30.5	(26.1 - 35.2)
Kansas	30.9	(27.3 - 34.8)	19.0	(15.3 - 23.3)	49.9	(44.7 - 55.2)	29.4	(24.8 - 34.3)
Kentucky	38.2	(34.1 - 42.3)	27.7	(23.4 - 32.3)	55.2	(50.4 - 60.0)	36.6	(31.5 - 41.9)
Louisiana	31.0	(27.3 - 34.8)	19.0	(15.8 - 22.5)	45.1	(40.6 - 49.7)	30.2	(25.5 - 35.2)
Maine	29.3	(25.8 - 32.9)	18.9	(15.2 - 23.1)	47.3	(41.6 - 53.1)	27.9	(23.7 - 32.5)
Maryland	27.1	(23.2 - 31.3)	16.3	(13.0 - 20.0)	38.2	(32.8 - 43.8)	26.8	(22.0 - 32.0)
Massachusetts	29.4	(25.3 - 33.7)	19.4	(15.5 - 23.7)	47.0	(40.6 - 53.4)	28.0	(23.2 - 33.3)
Michigan	33.6	(31.2 - 36.1)	18.0	(15.9 - 20.3)	49.6	(46.4 - 52.8)	33.1	(30.0 - 36.2)
Minnesota	33.6	(30.0 - 37.3)	22.2	(18.4 - 26.4)	54.9	(49.6 - 60.2)	31.5	(27.0 - 36.2)
Mississippi	34.5	(30.5 - 38.6)	23.3	(19.4 - 27.5)	44.3	(39.7 - 49.0)	34.4	(29.2 - 39.8)
Missouri	37.0	(32.8 - 41.2)	21.6	(18.0 - 25.6)	52.9	(47.3 - 58.5)	36.4	(31.3 - 41.8)
Montana	34.4	(30.5 - 38.3)	24.1	(20.3 - 28.4)	48.8	(43.7 - 54.0)	33.4	(28.6 - 38.5)

See notes at end of table.

(continued)

Table B.4B Percentages Reporting Past Month Use of Any Tobacco Product, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	31.1	(27.7 - 34.8)	14.2	(11.1 - 17.7)	49.0	(43.7 - 54.3)	30.4	(26.1 - 35.0)
Nevada	32.8	(28.3 - 37.6)	19.4	(15.7 - 23.5)	43.6	(37.6 - 49.7)	32.8	(27.4 - 38.7)
New Hampshire	29.0	(25.6 - 32.7)	16.7	(13.4 - 20.4)	46.5	(40.4 - 52.7)	28.1	(23.9 - 32.6)
New Jersey	26.9	(23.0 - 31.1)	13.9	(11.1 - 17.0)	45.0	(39.4 - 50.6)	25.8	(21.1 - 31.0)
New Mexico	30.9	(27.4 - 34.7)	18.2	(14.6 - 22.1)	50.2	(44.1 - 56.4)	29.3	(24.8 - 34.1)
New York	28.1	(25.4 - 30.9)	14.4	(12.2 - 16.7)	40.0	(36.6 - 43.5)	28.0	(24.6 - 31.5)
North Carolina	35.2	(31.3 - 39.3)	21.1	(17.8 - 24.8)	51.0	(45.7 - 56.1)	34.6	(29.8 - 39.7)
North Dakota	33.9	(30.2 - 37.7)	25.7	(21.6 - 30.0)	51.1	(46.1 - 56.0)	31.9	(27.3 - 36.9)
Ohio	35.6	(33.1 - 38.2)	20.5	(18.1 - 22.9)	52.6	(49.6 - 55.5)	34.8	(31.7 - 38.0)
Oklahoma	37.6	(33.3 - 42.0)	20.9	(17.2 - 25.0)	53.5	(48.2 - 58.8)	37.3	(31.9 - 42.9)
Oregon	31.9	(27.8 - 36.2)	18.0	(14.6 - 21.8)	49.0	(43.5 - 54.6)	30.9	(25.9 - 36.2)
Pennsylvania	32.4	(30.0 - 34.8)	20.3	(18.1 - 22.8)	47.6	(44.5 - 50.8)	31.6	(28.7 - 34.7)
Rhode Island	31.7	(27.6 - 36.0)	17.1	(13.5 - 21.2)	41.3	(35.3 - 47.5)	32.1	(27.3 - 37.3)
South Carolina	31.1	(27.1 - 35.3)	21.5	(17.9 - 25.5)	41.5	(36.5 - 46.7)	30.8	(25.8 - 36.0)
South Dakota	30.2	(26.8 - 33.7)	23.2	(19.5 - 27.3)	49.8	(44.5 - 55.0)	27.6	(23.5 - 32.1)
Tennessee	35.2	(31.1 - 39.4)	20.0	(16.4 - 24.0)	49.7	(44.5 - 54.8)	34.8	(29.8 - 40.0)
Texas	28.8	(26.8 - 30.9)	16.1	(14.4 - 17.9)	43.3	(40.5 - 46.1)	28.0	(25.3 - 30.8)
Utah	22.2	(19.0 - 25.7)	10.9	(8.4 - 13.7)	30.5	(26.6 - 34.7)	22.4	(18.0 - 27.3)
Vermont	27.7	(24.2 - 31.3)	19.0	(15.4 - 23.0)	47.8	(42.0 - 53.6)	25.7	(21.5 - 30.3)
Virginia	27.1	(23.8 - 30.7)	16.7	(13.7 - 20.1)	45.9	(40.3 - 51.6)	25.5	(21.5 - 29.9)
Washington	30.4	(26.3 - 34.8)	17.1	(14.0 - 20.5)	41.8	(36.7 - 47.0)	30.4	(25.2 - 35.9)
West Virginia	39.1	(35.1 - 43.2)	25.5	(21.3 - 30.2)	51.8	(46.6 - 57.0)	38.6	(33.7 - 43.8)
Wisconsin	31.4	(27.9 - 35.1)	20.3	(17.1 - 23.8)	49.5	(44.5 - 54.5)	29.9	(25.4 - 34.6)
Wyoming	31.2	(27.6 - 34.9)	20.2	(16.8 - 24.0)	49.1	(44.0 - 54.3)	29.5	(25.0 - 34.3)

NOTE: Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.
NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.5A Estimated Numbers (in Thousands) of Past Month Users of Cigarettes, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	57,288		3,495		11,252		42,541	
Alabama	1,014	(871 - 1,165)	64	(50 - 79)	169	(148 - 190)	781	(646 - 927)
Alaska	128	(111 - 146)	10	(8 - 13)	31	(27 - 34)	87	(72 - 104)
Arizona	919	(784 - 1,066)	62	(49 - 77)	194	(168 - 221)	663	(535 - 806)
Arkansas	615	(540 - 693)	45	(37 - 55)	115	(102 - 127)	455	(384 - 530)
California	5,247	(4,718 - 5,807)	253	(220 - 288)	1,068	(975 - 1,165)	3,926	(3,417 - 4,474)
Colorado	823	(697 - 960)	56	(43 - 71)	171	(148 - 195)	596	(477 - 729)
Connecticut	629	(530 - 739)	42	(32 - 53)	117	(99 - 137)	470	(376 - 575)
Delaware	179	(156 - 204)	12	(10 - 15)	34	(30 - 38)	133	(111 - 156)
District of Columbia	106	(90 - 122)	5	(3 - 6)	17	(14 - 19)	84	(70 - 100)
Florida	3,163	(2,871 - 3,469)	135	(113 - 158)	481	(442 - 522)	2,548	(2,263 - 2,848)
Georgia	1,643	(1,417 - 1,885)	97	(80 - 115)	317	(278 - 358)	1,229	(1,015 - 1,463)
Hawaii	217	(183 - 253)	10	(7 - 13)	46	(40 - 53)	161	(129 - 197)
Idaho	260	(227 - 295)	17	(13 - 21)	58	(50 - 65)	185	(154 - 219)
Illinois	2,632	(2,406 - 2,868)	176	(155 - 199)	530	(493 - 567)	1,926	(1,708 - 2,157)
Indiana	1,429	(1,248 - 1,619)	93	(77 - 112)	269	(239 - 300)	1,066	(897 - 1,248)
Iowa	647	(564 - 734)	45	(37 - 55)	144	(129 - 160)	457	(380 - 541)
Kansas	532	(462 - 606)	38	(29 - 48)	121	(106 - 136)	373	(308 - 444)
Kentucky	1,070	(942 - 1,204)	78	(65 - 92)	208	(188 - 228)	785	(663 - 914)
Louisiana	973	(850 - 1,102)	71	(58 - 85)	217	(194 - 241)	684	(570 - 809)
Maine	270	(235 - 306)	17	(14 - 21)	53	(47 - 60)	199	(167 - 235)
Maryland	941	(796 - 1,099)	57	(45 - 71)	167	(145 - 191)	717	(579 - 870)
Massachusetts	1,296	(1,107 - 1,498)	85	(67 - 104)	245	(211 - 281)	966	(789 - 1,162)
Michigan	2,296	(2,117 - 2,481)	135	(118 - 153)	460	(426 - 494)	1,701	(1,530 - 1,880)
Minnesota	1,123	(981 - 1,272)	90	(75 - 108)	265	(238 - 292)	768	(636 - 912)
Mississippi	648	(565 - 735)	48	(39 - 59)	121	(107 - 136)	478	(400 - 562)
Missouri	1,371	(1,200 - 1,551)	80	(64 - 97)	270	(239 - 302)	1,021	(859 - 1,195)
Montana	192	(167 - 219)	17	(14 - 20)	40	(36 - 45)	135	(112 - 161)

See notes at end of table.

(continued)

Table B.5A Estimated Numbers (in Thousands) of Past Month Users of Cigarettes, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	336	(292 - 384)	22	(17 - 28)	78	(68 - 88)	236	(195 - 281)
Nevada	431	(368 - 498)	25	(20 - 31)	67	(58 - 78)	338	(278 - 404)
New Hampshire	255	(220 - 291)	16	(12 - 19)	50	(44 - 58)	189	(157 - 223)
New Jersey	1,585	(1,347 - 1,842)	74	(58 - 93)	313	(270 - 357)	1,198	(972 - 1,448)
New Mexico	393	(343 - 446)	26	(21 - 33)	90	(78 - 102)	277	(231 - 327)
New York	3,778	(3,404 - 4,170)	189	(160 - 221)	669	(608 - 732)	2,920	(2,558 - 3,305)
North Carolina	1,873	(1,648 - 2,110)	122	(103 - 143)	346	(309 - 383)	1,405	(1,192 - 1,634)
North Dakota	151	(132 - 170)	14	(12 - 17)	34	(30 - 37)	103	(86 - 122)
Ohio	2,826	(2,616 - 3,043)	172	(151 - 194)	556	(520 - 591)	2,099	(1,895 - 2,312)
Oklahoma	822	(715 - 934)	53	(43 - 65)	168	(149 - 187)	600	(499 - 709)
Oregon	718	(614 - 830)	42	(34 - 52)	148	(129 - 167)	528	(428 - 638)
Pennsylvania	2,689	(2,459 - 2,928)	173	(152 - 195)	490	(454 - 526)	2,026	(1,805 - 2,259)
Rhode Island	223	(193 - 256)	12	(10 - 15)	34	(29 - 39)	177	(148 - 208)
South Carolina	804	(684 - 932)	63	(51 - 77)	137	(119 - 157)	603	(491 - 727)
South Dakota	153	(134 - 174)	14	(11 - 17)	37	(33 - 41)	102	(85 - 122)
Tennessee	1,324	(1,160 - 1,496)	78	(64 - 95)	258	(228 - 289)	987	(833 - 1,153)
Texas	3,861	(3,555 - 4,179)	250	(221 - 282)	872	(811 - 936)	2,738	(2,444 - 3,048)
Utah	324	(274 - 378)	26	(20 - 33)	87	(75 - 99)	211	(167 - 262)
Vermont	119	(103 - 137)	8	(6 - 10)	27	(23 - 31)	84	(69 - 101)
Virginia	1,295	(1,119 - 1,485)	81	(65 - 99)	275	(238 - 312)	940	(773 - 1,123)
Washington	1,205	(1,019 - 1,408)	70	(56 - 85)	222	(192 - 252)	914	(735 - 1,112)
West Virginia	480	(423 - 538)	32	(26 - 38)	88	(78 - 98)	360	(308 - 417)
Wisconsin	1,173	(1,029 - 1,324)	87	(72 - 103)	252	(223 - 281)	834	(699 - 981)
Wyoming	104	(90 - 118)	8	(6 - 9)	25	(22 - 28)	70	(58 - 84)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.5B Percentages Reporting Past Month Use of Cigarettes, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	25.9		15.1		39.5		25.1	
Alabama	28.0	(24.1 - 32.2)	17.2	(13.7 - 21.3)	35.6	(31.3 - 40.2)	28.1	(23.3 - 33.4)
Alaska	26.5	(23.1 - 30.1)	16.6	(13.3 - 20.3)	43.9	(38.9 - 49.1)	24.8	(20.4 - 29.6)
Arizona	24.4	(20.8 - 28.3)	14.5	(11.4 - 18.1)	39.1	(33.9 - 44.5)	23.3	(18.8 - 28.3)
Arkansas	28.8	(25.3 - 32.5)	20.1	(16.3 - 24.4)	41.2	(36.9 - 45.7)	27.9	(23.6 - 32.5)
California	20.6	(18.5 - 22.7)	9.0	(7.8 - 10.3)	31.1	(28.4 - 33.9)	20.4	(17.7 - 23.2)
Colorado	24.6	(20.9 - 28.7)	15.8	(12.2 - 19.9)	39.1	(33.9 - 44.6)	23.4	(18.7 - 28.6)
Connecticut	23.4	(19.7 - 27.4)	16.5	(12.7 - 20.8)	38.7	(32.5 - 45.1)	22.0	(17.6 - 26.9)
Delaware	28.9	(25.1 - 32.8)	19.2	(15.6 - 23.4)	44.9	(39.6 - 50.2)	27.6	(23.1 - 32.5)
District of Columbia	24.8	(21.2 - 28.7)	10.8	(7.9 - 14.4)	29.8	(25.4 - 34.6)	25.8	(21.3 - 30.6)
Florida	25.4	(23.0 - 27.8)	11.6	(9.8 - 13.6)	36.1	(33.1 - 39.1)	25.5	(22.7 - 28.5)
Georgia	26.3	(22.7 - 30.2)	14.5	(12.0 - 17.3)	37.6	(33.0 - 42.4)	26.0	(21.5 - 30.9)
Hawaii	22.4	(18.9 - 26.1)	10.3	(7.7 - 13.4)	39.5	(33.9 - 45.3)	21.3	(17.1 - 26.0)
Idaho	24.6	(21.5 - 28.0)	13.1	(10.3 - 16.4)	35.9	(31.3 - 40.6)	24.2	(20.1 - 28.6)
Illinois	27.1	(24.7 - 29.5)	17.6	(15.5 - 19.9)	41.2	(38.3 - 44.1)	25.9	(23.0 - 29.0)
Indiana	29.1	(25.4 - 33.0)	18.2	(15.0 - 21.8)	41.0	(36.4 - 45.7)	28.5	(24.0 - 33.3)
Iowa	27.2	(23.7 - 30.8)	18.0	(14.6 - 21.9)	45.9	(41.0 - 50.9)	25.2	(21.0 - 29.8)
Kansas	24.9	(21.6 - 28.4)	15.8	(12.1 - 20.0)	42.3	(37.2 - 47.5)	23.2	(19.1 - 27.6)
Kentucky	32.8	(28.8 - 36.9)	23.5	(19.6 - 27.8)	47.9	(43.2 - 52.5)	31.4	(26.5 - 36.6)
Louisiana	27.4	(24.0 - 31.1)	16.8	(13.8 - 20.2)	42.4	(37.9 - 47.0)	26.2	(21.8 - 31.0)
Maine	25.9	(22.6 - 29.4)	16.7	(13.3 - 20.6)	43.9	(38.7 - 49.2)	24.4	(20.4 - 28.7)
Maryland	22.2	(18.8 - 25.9)	13.7	(10.7 - 17.2)	33.6	(29.1 - 38.4)	21.5	(17.4 - 26.2)
Massachusetts	25.4	(21.7 - 29.4)	17.1	(13.7 - 21.1)	41.2	(35.5 - 47.2)	24.1	(19.7 - 29.0)
Michigan	29.1	(26.8 - 31.4)	16.2	(14.2 - 18.4)	44.9	(41.6 - 48.2)	28.2	(25.3 - 31.2)
Minnesota	28.7	(25.1 - 32.5)	20.8	(17.2 - 24.8)	50.8	(45.7 - 55.9)	25.9	(21.5 - 30.8)
Mississippi	28.8	(25.1 - 32.7)	18.6	(15.1 - 22.5)	37.6	(33.2 - 42.3)	28.7	(24.0 - 33.7)
Missouri	30.5	(26.7 - 34.5)	16.8	(13.5 - 20.4)	46.3	(40.9 - 51.7)	29.7	(25.0 - 34.8)
Montana	25.2	(22.0 - 28.7)	19.7	(16.2 - 23.6)	41.2	(36.2 - 46.3)	23.3	(19.3 - 27.7)

See notes at end of table.

(continued)

Table B.5B Percentages Reporting Past Month Use of Cigarettes, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	24.7	(21.4 - 28.2)	14.0	(10.8 - 17.8)	42.1	(36.9 - 47.5)	23.1	(19.1 - 27.4)
Nevada	28.9	(24.7 - 33.4)	17.3	(13.7 - 21.4)	38.6	(33.0 - 44.4)	28.9	(23.8 - 34.5)
New Hampshire	25.6	(22.2 - 29.3)	15.1	(11.9 - 18.8)	43.3	(37.4 - 49.4)	24.4	(20.2 - 28.9)
New Jersey	23.7	(20.2 - 27.6)	12.0	(9.4 - 15.0)	40.3	(34.8 - 45.9)	22.7	(18.4 - 27.4)
New Mexico	26.9	(23.5 - 30.6)	15.3	(12.1 - 18.9)	43.5	(37.7 - 49.4)	25.6	(21.4 - 30.2)
New York	25.6	(23.1 - 28.2)	12.9	(10.9 - 15.1)	37.1	(33.7 - 40.5)	25.4	(22.2 - 28.7)
North Carolina	29.9	(26.3 - 33.7)	19.1	(16.1 - 22.4)	45.3	(40.4 - 50.2)	28.9	(24.5 - 33.6)
North Dakota	28.3	(24.8 - 32.0)	22.3	(18.4 - 26.7)	44.8	(39.9 - 49.7)	26.2	(21.8 - 30.9)
Ohio	30.5	(28.3 - 32.9)	18.0	(15.8 - 20.4)	46.3	(43.4 - 49.3)	29.5	(26.7 - 32.5)
Oklahoma	30.2	(26.3 - 34.3)	17.3	(13.9 - 21.2)	46.5	(41.3 - 51.8)	29.2	(24.3 - 34.5)
Oregon	25.8	(22.1 - 29.8)	15.3	(12.2 - 18.8)	42.7	(37.4 - 48.1)	24.4	(19.8 - 29.5)
Pennsylvania	26.6	(24.4 - 29.0)	17.6	(15.5 - 19.9)	41.7	(38.7 - 44.8)	25.5	(22.8 - 28.5)
Rhode Island	27.3	(23.5 - 31.3)	15.0	(11.7 - 18.8)	36.5	(30.9 - 42.4)	27.5	(23.0 - 32.4)
South Carolina	26.0	(22.1 - 30.1)	19.6	(15.9 - 23.8)	35.7	(30.9 - 40.8)	25.3	(20.6 - 30.4)
South Dakota	25.0	(21.9 - 28.4)	18.9	(15.5 - 22.6)	43.2	(38.3 - 48.3)	22.6	(18.7 - 26.9)
Tennessee	28.8	(25.3 - 32.6)	17.1	(13.9 - 20.7)	43.9	(38.8 - 49.1)	27.9	(23.5 - 32.5)
Texas	24.4	(22.5 - 26.4)	13.4	(11.9 - 15.2)	37.8	(35.1 - 40.5)	23.5	(21.0 - 26.2)
Utah	19.3	(16.3 - 22.6)	10.4	(7.9 - 13.2)	27.5	(23.9 - 31.4)	19.0	(15.0 - 23.6)
Vermont	23.6	(20.3 - 27.1)	14.8	(11.7 - 18.5)	44.1	(38.3 - 50.1)	21.6	(17.7 - 25.9)
Virginia	23.2	(20.0 - 26.6)	14.6	(11.8 - 17.9)	40.3	(35.0 - 45.7)	21.6	(17.8 - 25.8)
Washington	25.6	(21.6 - 29.9)	14.4	(11.6 - 17.6)	37.5	(32.6 - 42.6)	25.1	(20.2 - 30.6)
West Virginia	30.9	(27.3 - 34.7)	22.0	(18.1 - 26.4)	44.2	(39.1 - 49.3)	29.8	(25.4 - 34.4)
Wisconsin	27.0	(23.7 - 30.5)	18.2	(15.1 - 21.6)	43.6	(38.7 - 48.7)	25.4	(21.3 - 29.9)
Wyoming	24.7	(21.5 - 28.2)	15.9	(13.0 - 19.1)	41.7	(36.7 - 46.8)	22.9	(18.8 - 27.4)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.6A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	147,154		14,064		17,522		115,568	
Alabama	2,375	(2,217 - 2,527)	221	(201 - 239)	280	(259 - 301)	1,874	(1,718 - 2,020)
Alaska	307	(288 - 326)	38	(35 - 41)	40	(37 - 44)	229	(210 - 247)
Arizona	2,642	(2,479 - 2,795)	262	(243 - 282)	311	(285 - 335)	2,069	(1,908 - 2,215)
Arkansas	1,336	(1,251 - 1,420)	133	(122 - 144)	157	(145 - 169)	1,046	(963 - 1,126)
California	18,148	(17,516 - 18,757)	1,817	(1,760 - 1,873)	2,491	(2,400 - 2,579)	13,840	(13,212 - 14,437)
Colorado	2,275	(2,132 - 2,412)	209	(190 - 227)	274	(252 - 295)	1,792	(1,653 - 1,922)
Connecticut	1,959	(1,847 - 2,063)	160	(146 - 172)	183	(165 - 200)	1,616	(1,505 - 1,717)
Delaware	410	(385 - 435)	38	(35 - 41)	46	(42 - 50)	326	(301 - 350)
District of Columbia	287	(270 - 304)	27	(25 - 29)	39	(36 - 41)	221	(204 - 237)
Florida	8,565	(8,237 - 8,881)	769	(734 - 804)	866	(826 - 906)	6,929	(6,609 - 7,235)
Georgia	4,143	(3,881 - 4,395)	420	(394 - 446)	539	(500 - 575)	3,184	(2,927 - 3,427)
Hawaii	633	(592 - 672)	58	(54 - 63)	75	(68 - 81)	500	(460 - 538)
Idaho	721	(682 - 759)	81	(75 - 87)	100	(92 - 107)	541	(503 - 576)
Illinois	6,419	(6,167 - 6,665)	607	(578 - 635)	791	(755 - 828)	5,021	(4,773 - 5,259)
Indiana	3,056	(2,854 - 3,252)	308	(286 - 329)	379	(348 - 409)	2,369	(2,174 - 2,555)
Iowa	1,404	(1,303 - 1,504)	148	(136 - 160)	174	(159 - 189)	1,083	(983 - 1,179)
Kansas	1,287	(1,199 - 1,373)	132	(121 - 144)	149	(135 - 163)	1,006	(919 - 1,089)
Kentucky	1,942	(1,796 - 2,085)	174	(158 - 190)	228	(209 - 248)	1,540	(1,398 - 1,676)
Louisiana	2,293	(2,157 - 2,424)	259	(240 - 277)	316	(294 - 337)	1,718	(1,587 - 1,843)
Maine	725	(689 - 760)	66	(61 - 71)	71	(64 - 77)	588	(553 - 621)
Maryland	2,916	(2,734 - 3,089)	261	(240 - 280)	320	(294 - 344)	2,336	(2,156 - 2,503)
Massachusetts	3,682	(3,480 - 3,875)	313	(289 - 336)	382	(350 - 413)	2,987	(2,789 - 3,168)
Michigan	5,058	(4,871 - 5,240)	497	(473 - 520)	585	(553 - 617)	3,975	(3,794 - 4,151)
Minnesota	2,433	(2,279 - 2,584)	257	(237 - 276)	274	(249 - 299)	1,903	(1,752 - 2,046)
Mississippi	1,454	(1,359 - 1,545)	159	(146 - 171)	192	(177 - 206)	1,104	(1,012 - 1,190)
Missouri	2,857	(2,673 - 3,036)	276	(253 - 298)	332	(302 - 362)	2,249	(2,070 - 2,419)
Montana	530	(502 - 556)	51	(47 - 55)	57	(53 - 62)	421	(394 - 447)

See notes at end of table.

(continued)

Table B.6A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	826	(771 - 879)	87	(80 - 95)	105	(96 - 114)	633	(580 - 684)
Nevada	999	(930 - 1,065)	82	(75 - 89)	108	(98 - 117)	810	(742 - 872)
New Hampshire	675	(637 - 711)	65	(60 - 69)	67	(60 - 73)	543	(506 - 578)
New Jersey	4,745	(4,480 - 4,994)	392	(363 - 419)	482	(443 - 521)	3,871	(3,608 - 4,112)
New Mexico	988	(937 - 1,038)	99	(91 - 108)	133	(122 - 143)	756	(706 - 803)
New York	10,400	(9,990 - 10,793)	888	(842 - 934)	1,168	(1,107 - 1,228)	8,343	(7,940 - 8,724)
North Carolina	3,724	(3,446 - 3,996)	359	(331 - 387)	417	(380 - 453)	2,948	(2,678 - 3,209)
North Dakota	338	(318 - 358)	37	(34 - 40)	46	(42 - 49)	255	(235 - 274)
Ohio	5,667	(5,433 - 5,897)	547	(520 - 574)	657	(622 - 692)	4,462	(4,233 - 4,686)
Oklahoma	1,686	(1,568 - 1,800)	187	(172 - 201)	215	(199 - 232)	1,284	(1,168 - 1,394)
Oregon	1,835	(1,707 - 1,956)	165	(151 - 179)	207	(189 - 225)	1,462	(1,337 - 1,579)
Pennsylvania	6,479	(6,211 - 6,740)	571	(543 - 600)	662	(626 - 697)	5,246	(4,982 - 5,501)
Rhode Island	580	(547 - 611)	51	(47 - 56)	57	(52 - 62)	471	(439 - 500)
South Carolina	2,042	(1,910 - 2,168)	187	(172 - 203)	229	(210 - 248)	1,625	(1,496 - 1,747)
South Dakota	373	(350 - 396)	42	(39 - 46)	43	(39 - 48)	288	(265 - 310)
Tennessee	2,961	(2,772 - 3,145)	246	(223 - 268)	345	(316 - 373)	2,371	(2,185 - 2,546)
Texas	10,768	(10,414 - 11,113)	1,109	(1,064 - 1,152)	1,441	(1,379 - 1,503)	8,218	(7,868 - 8,554)
Utah	1,226	(1,171 - 1,278)	174	(164 - 183)	229	(218 - 239)	823	(771 - 871)
Vermont	348	(329 - 367)	32	(29 - 35)	36	(33 - 39)	280	(262 - 298)
Virginia	3,600	(3,351 - 3,839)	309	(283 - 335)	400	(364 - 436)	2,891	(2,645 - 3,123)
Washington	3,135	(2,922 - 3,338)	302	(279 - 324)	350	(322 - 378)	2,483	(2,273 - 2,678)
West Virginia	921	(856 - 985)	82	(74 - 89)	112	(102 - 122)	727	(663 - 789)
Wisconsin	2,712	(2,540 - 2,879)	282	(262 - 302)	326	(298 - 353)	2,104	(1,937 - 2,263)
Wyoming	275	(258 - 291)	29	(26 - 31)	33	(30 - 36)	213	(197 - 228)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.6B Percentages Reporting Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	66.6		60.6		61.6		68.2	
Alabama	65.6	(61.3 - 69.8)	59.7	(54.5 - 64.7)	59.2	(54.6 - 63.6)	67.5	(61.9 - 72.8)
Alaska	63.6	(59.5 - 67.5)	61.7	(57.1 - 66.1)	58.0	(52.9 - 63.0)	65.0	(59.6 - 70.2)
Arizona	70.1	(65.8 - 74.2)	61.7	(57.1 - 66.2)	62.5	(57.3 - 67.5)	72.7	(67.1 - 77.9)
Arkansas	62.6	(58.6 - 66.5)	59.0	(54.0 - 63.8)	56.6	(52.2 - 60.8)	64.2	(59.0 - 69.1)
California	71.1	(68.6 - 73.5)	64.8	(62.7 - 66.8)	72.4	(69.8 - 75.0)	71.8	(68.5 - 74.8)
Colorado	68.1	(63.8 - 72.2)	58.7	(53.5 - 63.9)	62.7	(57.6 - 67.6)	70.3	(64.8 - 75.4)
Connecticut	72.7	(68.6 - 76.6)	62.9	(57.6 - 67.9)	60.3	(54.3 - 66.1)	75.6	(70.4 - 80.3)
Delaware	66.1	(61.9 - 70.0)	60.5	(55.7 - 65.0)	60.3	(55.5 - 65.0)	67.7	(62.4 - 72.6)
District of Columbia	67.5	(63.4 - 71.4)	63.3	(57.7 - 68.6)	70.3	(65.8 - 74.6)	67.6	(62.4 - 72.4)
Florida	68.6	(66.0 - 71.2)	66.3	(63.2 - 69.3)	65.0	(62.0 - 67.9)	69.4	(66.2 - 72.5)
Georgia	66.4	(62.2 - 70.4)	63.0	(58.9 - 66.8)	63.8	(59.3 - 68.2)	67.3	(61.9 - 72.4)
Hawaii	65.3	(61.1 - 69.3)	61.5	(56.7 - 66.2)	63.9	(58.5 - 69.1)	66.0	(60.7 - 71.0)
Idaho	68.4	(64.6 - 71.9)	62.7	(58.0 - 67.3)	62.0	(57.5 - 66.4)	70.6	(65.7 - 75.3)
Illinois	66.0	(63.4 - 68.5)	60.8	(57.9 - 63.6)	61.5	(58.7 - 64.3)	67.5	(64.1 - 70.7)
Indiana	62.2	(58.1 - 66.2)	60.2	(55.8 - 64.4)	57.7	(52.9 - 62.3)	63.3	(58.1 - 68.3)
Iowa	59.0	(54.7 - 63.2)	58.6	(53.8 - 63.3)	55.3	(50.6 - 60.0)	59.7	(54.2 - 65.0)
Kansas	60.2	(56.1 - 64.3)	54.8	(50.0 - 59.6)	52.2	(47.2 - 57.1)	62.5	(57.1 - 67.6)
Kentucky	59.5	(55.0 - 63.9)	52.7	(47.7 - 57.6)	52.6	(48.1 - 57.1)	61.6	(55.9 - 67.1)
Louisiana	64.7	(60.9 - 68.4)	61.4	(56.8 - 65.8)	61.6	(57.3 - 65.7)	65.9	(60.8 - 70.7)
Maine	69.6	(66.1 - 72.9)	63.6	(58.5 - 68.6)	58.6	(53.2 - 63.8)	71.9	(67.6 - 76.0)
Maryland	68.8	(64.5 - 72.9)	62.7	(57.8 - 67.4)	64.2	(59.0 - 69.1)	70.2	(64.8 - 75.3)
Massachusetts	72.3	(68.3 - 76.1)	63.3	(58.5 - 67.9)	64.3	(58.9 - 69.4)	74.6	(69.6 - 79.1)
Michigan	64.1	(61.7 - 66.4)	59.7	(56.8 - 62.5)	57.1	(54.0 - 60.2)	65.9	(62.9 - 68.8)
Minnesota	62.2	(58.2 - 66.0)	59.3	(54.6 - 63.8)	52.5	(47.7 - 57.3)	64.3	(59.2 - 69.1)
Mississippi	64.6	(60.4 - 68.7)	61.0	(56.0 - 65.8)	59.4	(54.9 - 63.8)	66.2	(60.7 - 71.4)
Missouri	63.5	(59.4 - 67.5)	57.9	(53.0 - 62.6)	56.9	(51.7 - 62.0)	65.4	(60.2 - 70.4)
Montana	69.4	(65.7 - 72.9)	60.0	(55.4 - 64.5)	58.5	(53.9 - 63.1)	72.6	(67.9 - 77.0)

See notes at end of table.

(continued)

Table B.6B Percentages Reporting Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	60.5	(56.5 - 64.4)	56.3	(51.5 - 61.0)	56.6	(51.6 - 61.6)	61.8	(56.7 - 66.8)
Nevada	67.1	(62.5 - 71.5)	57.0	(52.0 - 61.9)	61.8	(56.3 - 67.1)	69.1	(63.4 - 74.5)
New Hampshire	67.9	(64.1 - 71.6)	62.5	(57.8 - 67.0)	57.5	(51.9 - 62.9)	70.2	(65.3 - 74.7)
New Jersey	71.1	(67.1 - 74.8)	63.1	(58.5 - 67.5)	62.2	(57.1 - 67.1)	73.4	(68.4 - 77.9)
New Mexico	67.7	(64.2 - 71.1)	57.4	(52.4 - 62.2)	64.3	(59.2 - 69.2)	70.0	(65.4 - 74.3)
New York	70.4	(67.7 - 73.1)	60.9	(57.8 - 64.0)	64.7	(61.3 - 68.0)	72.5	(69.0 - 75.9)
North Carolina	59.5	(55.0 - 63.8)	56.4	(52.0 - 60.7)	54.6	(49.8 - 59.3)	60.7	(55.1 - 66.1)
North Dakota	63.6	(59.7 - 67.4)	59.3	(54.6 - 63.8)	60.8	(56.4 - 65.1)	64.8	(59.8 - 69.6)
Ohio	61.2	(58.7 - 63.7)	57.3	(54.4 - 60.1)	54.8	(51.9 - 57.7)	62.8	(59.6 - 65.9)
Oklahoma	61.9	(57.6 - 66.1)	60.6	(55.9 - 65.1)	59.6	(55.0 - 64.1)	62.5	(56.9 - 67.9)
Oregon	65.9	(61.3 - 70.3)	59.8	(54.7 - 64.7)	59.8	(54.6 - 64.9)	67.7	(61.9 - 73.1)
Pennsylvania	64.2	(61.6 - 66.8)	58.1	(55.1 - 60.9)	56.4	(53.3 - 59.4)	66.1	(62.8 - 69.3)
Rhode Island	70.9	(66.9 - 74.7)	62.4	(57.2 - 67.3)	61.8	(56.3 - 67.1)	73.2	(68.2 - 77.8)
South Carolina	66.0	(61.7 - 70.1)	58.1	(53.2 - 62.8)	59.7	(54.7 - 64.5)	68.1	(62.6 - 73.2)
South Dakota	61.0	(57.2 - 64.7)	57.2	(52.5 - 61.8)	50.7	(45.8 - 55.6)	63.6	(58.5 - 68.4)
Tennessee	64.5	(60.4 - 68.5)	53.6	(48.7 - 58.5)	58.6	(53.6 - 63.4)	66.9	(61.7 - 71.8)
Texas	68.1	(65.9 - 70.3)	59.5	(57.1 - 61.8)	62.4	(59.7 - 65.1)	70.7	(67.6 - 73.5)
Utah	73.2	(69.9 - 76.3)	70.3	(66.3 - 74.1)	72.7	(69.2 - 76.0)	73.9	(69.2 - 78.3)
Vermont	68.8	(65.0 - 72.4)	58.8	(54.0 - 63.5)	58.9	(53.5 - 64.1)	71.7	(66.9 - 76.2)
Virginia	64.5	(60.0 - 68.8)	55.7	(51.0 - 60.4)	58.7	(53.3 - 64.0)	66.5	(60.8 - 71.8)
Washington	66.5	(62.0 - 70.8)	62.1	(57.4 - 66.7)	59.3	(54.6 - 63.9)	68.3	(62.5 - 73.7)
West Virginia	59.4	(55.2 - 63.5)	57.0	(51.6 - 62.3)	56.7	(51.7 - 61.5)	60.1	(54.8 - 65.2)
Wisconsin	62.5	(58.5 - 66.3)	59.0	(54.8 - 63.1)	56.5	(51.6 - 61.2)	64.0	(59.0 - 68.9)
Wyoming	65.7	(61.7 - 69.6)	57.8	(53.2 - 62.2)	55.3	(50.4 - 60.2)	69.0	(63.7 - 73.9)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.7A Estimated Numbers (in Thousands) of Average Annual Marijuana Initiates Over the Past 24 Months, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	2,366		1,265		959		142	
Alabama	33	(27 - 41)	17	(13 - 22)	15	(10 - 20)	2	(1 - 4)
Alaska	6	(5 - 8)	4	(3 - 5)	2	(1 - 3)	0	(0 - 1)
Arizona	48	(39 - 58)	31	(24 - 39)	14	(9 - 20)	3	(1 - 7)
Arkansas	20	(16 - 24)	11	(8 - 14)	8	(6 - 11)	1	(0 - 2)
California	258	(227 - 293)	143	(125 - 162)	98	(78 - 121)	18	(7 - 39)
Colorado	39	(31 - 48)	21	(16 - 27)	15	(10 - 20)	3	(1 - 7)
Connecticut	30	(24 - 37)	16	(12 - 20)	12	(8 - 17)	2	(1 - 5)
Delaware	7	(6 - 8)	4	(3 - 5)	2	(2 - 3)	0	(0 - 1)
District of Columbia	5	(4 - 6)	2	(2 - 3)	2	(1 - 3)	0	(0 - 1)
Florida	99	(85 - 115)	54	(45 - 65)	37	(29 - 47)	8	(3 - 16)
Georgia	69	(56 - 82)	33	(27 - 41)	31	(23 - 42)	4	(1 - 8)
Hawaii	9	(7 - 11)	5	(4 - 7)	3	(2 - 4)	1	(0 - 1)
Idaho	12	(9 - 14)	5	(4 - 7)	6	(4 - 8)	1	(0 - 1)
Illinois	100	(88 - 113)	57	(48 - 66)	37	(29 - 46)	6	(3 - 12)
Indiana	53	(44 - 64)	30	(24 - 37)	20	(15 - 27)	3	(1 - 7)
Iowa	27	(22 - 32)	15	(12 - 19)	10	(7 - 14)	2	(1 - 4)
Kansas	28	(23 - 33)	15	(11 - 18)	11	(8 - 15)	2	(1 - 3)
Kentucky	39	(32 - 46)	21	(16 - 26)	16	(12 - 21)	2	(1 - 4)
Louisiana	40	(33 - 48)	23	(18 - 29)	15	(11 - 20)	2	(1 - 4)
Maine	12	(10 - 14)	6	(5 - 8)	5	(4 - 7)	1	(0 - 1)
Maryland	41	(33 - 50)	22	(16 - 28)	17	(12 - 23)	3	(1 - 6)
Massachusetts	63	(51 - 76)	35	(27 - 45)	24	(17 - 33)	4	(1 - 10)
Michigan	96	(84 - 108)	52	(45 - 61)	39	(31 - 48)	4	(2 - 9)
Minnesota	50	(41 - 60)	24	(19 - 31)	23	(17 - 31)	3	(1 - 6)
Mississippi	27	(22 - 33)	14	(10 - 18)	12	(9 - 16)	1	(0 - 3)
Missouri	46	(37 - 56)	24	(18 - 30)	19	(14 - 27)	3	(1 - 6)
Montana	9	(7 - 10)	5	(4 - 6)	3	(2 - 5)	0	(0 - 1)

See notes at end of table.

(continued)

Table B.7A Estimated Numbers (in Thousands) of Average Annual Marijuana Initiates Over the Past 24 Months, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	17	(14 - 20)	8	(6 - 11)	7	(5 - 10)	1	(0 - 2)
Nevada	15	(12 - 18)	9	(7 - 12)	5	(3 - 7)	1	(0 - 3)
New Hampshire	11	(9 - 14)	6	(5 - 8)	5	(3 - 6)	1	(0 - 1)
New Jersey	71	(57 - 86)	32	(25 - 40)	34	(24 - 46)	5	(2 - 13)
New Mexico	18	(14 - 22)	10	(8 - 13)	7	(5 - 9)	1	(0 - 3)
New York	157	(135 - 181)	73	(61 - 87)	74	(58 - 92)	10	(4 - 22)
North Carolina	67	(56 - 80)	39	(31 - 48)	24	(17 - 33)	4	(1 - 9)
North Dakota	8	(6 - 9)	4	(3 - 5)	3	(2 - 4)	0	(0 - 1)
Ohio	96	(85 - 109)	50	(42 - 58)	41	(33 - 50)	5	(2 - 10)
Oklahoma	31	(26 - 38)	20	(15 - 25)	10	(7 - 13)	2	(1 - 4)
Oregon	29	(24 - 36)	15	(12 - 19)	12	(9 - 17)	2	(1 - 4)
Pennsylvania	95	(82 - 109)	43	(35 - 51)	46	(38 - 56)	6	(2 - 13)
Rhode Island	9	(7 - 11)	5	(4 - 6)	3	(2 - 5)	1	(0 - 1)
South Carolina	33	(27 - 40)	19	(15 - 24)	12	(9 - 17)	2	(1 - 4)
South Dakota	8	(7 - 10)	4	(3 - 5)	4	(3 - 5)	0	(0 - 1)
Tennessee	46	(38 - 56)	23	(18 - 30)	20	(15 - 27)	3	(1 - 7)
Texas	172	(152 - 193)	96	(83 - 111)	67	(53 - 82)	9	(4 - 17)
Utah	21	(17 - 25)	11	(8 - 14)	9	(7 - 12)	1	(0 - 2)
Vermont	6	(5 - 7)	3	(3 - 4)	3	(2 - 4)	0	(0 - 1)
Virginia	59	(48 - 71)	30	(23 - 38)	25	(18 - 35)	4	(1 - 8)
Washington	52	(43 - 62)	30	(24 - 37)	18	(13 - 25)	3	(1 - 8)
West Virginia	15	(12 - 18)	8	(6 - 10)	6	(4 - 9)	1	(0 - 2)
Wisconsin	58	(48 - 69)	33	(26 - 41)	22	(16 - 29)	3	(1 - 8)
Wyoming	5	(4 - 6)	3	(2 - 3)	2	(2 - 3)	0	(0 - 1)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.7B Average Annual Rates of First Use of Marijuana Over the Past 24 Months, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]
Total[3]	1.6		6.3		5.9		0.1	
Alabama	1.3	(1.0 - 1.6)	5.2	(3.8 - 6.9)	5.2	(3.7 - 7.2)	0.1	(0.0 - 0.3)
Alaska	2.5	(2.0 - 3.1)	7.8	(6.1 - 10.1)	6.5	(4.5 - 9.3)	0.2	(0.1 - 0.6)
Arizona	2.0	(1.6 - 2.5)	8.9	(6.9 - 11.4)	5.1	(3.4 - 7.5)	0.2	(0.1 - 0.5)
Arkansas	1.3	(1.0 - 1.6)	5.6	(4.2 - 7.4)	4.7	(3.4 - 6.4)	0.1	(0.0 - 0.3)
California	1.5	(1.3 - 1.8)	6.0	(5.2 - 6.9)	4.7	(3.8 - 5.9)	0.1	(0.1 - 0.4)
Colorado	2.1	(1.7 - 2.7)	7.5	(5.6 - 9.9)	7.1	(4.9 - 10.2)	0.2	(0.1 - 0.6)
Connecticut	1.8	(1.4 - 2.3)	7.1	(5.3 - 9.6)	8.3	(5.7 - 12.1)	0.2	(0.0 - 0.6)
Delaware	1.8	(1.4 - 2.2)	7.9	(6.1 - 10.2)	6.5	(4.5 - 9.3)	0.2	(0.1 - 0.5)
District of Columbia	1.7	(1.3 - 2.1)	6.2	(4.5 - 8.5)	5.8	(4.1 - 8.2)	0.1	(0.0 - 0.4)
Florida	1.1	(1.0 - 1.3)	5.2	(4.3 - 6.3)	4.7	(3.7 - 5.9)	0.1	(0.0 - 0.3)
Georgia	1.6	(1.3 - 2.0)	5.7	(4.5 - 7.2)	6.4	(4.7 - 8.9)	0.1	(0.0 - 0.3)
Hawaii	1.5	(1.2 - 1.9)	6.7	(5.0 - 8.9)	5.0	(3.3 - 7.6)	0.1	(0.0 - 0.4)
Idaho	1.6	(1.3 - 2.0)	4.5	(3.3 - 6.0)	6.1	(4.4 - 8.3)	0.1	(0.0 - 0.4)
Illinois	1.6	(1.4 - 1.8)	6.6	(5.6 - 7.8)	5.2	(4.2 - 6.6)	0.1	(0.1 - 0.3)
Indiana	1.6	(1.3 - 2.0)	6.7	(5.3 - 8.5)	5.6	(4.1 - 7.7)	0.1	(0.0 - 0.4)
Iowa	1.6	(1.3 - 2.0)	6.7	(5.2 - 8.6)	5.6	(4.0 - 7.8)	0.1	(0.0 - 0.5)
Kansas	1.9	(1.5 - 2.3)	6.9	(5.3 - 8.9)	7.0	(5.1 - 9.6)	0.1	(0.1 - 0.4)
Kentucky	1.7	(1.4 - 2.1)	7.4	(5.7 - 9.5)	6.2	(4.5 - 8.5)	0.1	(0.0 - 0.4)
Louisiana	1.5	(1.3 - 1.9)	6.2	(4.8 - 8.1)	4.7	(3.4 - 6.5)	0.1	(0.0 - 0.3)
Maine	1.9	(1.5 - 2.4)	6.9	(5.3 - 9.0)	10.0	(7.0 - 14.0)	0.1	(0.0 - 0.4)
Maryland	1.5	(1.2 - 1.9)	5.9	(4.5 - 7.8)	5.8	(4.1 - 8.1)	0.1	(0.0 - 0.4)
Massachusetts	2.2	(1.7 - 2.8)	8.7	(6.6 - 11.3)	8.8	(6.1 - 12.7)	0.2	(0.1 - 0.7)
Michigan	1.9	(1.7 - 2.2)	7.3	(6.3 - 8.6)	7.5	(6.0 - 9.3)	0.1	(0.1 - 0.3)
Minnesota	2.1	(1.7 - 2.5)	6.6	(5.1 - 8.5)	8.4	(6.2 - 11.4)	0.2	(0.1 - 0.4)
Mississippi	1.6	(1.3 - 2.0)	6.0	(4.5 - 7.9)	5.9	(4.3 - 8.0)	0.1	(0.0 - 0.3)
Missouri	1.6	(1.2 - 2.0)	5.7	(4.3 - 7.5)	6.3	(4.4 - 8.9)	0.1	(0.0 - 0.4)
Montana	1.8	(1.4 - 2.2)	7.1	(5.5 - 9.1)	7.0	(4.9 - 9.8)	0.1	(0.0 - 0.4)

See notes at end of table.

(continued)

Table B.7B Average Annual Rates of First Use of Marijuana Over the Past 24 Months, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]	Estimate[1]	Prediction Interval[2]
Nebraska	1.7	(1.4 - 2.1)	6.0	(4.6 - 7.8)	6.5	(4.7 - 8.9)	0.1	(0.0 - 0.3)
Nevada	1.7	(1.4 - 2.2)	8.0	(6.1 - 10.4)	5.3	(3.5 - 8.0)	0.2	(0.0 - 0.6)
New Hampshire	2.0	(1.6 - 2.5)	7.2	(5.6 - 9.3)	8.7	(5.9 - 12.5)	0.1	(0.0 - 0.4)
New Jersey	1.6	(1.3 - 2.0)	5.7	(4.4 - 7.3)	8.0	(5.7 - 11.2)	0.2	(0.0 - 0.5)
New Mexico	2.0	(1.6 - 2.6)	7.3	(5.5 - 9.5)	6.4	(4.4 - 9.3)	0.2	(0.0 - 0.6)
New York	1.6	(1.4 - 1.9)	5.6	(4.7 - 6.8)	7.3	(5.7 - 9.2)	0.1	(0.1 - 0.3)
North Carolina	1.5	(1.2 - 1.9)	7.0	(5.6 - 8.8)	5.4	(3.8 - 7.5)	0.1	(0.0 - 0.3)
North Dakota	2.1	(1.7 - 2.6)	7.9	(6.2 - 10.1)	6.8	(5.1 - 9.1)	0.1	(0.0 - 0.3)
Ohio	1.5	(1.3 - 1.8)	6.0	(5.1 - 7.1)	6.4	(5.2 - 7.9)	0.1	(0.0 - 0.3)
Oklahoma	1.7	(1.4 - 2.1)	7.6	(5.8 - 9.9)	4.6	(3.2 - 6.4)	0.1	(0.0 - 0.4)
Oregon	1.8	(1.4 - 2.3)	6.8	(5.2 - 8.9)	7.7	(5.3 - 10.9)	0.1	(0.0 - 0.5)
Pennsylvania	1.4	(1.2 - 1.6)	4.9	(4.0 - 5.9)	6.8	(5.5 - 8.3)	0.1	(0.0 - 0.3)
Rhode Island	1.7	(1.3 - 2.1)	7.0	(5.2 - 9.2)	7.3	(5.0 - 10.4)	0.1	(0.0 - 0.4)
South Carolina	1.6	(1.3 - 2.0)	6.7	(5.2 - 8.7)	5.5	(3.9 - 7.8)	0.1	(0.0 - 0.4)
South Dakota	1.9	(1.5 - 2.3)	6.4	(4.9 - 8.1)	6.9	(5.0 - 9.3)	0.1	(0.0 - 0.3)
Tennessee	1.5	(1.2 - 1.8)	5.8	(4.4 - 7.5)	5.9	(4.2 - 8.3)	0.1	(0.0 - 0.4)
Texas	1.5	(1.3 - 1.7)	5.9	(5.1 - 6.8)	4.6	(3.7 - 5.8)	0.1	(0.1 - 0.2)
Utah	1.8	(1.4 - 2.2)	5.1	(3.9 - 6.6)	4.3	(3.2 - 5.8)	0.1	(0.0 - 0.4)
Vermont	2.2	(1.8 - 2.7)	7.4	(5.7 - 9.6)	9.5	(6.6 - 13.6)	0.1	(0.0 - 0.4)
Virginia	1.6	(1.3 - 1.9)	6.1	(4.7 - 7.8)	6.2	(4.4 - 8.8)	0.1	(0.0 - 0.3)
Washington	1.7	(1.4 - 2.1)	7.3	(5.8 - 9.2)	5.7	(4.0 - 8.0)	0.1	(0.1 - 0.4)
West Virginia	1.3	(1.1 - 1.7)	6.5	(5.0 - 8.5)	5.3	(3.8 - 7.3)	0.1	(0.0 - 0.3)
Wisconsin	2.1	(1.7 - 2.5)	8.0	(6.3 - 10.0)	6.9	(5.0 - 9.5)	0.2	(0.0 - 0.6)
Wyoming	1.9	(1.6 - 2.4)	6.5	(5.0 - 8.2)	6.7	(4.8 - 9.1)	0.2	(0.1 - 0.5)

[1] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach. Note that the age group is based on a respondent's age at the time of the interview, not his or her age at first use.

[2] The prediction intervals presented above employ a Taylor linearization combining the hierarchical Bayes posterior variances for the two marijuana use/never use prevalences. Since these two prevalences were estimated independently, the hierarchical Bayes solutions did not provide the between prevalence correlations required to complete the linearization. For this purpose, simple Pearson's correlations between the two prevalences were calculated by age group across the fifty states and the District of Columbia.

[3] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.8A Estimated Numbers (in Thousands) of Past Month Users of Marijuana, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	10,769		1,715		4,032		5,022	
Alabama	120	(91 - 155)	21	(14 - 29)	48	(37 - 62)	51	(30 - 82)
Alaska	34	(27 - 42)	6	(5 - 8)	12	(9 - 15)	16	(11 - 23)
Arizona	195	(145 - 257)	31	(23 - 42)	58	(42 - 76)	106	(65 - 165)
Arkansas	74	(57 - 94)	16	(12 - 23)	26	(20 - 34)	31	(18 - 49)
California	1,521	(1,278 - 1,795)	216	(186 - 250)	482	(417 - 553)	823	(605 - 1,092)
Colorado	259	(198 - 330)	37	(27 - 49)	85	(66 - 105)	137	(86 - 207)
Connecticut	135	(102 - 176)	22	(15 - 30)	54	(40 - 70)	59	(35 - 94)
Delaware	41	(32 - 51)	9	(7 - 11)	15	(12 - 19)	17	(10 - 27)
District of Columbia	30	(22 - 40)	4	(3 - 6)	8	(6 - 10)	18	(11 - 29)
Florida	628	(500 - 776)	72	(56 - 91)	183	(155 - 215)	372	(256 - 521)
Georgia	261	(194 - 342)	43	(32 - 57)	102	(77 - 131)	117	(66 - 190)
Hawaii	57	(41 - 75)	8	(6 - 11)	18	(13 - 23)	31	(18 - 49)
Idaho	45	(34 - 57)	8	(5 - 11)	16	(12 - 21)	21	(13 - 33)
Illinois	472	(406 - 545)	92	(77 - 108)	188	(162 - 216)	192	(138 - 261)
Indiana	228	(176 - 289)	44	(33 - 58)	82	(64 - 104)	101	(62 - 156)
Iowa	78	(59 - 101)	13	(9 - 19)	33	(24 - 44)	32	(18 - 51)
Kansas	79	(61 - 99)	16	(11 - 22)	33	(24 - 43)	30	(18 - 46)
Kentucky	117	(90 - 149)	17	(12 - 25)	49	(38 - 63)	50	(30 - 79)
Louisiana	125	(98 - 156)	28	(20 - 37)	53	(40 - 68)	44	(26 - 69)
Maine	61	(48 - 75)	7	(5 - 10)	26	(20 - 31)	28	(17 - 42)
Maryland	207	(156 - 269)	37	(26 - 49)	73	(55 - 95)	97	(57 - 155)
Massachusetts	384	(296 - 485)	59	(43 - 78)	161	(128 - 197)	165	(98 - 259)
Michigan	419	(360 - 486)	65	(53 - 78)	165	(142 - 191)	190	(140 - 251)
Minnesota	208	(168 - 253)	43	(33 - 55)	92	(73 - 114)	73	(46 - 111)
Mississippi	75	(58 - 95)	17	(12 - 24)	35	(27 - 44)	23	(13 - 39)
Missouri	212	(163 - 269)	31	(22 - 43)	88	(66 - 113)	92	(58 - 140)
Montana	45	(35 - 57)	10	(7 - 13)	15	(12 - 19)	21	(13 - 31)

See notes at end of table.

(continued)

Table B.8A Estimated Numbers (in Thousands) of Past Month Users of Marijuana, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	54	(41 - 69)	9	(6 - 13)	24	(18 - 31)	20	(12 - 32)
Nevada	83	(62 - 110)	17	(12 - 22)	20	(15 - 27)	46	(28 - 72)
New Hampshire	59	(46 - 73)	11	(8 - 14)	24	(19 - 30)	24	(15 - 36)
New Jersey	331	(256 - 421)	46	(32 - 62)	135	(105 - 171)	150	(92 - 231)
New Mexico	95	(74 - 120)	16	(12 - 21)	35	(27 - 44)	44	(27 - 67)
New York	716	(603 - 843)	100	(78 - 125)	317	(271 - 368)	299	(207 - 418)
North Carolina	295	(225 - 378)	43	(32 - 57)	102	(79 - 128)	150	(93 - 227)
North Dakota	21	(16 - 26)	5	(3 - 6)	9	(7 - 11)	8	(5 - 12)
Ohio	399	(337 - 468)	66	(53 - 81)	159	(137 - 183)	174	(123 - 238)
Oklahoma	95	(71 - 123)	19	(13 - 27)	39	(29 - 51)	37	(20 - 60)
Oregon	184	(140 - 236)	26	(20 - 35)	54	(42 - 69)	103	(65 - 154)
Pennsylvania	450	(374 - 535)	62	(50 - 77)	166	(143 - 193)	221	(155 - 304)
Rhode Island	61	(47 - 76)	9	(6 - 12)	23	(18 - 27)	29	(19 - 43)
South Carolina	119	(91 - 151)	24	(17 - 32)	47	(35 - 60)	48	(29 - 76)
South Dakota	25	(20 - 31)	5	(4 - 7)	11	(8 - 14)	9	(6 - 14)
Tennessee	164	(122 - 215)	24	(17 - 33)	57	(42 - 75)	83	(50 - 130)
Texas	554	(469 - 649)	107	(88 - 128)	256	(218 - 297)	192	(127 - 277)
Utah	82	(62 - 105)	15	(11 - 20)	29	(23 - 37)	37	(22 - 59)
Vermont	27	(22 - 34)	5	(3 - 6)	13	(10 - 16)	10	(6 - 15)
Virginia	224	(165 - 297)	33	(23 - 45)	85	(63 - 111)	107	(61 - 173)
Washington	318	(243 - 408)	48	(36 - 62)	101	(81 - 125)	169	(106 - 254)
West Virginia	56	(43 - 72)	10	(7 - 14)	22	(17 - 29)	24	(14 - 38)
Wisconsin	223	(178 - 275)	40	(30 - 51)	94	(73 - 119)	90	(58 - 133)
Wyoming	24	(18 - 30)	4	(3 - 5)	9	(7 - 11)	11	(7 - 17)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.8B Percentages Reporting Past Month Use of Marijuana, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	4.9		7.4		14.2		3.0	
Alabama	3.3	(2.5 - 4.3)	5.6	(3.8 - 7.8)	10.2	(7.8 - 13.2)	1.9	(1.1 - 3.0)
Alaska	7.1	(5.6 - 8.8)	10.4	(7.8 - 13.5)	16.8	(13.1 - 20.9)	4.6	(3.0 - 6.7)
Arizona	5.2	(3.8 - 6.8)	7.3	(5.3 - 9.9)	11.6	(8.5 - 15.3)	3.7	(2.3 - 5.8)
Arkansas	3.5	(2.7 - 4.4)	7.3	(5.2 - 10.0)	9.5	(7.2 - 12.2)	1.9	(1.1 - 3.0)
California	6.0	(5.0 - 7.0)	7.7	(6.6 - 8.9)	14.0	(12.1 - 16.1)	4.3	(3.1 - 5.7)
Colorado	7.7	(5.9 - 9.9)	10.3	(7.5 - 13.8)	19.4	(15.2 - 24.2)	5.4	(3.4 - 8.1)
Connecticut	5.0	(3.8 - 6.5)	8.6	(6.0 - 11.8)	17.9	(13.3 - 23.2)	2.8	(1.6 - 4.4)
Delaware	6.5	(5.1 - 8.2)	13.9	(10.4 - 18.0)	20.1	(16.0 - 24.6)	3.4	(2.0 - 5.5)
District of Columbia	7.1	(5.1 - 9.5)	9.6	(6.5 - 13.6)	13.9	(10.4 - 18.1)	5.6	(3.4 - 8.7)
Florida	5.0	(4.0 - 6.2)	6.2	(4.8 - 7.9)	13.8	(11.6 - 16.1)	3.7	(2.6 - 5.2)
Georgia	4.2	(3.1 - 5.5)	6.4	(4.7 - 8.5)	12.1	(9.2 - 15.5)	2.5	(1.4 - 4.0)
Hawaii	5.8	(4.3 - 7.8)	8.3	(6.0 - 11.3)	15.2	(11.3 - 19.7)	4.1	(2.4 - 6.5)
Idaho	4.2	(3.2 - 5.4)	5.9	(4.2 - 8.2)	10.0	(7.5 - 13.0)	2.7	(1.6 - 4.3)
Illinois	4.8	(4.2 - 5.6)	9.2	(7.7 - 10.8)	14.6	(12.6 - 16.8)	2.6	(1.9 - 3.5)
Indiana	4.6	(3.6 - 5.9)	8.7	(6.5 - 11.3)	12.6	(9.8 - 15.8)	2.7	(1.7 - 4.2)
Iowa	3.3	(2.5 - 4.2)	5.2	(3.6 - 7.4)	10.6	(7.8 - 14.0)	1.7	(1.0 - 2.8)
Kansas	3.7	(2.9 - 4.6)	6.6	(4.6 - 9.2)	11.5	(8.6 - 14.9)	1.9	(1.1 - 2.8)
Kentucky	3.6	(2.7 - 4.6)	5.3	(3.6 - 7.4)	11.4	(8.7 - 14.5)	2.0	(1.2 - 3.1)
Louisiana	3.5	(2.8 - 4.4)	6.6	(4.7 - 8.8)	10.3	(7.8 - 13.3)	1.7	(1.0 - 2.7)
Maine	5.8	(4.6 - 7.2)	7.2	(5.1 - 9.9)	21.2	(16.9 - 26.0)	3.4	(2.1 - 5.1)
Maryland	4.9	(3.7 - 6.3)	8.8	(6.3 - 11.9)	14.7	(11.0 - 19.1)	2.9	(1.7 - 4.7)
Massachusetts	7.5	(5.8 - 9.5)	11.9	(8.6 - 15.7)	27.1	(21.6 - 33.2)	4.1	(2.4 - 6.5)
Michigan	5.3	(4.6 - 6.2)	7.8	(6.3 - 9.4)	16.1	(13.9 - 18.6)	3.1	(2.3 - 4.2)
Minnesota	5.3	(4.3 - 6.5)	9.9	(7.5 - 12.8)	17.6	(14.0 - 21.8)	2.5	(1.5 - 3.8)
Mississippi	3.3	(2.6 - 4.2)	6.7	(4.7 - 9.1)	10.8	(8.3 - 13.7)	1.4	(0.8 - 2.3)
Missouri	4.7	(3.6 - 6.0)	6.6	(4.6 - 9.1)	15.1	(11.4 - 19.4)	2.7	(1.7 - 4.1)
Montana	5.9	(4.6 - 7.4)	11.4	(8.5 - 14.8)	15.2	(11.9 - 19.0)	3.6	(2.2 - 5.4)

See notes at end of table.

(continued)

Table B.8B Percentages Reporting Past Month Use of Marijuana, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	3.9	(3.0 - 5.0)	6.1	(4.1 - 8.6)	12.8	(9.6 - 16.6)	2.0	(1.2 - 3.1)
Nevada	5.6	(4.1 - 7.4)	11.6	(8.4 - 15.3)	11.7	(8.5 - 15.6)	4.0	(2.4 - 6.1)
New Hampshire	5.9	(4.7 - 7.3)	10.7	(7.9 - 13.9)	20.6	(16.0 - 26.0)	3.1	(1.9 - 4.6)
New Jersey	5.0	(3.8 - 6.3)	7.3	(5.2 - 10.0)	17.4	(13.5 - 22.0)	2.9	(1.8 - 4.4)
New Mexico	6.5	(5.0 - 8.2)	9.2	(6.7 - 12.3)	16.9	(13.0 - 21.5)	4.1	(2.5 - 6.2)
New York	4.9	(4.1 - 5.7)	6.8	(5.3 - 8.6)	17.6	(15.0 - 20.4)	2.6	(1.8 - 3.6)
North Carolina	4.7	(3.6 - 6.0)	6.8	(5.1 - 9.0)	13.4	(10.4 - 16.8)	3.1	(1.9 - 4.7)
North Dakota	3.9	(3.1 - 5.0)	7.6	(5.4 - 10.3)	11.5	(8.8 - 14.7)	1.9	(1.2 - 3.1)
Ohio	4.3	(3.6 - 5.0)	6.9	(5.6 - 8.5)	13.3	(11.4 - 15.2)	2.4	(1.7 - 3.4)
Oklahoma	3.5	(2.6 - 4.5)	6.3	(4.3 - 8.7)	10.7	(8.0 - 14.0)	1.8	(1.0 - 2.9)
Oregon	6.6	(5.0 - 8.5)	9.6	(7.1 - 12.5)	15.7	(12.2 - 19.8)	4.8	(3.0 - 7.1)
Pennsylvania	4.5	(3.7 - 5.3)	6.3	(5.0 - 7.8)	14.2	(12.2 - 16.4)	2.8	(2.0 - 3.8)
Rhode Island	7.4	(5.8 - 9.2)	10.8	(7.8 - 14.6)	24.3	(19.6 - 29.5)	4.5	(2.9 - 6.7)
South Carolina	3.8	(3.0 - 4.9)	7.4	(5.4 - 9.9)	12.1	(9.2 - 15.6)	2.0	(1.2 - 3.2)
South Dakota	4.1	(3.2 - 5.1)	6.9	(5.0 - 9.3)	12.4	(9.3 - 16.0)	2.1	(1.3 - 3.2)
Tennessee	3.6	(2.7 - 4.7)	5.2	(3.6 - 7.3)	9.7	(7.2 - 12.8)	2.3	(1.4 - 3.7)
Texas	3.5	(3.0 - 4.1)	5.7	(4.7 - 6.9)	11.1	(9.5 - 12.9)	1.6	(1.1 - 2.4)
Utah	4.9	(3.7 - 6.3)	6.1	(4.4 - 8.2)	9.3	(7.2 - 11.9)	3.4	(2.0 - 5.3)
Vermont	5.4	(4.3 - 6.7)	8.4	(6.1 - 11.2)	20.9	(16.3 - 26.1)	2.6	(1.6 - 3.9)
Virginia	4.0	(3.0 - 5.3)	5.9	(4.1 - 8.0)	12.4	(9.2 - 16.3)	2.5	(1.4 - 4.0)
Washington	6.8	(5.2 - 8.7)	9.9	(7.5 - 12.8)	17.1	(13.6 - 21.1)	4.7	(2.9 - 7.0)
West Virginia	3.6	(2.7 - 4.6)	7.1	(5.0 - 9.7)	11.3	(8.6 - 14.5)	2.0	(1.1 - 3.2)
Wisconsin	5.1	(4.1 - 6.3)	8.3	(6.2 - 10.7)	16.3	(12.6 - 20.5)	2.7	(1.8 - 4.0)
Wyoming	5.6	(4.3 - 7.2)	7.8	(5.7 - 10.3)	14.6	(11.4 - 18.3)	3.5	(2.1 - 5.5)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.9A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Smoking Marijuana Once a Month, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	98,392		8,651		8,197		81,545	
Alabama	1,920	(1,757 - 2,084)	160	(141 - 180)	150	(129 - 171)	1,610	(1,452 - 1,765)
Alaska	152	(134 - 171)	20	(18 - 23)	13	(10 - 16)	119	(101 - 137)
Arizona	1,618	(1,434 - 1,806)	149	(130 - 169)	146	(122 - 172)	1,323	(1,145 - 1,503)
Arkansas	1,087	(996 - 1,179)	98	(86 - 110)	88	(76 - 100)	902	(813 - 989)
California	10,166	(9,489 - 10,854)	979	(921 - 1,038)	1,126	(1,037 - 1,218)	8,061	(7,394 - 8,739)
Colorado	1,054	(906 - 1,213)	96	(79 - 114)	92	(75 - 112)	866	(723 - 1,017)
Connecticut	1,158	(1,021 - 1,298)	72	(59 - 85)	66	(52 - 82)	1,020	(885 - 1,156)
Delaware	251	(223 - 280)	21	(18 - 24)	21	(18 - 25)	209	(182 - 237)
District of Columbia	192	(174 - 209)	17	(14 - 19)	15	(12 - 17)	160	(143 - 177)
Florida	6,100	(5,753 - 6,448)	499	(466 - 533)	450	(411 - 490)	5,150	(4,810 - 5,490)
Georgia	3,061	(2,789 - 3,336)	272	(246 - 300)	271	(232 - 312)	2,518	(2,257 - 2,776)
Hawaii	416	(373 - 460)	36	(31 - 41)	41	(34 - 48)	339	(297 - 381)
Idaho	445	(403 - 488)	51	(45 - 57)	49	(42 - 56)	345	(305 - 386)
Illinois	4,157	(3,895 - 4,422)	379	(351 - 407)	386	(352 - 421)	3,393	(3,137 - 3,651)
Indiana	2,160	(1,960 - 2,367)	207	(185 - 229)	186	(159 - 214)	1,768	(1,572 - 1,965)
Iowa	1,036	(936 - 1,139)	103	(91 - 115)	94	(80 - 108)	840	(744 - 937)
Kansas	894	(801 - 989)	88	(76 - 100)	82	(69 - 95)	725	(636 - 815)
Kentucky	1,673	(1,536 - 1,811)	129	(113 - 144)	124	(107 - 142)	1,420	(1,286 - 1,552)
Louisiana	1,934	(1,794 - 2,074)	177	(157 - 197)	160	(139 - 182)	1,597	(1,460 - 1,730)
Maine	418	(378 - 460)	36	(31 - 41)	24	(20 - 30)	357	(319 - 397)
Maryland	1,793	(1,601 - 1,989)	157	(137 - 178)	146	(123 - 170)	1,491	(1,305 - 1,679)
Massachusetts	2,027	(1,778 - 2,289)	145	(121 - 170)	99	(76 - 125)	1,783	(1,537 - 2,033)
Michigan	3,215	(3,010 - 3,424)	305	(281 - 329)	276	(247 - 306)	2,635	(2,435 - 2,838)
Minnesota	1,397	(1,239 - 1,563)	142	(123 - 162)	128	(107 - 150)	1,128	(975 - 1,286)
Mississippi	1,245	(1,155 - 1,334)	110	(98 - 123)	110	(96 - 124)	1,026	(938 - 1,110)
Missouri	2,011	(1,813 - 2,215)	195	(171 - 218)	144	(119 - 172)	1,673	(1,482 - 1,864)
Montana	295	(263 - 328)	24	(20 - 28)	23	(19 - 27)	248	(217 - 280)

See notes at end of table.

(continued)

Table B.9A Estimated Numbers (in Thousands) Reporting Perceptions of Great Risk of Smoking Marijuana Once a Month, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	564	(509 - 619)	59	(51 - 67)	49	(41 - 58)	456	(404 - 509)
Nevada	518	(450 - 589)	43	(36 - 50)	46	(38 - 56)	429	(363 - 498)
New Hampshire	342	(304 - 382)	31	(26 - 36)	19	(15 - 24)	292	(255 - 330)
New Jersey	3,003	(2,692 - 3,319)	209	(182 - 237)	193	(160 - 230)	2,602	(2,297 - 2,907)
New Mexico	589	(532 - 648)	56	(48 - 64)	60	(50 - 71)	473	(419 - 528)
New York	7,014	(6,562 - 7,467)	537	(490 - 584)	444	(393 - 497)	6,033	(5,590 - 6,474)
North Carolina	2,938	(2,687 - 3,193)	255	(229 - 282)	222	(190 - 255)	2,461	(2,214 - 2,708)
North Dakota	216	(194 - 239)	25	(22 - 28)	23	(20 - 26)	168	(147 - 190)
Ohio	4,174	(3,928 - 4,421)	369	(341 - 397)	318	(289 - 349)	3,486	(3,245 - 3,728)
Oklahoma	1,281	(1,149 - 1,414)	127	(113 - 142)	118	(101 - 135)	1,036	(907 - 1,165)
Oregon	989	(862 - 1,122)	85	(73 - 97)	69	(57 - 84)	835	(711 - 964)
Pennsylvania	4,580	(4,301 - 4,862)	353	(325 - 382)	284	(255 - 314)	3,944	(3,667 - 4,220)
Rhode Island	321	(285 - 358)	28	(24 - 32)	16	(13 - 20)	277	(242 - 312)
South Carolina	1,554	(1,416 - 1,694)	122	(107 - 138)	132	(114 - 150)	1,300	(1,164 - 1,434)
South Dakota	266	(241 - 292)	29	(26 - 32)	23	(20 - 27)	214	(190 - 239)
Tennessee	2,335	(2,140 - 2,532)	176	(155 - 197)	179	(152 - 207)	1,980	(1,791 - 2,166)
Texas	8,171	(7,793 - 8,548)	747	(703 - 792)	833	(772 - 895)	6,591	(6,221 - 6,956)
Utah	793	(728 - 860)	113	(101 - 125)	108	(96 - 121)	572	(510 - 634)
Vermont	167	(145 - 190)	14	(12 - 17)	11	(9 - 14)	142	(121 - 164)
Virginia	2,491	(2,254 - 2,731)	223	(198 - 249)	192	(161 - 226)	2,076	(1,848 - 2,305)
Washington	1,666	(1,459 - 1,882)	153	(132 - 174)	136	(114 - 160)	1,377	(1,176 - 1,587)
West Virginia	766	(703 - 832)	56	(49 - 63)	60	(52 - 69)	650	(588 - 712)
Wisconsin	1,609	(1,428 - 1,799)	161	(141 - 182)	139	(116 - 165)	1,309	(1,134 - 1,491)
Wyoming	169	(151 - 188)	17	(15 - 20)	16	(13 - 19)	136	(119 - 153)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the weighted average of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table B.9B Percentages Reporting Perceptions of Great Risk of Smoking Marijuana Once a Month, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Total[1]	44.5		37.3		28.8		48.1	
Alabama	53.1	(48.5 - 57.6)	43.4	(38.2 - 48.7)	31.6	(27.2 - 36.2)	58.0	(52.3 - 63.6)
Alaska	31.4	(27.6 - 35.4)	32.8	(28.3 - 37.5)	18.4	(14.7 - 22.5)	33.8	(28.9 - 39.0)
Arizona	43.0	(38.1 - 47.9)	35.1	(30.6 - 39.8)	29.4	(24.6 - 34.5)	46.5	(40.2 - 52.8)
Arkansas	51.0	(46.7 - 55.3)	43.5	(38.3 - 48.7)	31.5	(27.3 - 35.9)	55.3	(49.9 - 60.7)
California	39.8	(37.2 - 42.5)	34.9	(32.8 - 37.0)	32.8	(30.2 - 35.4)	41.8	(38.3 - 45.3)
Colorado	31.6	(27.1 - 36.3)	27.0	(22.4 - 32.0)	21.2	(17.2 - 25.6)	33.9	(28.4 - 39.9)
Connecticut	43.0	(37.9 - 48.2)	28.3	(23.4 - 33.5)	21.8	(17.2 - 27.0)	47.8	(41.4 - 54.1)
Delaware	40.4	(35.9 - 45.0)	32.3	(27.8 - 37.1)	28.1	(23.8 - 32.8)	43.4	(37.8 - 49.2)
District of Columbia	45.0	(40.9 - 49.2)	39.1	(33.4 - 44.9)	26.3	(22.3 - 30.7)	48.9	(43.7 - 54.2)
Florida	48.9	(46.1 - 51.7)	43.0	(40.1 - 46.0)	33.8	(30.9 - 36.7)	51.6	(48.2 - 55.0)
Georgia	49.1	(44.7 - 53.5)	40.8	(36.8 - 44.9)	32.1	(27.5 - 36.9)	53.2	(47.7 - 58.7)
Hawaii	42.9	(38.4 - 47.4)	37.9	(33.1 - 42.9)	35.0	(29.4 - 40.8)	44.7	(39.2 - 50.3)
Idaho	42.2	(38.2 - 46.2)	39.5	(34.9 - 44.3)	30.3	(26.1 - 34.8)	45.1	(39.9 - 50.4)
Illinois	42.7	(40.0 - 45.5)	37.9	(35.1 - 40.8)	30.0	(27.4 - 32.7)	45.6	(42.2 - 49.1)
Indiana	44.0	(39.9 - 48.2)	40.4	(36.1 - 44.8)	28.3	(24.3 - 32.6)	47.2	(42.0 - 52.5)
Iowa	43.5	(39.3 - 47.8)	40.7	(36.0 - 45.5)	29.8	(25.6 - 34.3)	46.3	(41.0 - 51.7)
Kansas	41.8	(37.5 - 46.3)	36.3	(31.4 - 41.4)	28.6	(24.1 - 33.3)	45.0	(39.5 - 50.6)
Kentucky	51.3	(47.0 - 55.5)	38.9	(34.3 - 43.7)	28.5	(24.5 - 32.7)	56.8	(51.4 - 62.1)
Louisiana	54.6	(50.6 - 58.6)	41.9	(37.2 - 46.7)	31.2	(27.1 - 35.5)	61.2	(56.0 - 66.3)
Maine	40.2	(36.3 - 44.1)	35.0	(30.3 - 39.9)	20.1	(16.2 - 24.5)	43.7	(39.0 - 48.6)
Maryland	42.3	(37.8 - 46.9)	37.8	(32.9 - 42.8)	29.2	(24.6 - 34.2)	44.8	(39.2 - 50.5)
Massachusetts	39.8	(34.9 - 44.9)	29.3	(24.6 - 34.4)	16.6	(12.9 - 21.0)	44.5	(38.4 - 50.8)
Michigan	40.7	(38.1 - 43.4)	36.6	(33.7 - 39.6)	26.9	(24.1 - 29.8)	43.7	(40.3 - 47.0)
Minnesota	35.7	(31.7 - 39.9)	32.8	(28.5 - 37.4)	24.5	(20.6 - 28.7)	38.1	(32.9 - 43.5)
Mississippi	55.3	(51.3 - 59.3)	42.2	(37.5 - 47.1)	34.0	(29.7 - 38.5)	61.5	(56.2 - 66.6)
Missouri	44.8	(40.3 - 49.2)	40.8	(36.0 - 45.8)	24.8	(20.4 - 29.5)	48.7	(43.1 - 54.2)
Montana	38.7	(34.5 - 43.0)	27.8	(23.6 - 32.4)	23.5	(19.6 - 27.8)	42.8	(37.5 - 48.2)

See notes at end of table.

(continued)

Table B.9B Percentages Reporting Perceptions of Great Risk of Smoking Marijuana Once a Month, by Age Group and State: 1999

State	Total		AGE GROUP (Years)					
			12-17		18-25		26 or Older	
	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval	Estimate	Prediction Interval
Nebraska	41.3	(37.3 - 45.4)	38.1	(33.2 - 43.2)	26.4	(22.1 - 31.0)	44.5	(39.4 - 49.7)
Nevada	34.8	(30.2 - 39.5)	29.8	(25.2 - 34.7)	26.6	(21.8 - 31.9)	36.6	(31.0 - 42.5)
New Hampshire	34.4	(30.6 - 38.4)	29.9	(25.6 - 34.6)	16.2	(12.5 - 20.4)	37.7	(33.0 - 42.7)
New Jersey	45.0	(40.3 - 49.7)	33.6	(29.3 - 38.2)	24.9	(20.6 - 29.6)	49.3	(43.5 - 55.1)
New Mexico	40.3	(36.4 - 44.4)	32.2	(27.8 - 37.0)	29.1	(24.4 - 34.2)	43.8	(38.8 - 48.8)
New York	47.5	(44.4 - 50.6)	36.8	(33.6 - 40.1)	24.6	(21.8 - 27.5)	52.5	(48.6 - 56.3)
North Carolina	46.9	(42.9 - 51.0)	40.0	(36.0 - 44.2)	29.0	(24.9 - 33.4)	50.7	(45.6 - 55.7)
North Dakota	40.6	(36.5 - 44.9)	39.6	(35.0 - 44.2)	30.3	(26.1 - 34.7)	42.8	(37.4 - 48.2)
Ohio	45.1	(42.4 - 47.7)	38.6	(35.7 - 41.6)	26.6	(24.1 - 29.1)	49.1	(45.7 - 52.5)
Oklahoma	47.0	(42.2 - 51.9)	41.3	(36.6 - 46.1)	32.5	(27.9 - 37.5)	50.4	(44.2 - 56.7)
Oregon	35.5	(31.0 - 40.3)	30.6	(26.3 - 35.2)	20.0	(16.3 - 24.1)	38.6	(32.9 - 44.6)
Pennsylvania	45.4	(42.6 - 48.2)	35.9	(33.1 - 38.8)	24.2	(21.7 - 26.7)	49.7	(46.2 - 53.2)
Rhode Island	39.2	(34.8 - 43.7)	33.9	(29.1 - 38.9)	17.2	(13.6 - 21.4)	43.0	(37.6 - 48.5)
South Carolina	50.2	(45.8 - 54.7)	37.9	(33.2 - 42.8)	34.4	(29.8 - 39.2)	54.4	(48.8 - 60.0)
South Dakota	43.5	(39.4 - 47.7)	39.0	(34.7 - 43.4)	27.0	(22.9 - 31.5)	47.4	(42.0 - 52.8)
Tennessee	50.9	(46.6 - 55.2)	38.3	(33.8 - 42.9)	30.4	(25.9 - 35.2)	55.9	(50.5 - 61.1)
Texas	51.7	(49.3 - 54.1)	40.1	(37.7 - 42.5)	36.1	(33.4 - 38.8)	56.7	(53.5 - 59.8)
Utah	47.4	(43.5 - 51.3)	45.7	(41.0 - 50.5)	34.4	(30.4 - 38.5)	51.4	(45.8 - 56.9)
Vermont	33.0	(28.7 - 37.4)	25.8	(21.3 - 30.7)	18.4	(14.4 - 22.9)	36.2	(30.9 - 41.9)
Virginia	44.6	(40.4 - 48.9)	40.3	(35.7 - 44.9)	28.2	(23.6 - 33.1)	47.8	(42.5 - 53.0)
Washington	35.4	(31.0 - 40.0)	31.4	(27.1 - 35.8)	23.1	(19.3 - 27.2)	37.9	(32.4 - 43.7)
West Virginia	49.5	(45.3 - 53.6)	39.0	(34.1 - 44.2)	30.4	(26.2 - 34.9)	53.7	(48.6 - 58.9)
Wisconsin	37.1	(32.9 - 41.4)	33.6	(29.5 - 38.0)	24.2	(20.2 - 28.5)	39.9	(34.5 - 45.4)
Wyoming	40.5	(36.2 - 44.9)	35.0	(30.8 - 39.4)	26.5	(22.3 - 31.0)	44.1	(38.5 - 49.8)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

[1] This estimate is the sum of the hierarchical Bayes estimates across all states and the District of Columbia, and typically is not equal to the direct sample weighted estimate for the nation.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Appendix C: Sample-Based Estimates

Appendix C: Sample-Based Estimates

In this report, the State estimates include both model-based estimates and sample-based estimates. The tables in this appendix represent sample-based estimates, which were restricted to scales and other continuous data that resulted in more precise estimates than questions having only "yes" or "no" answers. Still, the smaller sample sizes in the 42 States and the District of Columbia and the wide range of responses for some of the variables sometimes resulted in sample-based estimates with sizable sampling errors. Therefore, it is important to use the 95 percent confidence interval associated with each State sample-based estimate when making inferences about it.

The sample-based estimates in the average age at first use tables (Tables C.1, C.3, C.5, C.12, C.16, C.17, C.18) are based on special considerations. Specifically, when estimating the average age at first use, using only those who were 12 to 17 in 1999 was also considered because their earlier behavior would have a more direct bearing on their current use. However, there was concern that, for some youths, the age at first use might have occurred as early as 1990 or as late as 1999, and thus not present a summary of more "recent" experience. In addition, given the small age span, there is little differentiation in the average age at first use, which makes it difficult to analyze differences in the patterns in different subgroups. For example, in 1999, the average ages at first use among youths aged 12 to 17 were 12.3 years for cigarettes, 12.9 years for alcohol, and 13.6 years for marijuana (data not shown in tables). Even if the measures were limited to youths aged 12 to 17, the true average age at first use among all youths (i.e., persons aged 0 to 17) would be significantly underestimated for cigarettes and alcohol because significant numbers of youths aged 10 and 11 initiate alcohol or cigarettes. For these reasons, the summary was limited to relatively "recent" initiation in the years 1995 to 1997, even though it would be less directly related to "explaining" current use among youths.

Table C.1 Average Age at First Alcohol Use Among Persons Reporting First Use of Alcohol at Age 25 or Younger in 1995 to 1997, by State: 1999

State	Average Age	95% C.I.	State	Average Age	95% C.I.
National	15.7	(15.6 -15.8)	Missouri	15.6	(14.6 -16.6)
Alabama	15.6	(14.8 -16.3)	Montana	14.8	(14.5 -15.1)
Alaska	15.3	(14.7 -15.8)	Nebraska	15.6	(15.0 -16.2)
Arizona	15.1	(14.3 -15.8)	Nevada	15.1	(14.4 -15.8)
Arkansas	15.5	(14.8 -16.2)	New Hampshire	15.5	(14.6 -16.5)
California	15.7	(15.5 -16.0)	New Jersey	15.9	(15.4 -16.4)
Colorado	15.1	(14.5 -15.6)	New Mexico	15.8	(15.1 -16.4)
Connecticut	15.6	(14.6 -16.5)	New York	15.5	(15.1 -16.0)
Delaware	15.6	(15.0 -16.1)	North Carolina	15.7	(15.3 -16.2)
District of Columbia	16.5	(15.3 -17.7)	North Dakota	15.1	(14.4 -15.8)
Florida	15.9	(15.5 -16.3)	Ohio	15.5	(15.3 -15.8)
Georgia	16.0	(15.4 -16.6)	Oklahoma	15.1	(14.3 -15.9)
Hawaii	15.4	(14.8 -16.1)	Oregon	15.3	(14.6 -16.1)
Idaho	15.7	(15.3 -16.1)	Pennsylvania	15.8	(15.5 -16.1)
Illinois	15.8	(15.4 -16.2)	Rhode Island	14.9	(14.3 -15.4)
Indiana	16.2	(15.8 -16.6)	South Carolina	16.2	(15.4 -17.0)
Iowa	15.8	(15.0 -16.5)	South Dakota	15.1	(14.7 -15.4)
Kansas	15.4	(14.8 -16.0)	Tennessee	16.0	(15.5 -16.5)
Kentucky	15.7	(15.3 -16.1)	Texas	15.8	(15.5 -16.1)
Louisiana	15.5	(14.7 -16.2)	Utah	15.7	(15.1 -16.3)
Maine	15.6	(15.0 -16.2)	Vermont	15.0	(14.5 -15.5)
Maryland	15.7	(14.7 -16.7)	Virginia	16.0	(15.5 -16.6)
Massachusetts	15.6	(15.1 -16.2)	Washington	15.4	(14.7 -16.2)
Michigan	15.7	(15.4 -16.0)	West Virginia	15.6	(15.1 -16.2)
Minnesota	15.6	(15.2 -16.0)	Wisconsin	15.4	(15.0 -15.7)
Mississippi	16.3	(15.8 -16.8)	Wyoming	15.2	(14.3 -16.1)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.2 Average Scale Scores of Alcohol Dependence Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	0.58	(0.56 -0.60)	Missouri	0.54	(0.39 -0.70)
Alabama	0.47	(0.32 -0.62)	Montana	0.84	(0.68 -1.00)
Alaska	0.65	(0.50 -0.80)	Nebraska	0.58	(0.44 -0.73)
Arizona	0.76	(0.58 -0.94)	Nevada	0.73	(0.56 -0.89)
Arkansas	0.61	(0.48 -0.74)	New Hampshire	0.59	(0.45 -0.74)
California	0.56	(0.50 -0.63)	New Jersey	0.60	(0.44 -0.76)
Colorado	0.70	(0.54 -0.87)	New Mexico	0.67	(0.48 -0.87)
Connecticut	0.72	(0.52 -0.93)	New York	0.61	(0.49 -0.72)
Delaware	0.73	(0.52 -0.95)	North Carolina	0.47	(0.34 -0.60)
District of Columbia	0.50	(0.17 -0.84)	North Dakota	0.96	(0.74 -1.17)
Florida	0.44	(0.37 -0.51)	Ohio	0.54	(0.47 -0.61)
Georgia	0.49	(0.41 -0.58)	Oklahoma	0.53	(0.38 -0.68)
Hawaii	0.55	(0.37 -0.74)	Oregon	0.60	(0.43 -0.77)
Idaho	0.53	(0.42 -0.64)	Pennsylvania	0.54	(0.47 -0.61)
Illinois	0.61	(0.53 -0.69)	Rhode Island	0.56	(0.40 -0.71)
Indiana	0.56	(0.46 -0.66)	South Carolina	0.55	(0.39 -0.72)
Iowa	0.73	(0.61 -0.84)	South Dakota	0.80	(0.62 -0.99)
Kansas	0.52	(0.36 -0.67)	Tennessee	0.40	(0.29 -0.52)
Kentucky	0.54	(0.43 -0.66)	Texas	0.59	(0.52 -0.66)
Louisiana	0.60	(0.41 -0.78)	Utah	0.37	(0.24 -0.49)
Maine	0.54	(0.39 -0.69)	Vermont	0.60	(0.46 -0.73)
Maryland	0.64	(0.48 -0.80)	Virginia	0.46	(0.32 -0.60)
Massachusetts	0.78	(0.60 -0.96)	Washington	0.57	(0.43 -0.71)
Michigan	0.55	(0.49 -0.61)	West Virginia	0.62	(0.45 -0.78)
Minnesota	0.63	(0.45 -0.80)	Wisconsin	0.76	(0.60 -0.92)
Mississippi	0.66	(0.51 -0.81)	Wyoming	0.77	(0.63 -0.91)

*Low precision; no estimate reported.

NOTE: A respondent who answered "Yes" to three or more of the seven alcohol criteria for dependence listed in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) would be considered alcohol dependent. Respondents were assigned a score of 1 if they answered "no" to all seven questions, and a score of 8 if they answered "yes" to all the questions. A respondent who has not used alcohol in the past year was assigned a score of zero.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.3 Average Age at First Cigarette Use Among Persons Reporting First Use of Cigarettes at Age 25 or Younger in 1995 to 1997, by State: 1999

State	Average Age	95% C.I.	State	Average Age	95% C.I.
National	15.0	(14.9 -15.1)	Missouri	15.2	(14.5 -15.9)
Alabama	15.0	(14.1 -15.9)	Montana	14.4	(13.8 -14.9)
Alaska	14.4	(13.7 -15.1)	Nebraska	15.4	(14.7 -16.0)
Arizona	14.4	(13.5 -15.3)	Nevada	14.1	(13.3 -14.9)
Arkansas	15.2	(13.7 -16.8)	New Hampshire	16.6	(15.3 -18.0)
California	15.4	(15.1 -15.8)	New Jersey	15.3	(14.7 -15.8)
Colorado	14.2	(13.5 -15.0)	New Mexico	14.8	(14.3 -15.3)
Connecticut	15.2	(14.0 -16.4)	New York	15.5	(14.9 -16.1)
Delaware	14.4	(13.8 -14.9)	North Carolina	14.8	(13.9 -15.7)
District of Columbia	16.0	(15.2 -16.8)	North Dakota	15.2	(14.4 -15.9)
Florida	14.9	(14.5 -15.2)	Ohio	15.3	(14.9 -15.6)
Georgia	14.7	(14.0 -15.4)	Oklahoma	14.8	(13.7 -15.9)
Hawaii	15.5	(14.1 -16.8)	Oregon	14.7	(13.3 -16.0)
Idaho	14.5	(13.9 -15.2)	Pennsylvania	14.7	(14.4 -15.1)
Illinois	15.2	(14.9 -15.6)	Rhode Island	14.2	(13.4 -15.0)
Indiana	15.0	(14.2 -15.9)	South Carolina	15.0	(14.0 -16.0)
Iowa	15.3	(14.6 -16.1)	South Dakota	15.3	(14.1 -16.5)
Kansas	15.4	(14.5 -16.3)	Tennessee	14.9	(14.4 -15.5)
Kentucky	14.2	(13.6 -14.8)	Texas	15.0	(14.7 -15.3)
Louisiana	15.0	(13.9 -16.1)	Utah	15.3	(14.2 -16.3)
Maine	15.1	(14.4 -15.8)	Vermont	14.9	(14.0 -15.9)
Maryland	14.7	(13.8 -15.7)	Virginia	14.8	(14.2 -15.5)
Massachusetts	14.6	(14.1 -15.1)	Washington	15.1	(13.9 -16.3)
Michigan	15.0	(14.5 -15.5)	West Virginia	15.1	(14.7 -15.6)
Minnesota	14.8	(14.1 -15.4)	Wisconsin	14.8	(14.3 -15.3)
Mississippi	14.6	(13.8 -15.4)	Wyoming	14.5	(13.9 -15.2)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.4 Average Scale Scores of Cigarette Dependence Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	0.56	(0.54 -0.58)	Missouri	0.59	(0.39 -0.78)
Alabama	0.58	(0.35 -0.80)	Montana	0.84	(0.65 -1.02)
Alaska	0.64	(0.45 -0.83)	Nebraska	0.53	(0.38 -0.68)
Arizona	0.60	(0.40 -0.81)	Nevada	0.63	(0.35 -0.92)
Arkansas	0.80	(0.56 -1.04)	New Hampshire	0.51	(0.33 -0.69)
California	0.36	(0.32 -0.41)	New Jersey	0.46	(0.34 -0.58)
Colorado	0.66	(0.44 -0.88)	New Mexico	0.65	(0.38 -0.91)
Connecticut	0.54	(0.33 -0.76)	New York	0.46	(0.34 -0.57)
Delaware	0.93	(0.64 -1.22)	North Carolina	0.71	(0.44 -0.98)
District of Columbia	0.31	(0.12 -0.51)	North Dakota	0.87	(0.75 -0.99)
Florida	0.39	(0.31 -0.47)	Ohio	0.65	(0.55 -0.75)
Georgia	0.64	(0.50 -0.78)	Oklahoma	0.68	(0.51 -0.85)
Hawaii	0.54	(0.30 -0.78)	Oregon	0.57	(0.35 -0.79)
Idaho	0.48	(0.31 -0.65)	Pennsylvania	0.63	(0.52 -0.74)
Illinois	0.62	(0.54 -0.69)	Rhode Island	0.52	(0.28 -0.75)
Indiana	0.58	(0.40 -0.77)	South Carolina	0.77	(0.54 -1.00)
Iowa	0.74	(0.53 -0.94)	South Dakota	0.65	(0.49 -0.82)
Kansas	0.54	(0.35 -0.72)	Tennessee	0.53	(0.41 -0.66)
Kentucky	0.82	(0.56 -1.07)	Texas	0.50	(0.44 -0.56)
Louisiana	0.71	(0.52 -0.90)	Utah	0.38	(0.23 -0.52)
Maine	0.65	(0.47 -0.83)	Vermont	0.58	(0.39 -0.78)
Maryland	0.65	(0.48 -0.82)	Virginia	0.50	(0.33 -0.68)
Massachusetts	0.74	(0.54 -0.94)	Washington	0.54	(0.36 -0.73)
Michigan	0.57	(0.48 -0.66)	West Virginia	0.91	(0.63 -1.19)
Minnesota	0.78	(0.48 -1.08)	Wisconsin	0.61	(0.48 -0.75)
Mississippi	0.79	(0.57 -1.01)	Wyoming	0.61	(0.48 -0.73)

*Low precision; no estimate reported.

NOTE: A respondent who answered "Yes" to three or more of the seven cigarette criteria for dependence listed in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) would be considered cigarette dependent. Respondents were assigned a score of 1 if they answered "no" to all seven questions, and a score of 8 if they answered “yes” to all the questions. A respondent who has not used cigarettes in the past year was assigned a score of zero.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.5 Average Age at First Marijuana Use Among Persons Reporting First Use of Marijuana at Age 25 or Younger in 1995 to 1997, by State: 1999

State	Average Age	95% C.I.	State	Average Age	95% C.I.
National	16.2	(16.1 -16.4)	Missouri	16.2	(15.3 -17.0)
Alabama	16.6	(15.6 -17.6)	Montana	15.1	(14.5 -15.7)
Alaska	16.0	(14.8 -17.2)	Nebraska	16.1	(15.0 -17.1)
Arizona	15.3	(14.4 -16.2)	Nevada	15.1	(14.3 -15.8)
Arkansas	15.9	(15.4 -16.4)	New Hampshire	16.5	(14.7 -18.2)
California	16.1	(15.8 -16.4)	New Jersey	16.9	(16.0 -17.7)
Colorado	15.9	(15.2 -16.6)	New Mexico	15.9	(15.1 -16.7)
Connecticut	16.8	(15.1 -18.6)	New York	16.7	(16.1 -17.3)
Delaware	16.2	(15.2 -17.1)	North Carolina	16.1	(15.6 -16.7)
District of Columbia	16.4	(15.0 -17.8)	North Dakota	16.9	(16.0 -17.7)
Florida	16.1	(15.6 -16.6)	Ohio	16.6	(16.2 -17.0)
Georgia	15.8	(15.1 -16.6)	Oklahoma	15.9	(14.9 -16.8)
Hawaii	16.5	(14.7 -18.4)	Oregon	16.0	(14.8 -17.2)
Idaho	16.7	(15.8 -17.6)	Pennsylvania	16.6	(16.2 -16.9)
Illinois	15.7	(15.4 -16.0)	Rhode Island	16.3	(15.1 -17.5)
Indiana	16.3	(15.7 -17.0)	South Carolina	16.0	(15.1 -16.8)
Iowa	16.9	(16.2 -17.7)	South Dakota	16.8	(15.5 -18.1)
Kansas	15.7	(15.0 -16.5)	Tennessee	16.9	(15.3 -18.4)
Kentucky	16.5	(15.8 -17.2)	Texas	16.1	(15.8 -16.5)
Louisiana	16.0	(15.2 -16.9)	Utah	15.6	(15.0 -16.2)
Maine	17.1	(15.5 -18.7)	Vermont	16.7	(15.1 -18.2)
Maryland	16.0	(14.9 -17.1)	Virginia	16.5	(15.4 -17.6)
Massachusetts	16.2	(15.2 -17.2)	Washington	15.8	(15.3 -16.3)
Michigan	16.6	(16.0 -17.2)	West Virginia	16.3	(15.5 -17.1)
Minnesota	15.6	(15.0 -16.2)	Wisconsin	16.6	(15.4 -17.7)
Mississippi	16.8	(16.1 -17.5)	Wyoming	15.9	(15.2 -16.6)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.6 Average Scale Scores of Marijuana Dependence Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	0.30	(0.29 -0.32)	Missouri	0.23	(0.14 -0.32)
Alabama	0.20	(0.09 -0.30)	Montana	0.53	(0.34 -0.72)
Alaska	0.38	(0.28 -0.47)	Nebraska	0.12	(0.09 -0.16)
Arizona	0.37	(0.20 -0.54)	Nevada	0.41	(0.22 -0.60)
Arkansas	0.36	(0.20 -0.52)	New Hampshire	0.29	(0.18 -0.39)
California	0.36	(0.30 -0.42)	New Jersey	0.29	(0.19 -0.39)
Colorado	0.33	(0.21 -0.45)	New Mexico	0.51	(0.31 -0.70)
Connecticut	0.38	(0.17 -0.59)	New York	0.27	(0.19 -0.36)
Delaware	0.57	(0.39 -0.74)	North Carolina	0.32	(0.20 -0.43)
District of Columbia	0.32	(0.06 -0.58)	North Dakota	0.38	(0.20 -0.56)
Florida	0.21	(0.15 -0.28)	Ohio	0.24	(0.20 -0.29)
Georgia	0.25	(0.15 -0.34)	Oklahoma	0.23	(0.15 -0.31)
Hawaii	0.34	(0.21 -0.47)	Oregon	0.38	(0.24 -0.52)
Idaho	0.15	(0.08 -0.22)	Pennsylvania	0.26	(0.18 -0.34)
Illinois	0.32	(0.25 -0.39)	Rhode Island	0.36	(0.21 -0.51)
Indiana	0.24	(0.13 -0.35)	South Carolina	0.30	(0.16 -0.44)
Iowa	0.27	(0.10 -0.43)	South Dakota	0.28	(0.15 -0.41)
Kansas	0.24	(0.06 -0.41)	Tennessee	0.21	(0.12 -0.30)
Kentucky	0.29	(0.14 -0.43)	Texas	0.27	(0.22 -0.33)
Louisiana	0.35	(0.21 -0.50)	Utah	0.23	(0.15 -0.30)
Maine	0.29	(0.20 -0.38)	Vermont	0.46	(0.29 -0.63)
Maryland	0.32	(0.22 -0.42)	Virginia	0.24	(0.17 -0.31)
Massachusetts	0.50	(0.35 -0.65)	Washington	0.36	(0.21 -0.50)
Michigan	0.33	(0.26 -0.39)	West Virginia	0.34	(0.15 -0.53)
Minnesota	0.34	(0.15 -0.54)	Wisconsin	0.36	(0.24 -0.47)
Mississippi	0.33	(0.21 -0.44)	Wyoming	0.31	(0.17 -0.45)

*Low precision; no estimate reported.

NOTE: A respondent who answered "Yes" to three or more of the seven marijuana criteria for dependence listed in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) would be considered marijuana dependent. Respondents were assigned a score of 1 if they answered "no" to all seven questions, and a score of 8 if they answered “yes” to all the questions. A respondent who has not used marijuana in the past year was assigned a score of zero.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.7 Average Scale Scores of Difficulty Obtaining Marijuana Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	3.41	(3.39 -3.44)	Missouri	3.49	(3.29 -3.68)
Alabama	3.33	(2.98 -3.68)	Montana	3.47	(3.25 -3.68)
Alaska	3.49	(3.30 -3.67)	Nebraska	3.17	(2.93 -3.40)
Arizona	3.49	(3.25 -3.72)	Nevada	3.67	(3.52 -3.82)
Arkansas	3.45	(3.28 -3.61)	New Hampshire	3.48	(3.23 -3.74)
California	3.34	(3.27 -3.41)	New Jersey	3.34	(3.21 -3.48)
Colorado	3.70	(3.53 -3.87)	New Mexico	3.59	(3.37 -3.81)
Connecticut	3.60	(3.45 -3.75)	New York	3.45	(3.31 -3.59)
Delaware	3.70	(3.45 -3.95)	North Carolina	3.28	(3.08 -3.47)
District of Columbia	3.18	(2.85 -3.50)	North Dakota	3.24	(3.01 -3.47)
Florida	3.21	(3.12 -3.31)	Ohio	3.46	(3.35 -3.57)
Georgia	3.42	(3.24 -3.60)	Oklahoma	3.35	(3.01 -3.69)
Hawaii	3.27	(3.12 -3.42)	Oregon	3.43	(3.15 -3.70)
Idaho	3.34	(3.18 -3.50)	Pennsylvania	3.39	(3.28 -3.49)
Illinois	3.57	(3.47 -3.68)	Rhode Island	3.42	(3.12 -3.72)
Indiana	3.59	(3.44 -3.73)	South Carolina	3.43	(3.28 -3.59)
Iowa	3.38	(3.24 -3.52)	South Dakota	3.09	(2.88 -3.31)
Kansas	3.29	(3.13 -3.46)	Tennessee	3.34	(3.07 -3.62)
Kentucky	3.65	(3.48 -3.81)	Texas	3.30	(3.20 -3.40)
Louisiana	3.44	(3.28 -3.61)	Utah	3.17	(3.00 -3.35)
Maine	3.41	(3.17 -3.64)	Vermont	3.54	(3.37 -3.70)
Maryland	3.55	(3.35 -3.75)	Virginia	3.36	(3.21 -3.52)
Massachusetts	3.53	(3.30 -3.76)	Washington	3.52	(3.36 -3.69)
Michigan	3.46	(3.37 -3.56)	West Virginia	3.56	(3.38 -3.75)
Minnesota	3.55	(3.36 -3.73)	Wisconsin	3.44	(3.24 -3.64)
Mississippi	3.41	(3.24 -3.58)	Wyoming	3.48	(3.32 -3.64)

*Low precision; no estimate reported.

NOTE: A scale score of 5 reflects that a respondent reported that it would be very easy to obtain marijuana if they wanted to get some, whereas a scale score of 1 implies it would be probably impossible.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.8 Average Scale Scores of Antisocial Behavior-Delinquency Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	1.15	(1.14 -1.15)	Missouri	1.15	(1.11 -1.19)
Alabama	1.14	(1.08 -1.19)	Montana	1.19	(1.16 -1.22)
Alaska	1.18	(1.12 -1.23)	Nebraska	1.10	(1.07 -1.14)
Arizona	1.19	(1.15 -1.23)	Nevada	1.15	(1.12 -1.19)
Arkansas	1.13	(1.10 -1.16)	New Hampshire	1.12	(1.07 -1.16)
California	1.14	(1.12 -1.16)	New Jersey	1.12	(1.10 -1.13)
Colorado	1.15	(1.10 -1.21)	New Mexico	1.19	(1.12 -1.26)
Connecticut	1.16	(1.09 -1.24)	New York	1.14	(1.12 -1.17)
Delaware	1.21	(1.11 -1.31)	North Carolina	1.14	(1.11 -1.17)
District of Columbia	1.15	(1.09 -1.22)	North Dakota	1.16	(1.10 -1.21)
Florida	1.15	(1.12 -1.18)	Ohio	1.14	(1.11 -1.16)
Georgia	1.12	(1.09 -1.15)	Oklahoma	1.13	(1.10 -1.16)
Hawaii	1.16	(1.11 -1.20)	Oregon	1.16	(1.08 -1.24)
Idaho	1.13	(1.09 -1.16)	Pennsylvania	1.13	(1.11 -1.15)
Illinois	1.16	(1.13 -1.19)	Rhode Island	1.18	(1.12 -1.25)
Indiana	1.11	(1.09 -1.14)	South Carolina	1.16	(1.12 -1.21)
Iowa	1.18	(1.12 -1.23)	South Dakota	1.13	(1.09 -1.17)
Kansas	1.15	(1.08 -1.22)	Tennessee	1.12	(1.08 -1.17)
Kentucky	1.18	(1.12 -1.23)	Texas	1.15	(1.13 -1.16)
Louisiana	1.20	(1.13 -1.27)	Utah	1.15	(1.11 -1.20)
Maine	1.14	(1.08 -1.19)	Vermont	1.14	(1.11 -1.17)
Maryland	1.16	(1.11 -1.21)	Virginia	1.11	(1.07 -1.14)
Massachusetts	1.17	(1.14 -1.20)	Washington	1.16	(1.11 -1.20)
Michigan	1.15	(1.12 -1.17)	West Virginia	1.16	(1.12 -1.19)
Minnesota	1.19	(1.10 -1.28)	Wisconsin	1.10	(1.07 -1.13)
Mississippi	1.17	(1.12 -1.21)	Wyoming	1.20	(1.15 -1.24)

*Low precision; no estimate reported.

NOTE: A scale score of 5 indicates a respondent participated in antisocial or delinquent actions in the past year, whereas a scale score of 1 reflects no such actions.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.9 Average Scale Scores of Favorable Attitudes Toward Substance Use Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	1.55	(1.54 -1.57)	Missouri	1.58	(1.46 -1.69)
Alabama	1.42	(1.30 -1.55)	Montana	1.62	(1.54 -1.70)
Alaska	1.53	(1.41 -1.65)	Nebraska	1.52	(1.42 -1.63)
Arizona	1.53	(1.40 -1.66)	Nevada	1.65	(1.54 -1.75)
Arkansas	1.58	(1.47 -1.68)	New Hampshire	1.46	(1.36 -1.55)
California	1.54	(1.51 -1.57)	New Jersey	1.54	(1.46 -1.62)
Colorado	1.70	(1.57 -1.83)	New Mexico	1.58	(1.48 -1.68)
Connecticut	1.63	(1.54 -1.72)	New York	1.56	(1.50 -1.62)
Delaware	1.73	(1.65 -1.81)	North Carolina	1.61	(1.49 -1.74)
District of Columbia	1.56	(1.39 -1.74)	North Dakota	1.62	(1.54 -1.71)
Florida	1.53	(1.48 -1.57)	Ohio	1.53	(1.48 -1.57)
Georgia	1.51	(1.43 -1.58)	Oklahoma	1.58	(1.47 -1.70)
Hawaii	1.52	(1.42 -1.62)	Oregon	1.51	(1.40 -1.63)
Idaho	1.41	(1.33 -1.49)	Pennsylvania	1.58	(1.53 -1.62)
Illinois	1.58	(1.53 -1.63)	Rhode Island	1.58	(1.46 -1.71)
Indiana	1.56	(1.46 -1.67)	South Carolina	1.65	(1.53 -1.77)
Iowa	1.59	(1.44 -1.73)	South Dakota	1.55	(1.45 -1.64)
Kansas	1.53	(1.39 -1.67)	Tennessee	1.56	(1.44 -1.67)
Kentucky	1.63	(1.53 -1.73)	Texas	1.53	(1.49 -1.57)
Louisiana	1.57	(1.46 -1.68)	Utah	1.30	(1.23 -1.37)
Maine	1.53	(1.40 -1.66)	Vermont	1.54	(1.48 -1.61)
Maryland	1.61	(1.53 -1.69)	Virginia	1.58	(1.50 -1.66)
Massachusetts	1.57	(1.48 -1.66)	Washington	1.53	(1.48 -1.58)
Michigan	1.54	(1.48 -1.60)	West Virginia	1.63	(1.51 -1.75)
Minnesota	1.61	(1.52 -1.70)	Wisconsin	1.58	(1.49 -1.67)
Mississippi	1.58	(1.47 -1.69)	Wyoming	1.59	(1.53 -1.65)

*Low precision; no estimate reported.

NOTE: A scale score of 1 indicates a respondent strongly disapproves of substance use, a score of 2 indicates a respondent somewhat disapproves of substance use, and a score of 3 indicates a respondent neither approves nor disapproves of substance use.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.10 Average Scale Scores of Peer Attitudes Toward Substance Use Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	1.61	(1.60 -1.62)	Missouri	1.62	(1.50 -1.74)
Alabama	1.52	(1.40 -1.63)	Montana	1.66	(1.54 -1.78)
Alaska	1.59	(1.46 -1.71)	Nebraska	1.51	(1.40 -1.62)
Arizona	1.61	(1.48 -1.74)	Nevada	1.64	(1.55 -1.73)
Arkansas	1.64	(1.55 -1.74)	New Hampshire	1.55	(1.46 -1.64)
California	1.55	(1.52 -1.58)	New Jersey	1.54	(1.47 -1.62)
Colorado	1.78	(1.67 -1.89)	New Mexico	1.73	(1.60 -1.86)
Connecticut	1.60	(1.51 -1.68)	New York	1.62	(1.54 -1.69)
Delaware	1.73	(1.63 -1.82)	North Carolina	1.69	(1.59 -1.79)
District of Columbia	1.58	(1.40 -1.77)	North Dakota	1.75	(1.66 -1.84)
Florida	1.54	(1.49 -1.59)	Ohio	1.60	(1.56 -1.64)
Georgia	1.59	(1.51 -1.68)	Oklahoma	1.58	(1.50 -1.65)
Hawaii	1.55	(1.45 -1.65)	Oregon	1.56	(1.42 -1.69)
Idaho	1.43	(1.35 -1.51)	Pennsylvania	1.63	(1.57 -1.68)
Illinois	1.66	(1.61 -1.71)	Rhode Island	1.63	(1.51 -1.74)
Indiana	1.66	(1.56 -1.76)	South Carolina	1.75	(1.65 -1.85)
Iowa	1.59	(1.46 -1.72)	South Dakota	1.59	(1.50 -1.69)
Kansas	1.62	(1.47 -1.77)	Tennessee	1.64	(1.52 -1.76)
Kentucky	1.75	(1.65 -1.85)	Texas	1.58	(1.54 -1.62)
Louisiana	1.70	(1.61 -1.80)	Utah	1.34	(1.29 -1.40)
Maine	1.62	(1.50 -1.75)	Vermont	1.65	(1.57 -1.73)
Maryland	1.71	(1.59 -1.82)	Virginia	1.63	(1.55 -1.71)
Massachusetts	1.60	(1.47 -1.72)	Washington	1.61	(1.52 -1.70)
Michigan	1.62	(1.57 -1.68)	West Virginia	1.77	(1.68 -1.86)
Minnesota	1.66	(1.55 -1.77)	Wisconsin	1.63	(1.52 -1.73)
Mississippi	1.69	(1.58 -1.80)	Wyoming	1.57	(1.50 -1.65)

*Low precision; no estimate reported.

NOTE: A scale score of 1 indicates a peer attitude of strongly disapprove towards substance use, a score of 2 indicates a somewhat disapprove peer attitude, and a score of 3 indicates neither an approve nor disapprove peer attitude.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.11 Average Scale Scores of Peer Substance Use Among Persons Aged 12 to 17, by State: 1999

State	Average Score	95% C.I.	State	Average Score	95% C.I.
National	1.69	(1.68 -1.70)	Missouri	1.66	(1.61 -1.72)
Alabama	1.61	(1.50 -1.73)	Montana	1.79	(1.68 -1.89)
Alaska	1.72	(1.60 -1.84)	Nebraska	1.67	(1.59 -1.75)
Arizona	1.76	(1.64 -1.89)	Nevada	1.79	(1.70 -1.88)
Arkansas	1.69	(1.63 -1.76)	New Hampshire	1.67	(1.55 -1.78)
California	1.63	(1.60 -1.66)	New Jersey	1.65	(1.57 -1.73)
Colorado	1.80	(1.70 -1.91)	New Mexico	1.84	(1.72 -1.96)
Connecticut	1.74	(1.63 -1.85)	New York	1.70	(1.63 -1.77)
Delaware	1.84	(1.76 -1.93)	North Carolina	1.69	(1.62 -1.75)
District of Columbia	1.51	(1.35 -1.66)	North Dakota	1.77	(1.69 -1.86)
Florida	1.60	(1.55 -1.65)	Ohio	1.69	(1.64 -1.73)
Georgia	1.68	(1.63 -1.73)	Oklahoma	1.65	(1.58 -1.72)
Hawaii	1.71	(1.59 -1.82)	Oregon	1.61	(1.50 -1.72)
Idaho	1.60	(1.51 -1.68)	Pennsylvania	1.69	(1.64 -1.74)
Illinois	1.73	(1.68 -1.78)	Rhode Island	1.69	(1.59 -1.79)
Indiana	1.67	(1.54 -1.79)	South Carolina	1.73	(1.60 -1.85)
Iowa	1.71	(1.65 -1.77)	South Dakota	1.79	(1.64 -1.94)
Kansas	1.72	(1.63 -1.80)	Tennessee	1.72	(1.61 -1.83)
Kentucky	1.78	(1.67 -1.89)	Texas	1.68	(1.64 -1.72)
Louisiana	1.78	(1.69 -1.88)	Utah	1.46	(1.39 -1.53)
Maine	1.69	(1.60 -1.78)	Vermont	1.69	(1.61 -1.77)
Maryland	1.72	(1.63 -1.80)	Virginia	1.67	(1.59 -1.75)
Massachusetts	1.77	(1.66 -1.88)	Washington	1.70	(1.61 -1.79)
Michigan	1.68	(1.63 -1.73)	West Virginia	1.88	(1.79 -1.96)
Minnesota	1.74	(1.62 -1.85)	Wisconsin	1.74	(1.67 -1.81)
Mississippi	1.77	(1.68 -1.86)	Wyoming	1.72	(1.63 -1.80)

*Low precision; no estimate reported.

NOTE: A scale score of 4 indicates that a respondent reported substance use by all of their friends , whereas a score of 1 indicates that a respondent reported substance use by none of their friends.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.12 Average Age at First Use for Cigarettes, Alcohol, and Marijuana Among Persons Reporting Initiation at Age 25 or Younger in 1995 to 1997, by State: 1999

State	FIRST USED CIGARETTES[1]		FIRST USED ALCOHOL[2]		FIRST USED MARIJUANA[3]	
	Average Age	95% C.I.	Average Age	95% C.I.	Average Age	95% C.I.
National	15.0	(14.9 -15.1)	15.7	(15.6 -15.8)	16.2	(16.1 -16.4)
Alabama	15.0	(14.1 -15.9)	15.6	(14.8 -16.3)	16.6	(15.6 -17.6)
Alaska	14.4	(13.7 -15.1)	15.3	(14.7 -15.8)	16.0	(14.8 -17.2)
Arizona	14.4	(13.5 -15.3)	15.1	(14.3 -15.8)	15.3	(14.4 -16.2)
Arkansas	15.2	(13.7 -16.8)	15.5	(14.8 -16.2)	15.9	(15.4 -16.4)
California	15.4	(15.1 -15.8)	15.7	(15.5 -16.0)	16.1	(15.8 -16.4)
Colorado	14.2	(13.5 -15.0)	15.1	(14.5 -15.6)	15.9	(15.2 -16.6)
Connecticut	15.2	(14.0 -16.4)	15.6	(14.6 -16.5)	16.8	(15.1 -18.6)
Delaware	14.4	(13.8 -14.9)	15.6	(15.0 -16.1)	16.2	(15.2 -17.1)
District of Columbia	16.0	(15.2 -16.8)	16.5	(15.3 -17.7)	16.4	(15.0 -17.8)
Florida	14.9	(14.5 -15.2)	15.9	(15.5 -16.3)	16.1	(15.6 -16.6)
Georgia	14.7	(14.0 -15.4)	16.0	(15.4 -16.6)	15.8	(15.1 -16.6)
Hawaii	15.5	(14.1 -16.8)	15.4	(14.8 -16.1)	16.5	(14.7 -18.4)
Idaho	14.5	(13.9 -15.2)	15.7	(15.3 -16.1)	16.7	(15.8 -17.6)
Illinois	15.2	(14.9 -15.6)	15.8	(15.4 -16.2)	15.7	(15.4 -16.0)
Indiana	15.0	(14.2 -15.9)	16.2	(15.8 -16.6)	16.3	(15.7 -17.0)
Iowa	15.3	(14.6 -16.1)	15.8	(15.0 -16.5)	16.9	(16.2 -17.7)
Kansas	15.4	(14.5 -16.3)	15.4	(14.8 -16.0)	15.7	(15.0 -16.5)
Kentucky	14.2	(13.6 -14.8)	15.7	(15.3 -16.1)	16.5	(15.8 -17.2)
Louisiana	15.0	(13.9 -16.1)	15.5	(14.7 -16.2)	16.0	(15.2 -16.9)
Maine	15.1	(14.4 -15.8)	15.6	(15.0 -16.2)	17.1	(15.5 -18.7)
Maryland	14.7	(13.8 -15.7)	15.7	(14.7 -16.7)	16.0	(14.9 -17.1)
Massachusetts	14.6	(14.1 -15.1)	15.6	(15.1 -16.2)	16.2	(15.2 -17.2)
Michigan	15.0	(14.5 -15.5)	15.7	(15.4 -16.0)	16.6	(16.0 -17.2)
Minnesota	14.8	(14.1 -15.4)	15.6	(15.2 -16.0)	15.6	(15.0 -16.2)
Mississippi	14.6	(13.8 -15.4)	16.3	(15.8 -16.8)	16.8	(16.1 -17.5)
Missouri	15.2	(14.5 -15.9)	15.6	(14.6 -16.6)	16.2	(15.3 -17.0)

See notes at end of table.

(continued)

Table C.12 Average Age at First Use for Cigarettes, Alcohol, and Marijuana Among Persons Reporting Initiation at Age 25 or Younger in 1995 to 1997, by State: 1999

State	FIRST USED CIGARETTES[1]		FIRST USED ALCOHOL[2]		FIRST USED MARIJUANA[3]	
	Average Age	95% C.I.	Average Age	95% C.I.	Average Age	95% C.I.
Montana	14.4	(13.8 -14.9)	14.8	(14.5 -15.1)	15.1	(14.5 -15.7)
Nebraska	15.4	(14.7 -16.0)	15.6	(15.0 -16.2)	16.1	(15.0 -17.1)
Nevada	14.1	(13.3 -14.9)	15.1	(14.4 -15.8)	15.1	(14.3 -15.8)
New Hampshire	16.6	(15.3 -18.0)	15.5	(14.6 -16.5)	16.5	(14.7 -18.2)
New Jersey	15.3	(14.7 -15.8)	15.9	(15.4 -16.4)	16.9	(16.0 -17.7)
New Mexico	14.8	(14.3 -15.3)	15.8	(15.1 -16.4)	15.9	(15.1 -16.7)
New York	15.5	(14.9 -16.1)	15.5	(15.1 -16.0)	16.7	(16.1 -17.3)
North Carolina	14.8	(13.9 -15.7)	15.7	(15.3 -16.2)	16.1	(15.6 -16.7)
North Dakota	15.2	(14.4 -15.9)	15.1	(14.4 -15.8)	16.9	(16.0 -17.7)
Ohio	15.3	(14.9 -15.6)	15.5	(15.3 -15.8)	16.6	(16.2 -17.0)
Oklahoma	14.8	(13.7 -15.9)	15.1	(14.3 -15.9)	15.9	(14.9 -16.8)
Oregon	14.7	(13.3 -16.0)	15.3	(14.6 -16.1)	16.0	(14.8 -17.2)
Pennsylvania	14.7	(14.4 -15.1)	15.8	(15.5 -16.1)	16.6	(16.2 -16.9)
Rhode Island	14.2	(13.4 -15.0)	14.9	(14.3 -15.4)	16.3	(15.1 -17.5)
South Carolina	15.0	(14.0 -16.0)	16.2	(15.4 -17.0)	16.0	(15.1 -16.8)
South Dakota	15.3	(14.1 -16.5)	15.1	(14.7 -15.4)	16.8	(15.5 -18.1)
Tennessee	14.9	(14.4 -15.5)	16.0	(15.5 -16.5)	16.9	(15.3 -18.4)
Texas	15.0	(14.7 -15.3)	15.8	(15.5 -16.1)	16.1	(15.8 -16.5)
Utah	15.3	(14.2 -16.3)	15.7	(15.1 -16.3)	15.6	(15.0 -16.2)
Vermont	14.9	(14.0 -15.9)	15.0	(14.5 -15.5)	16.7	(15.1 -18.2)
Virginia	14.8	(14.2 -15.5)	16.0	(15.5 -16.6)	16.5	(15.4 -17.6)
Washington	15.1	(13.9 -16.3)	15.4	(14.7 -16.2)	15.8	(15.3 -16.3)
West Virginia	15.1	(14.7 -15.6)	15.6	(15.1 -16.2)	16.3	(15.5 -17.1)
Wisconsin	14.8	(14.3 -15.3)	15.4	(15.0 -15.7)	16.6	(15.4 -17.7)
Wyoming	14.5	(13.9 -15.2)	15.2	(14.3 -16.1)	15.9	(15.2 -16.6)

*Low precision; no estimate reported.

[1] Average age at first cigarette use was computed among persons who first used cigarettes at age 25 or younger in 1995 to 1997.
[2] Average age at first alcohol use was computed among persons who first used alcohol at age 25 or younger in 1995 to 1997.
[3] Average age at first marijuana use was computed among persons who first used marijuana at age 25 or younger in 1995 to 1997.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.13 Percentages Reporting No Substance Use and Substance Sequence Patterns for Use of Cigarettes, Alcohol, or Marijuana Among Persons Aged 20 to 25, by State: 1999

State	NEVER USED		USED ONE SUBSTANCE			
	Alcohol, Cigarettes, or Marijuana		Only Cigarettes or Only Alcohol		Only Marijuana	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
National	10.2	(9.5 -10.9)	18.8	(17.9 -19.7)	0.2	(0.1 -0.4)
Alabama	9.3	(5.9 -14.2)	18.4	(11.1 -28.9)	*	(* -*)
Alaska	5.1	(2.7 -9.4)	13.7	(8.7 -20.8)	*	(* -*)
Arizona	13.4	(9.2 -19.1)	17.0	(9.9 -27.6)	*	(* -*)
Arkansas	15.9	(9.9 -24.6)	15.6	(11.8 -20.4)	*	(* -*)
California	14.5	(12.3 -17.1)	20.4	(17.6 -23.5)	0.6	(0.2 -2.3)
Colorado	3.1	(1.2 -7.4)	16.2	(12.1 -21.4)	*	(* -*)
Connecticut	*	(* -*)	17.8	(10.5 -28.6)	*	(* -*)
Delaware	4.6	(2.0 -10.1)	19.2	(14.0 -25.8)	*	(* -*)
District of Columbia	16.0	(9.4 -26.1)	21.5	(12.6 -34.4)	*	(* -*)
Florida	13.0	(10.5 -16.1)	22.1	(18.6 -26.0)	*	(* -*)
Georgia	9.8	(4.1 -21.5)	26.6	(17.2 -38.8)	*	(* -*)
Hawaii	11.5	(5.7 -21.8)	18.8	(13.0 -26.3)	*	(* -*)
Idaho	15.9	(8.0 -29.1)	14.4	(9.9 -20.5)	*	(* -*)
Illinois	9.5	(7.4 -12.2)	17.4	(13.9 -21.6)	*	(* -*)
Indiana	8.9	(4.2 -17.7)	13.9	(9.5 -20.0)	0.8	(0.2 -3.6)
Iowa	2.1	(1.0 -4.4)	15.9	(11.2 -22.2)	*	(* -*)
Kansas	10.8	(7.4 -15.4)	14.9	(9.8 -21.9)	*	(* -*)
Kentucky	5.0	(2.5 -9.8)	18.3	(12.6 -25.7)	*	(* -*)
Louisiana	12.4	(7.7 -19.2)	18.0	(11.6 -27.0)	*	(* -*)
Maine	7.0	(2.9 -16.0)	9.8	(6.3 -15.1)	*	(* -*)
Maryland	6.3	(3.8 -10.3)	26.4	(19.2 -35.1)	*	(* -*)
Massachusetts	5.4	(1.8 -15.2)	14.5	(8.2 -24.3)	*	(* -*)
Michigan	6.6	(5.0 -8.6)	16.4	(13.4 -20.1)	*	(* -*)
Minnesota	6.4	(2.4 -15.8)	13.6	(9.8 -18.4)	0.2	(0.0 -1.4)
Mississippi	16.0	(10.7 -23.4)	20.3	(17.0 -24.1)	*	(* -*)
Missouri	7.6	(4.3 -13.1)	17.6	(12.2 -24.8)	*	(* -*)

See notes at end of table.

(continued)

Table C.13 Percentages Reporting No Substance Use and Substance Sequence Patterns for Use of Cigarettes, Alcohol, or Marijuana Among Persons Aged 20 to 25, by State: 1999

State	NEVER USED		USED ONE SUBSTANCE			
	Alcohol, Cigarettes, or Marijuana		Only Cigarettes or Only Alcohol		Only Marijuana	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
Montana	5.4	(2.6 -10.7)	14.5	(10.3 -20.0)	*	(* -*)
Nebraska	9.4	(5.4 -16.0)	17.4	(11.8 -25.0)	*	(* -*)
Nevada	11.8	(6.9 -19.5)	16.6	(12.3 -22.0)	*	(* -*)
New Hampshire	3.5	(1.2 -10.3)	14.2	(7.1 -26.3)	*	(* -*)
New Jersey	8.0	(4.4 -14.2)	22.4	(14.7 -32.6)	*	(* -*)
New Mexico	5.0	(2.2 -10.8)	15.3	(9.0 -24.8)	0.2	(0.0 -1.4)
New York	9.3	(6.8 -12.6)	21.8	(18.2 -25.9)	0.1	(0.0 -0.6)
North Carolina	7.5	(4.6 -12.1)	15.7	(9.3 -25.3)	*	(* -*)
North Dakota	3.8	(1.9 -7.3)	13.4	(8.6 -20.2)	*	(* -*)
Ohio	8.7	(5.8 -12.9)	16.1	(13.7 -18.9)	*	(* -*)
Oklahoma	8.9	(4.8 -16.1)	20.0	(15.1 -26.0)	*	(* -*)
Oregon	5.8	(3.3 -10.2)	20.3	(14.7 -27.2)	*	(* -*)
Pennsylvania	8.5	(6.1 -11.7)	19.0	(15.8 -22.7)	0.3	(0.0 -2.4)
Rhode Island	13.0	(9.1 -18.1)	16.9	(10.3 -26.4)	*	(* -*)
South Carolina	11.0	(6.4 -18.2)	16.6	(11.8 -22.9)	*	(* -*)
South Dakota	2.8	(1.1 -7.4)	16.3	(9.5 -26.7)	*	(* -*)
Tennessee	11.0	(6.5 -18.1)	19.2	(13.0 -27.5)	*	(* -*)
Texas	13.5	(10.5 -17.2)	19.9	(16.6 -23.6)	0.1	(0.0 -0.6)
Utah	34.9	(29.6 -40.7)	14.4	(10.7 -19.0)	*	(* -*)
Vermont	0.9	(0.2 -4.4)	17.1	(12.3 -23.2)	*	(* -*)
Virginia	5.7	(2.9 -10.9)	20.0	(14.5 -27.0)	*	(* -*)
Washington	11.8	(7.2 -18.7)	16.2	(12.4 -20.9)	*	(* -*)
West Virginia	9.7	(5.0 -18.2)	16.6	(12.8 -21.2)	*	(* -*)
Wisconsin	5.8	(2.8 -11.5)	17.8	(13.2 -23.5)	*	(* -*)
Wyoming	6.1	(3.2 -11.1)	19.8	(14.4 -26.6)	*	(* -*)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.14 Percentages Reporting Two Substance Sequence Patterns for Use of Cigarettes, Alcohol, and Marijuana Among Persons Aged 20 to 25, by State: 1999

State	USED TWO SUBSTANCES							
	Cigarettes Before Alcohol		Alcohol Before Cigarettes		Cigarettes or Alcohol Before Marijuana		Marijuana Before Cigarettes or Alcohol	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
National	13.5	(12.8 -14.3)	9.9	(9.2 -10.5)	2.9	(2.6 -3.3)	1.1	(0.8 -1.4)
Alabama	18.5	(13.3 -25.2)	9.6	(5.5 -16.2)	2.6	(1.0 -6.5)	*	(* -*)
Alaska	16.9	(11.7 -23.7)	2.6	(1.4 -5.0)	2.1	(0.7 -6.3)	1.5	(0.4 -5.8)
Arizona	11.8	(6.1 - 21.3)	12.0	(6.5 - 21.0)	2.3	(0.8 - 6.3)	0.8	(0.2 - 3.7)
Arkansas	13.1	(9.5 - 17.8)	10.7	(7.2 - 15.7)	0.8	(0.1 - 3.7)	0.6	(0.1 - 3.1)
California	12.4	(10.0 - 15.4)	7.3	(5.3 - 10.0)	2.8	(2.0 - 4.1)	2.9	(1.7 - 4.9)
Colorado	12.2	(8.9 - 16.4)	6.1	(2.7 - 13.2)	*	(* - *)	*	(* - *)
Connecticut	11.1	(5.5 - 21.2)	*	(* - *)	*	(* - *)	*	(* - *)
Delaware	11.5	(7.3 - 17.7)	8.7	(4.2 - 17.1)	6.0	(3.2 - 11.0)	0.9	(0.3 - 3.0)
District of Columbia	6.7	(4.1 - 10.8)	9.9	(4.7 - 19.5)	5.8	(3.3 - 10.0)	1.3	(0.3 - 4.9)
Florida	12.9	(10.1 - 16.3)	10.6	(8.1 - 13.8)	3.8	(2.6 - 5.5)	1.0	(0.4 - 2.2)
Georgia	12.6	(7.1 - 21.3)	9.2	(5.5 - 14.9)	3.2	(0.9 - 10.8)	*	(* - *)
Hawaii	9.2	(5.6 - 14.9)	6.0	(2.8 - 12.4)	*	(* - *)	*	(* - *)
Idaho	15.1	(12.0 - 18.8)	10.4	(6.6 - 16.1)	2.2	(0.8 - 5.8)	0.9	(0.3 - 2.7)
Illinois	15.9	(12.8 - 19.6)	10.7	(8.1 - 14.0)	3.1	(2.0 - 4.7)	0.9	(0.4 - 2.0)
Indiana	19.0	(13.2 - 26.4)	11.1	(6.5 - 18.3)	3.4	(1.8 - 6.3)	0.7	(0.2 - 3.1)
Iowa	11.9	(7.9 - 17.5)	19.1	(11.5 - 30.2)	*	(* - *)	0.2	(0.0 - 1.4)
Kansas	13.7	(8.6 - 21.3)	14.3	(10.6 - 19.1)	2.4	(0.9 - 6.2)	0.3	(0.0 - 2.1)
Kentucky	21.1	(15.4 - 28.2)	10.4	(7.2 - 14.7)	3.0	(1.5 - 5.6)	*	(* - *)
Louisiana	16.3	(12.0 - 21.8)	12.0	(8.2 - 17.3)	3.4	(2.1 - 5.5)	1.1	(0.2 - 4.9)
Maine	11.2	(5.4 - 21.7)	6.7	(4.2 - 10.6)	4.9	(2.4 - 9.7)	*	(* - *)
Maryland	12.0	(6.8 - 20.1)	8.7	(5.1 - 14.5)	7.1	(4.6 - 10.6)	1.4	(0.3 - 6.1)
Massachusetts	8.6	(4.8 - 15.1)	8.5	(3.5 - 19.2)	4.4	(2.0 - 9.5)	*	(* - *)
Michigan	10.5	(8.3 - 13.1)	8.6	(6.5 - 11.4)	4.9	(2.9 - 8.2)	1.2	(0.5 - 2.8)
Minnesota	15.4	(9.8 - 23.5)	10.7	(5.7 - 19.1)	*	(* - *)	0.1	(0.0 - 1.4)
Mississippi	13.0	(9.1 - 18.1)	9.9	(5.3 - 17.7)	4.0	(1.4 - 10.8)	0.2	(0.0 - 1.6)
Missouri	11.1	(7.3 - 16.4)	14.6	(9.6 - 21.8)	1.0	(0.2 - 4.2)	0.7	(0.2 - 2.4)

See notes at end of table.

(continued)

Table C.14 Percentages Reporting Two Substance Sequence Patterns for Use of Cigarettes, Alcohol, and Marijuana Among Persons Aged 20 to 25, by State: 1999

State	USED TWO SUBSTANCES							
	Cigarettes Before Alcohol		Alcohol Before Cigarettes		Cigarettes or Alcohol Before Marijuana		Marijuana Before Cigarettes or Alcohol	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
Montana	16.4	(11.8 - 22.2)	9.2	(5.3 -15.5)	*	(* - *)	*	(* - *)
Nebraska	16.9	(10.6 - 25.8)	16.0	(10.9 -22.9)	*	(* - *)	0.1	(0.0 - 1.1)
Nevada	15.5	(9.0 - 25.3)	5.4	(2.3 -12.2)	1.8	(1.1 - 3.1)	*	(* - *)
New Hampshire	15.5	(9.1 - 25.2)	8.4	(3.2 -19.9)	1.7	(0.4 - 7.0)	1.6	(0.4 - 6.4)
New Jersey	10.6	(5.7 - 19.1)	7.5	(5.3 -10.6)	3.1	(1.0 - 9.1)	*	(* - *)
New Mexico	11.7	(6.2 - 21.0)	10.7	(7.3 -15.3)	3.1	(1.0 - 9.1)	0.4	(0.1 - 3.0)
New York	9.1	(7.0 - 11.7)	10.0	(7.2 - 13.6)	3.5	(2.2 - 5.6)	1.4	(0.6 - 3.1)
North Carolina	23.0	(15.8 - 32.4)	7.9	(6.2 - 9.9)	2.7	(1.1 - 6.4)	0.5	(0.1 - 2.1)
North Dakota	18.2	(12.8 - 25.2)	25.4	(18.3 - 34.1)	1.7	(0.6 - 4.8)	*	(* - *)
Ohio	12.6	(10.2 - 15.6)	11.1	(9.0 - 13.7)	4.1	(2.9 - 5.8)	0.6	(0.2 - 1.7)
Oklahoma	16.1	(10.2 - 24.4)	9.1	(6.1 - 13.4)	2.0	(0.6 - 6.2)	1.8	(0.4 - 7.7)
Oregon	9.1	(5.8 - 13.8)	6.4	(4.4 - 9.3)	4.2	(1.8 - 9.6)	*	(* - *)
Pennsylvania	16.3	(13.7 - 19.4)	9.7	(7.4 - 12.4)	1.8	(1.0 - 3.1)	1.0	(0.5 - 2.1)
Rhode Island	12.8	(8.2 - 19.4)	5.5	(2.9 - 10.3)	5.9	(2.8 - 11.9)	0.3	(0.0 - 2.4)
South Carolina	17.9	(12.9 - 24.3)	9.3	(5.3 - 16.0)	3.2	(1.1 - 8.4)	0.9	(0.2 - 4.3)
South Dakota	17.3	(10.7 - 26.7)	19.8	(14.4 - 26.5)	1.8	(0.5 - 5.8)	*	(* - *)
Tennessee	12.0	(8.1 - 17.5)	9.0	(4.9 - 16.0)	1.6	(0.5 - 5.5)	*	(* - *)
Texas	15.4	(12.7 - 18.6)	10.1	(7.8 - 13.0)	2.7	(1.7 - 4.4)	0.8	(0.4 - 2.0)
Utah	10.9	(7.2 - 16.2)	8.2	(6.1 - 10.8)	1.5	(0.4 - 5.8)	*	(* - *)
Vermont	8.8	(4.7 - 15.9)	11.1	(7.6 - 15.9)	4.4	(1.9 - 9.8)	*	(* - *)
Virginia	13.0	(8.7 - 18.9)	12.9	(7.9 - 20.3)	*	(* - *)	0.2	(0.0 - 1.5)
Washington	10.4	(6.5 - 16.4)	9.5	(6.5 - 13.8)	0.8	(0.5 - 1.4)	*	(* - *)
West Virginia	22.6	(19.3 - 26.4)	8.9	(5.2 - 14.8)	1.2	(0.4 - 3.7)	*	(* - *)
Wisconsin	11.9	(6.4 - 20.9)	16.0	(10.6 - 23.3)	2.8	(1.0 - 7.5)	*	(* - *)
Wyoming	11.3	(7.7 - 16.4)	11.0	(7.4 - 16.1)	3.3	(1.4 - 7.6)	*	(* - *)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.15 Percentages Reporting Three Substance Sequence Patterns for Use of Cigarettes, Alcohol, and Marijuana Among Persons Aged 20 to 25, by State: 1999

State	USED ALL THREE SUBSTANCES									
	Alcohol Before Cigarettes Before Marijuana		Alcohol Before Marijuana Before Cigarettes		Cigarettes Before Marijuana Before Alcohol		Cigarettes Before Alcohol Before Marijuana		Marijuana First Then Either Alcohol Before Cigarettes or Cigarettes Before Alcohol	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
National	12.7	11.9 -13.5)	5.7	(5.2 -6.2)	6.1	(5.6 -6.6)	14.1	13.3 -14.9)	4.9	(4.4 -5.3)
Alabama	14.5	(8.3 -23.9)	3.3	(1.6 -6.5)	3.0	(1.6 -5.4)	14.2	10.4 -19.0)	4.8	(2.4 -9.0)
Alaska	12.4	(8.8 -17.3)	8.4	(4.5 -15.1)	10.6	(6.9 -16.1)	22.0	15.8 -29.6)	4.7	(2.0 -10.9)
Arizona	12.7	(7.2 -21.3)	6.9	(3.5 -12.9)	4.7	(2.0 -10.8)	11.5	(6.0 -20.9)	7.0	(3.8 -12.4)
Arkansas	11.2	(7.6 -16.3)	3.9	(2.6 -5.8)	6.0	(3.9 -9.2)	17.3	13.0 -22.6)	5.0	(3.0 -8.1)
California	11.1	(8.7 -14.0)	7.0	(5.2 -9.4)	3.5	(2.5 -4.9)	13.1	10.8 -15.7)	4.4	(3.3 -5.8)
Colorado	15.7	(9.4 -25.0)	6.9	(3.2 -14.2)	7.8	(4.8 -12.4)	23.4	16.5 -32.0)	3.4	(1.4 -8.2)
Connecticut	11.4	(5.4 -22.6)	11.9	(6.3 -21.3)	4.9	(3.1 -7.8)	10.2	(4.9 -20.1)	12.9	(6.2 -24.7)
Delaware	17.4	11.5 -25.6)	3.1	(1.5 -6.2)	7.6	(4.0 -13.7)	14.2	10.5 -18.9)	6.8	(4.3 -10.7)
District of Columbia	10.8	(7.1 -16.1)	6.1	(3.1 -11.6)	3.5	(1.4 -8.6)	12.9	(9.3 -17.6)	4.1	(1.7 -9.8)
Florida	6.8	(5.1 -8.9)	5.1	(3.4 -7.5)	7.2	(5.1 -9.9)	12.6	(9.7 -16.2)	4.7	(3.3 -6.7)
Georgia	7.0	(4.8 -10.1)	3.8	(1.9 -7.7)	6.9	(3.3 -13.7)	13.1	(6.0 -26.6)	4.8	(1.7 -13.3)
Hawaii	13.0	(6.9 -23.3)	4.8	(2.7 -8.4)	8.8	(6.1 -12.5)	18.3	11.5 -27.9)	5.7	(2.7 -11.7)
Idaho	12.8	(7.9 -19.9)	4.2	(2.7 -6.7)	3.5	(1.7 -6.9)	15.6	11.5 -20.8)	4.5	(2.4 -8.3)
Illinois	10.5	(8.5 -12.8)	6.3	(4.6 -8.6)	7.1	(5.0 -10.1)	13.0	10.2 -16.3)	5.6	(3.9 -7.9)
Indiana	11.0	(7.0 -17.0)	4.1	(1.9 -8.7)	10.1	(4.7 -20.1)	12.9	(9.2 -17.8)	4.1	(2.2 -7.3)
Iowa	20.9	15.0 -28.4)	3.6	(2.1 -6.2)	8.0	(3.6 -16.8)	13.5	(8.1 -21.6)	3.7	(1.5 -8.8)
Kansas	16.0	11.6 -21.7)	4.5	(1.9 -10.5)	8.7	(5.9 -12.7)	10.1	(6.5 -15.4)	4.3	(1.9 -9.4)
Kentucky	9.8	(5.7 -16.2)	3.9	(1.7 -8.9)	9.2	(6.0 -13.9)	14.6	(9.5 -21.7)	3.4	(1.4 -8.3)
Louisiana	7.3	(4.3 -12.3)	4.0	(1.5 -10.4)	5.3	(2.6 -10.6)	14.1	(9.5 -20.4)	6.1	(2.9 -12.2)
Maine	13.5	(9.0 -19.9)	9.4	(5.1 -16.7)	9.6	(6.0 -15.0)	20.0	13.5 -28.6)	6.4	(3.4 -11.5)
Maryland	11.3	(7.6 -16.4)	5.6	(2.1 -13.7)	6.5	(3.7 -11.0)	11.2	(6.2 -19.5)	3.6	(1.7 -7.6)
Massachusetts	23.2	13.2 -37.5)	3.6	(1.1 -10.6)	6.9	(2.8 -16.0)	18.4	10.4 -30.6)	4.4	(1.5 -12.3)
Michigan	14.4	11.7 -17.7)	6.0	(4.3 -8.3)	6.1	(4.2 -8.8)	17.4	14.5 -20.8)	7.9	(5.8 -10.8)
Minnesota	21.0	13.8 -30.5)	5.8	(2.8 -11.4)	5.4	(2.0 -13.4)	16.0	11.2 -22.3)	3.7	(2.1 -6.7)
Mississippi	9.1	(5.8 -14.1)	4.6	(2.3 -8.8)	3.9	(1.6 -9.1)	16.5	11.9 -22.5)	2.5	(1.4 -4.4)
Missouri	6.3	(3.0 -12.5)	6.8	(3.1 -14.5)	10.3	(5.4 -18.7)	18.8	13.4 -25.8)	5.2	(2.4 -10.7)

See notes at end of table.

(continued)

Table C.15 Percentages Reporting Three Substance Sequence Patterns for Use of Cigarettes, Alcohol, and Marijuana Among Persons Aged 20 to 25, by State: 1999

State	USED ALL THREE SUBSTANCES									
	Alcohol Before Cigarettes Before Marijuana		Alcohol Before Marijuana Before Cigarettes		Cigarettes Before Marijuana Before Alcohol		Cigarettes Before Alcohol Before Marijuana		Marijuana First Then Either Alcohol Before Cigarettes or Cigarettes Before Alcohol	
	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.	Percentage	95% C.I.
Montana	23.1	16.6 -31.2)	7.3	(3.9 -13.5)	6.5	(2.9 -13.9)	11.8	(8.6 -16.0)	4.7	(2.5 -8.5)
Nebraska	12.8	(7.6 -20.8)	3.3	(1.6 -6.8)	8.4	(5.0 -13.6)	12.6	(7.1 -21.4)	1.1	(0.2 -4.6)
Nevada	13.4	(8.9 -19.7)	6.2	(2.5 -14.8)	12.2	(6.5 -21.8)	11.6	(5.7 -22.3)	5.5	(2.4 -12.1)
New Hampshire	12.2	(5.6 -24.6)	*	(* -*)	*	(* -*)	18.0	10.6 -28.7)	6.6	(3.0 -14.0)
New Jersey	17.9	11.2 -27.4)	6.8	(3.3 -13.3)	4.8	(1.9 -11.6)	15.0	(9.6 -22.7)	3.4	(0.9 -11.8)
New Mexico	13.5	(7.1 -24.1)	10.5	(6.1 -17.5)	4.0	(1.3 -11.8)	19.5	11.4 -31.2)	6.2	(2.7 -13.5)
New York	15.6	12.2 -19.7)	6.2	(4.2 -9.1)	5.0	(3.3 -7.3)	12.6	10.2 -15.3)	5.5	(3.7 -8.1)
North Carolina	12.6	(8.9 -17.4)	6.0	(2.5 -14.1)	7.7	(4.6 -12.6)	12.3	(8.3 -17.9)	4.1	(2.0 -8.2)
North Dakota	20.1	14.0 -27.9)	3.9	(1.8 -8.2)	2.3	(0.8 -6.3)	10.6	(6.9 -15.9)	0.7	(0.1 -3.7)
Ohio	13.4	10.7 -16.6)	8.2	(6.1 -10.9)	6.2	(4.7 -8.2)	13.6	11.2 -16.5)	5.1	(3.6 -7.2)
Oklahoma	15.5	(9.4 -24.3)	4.8	(2.7 -8.2)	6.6	(3.5 -12.3)	10.6	(7.0 -15.6)	3.9	(2.1 -6.9)
Oregon	19.5	14.1 -26.4)	7.9	(4.0 -14.9)	8.1	(3.2 -18.9)	13.8	(8.9 -20.7)	4.9	(1.6 -14.1)
Pennsylvania	12.4	10.0 -15.2)	5.6	(4.1 -7.6)	5.2	(3.8 -7.2)	15.9	12.7 -19.6)	4.1	(2.9 -5.9)
Rhode Island	11.1	(7.1 -17.0)	*	(* -*)	6.8	(3.7 -12.1)	16.8	10.2 -26.4)	4.9	(2.1 -10.9)
South Carolina	8.1	(5.1 -12.7)	4.6	(2.2 -9.4)	9.5	(5.7 -15.4)	17.0	10.7 -25.9)	1.9	(0.6 -5.4)
South Dakota	15.7	10.2 -23.3)	3.4	(1.0 -10.6)	3.0	(1.6 -5.6)	13.7	(9.6 -19.2)	4.4	(2.5 -7.5)
Tennessee	13.4	(8.3 -20.9)	2.9	(1.2 -6.7)	8.7	(5.0 -14.7)	15.3	10.2 -22.3)	6.1	(3.6 -10.1)
Texas	12.3	(9.5 -15.7)	4.4	(3.0 -6.3)	4.0	(2.7 -6.0)	12.1	(9.4 -15.4)	4.6	(3.3 -6.4)
Utah	7.3	(5.4 -9.9)	4.5	(2.9 -6.8)	4.7	(2.5 -8.7)	8.7	(5.6 -13.1)	4.4	(2.6 -7.3)
Vermont	21.7	15.9 -29.0)	4.9	(2.3 -10.2)	7.9	(5.0 -12.3)	20.9	13.6 -30.7)	2.3	(0.8 -5.9)
Virginia	16.7	10.7 -25.3)	4.5	(2.2 -8.9)	9.5	(5.3 -16.4)	13.1	(7.8 -21.1)	3.9	(1.7 -8.5)
Washington	10.8	(7.9 -14.4)	6.3	(3.3 -11.9)	8.3	(4.2 -15.6)	15.4	11.2 -20.7)	9.2	(6.8 -12.3)
West Virginia	7.6	(4.1 -13.8)	4.2	(1.6 -10.5)	7.4	(4.4 -12.2)	15.8	10.4 -23.2)	5.9	(2.7 -12.5)
Wisconsin	15.1	10.1 -22.0)	6.6	(3.3 -12.7)	3.0	(1.1 -7.6)	16.9	10.3 -26.6)	3.6	(1.9 -6.7)
Wyoming	14.9	(9.5 -22.7)	7.6	(5.0 -11.3)	2.6	(1.1 -5.7)	12.9	(8.1 -19.8)	9.9	(6.7 -14.4)

*Low precision; no estimate reported.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.16 Average Age at First Alcohol, Cigarette, and Marijuana Use Among Persons Reporting Initiation of Alcohol and Cigarettes Before Marijuana, by State: 1999

State	Sample Size	Average Age at First Alcohol Use		Average Age at First Cigarette Use		Average Age at First Marijuana Use	
		Mean	95% C.I.	Mean	95% C.I.	Mean	95% C.I.
National	3,330	14.0	(13.9 -14.2)	13.9	(13.7 -14.0)	16.9	(16.8 -17.1)
California	179	14.2	(13.5 -14.8)	14.2	(13.6 -14.8)	17.1	(16.7 -17.5)
Florida	118	14.1	(13.6 -14.6)	13.8	(13.2 -14.3)	16.7	(16.1 -17.3)
Illinois	143	13.7	(13.1 -14.3)	13.8	(13.3 -14.3)	16.5	(16.0 -17.0)
Michigan	169	14.5	(13.9 -15.1)	13.7	(13.2 -14.1)	17.3	(16.6 -18.0)
New York	140	13.6	(12.6 -14.7)	14.4	(13.7 -15.1)	17.3	(16.4 -18.1)
Ohio	179	14.5	(14.1 -14.9)	14.5	(14.0 -15.0)	17.1	(16.6 -17.6)
Pennsylvania	175	14.4	(13.9 -14.8)	13.7	(13.1 -14.3)	17.2	(16.7 -17.7)
Texas	149	13.8	(13.1 -14.4)	13.7	(13.1 -14.3)	17.0	(16.4 -17.6)

*Low precision; no estimate reported.

NOTE: This table contains estimates among those persons who reported initiating the use of marijuana at age 25 or younger in 1995 through 1997.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.17 Average Age at First Cigarette and Marijuana Use Among Persons Reporting Initiation of Cigarettes Before Marijuana, by State: 1999

State	Sample Size	Average Age at First Cigarette Use		Average Age at First Marijuana Use	
		Mean	95% C.I.	Mean	95% C.I.
National	1,038	13.0	(12.8 -13.2)	14.9	(14.7 -15.0)
California	69	12.7	(12.0 -13.3)	14.2	(13.7 -14.7)
Florida	42	13.2	(12.2 -14.2)	14.9	(14.1 -15.7)
Illinois	62	13.5	(12.8 -14.1)	14.8	(14.3 -15.3)
Michigan	49	12.6	(11.7 -13.5)	14.8	(14.1 -15.5)
New York	36	13.2	(12.2 -14.1)	15.4	(14.5 -16.2)
Ohio	63	13.0	(12.3 -13.7)	15.0	(14.5 -15.4)
Pennsylvania	42	12.9	(11.8 -14.1)	14.9	(14.1 -15.6)
Texas	49	13.3	(12.7 -13.8)	14.9	(14.1 -15.6)

*Low precision; no estimate reported.

NOTE: This table contains estimates among those persons who reported initiating the use of marijuana at age 25 or younger in 1995 through 1997.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.18 Average Age at First Alcohol and Marijuana Use Among Persons Reporting Initiation of Alcohol Before Marijuana, by State: 1999

State	Sample Size	Average Age at First Alcohol Use		Average Age at First Marijuana Use	
		Mean	95% C.I.	Mean	95% C.I.
National	575	14.4	(14.1 -14.7)	16.3	(16.0 -16.5)
California	51	14.8	(13.8 -15.7)	16.3	(15.2 -17.3)
Florida	18	11.9	(9.1 -14.6)	16.1	(14.8 -17.5)
Illinois	23	14.2	(12.8 -15.7)	16.3	(15.4 -17.2)
Michigan	30	15.5	(14.9 -16.0)	16.4	(15.9 -17.0)
New York	19	14.9	(14.1 -15.7)	16.6	(15.9 -17.4)
Ohio	31	15.2	(14.4 -15.9)	16.4	(15.6 -17.3)
Pennsylvania	19	15.4	(13.9 -16.9)	16.9	(15.7 -18.1)
Texas	32	14.3	(13.2 -15.4)	16.2	(15.3 -17.1)

*Low precision; no estimate reported.

NOTE: This table contains estimates among those persons who reported initiating the use of marijuana at age 25 or younger in 1995 through 1997.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table C.19 Average Age at Time of Interview for Drug Initiation Patterns, by State: 1999

State	Initiated Alcohol Use Only Before Marijuana Use			Initiated Cigarette Use Only Before Marijuana Use			Initiated Alcohol and Cigarette Use Before Marijuana Use		
	Sample Size	Mean	95% C.I.	Sample Size	Mean	95% C.I.	Sample Size	Mean	95% C.I.
National	575	19.4	(19.1 - 19.7)	1,038	17.8	(17.6 -17.9)	3,330	19.9	(19.7 -20.0)
California	51	19.5	(18.4 - 20.6)	69	17.2	(16.7 -17.7)	179	20.0	(19.5 -20.5)
Florida	18	19.5	(18.2 - 20.9)	42	17.9	(17.0 -18.9)	118	19.5	(18.7 -20.3)
Illinois	23	19.6	(19.0 - 20.3)	62	17.9	(17.3 -18.5)	143	19.4	(18.9 -19.9)
Michigan	30	19.7	(19.1 - 20.3)	49	17.8	(17.1 -18.5)	169	20.4	(19.6 -21.2)
New York	19	19.5	(18.7 - 20.4)	36	18.2	(17.3 -19.1)	140	20.1	(19.2 -21.1)
Ohio	31	19.6	(18.8 - 20.4)	63	17.7	(17.1 -18.2)	179	20.1	(19.6 -20.6)
Pennsylvania	19	19.8	(18.6 - 21.0)	42	17.5	(16.5 -18.4)	175	20.1	(19.5 -20.8)
Texas	32	19.0	(18.1 - 19.9)	49	17.8	(17.0 -18.6)	149	19.9	(19.2 -20.5)

*Low precision; no estimate reported.

NOTE: This table contains estimates among those persons who reported initiating the use of marijuana at age 25 or younger in 1995 through 1997.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Appendix D: State-by-State Model-Based Tables

Table D.1 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Alabama, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	34.7	14.1	51.9	34.5
Binge Alcohol[1]	16.8	8.5	31.1	15.5
Any Tobacco[2]	34.9	19.6	42.1	35.8
Cigarette	28.0	17.2	35.6	28.1
Marijuana	3.3	5.6	10.2	1.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	46.8	44.6	38.8	48.5
Smoking one or more packs per day	65.6	59.7	59.2	67.5
Smoking marijuana once a month	53.1	43.4	31.6	58.0
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.3	5.2	5.2	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,255	52	246	957
Binge Alcohol[1]	610	31	148	431
Any Tobacco[2]	1,265	72	200	993
Cigarette	1,014	64	169	781
Marijuana	120	21	48	51
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,694	165	184	1,345
Smoking one or more packs per day	2,375	221	280	1,874
Smoking marijuana once a month	1,920	160	150	1,610
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	33	17	15	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.2 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Alaska, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	53.4	17.2	60.2	58.5
Binge Alcohol[1]	22.1	11.7	40.3	20.3
Any Tobacco[2]	32.7	20.4	47.9	31.8
Cigarette	26.5	16.6	43.9	24.8
Marijuana	7.1	10.4	16.8	4.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.5	37.8	37.6	47.1
Smoking one or more packs per day	63.6	61.7	58.0	65.0
Smoking marijuana once a month	31.4	32.8	18.4	33.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.5	7.8	6.5	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	258	11	42	206
Binge Alcohol[1]	107	7	28	71
Any Tobacco[2]	158	13	33	112
Cigarette	128	10	31	87
Marijuana	34	6	12	16
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	215	23	26	166
Smoking one or more packs per day	307	38	40	229
Smoking marijuana once a month	152	20	13	119
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	6	4	2	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.3 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Arizona, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	48.6	17.1	54.9	52.2
Binge Alcohol[1]	19.5	11.1	34.6	18.1
Any Tobacco[2]	28.4	17.1	44.9	27.2
Cigarette	24.4	14.5	39.1	23.3
Marijuana	5.2	7.3	11.6	3.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	48.5	42.6	39.5	50.9
Smoking one or more packs per day	70.1	61.7	62.5	72.7
Smoking marijuana once a month	43.0	35.1	29.4	46.5
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.0	8.9	5.1	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,829	73	273	1,484
Binge Alcohol[1]	734	47	172	515
Any Tobacco[2]	1,069	73	223	773
Cigarette	919	62	194	663
Marijuana	195	31	58	106
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,825	181	196	1,448
Smoking one or more packs per day	2,642	262	311	2,069
Smoking marijuana once a month	1,618	149	146	1,323
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	48	31	14	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.4 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Arkansas, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	34.0	17.0	48.2	33.9
Binge Alcohol[1]	18.2	11.0	34.0	16.5
Any Tobacco[2]	35.7	24.4	46.0	35.6
Cigarette	28.8	20.1	41.2	27.9
Marijuana	3.5	7.3	9.5	1.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	48.5	42.7	37.2	51.2
Smoking one or more packs per day	62.6	59.0	56.6	64.2
Smoking marijuana once a month	51.0	43.5	31.5	55.3
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.3	5.6	4.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	725	38	134	553
Binge Alcohol[1]	388	25	94	269
Any Tobacco[2]	763	55	128	580
Cigarette	615	45	115	455
Marijuana	74	16	26	31
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,035	96	103	835
Smoking one or more packs per day	1,336	133	157	1,046
Smoking marijuana once a month	1,087	98	88	902
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	20	11	8	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.5 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in California, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	47.4	16.1	52.5	51.0
Binge Alcohol[1]	18.8	9.5	33.5	17.5
Any Tobacco[2]	23.0	10.8	33.8	22.9
Cigarette	20.6	9.0	31.1	20.4
Marijuana	6.0	7.7	14.0	4.3
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	47.2	41.8	43.9	48.6
Smoking one or more packs per day	71.1	64.8	72.4	71.8
Smoking marijuana once a month	39.8	34.9	32.8	41.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	6.0	4.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	12,102	450	1,806	9,846
Binge Alcohol[1]	4,790	266	1,152	3,372
Any Tobacco[2]	5,883	303	1,163	4,417
Cigarette	5,247	253	1,068	3,926
Marijuana	1,521	216	482	823
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	12,053	1,173	1,508	9,372
Smoking one or more packs per day	18,148	1,817	2,491	13,840
Smoking marijuana once a month	10,166	979	1,126	8,061
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	258	143	98	18

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.6 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Colorado, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	59.5	20.8	66.1	63.7
Binge Alcohol[1]	22.9	12.3	42.3	21.0
Any Tobacco[2]	29.5	19.8	44.7	28.3
Cigarette	24.6	15.8	39.1	23.4
Marijuana	7.7	10.3	19.4	5.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.4	38.1	30.5	47.6
Smoking one or more packs per day	68.1	58.7	62.7	70.3
Smoking marijuana once a month	31.6	27.0	21.2	33.9
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.1	7.5	7.1	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,988	74	288	1,625
Binge Alcohol[1]	764	44	185	536
Any Tobacco[2]	987	70	195	722
Cigarette	823	56	171	596
Marijuana	259	37	85	137
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,484	135	133	1,215
Smoking one or more packs per day	2,275	209	274	1,792
Smoking marijuana once a month	1,054	96	92	866
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	39	21	15	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.7 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Connecticut, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	52.8	19.0	64.7	55.0
Binge Alcohol[1]	20.5	11.7	42.8	18.3
Any Tobacco[2]	26.6	19.5	44.4	24.9
Cigarette	23.4	16.5	38.7	22.0
Marijuana	5.0	8.6	17.9	2.8
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	43.6	39.9	34.2	45.3
Smoking one or more packs per day	72.7	62.9	60.3	75.6
Smoking marijuana once a month	43.0	28.3	21.8	47.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.8	7.1	8.3	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,420	48	196	1,176
Binge Alcohol[1]	551	30	130	392
Any Tobacco[2]	717	49	135	533
Cigarette	629	42	117	470
Marijuana	135	22	54	59
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,174	101	104	969
Smoking one or more packs per day	1,959	160	183	1,616
Smoking marijuana once a month	1,158	72	66	1,020
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	30	16	12	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.8 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Delaware, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	49.7	17.2	57.9	52.7
Binge Alcohol[1]	22.7	12.0	41.3	21.2
Any Tobacco[2]	32.7	22.2	48.3	31.7
Cigarette	28.9	19.2	44.9	27.6
Marijuana	6.5	13.9	20.1	3.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.9	42.3	35.6	46.7
Smoking one or more packs per day	66.1	60.5	60.3	67.7
Smoking marijuana once a month	40.4	32.3	28.1	43.4
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.8	7.9	6.5	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	309	11	44	254
Binge Alcohol[1]	141	8	31	102
Any Tobacco[2]	203	14	37	153
Cigarette	179	12	34	133
Marijuana	41	9	15	17
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	279	27	27	225
Smoking one or more packs per day	410	38	46	326
Smoking marijuana once a month	251	21	21	209
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	7	4	2	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.9 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in the District of Columbia, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	44.3	11.2	52.4	47.2
Binge Alcohol[1]	17.4	6.8	30.4	16.5
Any Tobacco[2]	28.7	13.1	34.6	29.7
Cigarette	24.8	10.8	29.8	25.8
Marijuana	7.1	9.6	13.9	5.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	55.6	49.0	51.2	57.1
Smoking one or more packs per day	67.5	63.3	70.3	67.6
Smoking marijuana once a month	45.0	39.1	26.3	48.9
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	6.2	5.8	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	188	5	29	155
Binge Alcohol[1]	74	3	17	54
Any Tobacco[2]	122	6	19	97
Cigarette	106	5	17	84
Marijuana	30	4	8	18
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	236	21	28	187
Smoking one or more packs per day	287	27	39	221
Smoking marijuana once a month	192	17	15	160
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	5	2	2	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.10 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Florida, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	46.3	13.4	54.3	49.1
Binge Alcohol[1]	18.0	7.9	33.4	17.1
Any Tobacco[2]	29.6	14.7	40.3	29.9
Cigarette	25.4	11.6	36.1	25.5
Marijuana	5.0	6.2	13.8	3.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	48.1	47.5	42.3	49.0
Smoking one or more packs per day	68.6	66.3	65.0	69.4
Smoking marijuana once a month	48.9	43.0	33.8	51.6
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.1	5.2	4.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	5,779	155	724	4,900
Binge Alcohol[1]	2,241	92	445	1,704
Any Tobacco[2]	3,690	171	538	2,981
Cigarette	3,163	135	481	2,548
Marijuana	628	72	183	372
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	6,007	551	563	4,892
Smoking one or more packs per day	8,565	769	866	6,929
Smoking marijuana once a month	6,100	499	450	5,150
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	99	54	37	8

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.11 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Georgia, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	43.0	15.3	51.3	45.5
Binge Alcohol[1]	17.9	8.9	31.6	16.8
Any Tobacco[2]	30.9	17.7	42.4	30.7
Cigarette	26.3	14.5	37.6	26.0
Marijuana	4.2	6.4	12.1	2.5
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	48.0	47.4	39.2	49.7
Smoking one or more packs per day	66.4	63.0	63.8	67.3
Smoking marijuana once a month	49.1	40.8	32.1	53.2
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	5.7	6.4	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,685	102	433	2,150
Binge Alcohol[1]	1,120	59	266	795
Any Tobacco[2]	1,927	118	358	1,451
Cigarette	1,643	97	317	1,229
Marijuana	261	43	102	117
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,999	317	331	2,351
Smoking one or more packs per day	4,143	420	539	3,184
Smoking marijuana once a month	3,061	272	271	2,518
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	69	33	31	4

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.12 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Hawaii, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	44.4	16.3	52.1	46.8
Binge Alcohol[1]	20.8	10.3	33.0	20.2
Any Tobacco[2]	24.8	13.2	38.0	24.3
Cigarette	22.4	10.3	39.5	21.3
Marijuana	5.8	8.3	15.2	4.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	46.6	41.6	39.4	48.3
Smoking one or more packs per day	65.3	61.5	63.9	66.0
Smoking marijuana once a month	42.9	37.9	35.0	44.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	6.7	5.0	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	431	16	61	355
Binge Alcohol[1]	202	10	38	153
Any Tobacco[2]	241	12	44	184
Cigarette	217	10	46	161
Marijuana	57	8	18	31
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	451	40	46	366
Smoking one or more packs per day	633	58	75	500
Smoking marijuana once a month	416	36	41	339
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	9	5	3	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.13 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Idaho, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	43.5	14.2	46.8	47.7
Binge Alcohol[1]	19.2	9.5	30.5	18.4
Any Tobacco[2]	31.3	15.5	40.1	32.2
Cigarette	24.6	13.1	35.9	24.2
Marijuana	4.2	5.9	10.0	2.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	43.0	40.1	36.2	44.9
Smoking one or more packs per day	68.4	62.7	62.0	70.6
Smoking marijuana once a month	42.2	39.5	30.3	45.1
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	4.5	6.1	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	459	18	75	365
Binge Alcohol[1]	202	12	49	141
Any Tobacco[2]	331	20	64	246
Cigarette	260	17	58	185
Marijuana	45	8	16	21
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	454	52	58	344
Smoking one or more packs per day	721	81	100	541
Smoking marijuana once a month	445	51	49	345
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	12	5	6	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.14 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Illinois, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	49.9	18.0	60.0	52.4
Binge Alcohol[1]	22.0	11.4	40.9	20.1
Any Tobacco[2]	30.9	19.1	45.5	29.9
Cigarette	27.1	17.6	41.2	25.9
Marijuana	4.8	9.2	14.6	2.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.2	42.1	36.1	45.9
Smoking one or more packs per day	66.0	60.8	61.5	67.5
Smoking marijuana once a month	42.7	37.9	30.0	45.6
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.6	5.2	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	4,849	179	772	3,897
Binge Alcohol[1]	2,139	114	526	1,499
Any Tobacco[2]	3,002	190	586	2,225
Cigarette	2,632	176	530	1,926
Marijuana	472	92	188	192
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	4,300	420	465	3,415
Smoking one or more packs per day	6,419	607	791	5,021
Smoking marijuana once a month	4,157	379	386	3,393
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	100	57	37	6

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.15 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Indiana, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	44.4	15.5	55.4	46.4
Binge Alcohol[1]	19.6	10.5	37.6	17.8
Any Tobacco[2]	33.8	20.6	46.9	33.3
Cigarette	29.1	18.2	41.0	28.5
Marijuana	4.6	8.7	12.6	2.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	40.0	39.3	34.9	41.0
Smoking one or more packs per day	62.2	60.2	57.7	63.3
Smoking marijuana once a month	44.0	40.4	28.3	47.2
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.7	5.6	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,180	79	364	1,737
Binge Alcohol[1]	965	54	247	664
Any Tobacco[2]	1,661	106	308	1,248
Cigarette	1,429	93	269	1,066
Marijuana	228	44	82	101
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,966	201	229	1,536
Smoking one or more packs per day	3,056	308	379	2,369
Smoking marijuana once a month	2,160	207	186	1,768
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	53	30	20	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.16 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Iowa, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	53.6	20.2	70.4	55.3
Binge Alcohol[1]	24.6	13.1	49.4	22.0
Any Tobacco[2]	32.3	20.8	52.2	30.5
Cigarette	27.2	18.0	45.9	25.2
Marijuana	3.3	5.2	10.6	1.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	35.6	37.7	25.1	37.2
Smoking one or more packs per day	59.0	58.6	55.3	59.7
Smoking marijuana once a month	43.5	40.7	29.8	46.3
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.7	5.6	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,276	51	221	1,003
Binge Alcohol[1]	587	33	155	399
Any Tobacco[2]	770	52	164	554
Cigarette	647	45	144	457
Marijuana	78	13	33	32
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	848	95	79	674
Smoking one or more packs per day	1,404	148	174	1,083
Smoking marijuana once a month	1,036	103	94	840
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	27	15	10	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.17 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Kansas, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	49.7	16.0	61.1	52.8
Binge Alcohol[1]	21.7	9.9	42.9	19.7
Any Tobacco[2]	30.9	19.0	49.9	29.4
Cigarette	24.9	15.8	42.3	23.2
Marijuana	3.7	6.6	11.5	1.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	41.2	38.3	33.5	43.0
Smoking one or more packs per day	60.2	54.8	52.2	62.5
Smoking marijuana once a month	41.8	36.3	28.6	45.0
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.9	6.9	7.0	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,062	39	175	849
Binge Alcohol[1]	463	24	122	316
Any Tobacco[2]	661	46	143	473
Cigarette	532	38	121	373
Marijuana	79	16	33	30
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	881	93	96	693
Smoking one or more packs per day	1,287	132	149	1,006
Smoking marijuana once a month	894	88	82	725
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	28	15	11	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.18 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Kentucky, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	33.6	13.7	51.4	33.2
Binge Alcohol[1]	18.3	9.5	38.0	16.1
Any Tobacco[2]	38.2	27.7	55.2	36.6
Cigarette	32.8	23.5	47.9	31.4
Marijuana	3.6	5.3	11.4	2.0
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	49.7	44.5	34.0	53.2
Smoking one or more packs per day	59.5	52.7	52.6	61.6
Smoking marijuana once a month	51.3	38.9	28.5	56.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	7.4	6.2	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,098	45	223	829
Binge Alcohol[1]	599	31	165	403
Any Tobacco[2]	1,246	91	240	915
Cigarette	1,070	78	208	785
Marijuana	117	17	49	50
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,623	147	148	1,329
Smoking one or more packs per day	1,942	174	228	1,540
Smoking marijuana once a month	1,673	129	124	1,420
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	39	21	16	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.19 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Louisiana, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	41.8	20.9	57.8	42.1
Binge Alcohol[1]	21.6	11.5	39.1	19.8
Any Tobacco[2]	31.0	19.0	45.1	30.2
Cigarette	27.4	16.8	42.4	26.2
Marijuana	3.5	6.6	10.3	1.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	50.0	43.7	37.4	53.4
Smoking one or more packs per day	64.7	61.4	61.6	65.9
Smoking marijuana once a month	54.6	41.9	31.2	61.2
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	6.2	4.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,483	88	296	1,098
Binge Alcohol[1]	766	48	201	516
Any Tobacco[2]	1,098	80	231	787
Cigarette	973	71	217	684
Marijuana	125	28	53	44
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,770	184	192	1,394
Smoking one or more packs per day	2,293	259	316	1,718
Smoking marijuana once a month	1,934	177	160	1,597
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	40	23	15	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.20 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Maine, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	47.8	17.6	63.6	49.3
Binge Alcohol[1]	19.6	10.0	41.3	17.7
Any Tobacco[2]	29.3	18.9	47.3	27.9
Cigarette	25.9	16.7	43.9	24.4
Marijuana	5.8	7.2	21.2	3.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	41.0	36.9	24.4	44.0
Smoking one or more packs per day	69.6	63.6	58.6	71.9
Smoking marijuana once a month	40.2	35.0	20.1	43.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.9	6.9	10.0	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	498	18	77	403
Binge Alcohol[1]	205	10	50	144
Any Tobacco[2]	305	20	57	228
Cigarette	270	17	53	199
Marijuana	61	7	26	28
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	427	38	30	360
Smoking one or more packs per day	725	66	71	588
Smoking marijuana once a month	418	36	24	357
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	12	6	5	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.21 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Maryland, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	49.2	13.3	53.2	53.1
Binge Alcohol[1]	15.5	7.1	31.3	14.2
Any Tobacco[2]	27.1	16.3	38.2	26.8
Cigarette	22.2	13.7	33.6	21.5
Marijuana	4.9	8.8	14.7	2.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	50.8	47.6	41.8	52.6
Smoking one or more packs per day	68.8	62.7	64.2	70.2
Smoking marijuana once a month	42.3	37.8	29.2	44.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	5.9	5.8	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,086	55	265	1,765
Binge Alcohol[1]	657	30	156	472
Any Tobacco[2]	1,149	68	190	891
Cigarette	941	57	167	717
Marijuana	207	37	73	97
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,154	198	208	1,748
Smoking one or more packs per day	2,916	261	320	2,336
Smoking marijuana once a month	1,793	157	146	1,491
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	41	22	17	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.22 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Massachusetts, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	58.3	22.5	69.2	61.0
Binge Alcohol[1]	23.9	13.7	49.7	21.4
Any Tobacco[2]	29.4	19.4	47.0	28.0
Cigarette	25.4	17.1	41.2	24.1
Marijuana	7.5	11.9	27.1	4.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	41.8	36.2	27.9	44.5
Smoking one or more packs per day	72.3	63.3	64.3	74.6
Smoking marijuana once a month	39.8	29.3	16.6	44.5
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.2	8.7	8.8	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,967	111	411	2,445
Binge Alcohol[1]	1,221	68	295	858
Any Tobacco[2]	1,498	96	280	1,123
Cigarette	1,296	85	245	966
Marijuana	384	59	161	165
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,128	179	166	1,784
Smoking one or more packs per day	3,682	313	382	2,987
Smoking marijuana once a month	2,027	145	99	1,783
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	63	35	24	4

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.23 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Michigan, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	46.9	16.0	59.1	49.1
Binge Alcohol[1]	21.4	9.5	39.4	20.0
Any Tobacco[2]	33.6	18.0	49.6	33.1
Cigarette	29.1	16.2	44.9	28.2
Marijuana	5.3	7.8	16.1	3.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	42.3	39.3	34.5	44.1
Smoking one or more packs per day	64.1	59.7	57.1	65.9
Smoking marijuana once a month	40.7	36.6	26.9	43.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.9	7.3	7.5	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	3,701	133	606	2,962
Binge Alcohol[1]	1,692	79	404	1,209
Any Tobacco[2]	2,655	150	508	1,997
Cigarette	2,296	135	460	1,701
Marijuana	419	65	165	190
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	3,340	327	354	2,660
Smoking one or more packs per day	5,058	497	585	3,975
Smoking marijuana once a month	3,215	305	276	2,635
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	96	52	39	4

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.24 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Minnesota, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	55.5	20.1	70.5	58.0
Binge Alcohol[1]	23.7	13.4	49.5	20.7
Any Tobacco[2]	33.6	22.2	54.9	31.5
Cigarette	28.7	20.8	50.8	25.9
Marijuana	5.3	9.9	17.6	2.5
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.0	34.8	30.5	41.1
Smoking one or more packs per day	62.2	59.3	52.5	64.3
Smoking marijuana once a month	35.7	32.8	24.5	38.1
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.1	6.6	8.4	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,171	87	368	1,716
Binge Alcohol[1]	929	58	259	613
Any Tobacco[2]	1,314	96	287	932
Cigarette	1,123	90	265	768
Marijuana	208	43	92	73
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,526	151	159	1,216
Smoking one or more packs per day	2,433	257	274	1,903
Smoking marijuana once a month	1,397	142	128	1,128
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	50	24	23	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.25 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Mississippi, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	31.1	16.5	45.7	30.6
Binge Alcohol[1]	17.3	9.3	32.5	15.6
Any Tobacco[2]	34.5	23.3	44.3	34.4
Cigarette	28.8	18.6	37.6	28.7
Marijuana	3.3	6.7	10.8	1.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	48.9	48.4	41.4	50.4
Smoking one or more packs per day	64.6	61.0	59.4	66.2
Smoking marijuana once a month	55.3	42.2	34.0	61.5
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.0	5.9	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	701	43	147	510
Binge Alcohol[1]	389	24	105	260
Any Tobacco[2]	776	61	143	573
Cigarette	648	48	121	478
Marijuana	75	17	35	23
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,100	126	134	840
Smoking one or more packs per day	1,454	159	192	1,104
Smoking marijuana once a month	1,245	110	110	1,026
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	27	14	12	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.26 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Missouri, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	46.6	15.7	60.6	48.6
Binge Alcohol[1]	22.8	10.2	43.1	21.1
Any Tobacco[2]	37.0	21.6	52.9	36.4
Cigarette	30.5	16.8	46.3	29.7
Marijuana	4.7	6.6	15.1	2.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	41.6	41.2	28.3	43.9
Smoking one or more packs per day	63.5	57.9	56.9	65.4
Smoking marijuana once a month	44.8	40.8	24.8	48.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	5.7	6.3	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,097	75	354	1,669
Binge Alcohol[1]	1,024	49	251	724
Any Tobacco[2]	1,662	103	309	1,250
Cigarette	1,371	80	270	1,021
Marijuana	212	31	88	92
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,869	196	165	1,508
Smoking one or more packs per day	2,857	276	332	2,249
Smoking marijuana once a month	2,011	195	144	1,673
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	46	24	19	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.27 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Montana, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	55.1	23.6	61.8	58.6
Binge Alcohol[1]	22.8	15.1	44.0	20.4
Any Tobacco[2]	34.4	24.1	48.8	33.4
Cigarette	25.2	19.7	41.2	23.3
Marijuana	5.9	11.4	15.2	3.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.6	34.6	29.6	42.0
Smoking one or more packs per day	69.4	60.0	58.5	72.6
Smoking marijuana once a month	38.7	27.8	23.5	42.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.8	7.1	7.0	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	420	20	61	340
Binge Alcohol[1]	174	13	43	118
Any Tobacco[2]	262	21	48	194
Cigarette	192	17	40	135
Marijuana	45	10	15	21
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	302	29	29	243
Smoking one or more packs per day	530	51	57	421
Smoking marijuana once a month	295	24	23	248
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	9	5	3	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.28 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Nebraska, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	53.4	17.4	71.7	55.4
Binge Alcohol[1]	25.4	11.4	49.0	23.1
Any Tobacco[2]	31.1	14.2	49.0	30.4
Cigarette	24.7	14.0	42.1	23.1
Marijuana	3.9	6.1	12.8	2.0
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.4	39.4	27.2	41.6
Smoking one or more packs per day	60.5	56.3	56.6	61.8
Smoking marijuana once a month	41.3	38.1	26.4	44.5
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	6.0	6.5	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	727	27	133	567
Binge Alcohol[1]	345	18	91	237
Any Tobacco[2]	424	22	91	311
Cigarette	336	22	78	236
Marijuana	54	9	24	20
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	538	61	50	426
Smoking one or more packs per day	826	87	105	633
Smoking marijuana once a month	564	59	49	456
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	17	8	7	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.29 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Nevada, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	54.2	18.4	55.2	58.5
Binge Alcohol[1]	22.4	13.3	34.5	21.8
Any Tobacco[2]	32.8	19.4	43.6	32.8
Cigarette	28.9	17.3	38.6	28.9
Marijuana	5.6	11.6	11.7	4.0
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	43.4	39.8	40.2	44.3
Smoking one or more packs per day	67.1	57.0	61.8	69.1
Smoking marijuana once a month	34.8	29.8	26.6	36.6
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	8.0	5.3	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	807	26	96	685
Binge Alcohol[1]	334	19	60	255
Any Tobacco[2]	489	28	76	385
Cigarette	431	25	67	338
Marijuana	83	17	20	46
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	646	57	70	518
Smoking one or more packs per day	999	82	108	810
Smoking marijuana once a month	518	43	46	429
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	15	9	5	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.30 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in New Hampshire, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	56.1	19.5	68.6	59.1
Binge Alcohol[1]	20.3	11.0	44.3	18.0
Any Tobacco[2]	29.0	16.7	46.5	28.1
Cigarette	25.6	15.1	43.3	24.4
Marijuana	5.9	10.7	20.6	3.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.7	40.2	28.5	41.3
Smoking one or more packs per day	67.9	62.5	57.5	70.2
Smoking marijuana once a month	34.4	29.9	16.2	37.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.0	7.2	8.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	558	20	80	458
Binge Alcohol[1]	202	11	52	139
Any Tobacco[2]	289	17	54	217
Cigarette	255	16	50	189
Marijuana	59	11	24	24
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	394	42	33	319
Smoking one or more packs per day	675	65	67	543
Smoking marijuana once a month	342	31	19	292
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	11	6	5	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.31 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in New Jersey, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	51.3	17.3	60.2	54.0
Binge Alcohol[1]	19.5	9.7	37.6	18.0
Any Tobacco[2]	26.9	13.9	45.0	25.8
Cigarette	23.7	12.0	40.3	22.7
Marijuana	5.0	7.3	17.4	2.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	42.7	41.8	38.9	43.3
Smoking one or more packs per day	71.1	63.1	62.2	73.4
Smoking marijuana once a month	45.0	33.6	24.9	49.3
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	5.7	8.0	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	3,422	108	467	2,847
Binge Alcohol[1]	1,301	60	292	949
Any Tobacco[2]	1,798	86	349	1,363
Cigarette	1,585	74	313	1,198
Marijuana	331	46	135	150
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,847	260	302	2,286
Smoking one or more packs per day	4,745	392	482	3,871
Smoking marijuana once a month	3,003	209	193	2,602
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	71	32	34	5

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.32 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in New Mexico, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	49.8	19.9	58.8	52.8
Binge Alcohol[1]	22.0	11.8	39.2	20.4
Any Tobacco[2]	30.9	18.2	50.2	29.3
Cigarette	26.9	15.3	43.5	25.6
Marijuana	6.5	9.2	16.9	4.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	47.3	40.6	40.8	49.6
Smoking one or more packs per day	67.7	57.4	64.3	70.0
Smoking marijuana once a month	40.3	32.2	29.1	43.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.0	7.3	6.4	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	727	34	122	571
Binge Alcohol[1]	322	20	81	220
Any Tobacco[2]	452	31	104	316
Cigarette	393	26	90	277
Marijuana	95	16	35	44
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	690	70	84	536
Smoking one or more packs per day	988	99	133	756
Smoking marijuana once a month	589	56	60	473
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	18	10	7	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.33 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in New York, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	48.4	17.9	62.3	50.0
Binge Alcohol[1]	20.9	9.9	40.2	19.2
Any Tobacco[2]	28.1	14.4	40.0	28.0
Cigarette	25.6	12.9	37.1	25.4
Marijuana	4.9	6.8	17.6	2.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	45.2	41.9	36.2	47.0
Smoking one or more packs per day	70.4	60.9	64.7	72.5
Smoking marijuana once a month	47.5	36.8	24.6	52.5
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	5.6	7.3	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	7,140	261	1,126	5,753
Binge Alcohol[1]	3,084	144	727	2,213
Any Tobacco[2]	4,150	209	723	3,218
Cigarette	3,778	189	669	2,920
Marijuana	716	100	317	299
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	6,670	611	654	5,404
Smoking one or more packs per day	10,400	888	1,168	8,343
Smoking marijuana once a month	7,014	537	444	6,033
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	157	73	74	10

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.34 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in North Carolina, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	36.7	13.2	50.2	37.7
Binge Alcohol[1]	16.3	8.3	30.9	15.1
Any Tobacco[2]	35.2	21.1	51.0	34.6
Cigarette	29.9	19.1	45.3	28.9
Marijuana	4.7	6.8	13.4	3.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	46.6	47.7	37.8	47.9
Smoking one or more packs per day	59.5	56.4	54.6	60.7
Smoking marijuana once a month	46.9	40.0	29.0	50.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	7.0	5.4	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,298	84	383	1,831
Binge Alcohol[1]	1,022	53	236	733
Any Tobacco[2]	2,206	134	389	1,682
Cigarette	1,873	122	346	1,405
Marijuana	295	43	102	150
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,918	304	288	2,326
Smoking one or more packs per day	3,724	359	417	2,948
Smoking marijuana once a month	2,938	255	222	2,461
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	67	39	24	4

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.35 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in North Dakota, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	54.3	24.7	75.4	55.0
Binge Alcohol[1]	28.1	16.5	54.3	25.0
Any Tobacco[2]	33.9	25.7	51.1	31.9
Cigarette	28.3	22.3	44.8	26.2
Marijuana	3.9	7.6	11.5	1.9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	36.2	36.0	26.3	38.1
Smoking one or more packs per day	63.6	59.3	60.8	64.8
Smoking marijuana once a month	40.6	39.6	30.3	42.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.1	7.9	6.8	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	289	16	57	217
Binge Alcohol[1]	150	10	41	99
Any Tobacco[2]	180	16	38	126
Cigarette	151	14	34	103
Marijuana	21	5	9	8
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	192	23	20	150
Smoking one or more packs per day	338	37	46	255
Smoking marijuana once a month	216	25	23	168
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	8	4	3	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.36 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Ohio, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	45.5	15.8	57.6	47.5
Binge Alcohol[1]	22.2	10.0	40.3	20.8
Any Tobacco[2]	35.6	20.5	52.6	34.8
Cigarette	30.5	18.0	46.3	29.5
Marijuana	4.3	6.9	13.3	2.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	41.6	42.2	32.6	43.1
Smoking one or more packs per day	61.2	57.3	54.8	62.8
Smoking marijuana once a month	45.1	38.6	26.6	49.1
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	6.0	6.4	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	4,216	151	690	3,374
Binge Alcohol[1]	2,054	96	483	1,475
Any Tobacco[2]	3,299	195	630	2,473
Cigarette	2,826	172	556	2,099
Marijuana	399	66	159	174
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	3,856	403	391	3,062
Smoking one or more packs per day	5,667	547	657	4,462
Smoking marijuana once a month	4,174	369	318	3,486
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	96	50	41	5

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.37 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Oklahoma, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	36.9	15.7	52.7	37.4
Binge Alcohol[1]	18.6	10.5	37.3	16.6
Any Tobacco[2]	37.6	20.9	53.5	37.3
Cigarette	30.2	17.3	46.5	29.2
Marijuana	3.5	6.3	10.7	1.8
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	49.9	44.7	39.3	52.5
Smoking one or more packs per day	61.9	60.6	59.6	62.5
Smoking marijuana once a month	47.0	41.3	32.5	50.4
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	7.6	4.6	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,006	48	190	767
Binge Alcohol[1]	507	32	135	340
Any Tobacco[2]	1,023	64	193	766
Cigarette	822	53	168	600
Marijuana	95	19	39	37
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,358	138	142	1,078
Smoking one or more packs per day	1,686	187	215	1,284
Smoking marijuana once a month	1,281	127	118	1,036
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	31	20	10	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.38 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Oregon, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	51.5	16.6	61.1	54.4
Binge Alcohol[1]	19.2	9.7	36.4	17.6
Any Tobacco[2]	31.9	18.0	49.0	30.9
Cigarette	25.8	15.3	42.7	24.4
Marijuana	6.6	9.6	15.7	4.8
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	45.2	37.0	32.4	48.3
Smoking one or more packs per day	65.9	59.8	59.8	67.7
Smoking marijuana once a month	35.5	30.6	20.0	38.6
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.8	6.8	7.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,433	46	212	1,176
Binge Alcohol[1]	534	27	126	381
Any Tobacco[2]	887	50	170	667
Cigarette	718	42	148	528
Marijuana	184	26	54	103
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,258	102	112	1,043
Smoking one or more packs per day	1,835	165	207	1,462
Smoking marijuana once a month	989	85	69	835
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	29	15	12	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.39 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Pennsylvania, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	48.3	15.7	59.6	50.7
Binge Alcohol[1]	21.4	10.1	41.4	19.8
Any Tobacco[2]	32.4	20.3	47.6	31.6
Cigarette	26.6	17.6	41.7	25.5
Marijuana	4.5	6.3	14.2	2.8
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.0	39.0	29.8	40.3
Smoking one or more packs per day	64.2	58.1	56.4	66.1
Smoking marijuana once a month	45.4	35.9	24.2	49.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.4	4.9	6.8	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	4,876	155	700	4,021
Binge Alcohol[1]	2,158	99	486	1,574
Any Tobacco[2]	3,268	200	559	2,509
Cigarette	2,689	173	490	2,026
Marijuana	450	62	166	221
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	3,931	384	350	3,197
Smoking one or more packs per day	6,479	571	662	5,246
Smoking marijuana once a month	4,580	353	284	3,944
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	95	43	46	6

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.40 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Rhode Island, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	50.6	18.0	65.1	52.6
Binge Alcohol[1]	21.1	10.9	44.9	19.0
Any Tobacco[2]	31.7	17.1	41.3	32.1
Cigarette	27.3	15.0	36.5	27.5
Marijuana	7.4	10.8	24.3	4.5
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.9	42.8	35.5	46.5
Smoking one or more packs per day	70.9	62.4	61.8	73.2
Smoking marijuana once a month	39.2	33.9	17.2	43.0
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	7.0	7.3	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	414	15	60	339
Binge Alcohol[1]	173	9	42	122
Any Tobacco[2]	259	14	38	207
Cigarette	223	12	34	177
Marijuana	61	9	23	29
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	367	35	33	299
Smoking one or more packs per day	580	51	57	471
Smoking marijuana once a month	321	28	16	277
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	9	5	3	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.41 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in South Carolina, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	34.8	14.8	47.7	35.5
Binge Alcohol[1]	17.3	8.5	32.5	16.0
Any Tobacco[2]	31.1	21.5	41.5	30.8
Cigarette	26.0	19.6	35.7	25.3
Marijuana	3.8	7.4	12.1	2.0
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	51.4	49.3	38.8	53.8
Smoking one or more packs per day	66.0	58.1	59.7	68.1
Smoking marijuana once a month	50.2	37.9	34.4	54.4
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.7	5.5	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,077	48	183	847
Binge Alcohol[1]	534	27	125	382
Any Tobacco[2]	963	69	159	734
Cigarette	804	63	137	603
Marijuana	119	24	47	48
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,592	159	149	1,284
Smoking one or more packs per day	2,042	187	229	1,625
Smoking marijuana once a month	1,554	122	132	1,300
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	33	19	12	2

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.42 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in South Dakota, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	51.7	21.2	68.6	53.4
Binge Alcohol[1]	25.0	14.7	48.8	22.1
Any Tobacco[2]	30.2	23.2	49.8	27.6
Cigarette	25.0	18.9	43.2	22.6
Marijuana	4.1	6.9	12.4	2.1
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	38.3	35.8	27.2	40.8
Smoking one or more packs per day	61.0	57.2	50.7	63.6
Smoking marijuana once a month	43.5	39.0	27.0	47.4
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.9	6.4	6.9	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	316	16	59	242
Binge Alcohol[1]	153	11	42	100
Any Tobacco[2]	185	17	43	125
Cigarette	153	14	37	102
Marijuana	25	5	11	9
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	234	26	23	184
Smoking one or more packs per day	373	42	43	288
Smoking marijuana once a month	266	29	23	214
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	8	4	4	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.43 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Tennessee, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	34.0	13.8	45.2	34.8
Binge Alcohol[1]	17.2	8.0	33.3	15.8
Any Tobacco[2]	35.2	20.0	49.7	34.8
Cigarette	28.8	17.1	43.9	27.9
Marijuana	3.6	5.2	9.7	2.3
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	50.9	45.3	38.4	53.7
Smoking one or more packs per day	64.5	53.6	58.6	66.9
Smoking marijuana once a month	50.9	38.3	30.4	55.9
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	5.8	5.9	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	1,561	63	266	1,232
Binge Alcohol[1]	791	37	196	559
Any Tobacco[2]	1,616	92	292	1,232
Cigarette	1,324	78	258	987
Marijuana	164	24	57	83
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,336	208	226	1,902
Smoking one or more packs per day	2,961	246	345	2,371
Smoking marijuana once a month	2,335	176	179	1,980
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	46	23	20	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.44 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Texas, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	43.0	17.4	54.4	44.8
Binge Alcohol[1]	21.6	10.9	36.5	20.4
Any Tobacco[2]	28.8	16.1	43.3	28.0
Cigarette	24.4	13.4	37.8	23.5
Marijuana	3.5	5.7	11.1	1.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	49.7	42.0	42.4	52.4
Smoking one or more packs per day	68.1	59.5	62.4	70.7
Smoking marijuana once a month	51.7	40.1	36.1	56.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.5	5.9	4.6	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	6,796	324	1,258	5,215
Binge Alcohol[1]	3,420	202	843	2,374
Any Tobacco[2]	4,551	300	999	3,252
Cigarette	3,861	250	872	2,738
Marijuana	554	107	256	192
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	7,856	782	980	6,094
Smoking one or more packs per day	10,768	1,109	1,441	8,218
Smoking marijuana once a month	8,171	747	833	6,591
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	172	96	67	9

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.45 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Utah, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	28.6	10.3	32.8	31.4
Binge Alcohol[1]	15.5	7.1	24.4	14.8
Any Tobacco[2]	22.2	10.9	30.5	22.4
Cigarette	19.3	10.4	27.5	19.0
Marijuana	4.9	6.1	9.3	3.4
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	52.8	51.5	46.7	54.8
Smoking one or more packs per day	73.2	70.3	72.7	73.9
Smoking marijuana once a month	47.4	45.7	34.4	51.4
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.8	5.1	4.3	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	478	26	103	349
Binge Alcohol[1]	259	18	77	165
Any Tobacco[2]	372	27	96	249
Cigarette	324	26	87	211
Marijuana	82	15	29	37
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	884	127	147	610
Smoking one or more packs per day	1,226	174	229	823
Smoking marijuana once a month	793	113	108	572
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	21	11	9	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.46 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Vermont, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	54.2	19.2	67.1	57.0
Binge Alcohol[1]	21.2	10.3	47.1	18.6
Any Tobacco[2]	27.7	19.0	47.8	25.7
Cigarette	23.6	14.8	44.1	21.6
Marijuana	5.4	8.4	20.9	2.6
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	39.2	33.9	24.5	42.3
Smoking one or more packs per day	68.8	58.8	58.9	71.7
Smoking marijuana once a month	33.0	25.8	18.4	36.2
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.2	7.4	9.5	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	274	10	41	223
Binge Alcohol[1]	107	6	29	73
Any Tobacco[2]	140	10	29	100
Cigarette	119	8	27	84
Marijuana	27	5	13	10
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	199	18	15	165
Smoking one or more packs per day	348	32	36	280
Smoking marijuana once a month	167	14	11	142
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	6	3	3	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.47 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Virginia, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	45.0	12.8	56.4	47.3
Binge Alcohol[1]	18.5	7.4	38.8	16.8
Any Tobacco[2]	27.1	16.7	45.9	25.5
Cigarette	23.2	14.6	40.3	21.6
Marijuana	4.0	5.9	12.4	2.5
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.9	46.3	37.1	45.9
Smoking one or more packs per day	64.5	55.7	58.7	66.5
Smoking marijuana once a month	44.6	40.3	28.2	47.8
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.6	6.1	6.2	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,510	71	385	2,054
Binge Alcohol[1]	1,034	41	265	728
Any Tobacco[2]	1,515	93	313	1,109
Cigarette	1,295	81	275	940
Marijuana	224	33	85	107
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,504	257	253	1,994
Smoking one or more packs per day	3,600	309	400	2,891
Smoking marijuana once a month	2,491	223	192	2,076
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	59	30	25	4

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.48 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Washington, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	50.2	16.1	54.9	54.0
Binge Alcohol[1]	18.8	10.2	36.8	17.1
Any Tobacco[2]	30.4	17.1	41.8	30.4
Cigarette	25.6	14.4	37.5	25.1
Marijuana	6.8	9.9	17.1	4.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	46.2	34.4	33.5	49.8
Smoking one or more packs per day	66.5	62.1	59.3	68.3
Smoking marijuana once a month	35.4	31.4	23.1	37.9
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.7	7.3	5.7	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,364	78	324	1,961
Binge Alcohol[1]	887	50	217	620
Any Tobacco[2]	1,433	83	247	1,103
Cigarette	1,205	70	222	914
Marijuana	318	48	101	169
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	2,176	167	198	1,811
Smoking one or more packs per day	3,135	302	350	2,483
Smoking marijuana once a month	1,666	153	136	1,377
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	52	30	18	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.49 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in West Virginia, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	32.5	15.5	47.8	32.1
Binge Alcohol[1]	17.6	10.7	36.1	15.4
Any Tobacco[2]	39.1	25.5	51.8	38.6
Cigarette	30.9	22.0	44.2	29.8
Marijuana	3.6	7.1	11.3	2.0
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	44.6	36.0	35.7	47.0
Smoking one or more packs per day	59.4	57.0	56.7	60.1
Smoking marijuana once a month	49.5	39.0	30.4	53.7
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.3	6.5	5.3	0.1
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	505	22	95	388
Binge Alcohol[1]	274	15	72	187
Any Tobacco[2]	606	37	103	467
Cigarette	480	32	88	360
Marijuana	56	10	22	24
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	691	52	71	568
Smoking one or more packs per day	921	82	112	727
Smoking marijuana once a month	766	56	60	650
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	15	8	6	1

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.50 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Wisconsin, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	57.6	21.9	67.0	61.1
Binge Alcohol[1]	25.6	14.0	47.0	23.6
Any Tobacco[2]	31.4	20.3	49.5	29.9
Cigarette	27.0	18.2	43.6	25.4
Marijuana	5.1	8.3	16.3	2.7
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	37.5	35.5	27.9	39.5
Smoking one or more packs per day	62.5	59.0	56.5	64.0
Smoking marijuana once a month	37.1	33.6	24.2	39.9
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	2.1	8.0	6.9	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	2,497	105	387	2,006
Binge Alcohol[1]	1,113	67	271	775
Any Tobacco[2]	1,363	97	285	981
Cigarette	1,173	87	252	834
Marijuana	223	40	94	90
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	1,628	170	161	1,297
Smoking one or more packs per day	2,712	282	326	2,104
Smoking marijuana once a month	1,609	161	139	1,309
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	58	33	22	3

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table D.51 Estimates of Past Month Use of Selected Drugs, Perceptions of Great Risk, and Average Annual Rates of First Marijuana Use in the Past 24 Months in Wyoming, by Age Group: 1999

Drug Characteristic	Total	AGE GROUP (Years)		
		12-17	18-25	26 or Older
	RATE ESTIMATES (Percent)			
PAST MONTH USE				
Alcohol	50.5	22.1	65.5	52.2
Binge Alcohol[1]	25.2	15.8	50.7	21.7
Any Tobacco[2]	31.2	20.2	49.1	29.5
Cigarette	24.7	15.9	41.7	22.9
Marijuana	5.6	7.8	14.6	3.5
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	37.7	35.3	27.8	40.1
Smoking one or more packs per day	65.7	57.8	55.3	69.0
Smoking marijuana once a month	40.5	35.0	26.5	44.1
AVERAGE ANNUAL RATE OF FIRST MARIJUANA USE[3]	1.9	6.5	6.7	0.2
	POPULATION ESTIMATES (In Thousands)			
PAST MONTH USE				
Alcohol	211	11	39	161
Binge Alcohol[1]	105	8	31	67
Any Tobacco[2]	131	10	30	91
Cigarette	104	8	25	70
Marijuana	24	4	9	11
PERCEPTIONS OF GREAT RISK				
Drinking 5 or more drinks once or twice a week	158	18	17	124
Smoking one or more packs per day	275	29	33	213
Smoking marijuana once a month	169	17	16	136
AVERAGE ANNUAL NUMBER OF MARIJUANA INITIATES	5	3	2	0

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

[1] "Binge" Alcohol Use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By "occasion" is meant at the same time or within a couple hours of each other.

[2] Any tobacco product indicates use at least once of cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

[3] Average Annual Rate = {(First Use of Marijuana in Past 24 Months) / [(First Use of Marijuana in Past 24 Months * 0.5) + Never Used Marijuana]} / 2. Both of the computation components, first use of marijuana in past 24 months and never used marijuana, are based on a survey-weighted hierarchical Bayes estimation approach.

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Appendix E: Description of the Survey

Appendix E: Description of the Survey

E.1 Sample Design

The 1999 National Household Survey on Drug Abuse (NHSDA) sample design was part of a coordinated 5-year sample design to provide estimates for all 50 States plus the District of Columbia through the year 2003. The coordinated design will facilitate 50 percent overlap in first-stage units (area segments) between each 2 successive years from 1999 through 2003.

For the 5-year 50-State design, eight States were designated as large sample States (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas) with samples large enough to support direct State estimates. Sample sizes in these States ranged from 2,669 to 4,681. For the remaining 42 States and the District of Columbia, smaller, but adequate, samples were selected to support State estimates using small area estimation (SAE) techniques. Sample sizes in these States ranged from 756 to 1,280.

States were first stratified into a total of 900 field interviewer (FI) regions (48 regions in each large sample State and 12 regions in each small sample State). These regions were contiguous geographic areas designed to yield the same number of interviews on average. Within FI regions, adjacent Census blocks were combined to form the first-stage sampling units, called area segments. A total of 96 segments per FI region were selected with probability proportional to population size in order to support the 5-year sample and any supplemental studies that the Substance Abuse and Mental Health Services Administration (SAMHSA) may choose to field. Eight sample segments per FI region were fielded during the 1999 survey year.

These sampled segments were allocated equally into four separate samples, one for each 3-month period during the year, so that the survey is essentially always in the field. In each of these area segments, a listing of all addresses was made from which a sample of 223,868 addresses was selected. Of these, 187,842 were determined to be eligible sample units. In these sample units (which can be either households or units within group quarters), sample persons were randomly selected using an automated screening procedure programmed in a handheld computer carried by the interviewers. Youths (aged 12 to 17 years) and young adults (aged 18 to 25 years) were oversampled at this stage. Because of the large sample size associated with this sample, there was no need to oversample racial/ethnic groups, as was done on prior NHSDAs. Consistent with previous NHSDAs, the final respondent sample of 66,706 persons was representative of the U.S. general population (since 1991, the civilian noninstitutional population) aged 12 or older. In addition, State samples were representative of their respective State populations.

During Quarter 1 of the 1999 NHSDA, it became evident that the response rates were not comparable with those achieved in prior years. The principal cause for the reduction in response rates was the shortage of FIs and their inexperience. One action taken to overcome the response problem was to subsample from all pending cases so that cases retained could be worked more thoroughly. This special subsampling was conducted in two phases. During the first phase, a total of 8,640 of the

13,161 unfinished dwelling units (i.e., pending screeners) were pulled out of the sample. In the second phase, dwelling units eligible to be sampled included those that were unfinished and those with pending person interviews. A total of 3,958 such units were removed in the second phase. In order to reduce the effect of unequal weights, all pending dwelling units (all units from round 1 and 1,827 units from round 2) were put back into the sample in Quarter 2. The sample weights were adjusted to reflect the subsampling and putting back of cases.

The 1999 NHSDA also included a supplemental sample using the paper-and-pencil interviewing (PAPI) mode for the purposes of measuring trends with estimates comparable with 1998 and prior years. The design for the supplemental PAPI study utilized a probability subsample of 250 FI regions and employed a coordinated oversampling strategy to increase the representation of blacks and Hispanics. All segments selected for the main CAI study within the 250 FI regions were also selected for the PAPI study. Oversampling of blacks and Hispanics was achieved by a coordinated sampling scheme that oversampled FI regions with high concentrations of blacks and Hispanics and by screening for and oversampling blacks and Hispanics in dwelling units designated for the PAPI sample. The automated sampling procedure, when applied in the PAPI segments, specified which dwelling units were to be interviewed in the CAI mode and which were to interviewed in the PAPI and then applied the appropriate person selection scheme for that particular survey. A sample of 46,328 addresses was selected for the PAPI study. Of these, 40,584 were determined to be eligible, and the final respondent sample consisted of 13,809 persons.

E.2 Data Collection Methodology (CAI)

The data collection method used in the NHSDA involves in-person interviews with sample persons, incorporating procedures that would be likely to increase respondents' cooperation and willingness to report honestly about their illicit drug use behavior. Confidentiality is stressed in all written and verbal communications with potential respondents, respondents' names are not collected with the data, and computer-assisted interviewing (CAI), including audio computer-assisted self-interviewing (ACASI), is used to provide a private and confidential setting to complete the interview.

Introductory letters are sent to sampled addresses, followed by an interviewer visit. A 5-minute screening procedure conducted using a handheld computer involves listing all household members along with their basic demographic data. The computer uses the demographic data in a preprogrammed selection algorithm to select 0 to 2 sample person(s), depending on the composition of the household. This selection process is designed to provide the necessary sample sizes for the specified population age groupings.

Interviewers attempt to immediately conduct the NHSDA interview with each selected person in the household. The interviewer requests the selected respondent to identify a private area in the home away from other household members to conduct the interview. The interview averages about an hour, and includes a combination of CAPI (computer-assisted personal interviewing) and ACASI. The interview begins in CAPI mode with the FI reading the questions from the computer screen and entering the respondent's replies into the computer. The interview then transitions to the ACASI mode

for the sensitive questions. In this mode, the respondent can read the questions silently on the computer screen and/or listen to the questions read through headphones and enter his/her responses directly into the computer. At the conclusion of the ACASI section, the interview returns to the CAPI mode with the interviewer completing the questionnaire.

No personal identifying information is captured in the CAI record for the respondent. At the end of the day when an interviewer has completed one or more interviews, he/she transmits the data to Research Triangle Institute (RTI) via home telephone lines.

E.3 Data Processing (CAI)

Interviewers initiate nightly data transmissions of interview data and call records on days when they work. Computers at RTI direct the information to a raw data file that consists of one record for each completed interview. Even though much editing and consistency checking is done by the CAI program during the interview, additional, more complex edits and consistency checks are completed at RTI. Resolution of most inconsistencies and missing data is done using machine-editing routines developed specifically for the CAI instrument. Cases are retained only if the respondent provided data on lifetime use of cigarettes and at least nine other substances.

Statistical Imputation. For some key variables that still have missing values after the application of editing, statistical imputation is used to replace missing data with appropriate response codes.

Considerable changes in the imputation procedures used in past NHSDAs were introduced for the 1999 CAI sample. Three types of statistical imputation procedures are used: a standard unweighted sequential hot-deck imputation, a univariate combination of weighted regression imputation, and a random nearest neighbor hot-deck imputation (which could be viewed as a univariate predictive mean neighborhood method), and a combination of weighted regression and a random nearest neighbor hot-deck imputation using a neighborhood where imputation is accomplished on several response variables at once (which could be viewed as a multivariate predictive mean neighborhood method). Because the primary demographic variables (e.g., age, gender, race/ethnicity, employment, education) are imputed first, few variables are available for model-based imputation. Moreover, most demographic variables have a very low level of missingness. Hence, unweighted sequential hot deck is used to impute missing values for demographic variables. The demographic variables can then be used as covariates in models for drug use measures. These models also include other drug use variables as covariates. For example, the model for cocaine use includes cigarette, alcohol, and marijuana recency of use as covariates. The univariate predictive mean neighborhood method is used as an intermediate imputation procedure for recency of use, 12-month frequency of use, 30-day frequency of use, and 30-day binge drinking frequency for all drugs where these variables occur. The final imputed values for these variables are determined using multivariate predictive mean neighborhoods. The final imputed values for age at first use for all drugs and age at first daily cigarette use are determined using univariate predictive mean neighborhoods.

Hot-deck imputation involves the replacement of a missing value with a valid code taken from another respondent who is "similar" and has complete data. Responding and nonresponding units are sorted together by a variable or collection of variables closely related to the variable of interest, *Y*. For sequential hot-deck imputation, a missing value of *Y* is replaced by the nearest responding value preceding it in the sequence. With random nearest neighbor hot-deck imputation, the missing value of *Y* is replaced by a responding value from a donor randomly selected from a set of potential donors close to the unit with the missing value according to some distance metric. The predictive mean neighborhood imputation involves determining a predicted mean using a model, such as a linear regression or logistic regression, depending on the response variable, where the models incorporate the design weights. In the univariate case, the neighborhood of potential donors is determined by calculating the relative distance between the predicted mean for an item nonrespondent and the predicted mean for each potential donor, and choosing those within a small preset value (this is the "distance metric"). The pool of donors is further restricted to satisfy logical constraints whenever necessary (e.g., age at first crack use must not be younger than age at first cocaine use). Whenever possible, more than one response variable was considered at a time. In that (multivariate) case, the Mahalanobis distance across a vector of several response variables' predicted means is calculated between a given item nonrespondent and each candidate donor. The *k* smallest Mahalanobis distances, say 30, determine the neighborhood of candidate donors, and the nonrespondent's missing values in this vector are replaced by those of the randomly selected donor. A respondent may only be missing some of the responses within this vector of response variables; in that case, only the missing values were replaced, and donors were restricted to be logically consistent with the response variables that were not missing.

Although statistical imputation could not proceed separately within each State due to insufficient pools of donors, information about the State of residence of each respondent is incorporated in the modeling and hot-deck steps. For most drugs, respondents were separated into three State usage categories for each drug depending on the response variable of interest. Respondents from States with high usage of a given drug were placed in one category, respondents from medium usage States into another, and the remainder into a third category. This categorical "State rank" variable was used as one set of covariates in the imputation models. In addition, eligible donors for each item nonrespondent were restricted to be of the same State usage category (the same "State rank") as the item nonrespondent.

Weights. The general approach to developing and calibrating analysis weights involved developing design-based weights, d_k, as the inverse of the selection probabilities of the households and persons. Adjustment factors, $a_k(\lambda)$, were then applied to the design-based weights to adjust for nonresponse, to control for extreme weights when necessary, and to poststratify to known population control totals. In view of the importance of State-level estimates with the new 50-State design, it was necessary to control for a much larger number of known population totals. Several other modifications to the general weight adjustment strategy that had been used in past NHSDAs were also implemented for the first time with the 1999 CAI sample.

Weight adjustments were based on a generalization of Deville and Sarndal's (1992) logit model. This generalized exponential model (GEM) (Folsom & Singh, 2000) incorporates unit-specific bounds (ℓ_k, u_k), $k \in s$, for the adjustment factor $a_k(\lambda)$ as follows:

$$a_k(\lambda) = \frac{\ell_k(u_k - c_k) + u_k(c_k - \ell_k)\exp(A_k x_k'\lambda)}{(u_k - c_k) + (c_k - \ell_k)\exp(A_k x_k'\lambda)}$$

where c_k are prespecified centering constants, such that $\ell_k < c_k < u_k$ and $A_k = (u_k - \ell_k)/(u_k - c_k)(c_k - \ell_k)$. The variables ℓ_k, c_k, and u_k are user-specified bounds, and λ is the column vector of p model parameters corresponding to the p covariates x. The λ-parameters are estimated by solving

$$\Sigma_s x_k d_k a_k(\lambda) - \tilde{T}_x = 0,$$

where $\tilde{T}_x$ denotes control totals, which could be either nonrandom as is generally the case with poststratification, or random as is generally the case for nonresponse adjustment.

The final weights $w_k = d_k a_k(\lambda)$ minimize the distance function $\Delta(w,d)$ defined as

$$\Delta(w,d) = \sum_{k \in s} \frac{d_k}{A_k}\left\{(a_k - \ell_k)\log\frac{a_k - \ell_k}{c_k - \ell_k} + (u_k - a_k)\log\frac{u_k - a_k}{u_k - c_k}\right\}$$

This general approach was used at several stages of the weight adjustment process, including: (a) adjustment of household weights for extremes, (b) adjustment of household weights for nonresponse, (c) poststratification of household weights to meet population controls for various demographic groups by State, (d) adjustment of person weights for extremes, (e) poststratification of selected person weights, (f) adjustment of person weights for nonresponse, and (g) poststratification of person weights.

Every effort was made to include as many relevant State-specific covariates (typically defined by demographic domains within States) as possible in the multivariate models used to calibrate the weights (nonresponse adjustment and poststratification steps). Because further subdivision of State samples by demographic covariates often produced small cell sample sizes, it was not possible to retain all State-specific covariates and still estimate the necessary model parameters with reasonable precision. Therefore, a hierarchical structure was used in grouping States with covariates defined at the national level, at the census division level within the Nation, at the State-group within Census division, and, whenever possible, at the State level. In every case, the controls for the total population within a State and the five age groups within a State were maintained. Census control totals by age and race were required for the civilian, noninstitutionalized population of each State. Published Census projections (U.S. Bureau of the Census, 2000) reflected the total residential population (which includes military and institutionalized). The 1990 Census' 5 percent public use microdata file (U.S. Bureau of the Census, 1992) was used to distribute the State residential population into two groups, then the method of raking-ratio adjustment was used to get the desired domain-level counts such that they respect both the

State-level residential population counts as well as the national-level civilian and noncivilian counts for each domain. This was done for the midpoint of each NHSDA data collection period (i.e., quarter) such that counts aggregated over the quarters correspond to the annual counts.

Several other enhancements to the weighting procedures were also implemented. The control of extreme weights through winsorization was incorporated into the calibration processes. Winsorization truncates extreme values at prespecified levels and distributes the trimmed portions of weights to the nontruncated cases; note that this process was carried out using the GEM model discussed above. A step was added to poststratify the household-level weights to obtain Census-consistent estimates based on the household rosters from all screened households; these household roster-based estimates then provided the control totals needed to calibrate the respondent pair weights for subsequent planned analyses. An additional step poststratified the selected persons sample to conform with the adjusted roster estimates. The final step in poststratification related the respondent person sample to external Census data (defined within State whenever possible as discussed above).

Appendix F: Limitations of the Data

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F.1 Target Population

An important limitation of the National Household Survey on Drug Abuse (NHSDA) estimates of drug use prevalence is that they are only designed to describe the target population of the survey—the civilian, noninstitutionalized population aged 12 or older. Although this population includes almost 98 percent of the total U.S. population aged 12 or older, it does exclude some important and unique subpopulations who may have very different drug-using patterns. The survey excludes active-duty military personnel, who have been shown to have significantly lower rates of illicit drug use. Persons living in institutional group quarters, such as prisons and residential drug treatment centers, are not covered in the NHSDA and have been shown in other surveys to have higher rates of illicit drug use. Also excluded are homeless persons not living in a shelter on the survey date, another population shown to have higher than average rates of illicit drug use. Appendix H describes other surveys that provide data for these populations.

F.2 Sampling Error and Statistical Significance

The sampling error of an estimate is the error caused by the selection of a sample instead of conducting a census of the population. Sampling error is reduced by selecting a large sample and by using efficient sample design and estimation strategies, such as stratification, optimal allocation, and ratio estimation.

With the use of probability sampling methods in the NHSDA, it is possible to develop estimates of sampling error from the survey data. These estimates have been calculated for all prevalence estimates presented in this report using a Taylor series linearization approach that takes into account the effects of the complex NHSDA design features. The sampling errors are used to identify unreliable estimates and to test for the statistical significance of differences between estimates.

As was done in the past, direct survey estimates considered to be unreliable due to unacceptably large sampling error are not shown in this report and are noted by asterisks (*) in the tables containing such estimates. The criterion used for suppressing all direct survey estimates was based on the relative standard error (RSE), which is defined as the ratio of the standard error over the estimate.

For proportion estimates (p) within the range $[0 < p < 1]$, rates and corresponding estimated number of users were suppressed if

$$[se(p)/p \div -1\text{n}(p)] > 0.175 \text{ when } p < 0.5$$

or

$$[se(p)/(1-p)] \div -1\text{n}(1-p) > 0.175 \text{ when } p \geq 0.5.$$

This is an ad hoc rule that requires an effective sample size in excess of 50 when $0.10 \leq p \leq 0.90$. As (p) approaches 0.00 or 1.00, it requires increasingly larger effective sample sizes. Estimates were also suppressed if they were close to 0 or 100 percent (if $p < .00005$ or if $p \geq .99995$).

For estimates of other totals, and means (not bounded between 0 and 1), estimates were suppressed if

$$se(p)/p > 0.5.$$

Additionally, estimates of mean age were suppressed if the sample size was smaller than 10 respondents.

When making comparisons of estimates for different population subgroups from the same data year, the covariance term, which is usually small and positive, has typically been ignored. This results in somewhat conservative tests of hypotheses that will sometimes fail to establish statistical significance when in fact it exists.

F.3 Nonsampling Error

Nonsampling errors occur from nonresponse, coding errors, computer processing errors, errors in the sampling frame, reporting errors, and other errors. Nonsampling errors are reduced through data editing, statistical adjustments for nonresponse, and close monitoring and periodic retraining of interviewers.

Although nonsampling errors can often be much larger than sampling errors, measurement of most nonsampling errors is difficult or impossible. However, some indication of the effects of some types of nonsampling errors can be obtained through proxy measures, such as response rates and from other research studies.

Response rates for the NHSDA were stable for the period from 1994 to 1998, with the screening response rate at about 93 percent and the interview response rate at about 78 percent. Of the 187,842 eligible households sampled for the 1999 NHSDA main study, 169,166 were successfully screened for a weight-adjusted screening response rate of 89.6 percent. In these screened households, a total of 89,883 sample persons were selected, and completed interviews were obtained from 66,706 of these sample persons, for a weighted interview response rate of 68.6 percent. A total of 11,276 (18.0 percent) sample persons were classified as refusals, 5,692 (6.7 percent) were not available or never at home, and 6,209 (6.8 percent) did not participate for various other reasons, such as physical or mental incompetence or language barrier. The response rate was highest among the 12- to 17-year-old age group (78.1 percent). The response rate was 71.2 percent for the 18- to 25-year-old age group and 66.7 percent for adults aged 26 or older.

The increase in nonresponse in the 1999 NHSDA can be attributed primarily to an insufficient number of field interviewers (FIs) and their inexperience. Recruiting and training of FIs were major challenges due to the number required for the large sample and the tight labor market. This resulted in a relatively inexperienced FI staff. There were 2,010 FIs hired and

trained, and more than a third of them did not complete the survey year (37.6 percent). Both prior NHSDA experience and on-the-job experience were shown to be related to nonresponse. Previously experienced interviewers and interviewers with one, two, or three quarters of on-the-job experience were more successful at obtaining an interview. The overall nonresponse was also demonstrated to be a product of the combined influences of urbanicity and the age and gender of the respondent. Interviews were completed at a greater rate in rural regions than urban and by younger and female respondents.

Among survey participants, item response rates were above 98 percent for most questionnaire items. However, inconsistent responses for some items, including the drug use items, are common. Estimates of drug use from the NHSDA are based on the responses to multiple questions by respondents, so that the maximum amount of information is used in determining whether a respondent is classified as a drug user. Inconsistencies in responses are resolved through a logical editing process that involves some judgment on the part of survey analysts and is a potential source of nonsampling error. Because of the automatic routing through the computer-assisted interviewing (CAI) questionnaire (e.g., lifetime drug use questions that skip entire modules when answered "no"), there is less editing of this type than in the paper-and-pencil interviewing (PAPI) questionnaire used in previous years. In addition, less logical editing is used because with the CAI data, statistical imputation is relied upon more heavily to determine the final values of drug use variables in cases where there is the potential to use logical editing to make a determination. The combined amount of editing and imputation in the CAI data is still considerably less than the total amount in the PAPI study. For the 1999 CAI data, 2 percent of the estimate of past month hallucinogen use was based on logically edited cases and 4 percent on imputed cases, for a combined amount of 6 percent. In the 1998 NHSDA, the amount of editing and imputation for past month hallucinogens was 60 and 0 percent, respectively, for a total of 60 percent. The combined amount of editing and imputation for the estimate of past month heroin use was 15 percent for the 1999 CAI and 37 percent for the 1998 PAPI data.

NHSDA estimates are based on self-reports of drug use, and their value depends on respondents' truthfulness and memory. Although many studies have generally established the validity of self-report data and the NHSDA procedures were designed to encourage honesty and recall, some degree of underreporting is assumed. No adjustment to NHSDA data is made to correct for this. (Appendix H mentions a number of references addressing the validity of self-reported drug use data.) The methodology used in the NHSDA has been shown to produce more valid results than other self-report methods (e.g., by telephone) (Aquilino, 1994; Turner, Lessler, & Gfroerer, 1992). However, comparisons of NHSDA data with data from surveys conducted in classrooms suggest that underreporting of drug use by youths in their homes may be substantial (Gfroerer, 1993; Gfroerer, Wright, & Kopstein, 1997).

F.4 Incidence Estimates

The following is a general description of the procedure used to measure incidence rates and some of the limitations of those data. Although much of the discussion here is applicable to the incidence estimates discussed in Chapter 4, the actual calculations in that chapter are based on the formula in Section 1.3.1.

For diseases, the incidence rate, *IR*, for a population is defined as the number of new cases of the disease, *N,* divided by the person time, *PT*, of exposure or

$$IR = N / PT.$$

The person time of exposure can be measured for the full period of the study or for a shorter period. The person time of exposure ends at the time of diagnosis (e.g., Greenberg, Daniels, Flanders, Eley, & Boring, 1996, pp. 16-19). Similar conventions were followed for the NHSDA when defining the incidence of first use of a substance.

In order to stabilize the annual rate, the incidence was calculated over a 2-year period and later divided by 2. The time period for recording incidence cases in this report was the 24 months prior to the date of interview. This moving 2-year window for defining incidence cases differs from the calendar year time periods used to estimate incidence at the national level. An approximation was also used to simplify the estimation of the person time, *PT,* of exposure in the denominator of the incidence rate. It was assumed that the date of first use for initiates was uniformly distributed over the 2 years prior to the interview. With this assumption, the expected number of 2-year units of exposure experienced by initiates was $(½)N$ because the expected fraction of the interval that initiates were at risk was (½).

If O denotes the number of persons who would report never having used marijuana if a census of the population was conducted, the number of 2-year units of exposure experience by the population at risk at the beginning of the period is $PT = [(½)N + O)]$ because each of the O persons who had still not used marijuana at the time of interview were exposed for one full 2-year period. This leads to a 2-year incidence rate of the form

$$IR2 = N \div [(½)N + O].$$

The average annual incidence rate (*AAIR*) over the 2 years prior to the interview is then defined as $AAIR = (IR2 \div 2)$.

The *AAIR* is an appealing approximation because it can be recast in terms of two population prevalences that can be estimated by the survey-weighted hierarchical Bayes software developed for NHSDA small area estimation (SAE). This software fits logistic mixed models to binary (one/zero) outcome variables. Letting *M* depict the total survey-eligible population with $PI \equiv (N/M)$ and $PO \equiv (O/M)$ denoting the associated population fractions of past 24-month initiates and never users, respectively, then

$$AAIR = (½)\{PI \div [(½)PI + PO]\}.$$

The national incidence estimate uses the reported month and day of initiation to calculate the *PT* of exposure for initiates. This national incidence calculation uses the observed average fraction of the time period that initiates are at risk, say $\overline{f}$, in place of the assumed uniform fraction of (½) in the calculation of *PT*. Although the uniform distribution assumption for initiation dates will lead to some bias relative to the estimator incorporating $\overline{f}$, one could not use the State by

age-group-specific versions of $\overline{f}$ to form average annual incidence estimates because these $\overline{f}$'s would be much too unstable. Jointly modeling *PI*, *PO*, and $\overline{f}$ would be the ideal solution, but this is currently beyond the scope of the project.

A more important distinction between the model-based State-level average annual incidence estimates and their design-based national analogs is the way that age groups are handled. To produce the age-group-specific average annual incidence estimates, we simply condition the *PI* and *PO* prevalence estimates on the survey respondents' age at interview. This is consistent with how all the State-level age-specific small area estimates are produced. The design-based national estimates, on the other hand, assign incidence cases to age groups depending on the respondents' age at initiation. Therefore, someone just turning 12 at the time of the interview could have their initiation included in the 12 to 17-year-old count of incidence cases if it occurred when they were just turning 10. Similarly, respondents aged 18 through 19 at the time of the interview who reported first use during the 24-month time period prior to the interview when they were 17 would not have their initiation included in the 12 to 17-year-old value of *N*.

The assignment of exposure fractions is also different in the design-based and model-based estimates. In the national design-based estimate, the fraction of the time interval that an initiate is at risk is restricted to the fraction that he or she is both at risk and in the age interval. In the calculation of *PT*, the average of these age-*a* restricted fractions, say $\overline{fI}_a$, multiplies the count of initiations that occur to respondents when they are aged-*a*, say N_a. The never users' exposure time of one unit is also age restricted to the fraction of the time interval that they are aged-*a*. If the average of these age-restricted exposure fractions for never users is $\overline{fO}_a$, then

$$PT_a = \left[\left(\overline{fI}_a \right) N_a + \left(\overline{fO}_a \right) O_a \right],$$

where O_a is the count of never users at interview who have non-zero fractions of the 2-year time period when they are aged-*a*. This distinction between how age grouping is handled makes it clear that the national design-based incidence estimates and the national aggregates of the State-level model-based estimates will not be comparable. The State-level model-based estimates are incidence-like rates that can be compared across States.

The 95 percent prediction intervals quoted for the *AAIR's* also involved an approximation. Because the *PI* and *PO* prevalences were modeled separately, there was no direct way to produce 95 percent prediction intervals for the State-level *AAIR's* that would account for the posterior correlation between the two prevalences. Pearson correlation between the two State-level prevalences was used as a substitute.

Bias due to differential mortality occurs because some persons who were alive and exposed to the risk of first drug use in the historical periods shown in the tables died before the 1999 NHSDA was conducted. This bias is probably very small for estimates shown in this

report. Incidence estimates are also affected by memory errors, including recall decay (tendency to forget events occurring long ago) and forward telescoping (tendency to report that an event occurred more recently than it actually did). These memory errors would both tend to result in estimates for earlier years (i.e., 1960s and 1970s) that are downwardly biased (because of recall decay) and estimates for later years that are upwardly biased (because of telescoping). There is also likely to be some underreporting bias due to social acceptability of drug use behaviors and respondents' fear of disclosure. This is likely to have the greatest impact on recent estimates, which reflect more recent use and reporting by younger respondents. Finally, for drug use that is frequently initiated at age 10 or younger, estimates based on retrospective reports 1 year later underestimate total incidence because 11-year-old children are not sampled by the NHSDA. Prior analyses showed that alcohol and cigarette (any use) incidence estimates could be significantly affected by this. Therefore, for these drugs no 1998 estimates were made.

Johnson, Gerstein, and Rasinski (1998) concluded that the marijuana incidence trend from the NHSDA was biased because the reporting of initiation declines as the length of time between initiation and the survey increases. However, this study did not address very recent estimates (i.e., 1996 to 1998), which could be biased because they reflect recent drug use and because they are heavily based on the reports of adolescents. To better understand the size of the biases and to assess the reliability of estimates for recent years, the Office of Appled Studies (OAS) performed an analysis of estimates based on single years of NHSDA data. This analysis focused on three drugs: marijuana, cocaine, and heroin. Using the survey data from 1994 to 1998, estimates were made of the number of initiates, the rate of initiation for youths aged 12 to 17, and the rate of initiation for persons aged 18 to 25. For the 1994 survey, an estimate was made for the year 1993. For the 1995 survey, another estimate was made for the year 1993. In this way, two recent estimates of the same year could be compared. Similarly, the 1995 and 1996 data provided two estimates for 1994, the 1996 and 1997 surveys provided two estimates for 1995, the 1997 and 1998 surveys provided two estimates for 1996. Because these calculations represent two measurements of the same population characteristic, they would ideally be the same. Examples of these estimates are shown in the following table.

Drug initiation rates for youths aged 12 to 17 for the more hard-core drugs (such as cocaine and heroin) appear to be most prone to bias. For example, on average across the 4 survey years, the estimate for the rate of initiation of cocaine use among youths aged 12 to 17 was 48 percent higher the first time the estimate could be made than the second time. This indicates a probable bias in the estimation; however, it is unclear which estimate is the correct one. As a result, one should be cautious in interpreting any changes between the prior year and the most recent year in the initiation rates for youths of the more stigmatized drugs. Because only 5 years of data were used to estimate how the rate of incidence changes between the first year it can be estimated and the second, one should be cautious about inferring the magnitude of the bias (e.g., that it is 48 percent for cocaine). In 1999 and thereafter, the youth and young adult samples will be much larger, and more precise estimates of the bias will be possible.

	Year of Initiation								Average of Ratio of 1-Year Recall to 2-Year Recall
	1993		1994		1995		1996		
	Year of Survey								
	1994	1995	1995	1996	1996	1997	1997	1998	
Rate for Youths Aged 12 to 17									
Marijuana	59.2	53.7	74.2	75.2	75.7	73.6	83.2	75.6	1.055
Cocaine	8.9	5.0	10.2	5.7	10.6	8.0	11.3	11.0	1.480
Heroin	0.7	0.5	2.1	1.4	2.5	1.8	3.9	1.5	1.722
Rate for Young Adults Aged 18 to 25									
Marijuana	46.9	41.4	42.1	55.9	47.7	53.4	53.6	50.5	0.960
Cocaine	12.8	12.8	9.9	11.8	13.8	14.7	14.8	13.9	0.961
Heroin	0.1	1.4	1.4	2.1	2.4	1.9	2.3	3.0	0.692
Number of Initiates									
Marijuana	2,035	1,783	2,251	2,548	2,368	2,443	2,540	2,384	1.015
Cocaine	595	538	533	530	652	654	675	664	1.031
Heroin	41	62	122	97	141	93	171	127	1.195

Appendix G: State Estimation Methodology

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G.1 Background

In response to the need for State-level information on substance abuse problems, the Substance Abuse and Mental Health Services Administration (SAMHSA) began developing and testing small area estimation (SAE) methods for the National Household Survey on Drug Abuse (NHSDA) in 1994 under a contract with the Research Triangle Institute (RTI). That developmental work used logistic regression models with data from the combined 1991 to 1993 NHSDAs and local area indicators, such as drug-related arrests, alcohol-related death rates, and block group/tract level characteristics from the 1990 Census that were found to be associated with substance abuse. In 1996, the results were published for 25 States for which there were sufficient sample data (SAMHSA, 1996). A subsequent report described the methodology in detail and noted areas in which improvements were needed (Folsom & Judkins, 1997).

The increasing need for State-level estimates of substance use led to the decision to expand the NHSDA to provide estimates for all 50 States and the District of Columbia on an annual basis beginning in 1999. It was determined that, with the use of modeling similar to that used with the 1991 to 1993 NHSDA data in conjunction with a sample designed for State-level estimation, a sample of about 67,500 persons would be sufficient to make reasonably precise estimates.

The State-based NHSDA sample design implemented in 1999 had the following characteristics:

1. States are stratified into field interviewer (FI) regions that covered the geography of each State. The FI regions are comprised of contiguous Census tracts and counties and designed to yield about 75 interviews per region. In the 42 smaller States (by population) and the District of Columbia, there are 12 FI regions; in the eight largest States, there are 48 FI regions.

2. Within each region, eight segments are randomly selected and two are allocated to each calendar quarter of data collection.

3. Within each segment, households are screened, and a sample of one to two persons per household is selected. An average of nine responding persons per segment is sought.

4. The samples are selected so that approximately 900 responding persons, 300 in each age group (12 to 17, 18 to 25, and 26 or older), are drawn in each of the 42 States and the District of Columbia. In the eight large States, the person samples are allocated equally to the three age groups with overall respondent sample sizes ranging from 2,669 to 4,681.

In preparation for the modeling of the 1999 data, RTI used the data from the combined 1994-96 NHSDAs to develop an improved methodology that utilized more local area data and produced better estimates of the accuracy of the State estimates (Folsom, Shah, & Vaish, 1999). That effort involved the development of procedures that would validate the results for geographic areas with large samples. This work was reviewed by a panel with expertise in small

area estimation.[1] They approved of the methodology, but suggested further improvements for the modeling to be used to produce the 1999 State estimates. Those improvements have been incorporated into the methodology finally used for the 1999 State estimates included in this report. The methodology, called Survey-Weighted Hierarchical Bayes Estimation (HB), is described below.

G.2 Goals of Modeling

There were several goals underlying the estimation process. The first was to model drug use at the lowest possible level and aggregate over the levels to form the State estimates. The chosen level of aggregation was the 32 age group (12 to 17, 18 to 25, 26 to 34, 35+) by race/ethnicity (white-not Hispanic, black-not Hispanic, Hispanic, Other) by gender cells at the block group level. Estimated population counts could be obtained from a private vendor for each block group for each of the 32 cells. This level of aggregation was desired because the NHSDA first stage of sample selection was at the block group level, so that there would be data at this level to fit a model. In addition, there was a great deal of information from the Census at the block group level that could be used as predictors in the models. If prevalence rates could be estimated for each of the 32 cells at the block group level, it would only be necessary to multiply by the estimated population counts and aggregate to the State level.

Another goal of the estimation process was to include the sampling weight in the model in such a way that the small area estimates would converge to the design-based (sample-weighted) estimate when they are aggregated to a sufficient sample size. There was a desire for the estimates to have this characteristic so that there would be consistency with the survey-weighted national estimates based on the entire sample.

A third goal was to include as much local source data as possible, especially data related to each substance use measure. This would help provide a better fit beyond the strictly sociodemographic information. The desire was to use national sources of these data so that there would be consistency of collection and estimation methodology across States.

Recognizing that estimates based solely on these "fixed" effects would not reflect differences across States due to differences in laws, enforcement activities, advertising campaigns, outreach activities, and other such unique State contributions, a fourth goal was to include "random" effects to compensate for these differences. The types of random effects that could be supported by the NHSDA data were a function of the size of sample and the model fit to the sample data. For the 1999 survey, random effects were included at the State level and for substate regions comprised of three neighboring FI regions. Although this grouping of the three FI regions was principally motivated by the need to accumulate enough sample to support good model fitting for the low prevalence NHSDA outcomes, it was also reasoned that it would be possible to produce substate HB estimates for areas comprised of these FI region groups, once 2 or 3 years of NHSDA data were available, because that would yield substate region samples of at least 400 respondents. For substate areas like counties and large municipalities that do not conform to the substate region boundaries, HB estimates could be derived from their elemental

[1]The panel included William Bell of the U.S. Bureau of the Census; Partha Lahiri of the University of Nebraska; Balgobin Nandram of Worcester Polytechnic Institute and the National Center for Health Statistics; Wesley Schaible, formerly Associate Commissioner for Research and Evaluation at the Bureau of Labor Statistics; and Alan Zaslavsky of Harvard University. Other attendees involved in the development or discussion were Ralph Folsom, Judith Lessler, Avinash Singh, and Akhil Vaish of RTI and Doug Wright of SAMHSA.

block group level contributions, but the direct survey data employed in the estimation of the associated substate region effects would not be restricted to the county or city of interest. This mismatch of FI region and county/large municipality boundaries weakens the theoretical appeal of the associated HB estimate. For this reason, substate HB estimates probably should be restricted to areas that can be matched reasonably well to FI region groups.

One of the difficulties of typical SAE has been obtaining good estimates of the accuracy of the estimates with prediction intervals that give a good representation of the true probability of coverage of the intervals. Therefore, the final major goal was to provide accurate prediction intervals—ones that would approach the usual sample-based intervals as the sample size increases.

G.3 Variables to Be Modeled

A set of 20 measures covering a variety of aspects of substance use and abuse was designated. These variables are listed below. The first seven measures in the list were considered priority variables and were discussed in the *Summary of Findings from the 1999 National Household Survey on Drug Abuse* (SAMHSA, 2000b). The remaining variables have been estimated. Some have been discussed in this report, and the remaining ones will be released in a separate State report later this year.

1. past month binge alcohol use
2. past month cigarette use
3. past month marijuana use
4. past month any illicit drug use
5. past month any illicit drug except marijuana use
6. past year dependence on illicit drugs
7. past year dependence on alcohol or illicit drugs
8. past month alcohol use
9. never use marijuana
10. first time use of marijuana in the past 2 years
11. perceived great risk of smoking marijuana once a month
12. perceived great risk of smoking one or more packs of cigarettes everyday
13. perceived great risk of having five or more alcoholic drinks once or twice a week
14. past year receipt of treatment for illicit drugs
15. past year receipt of treatment for illicit drugs or alcohol
16. past year needed treatment for illicit drugs or dependent on alcohol
17. past year needed treatment for illicit drugs
18. past year cocaine use
19. past month tobacco use
20. Food Stamp participation rate

G.4 Predictors Used in Logistic Regression Models

Local area data used as potential predictor variables in the logistic regression models were obtained from several sources, including Claritas, the Census Bureau, the FBI (Uniform Crime Reports), Health Resources and Services Administration (Area Resource File), SAMHSA (Uniform Facility Data Set), and the National Center for Health Statistics (mortality data). The list of sources and potential data items used in the modeling are provided below.

Claritas

Demographic data package called *Building Block Basic, Age by Race* from Claritas for 1999 with projections to 2004; the estimates for 1999-population counts were used

Census Bureau

1990 Census, demographic and socioeconomic variables

July 1997 Food Stamp participation rates

Federal Bureau of Investigation

Uniform Crime Report (UCR), UCR arrest totals from: http://fisher.lib.Virginia.EDU/crime/; the most current data are for 1997 for most counties, and previous years data were used in a few cases

Health Resources and Services Administration

Area Resource File (ARF), some variables relating to income and employment from the ARF February 1999 release from the Bureau of Health Professions, Office of Research and Planning

National Center for Health Statistics

Mortality data using International Classification of Diseases, 9th revision (ICD-9), 1992 to 1997; ICD-9 death rate data from the Centers for Disease Control and Prevention at the National Center for Health Statistics

SAMHSA, Office of Applied Studies

Uniform Facility Data Set (UFDS), 1997 to 1998 UFDS data on drug and alcohol treatment rates from Synectics for Management Decisions, Inc.

The following tables list the specific independent variables that were potential predictors in the models.

Claritas Data

Description	Level
% Population aged 0-18 in block group	Block group
% Population aged 19-24 in block group	Block group
% Population aged 25-34 in block group	Block group
% Population aged 35-44 in block group	Block group
% Population aged 45-54 in block group	Block group
% Population aged 55-64 in block group	Block group
% Population aged 65+ in block group	Block group
% Blacks in block group	Block group
% Hispanics in block group	Block group
% Other race in block group	Block group
% Whites in block group	Block group

Claritas Data

Description	Level
% Males in block group	Block group
% Females in block group	Block group
% American Indian, Eskimo, Aleut in tract	Tract
% Asian, Pacific Islander in tract	Tract
% Population aged 0-18 in tract	Tract
% Population aged 19-24 in tract	Tract
% Population aged 25-34 in tract	Tract
% Population aged 35-44 in tract	Tract
% Population aged 45-54 in tract	Tract
% Population aged 55-64 in tract	Tract
% Population aged 65+ in tract	Tract
% Blacks in tract	Tract
% Hispanics in tract	Tract
% Other race in tract	Tract
% Whites in tract	Tract
% Males in tract	Tract
% Females in tract	Tract
% Population aged 0-18 in county	County
% Population aged 19-24 in county	County
% Population aged 25-34 in county	County
% Population aged 35-44 in county	County
% Population aged 45-54 in county	County
% Population aged 55-64 in county	County
% Population aged 65+ in county	County
% Blacks in county	County
% Hispanics in county	County
% Other race in county	County
% Whites in county	County
% Males in county	County
% Females in county	County

1990 Census Data

Description	Level
% Population who dropped out of high school	Tract
% Housing units built in 1940-1949	Tract
% Persons 16-64 with a work disability	Tract
% Hispanics who are Cuban	Tract
% Females 16 years or older in labor force	Tract
% Females never married	Tract
% Females separated/divorced/widowed/other	Tract
% One-person households	Tract
% Female head of household, no spouse, child ≤18	Tract
% Males 16 years or older in labor force	Tract
% Males never married	Tract
% Males separated/divorced/widowed/other	Tract
% Housing units built in 1939 or earlier	Tract
Average persons per room	Tract
% Families below poverty level	Tract
% Households with public assistance income	Tract
% Housing units rented	Tract
% Population 9-12 years of school, no high school diploma	Tract
% Population 0-8 years of school	Tract
% Population with associate's degree	Tract
% Population some college and no degree	Tract
% Population with bachelor's, graduate, professional degree	Tract
Median rents for rental units	Tract
Median value of owner-occupied housing units	Tract
Median household income	Tract

Uniform Crime Report Data

Description	Level
Drug possession arrest rate	County
Drug sale/manufacture arrest rate	County
Drug violations' arrest rate	County
Marijuana possession arrest rate	County
Marijuana sale/manufacture arrest rate	County
Opium cocaine possession arrest rate	County
Opium cocaine sale/manufacture arrest rate	County
Other drug possession arrest rate	County
Other dangerous non-narcotics arrest rate	County
Serious crime arrest rate	County
Violent crime arrest rate	County

Categorical Data

Description	Source	Level
=1 if Hispanic, =0 otherwise	Sample	Person
=1 if non-Hispanic Black, =0 otherwise	Sample	Person
=1 if non-Hispanic Other, =0 otherwise	Sample	Person
=1 if male, =0 if female	Sample	Person
=1 if Northeast region, =0 otherwise	1990 Census	State
=1 if Midwest region, =0 otherwise	1990 Census	State
=1 if South region, =0 otherwise	1990 Census	State
=1 if MSA with 1 million +, =0 otherwise	1990 Census	County
=1 if MSA with <1 million, =0 otherwise	1990 Census	County
=1 if non-MSA urban, =0 otherwise	1990 Census	Tract
Underclass indicator	Urban Institute	Tract
=1 if no Cubans in tract, =0 otherwise	1990 Census	Tract
=1 if urban area, =0 if rural area	1990 Census	Tract
=1 if no arrests for dangerous non-narcotics =0 otherwise	UCR	County

Miscellaneous Data

Variable Description	Level	Source
Alcohol death rate, direct cause	County	ICD-9
Alcohol death rate, indirect cause	County	ICD-9
Cigarettes death rate, direct cause	County	ICD-9
Cigarettes death rate, indirect cause	County	ICD-9
Drug death rate, direct cause	County	ICD-9
Drug death rate, indirect cause	County	ICD-9
Alcohol treatment rate	County	UFDS
Alcohol and drug treatment rate	County	UFDS
Drug treatment rate	County	UFDS
% Families below poverty level	County	ARF
Unemployment rate	County	ARF
Median personal income	County	ARF
Food stamp participation rate	County	Census Bureau

G.5 Selection of Independent Variables for the Models

Independent variables for modeling each of the substance use measures were first identified by a CHAID (Chi-squared Automatic Interaction Detector) algorithm. CHAID is an algorithm that does not use sample weights. Prior to this process, all the continuous variables were categorized using deciles and were treated as ordinal in CHAID. Race, region, and gender were treated as nominal categorical variables in CHAID. Significant independent variables from each model that were final nodes in the tree-growing process were identified as indicator variables destined for inclusion at a later step.

Independently, a SAS stepwise logistic regression model was fit for each dependent variable by age group. The SAS stepwise was used because it was able to quickly run all of the variables for all of the models, although it was recognized that the software would not take into account the complex sample design and the weights. The independent variables included all the first-order or linear polynomial trend contrasts across the 10 levels of the categorized variables plus the gender, region, and race variables. Significant variables (at the 3 percent level) were identified from this process. Based on this list, a list of variables was created that included the second- and third-order polynomials and the interaction of the first-order polynomials with the gender, race, and region variables.

Next, the variables from the CHAID process and the SAS process were entered into a SAS stepwise logistic model at the 1 percent significance level. Because of past concerns about overfitting of the data in earlier estimation using the 1991 to 1993 NHSDA data, the significance levels were made quite stringent. These variables were then entered into a SUDAAN logistic regression model because the SUDAAN software would adjust for the effects of the weights and

other aspects of the complex sample design. All variables that were still significant at the 1 percent significance level were entered into the survey weighted HB process.

Independently, a factor-analytic approach was used to determine the important variables to include in the model. This approach would allow the data to self-identify the important dimensions. The concern here was to use an alternate method that would have a certain face validity. That method was utilized to identify an independent set of variables that were then processed through the HB estimation. The results, however, in terms of model-fit and prediction intervals were generally not as good as with the CHAID/SAS/SUDAAN screening process for candidate independent variables. Also, the factor-analytic approach involves an inherently subjective step to attribute names to the various factor loadings, and the interest was more in the predictive ability of variables than in a substantive description of the dimensions. Nevertheless, it was encouraging to see that the results of the two approaches gave reasonably similar results. For these reasons, the estimates in this report were those based on the latter method that started with the CHAID process.

G.6 General Model Description

The model can be characterized as a complex mixed model (including both fixed and random effects) of the form:

$$\lambda = X\beta + ZU$$

Each of the symbols represents a matrix or vector. The leading term $X\beta$ is the usual (fixed) regression contribution, and ZU represents *random* effects for the States and FI region groups that the data will support and for which estimates are desired. Not obvious from the notation is that the form of the model is a logistic model used to estimate dichotomous data. The λ vector has elements $\ln[\pi_{ijk}/(1-\pi_{ijk})]$, where the π_{ijk} is the propensity for the k^{th} person in the j^{th} FI composite region in the i^{th} State to engage in the behavior of interest (e.g., to use marijuana in the past month). Also not obvious from the notation is that the model fitting utilizes the final "sample" weights as discussed above. The "sample" weights have been adjusted for nonresponse and poststratified to known Census counts.

The estimate for each State behaves like a "weighted" average of the direct survey estimate in that State and the predicted value based on the national regression model. The "weights" in this case are functions of the relative precision of the sample based estimate for the State and the predicted estimate based on the national model. The eight large States have large samples, and thus more "weight" is given to the sample estimate relative to the model-based regression estimate. The 42 small States and the District of Columbia put relatively more "weight" on the regression estimate because of their smaller samples. The national regression estimate actually uses national parameters that are based on the full sample of approximately 67,000 persons; however, the regression estimate for a specific State is based on applying the national regression parameters *to that State's "local" county, block group, and tract level predictor variables* and summing to the State level. Therefore, even the national regression component of the estimate for a State includes "local" State data.

The goal then was to come up with the best estimates of β and U. This would lead to the best estimates of λ, which would in turn lead to the best estimate of π. Once the best estimate of π for each block group and each age/race/gender cell within a block group has been estimated, the results could be weighted by the projected Census population counts at that level to make estimates for any geographic area larger than a block group.

G.7 Implementation of Modeling

The solution to the equation for λ in the above section is not straightforward but involves a series of iterative steps to generate values of the desired fixed and random effects from the underlying joint distribution. The details of the technique will be described in more detail in a methodological report currently in progress. In the interim, the basic process can be described as follows.

Let β denote the matrix of fixed effects, η be the matrix of State random effects i = 1-51, and ν denote the matrix of FI composite region effects j within State i. Because the goal is to estimate separate models for four age groups, it is assumed that the random effects vectors are four variate Normal with null mean vectors and 4X4 covariance matrices D_η and D_ν, respectively. To estimate the individual effects, a Bayesian approach is used to represent the joint density function given the data by $f(\beta, \eta, \nu, D_\nu, D_\eta \mid y)$. According to the Bayes process, this can be estimated once the conditional distributions are known:

$$f_1(\beta \mid \eta, \nu, D_\nu, D_\eta, y), f_2(D_\nu, D_\eta \mid \beta\ \eta, \nu, y), \text{ and } f_3(\eta, \nu \mid \beta, D_\nu, D_\eta, y).$$

To generate random draws from these distributions, Markov Chain Monte Carlo (MCMC) processes need to be used. These are a body of methods for generating pseudo-random draws from probability distributions via Markov chains. A Markov chain is fully specified by its starting distribution $P(X_0)$ and the transition kernel $P(X_t \mid X_{t-1})$.

Each MCMC step that involves the vector of binary outcome variables y in the conditioning set needs first to be modified by defining a pseudo-likelihood using survey weights. In defining pseudo-likelihood, weights are introduced after scaling them to the effective sample size based on a suitable design effect. Note that with the pseudo-likelihood, the covariance matrix of the pseudo-score functions is no longer equal to the pseudo-information matrix, and therefore a sandwich-type of covariance matrix was to compute the design effect. In this process, weights are largely assumed to be noninformative (i.e., unrelated to the outcome variable y). The assumption of noninformative weights is useful in finding tractable expressions for the appropriate information matrix of the pseudo score functions. The pseudo log-likelihood remains an unbiased estimate of the finite-population log-likelihood regardless of this assumption.

Step I $[\beta_\alpha \mid \eta, v, y]$ (this does not depend on D_η, D_ν)

With flat prior for β_α, the conditional posterior is proportional to the pseudo-likelihood function. For large samples, this posterior can be approximated by the multivariate normal distribution with mean vector equal to the pseudo-maximum likelihood estimate and with asymptotic covariance matrix having the associated sandwich form. Assuming that the survey weights are noninformative makes the age group specific β_α vectors conditionally independent of each other. Therefore, the β_α can be updated separately at each MCMC cycle.

Step II $[\eta_i \mid \beta, v_i, D_\eta, y]$ (this does not depend on D_ν)

Here the conditional posterior is proportional to the product of the prior $g(\eta_i|.)$, the pseudo-likelihood function $f(y|.)$ as well as the prior $p(\beta, D_\eta)$; this last prior can be omitted as it does not involve η_i. To calculate the denominator (or the normalization constant) of the posterior distribution for η_i requires multidimensional integration and is numerically intractable. To get around this problem, the Metropolis-Hastings (M-H) algorithm is used that requires a dominating density convenient for Monte Carlo sampling. For this purpose, the mode and

curvature of the conditional posterior distribution are used; these can be simply obtained from its numerator. Then a Gaussian distribution is used with matching mode and curvature to define the dominating density for M-H. As with the age group specific β_α parameters, the State-specific random effect vectors η_i are conditionally independent of each other and can be updated separately at each MCMC cycle.

Step III $[v_{ij} \mid \beta, \eta_i, D_v, y]$ (this does not depend on D_η)

Similar to step II.

Step IV $[D_\eta \mid \eta]$, $[D_v \mid v]$ (here, η and v include all the information from y)

Here, the pseudo-likelihood involving design weights comes in implicitly through the conditioning parameters η and v evaluated at the current cycle. An exact conditional posterior distribution is obtained because the inverse Wishart priors for D_η and D_v are conjugate.

Remarks

- In the NHSDA application, three FI regions were combined to form a minimum of four substate regions with corresponding random effects. This was done to ensure adequate sample sizes for estimation purposes.

- There is self-calibration built in to the modeling. This is achieved via design effect-scaling of survey weights incorporated in the conditional posterior density so that small area estimates for large States become asymptotically equivalent to the direct estimates. Similarly, survey-weighted estimates of the fixed parameters (in particular the intercept) give calibration of the aggregate of small area estimates to the national direct estimate.

- For posterior variance estimation purposes, the survey weights were largely assumed to be noninformative. The survey design effects on the posterior variance are therefore restricted to unequal weighting effects. It was assumed that all the design-related clustering effects are represented by between State and between substate (within State) variability of random effects. This does not take care of variability at lower levels of clustering. However, sample size is not sufficient at lower levels to support stable estimates of random effects for area segments.

- If the logistic mixed model fits well, the variance estimates should be reasonable. The self-calibration property provides some protection against model breakdown. Research is currently under way to develop a new MCMC algorithm that fully accounts for survey design effects on the small area estimate posterior prediction intervals.

G.8 Validation and Other Results

The following validation methodology was implemented at the time of the first release of the 1999 NHSDA data (SAMHSA, 2000b) and is based on the seven variables discussed in that report. Subsequently, an error in the imputation program was discovered, and the corrected estimates have been made available on the SAMHSA website. The imputation error should not have affected the results of the validation process in which estimates from repeated simulated samples were compared to the overall direct estimates because the imputation error would have been reflected in both the simulated data and the overall direct estimate. Therefore, those results are presented again below.

To validate the fit of the SAE models, the eight large sample States were used as internal benchmarks. For this purpose, 12 pseudo FI regions within each large sample State were created by pooling the 48 initial regions into groups of 4. Each of these pseudo FI regions were then expected to have 8 area segments per calendar quarter. For each of these pseudo FI region by quarter sets of 8 area segments, any segments that were devoid of interviews were first randomly replaced by a selection from the non-empty segments in the set. The completed set of 8 segments from each pseudo FI region by quarter combination was then randomly partitioned into 4 replicates of 2 segments each. Combined across the 12 pseudo FI regions and the 4 calendar quarters, each of the 4 substate replicates mimicked the size and design structure of a small State sample.

Having created four pseudo small State samples and associated universe level files for each large State, SAEs were then produced for 75 States (43 + 32), including the 43 small States and 32 substate territories defined across the eight large sample States. Tables G.3 and G.4 show these 32 substate SAEs and their direct survey weighted analogs for two of the seven substances included in the validation analysis—one with a medium prevalence, and one with a low prevalence. Full State sample estimates have been included for comparison purposes. Relative absolute biases of the substate estimates are shown where the full State sample direct estimate is used as the benchmark value.

The State specific relative absolute bias (RB) quantities in Tables G.3 and G.4 equal the absolute differences of the averaged four substate small area estimates (SS1, .., SS4) and the State full sample design based benchmark (e.g., California, etc.) divided by the benchmark. The average relative absolute bias (ARB) is the simple average across the eight large States of the RBs. For the two highest prevalence items, binge alcohol and cigarette use, these ARB quantities are quite small; namely 1.30 and 1.71 percent, respectively, for the total age 12 or older age group. For the three items with prevalence rates in the middle range, dependence on illicit drugs or alcohol, marijuana use and any illicit drug use, the ARB measures range from 4.75 to 5.82 percent for the total age group. The two lowest prevalence items, dependence on illicit drugs and use of any illicit drug other than marijuana, have ARBs of 8.38 and 11.49 percent for the total age group. The age groups with the lowest prevalence rates are seen to have the largest ARBs.

Table G.2 provides estimates of the relative absolute bias for the eight large States for three substance measures. The RB for a specific State is the absolute value of the difference between the survey weighted HB estimate and the direct survey estimate based on the full sample, divided by the direct survey estimate. Because models for these States put less reliance on the model, their biases are smaller than for the 42 States and the District of Columbia. For past month use of cigarettes (not shown) among the age 12 or older population, the ARB across the eight States was 1.4 percent. For past month use of any illicit drug, the ARB was 4.2 percent, and for the substance with the lowest prevalence, past year dependence on any illicit drug, the percentage was 7.5.

To compare the overall precision of the small area estimates with the direct survey estimates, ratios of the corresponding 95 percent Bayes (credible) intervals, which fully account for the posterior variance of the fixed and random effect parameters, were compared to the corresponding direct survey confidence intervals. These results are displayed in Tables G.5 and G.6 for past month use of any illicit drug and past year dependence on any illicit drug.

The SAE and direct intervals are summarized by showing average ratios of the *relative* interval widths (the interval width for a State divided by the corresponding estimate for that State) by State and overall averaged of the ratios across States by outcome. For the eight large

States for those aged 12 or older, the average ratios are cigarettes .89, any illicit drug .84, and dependence on any illicit drug.78. For the other States and the District of Columbia, the comparable estimates are cigarettes .71, any illicit drug .62, and dependence on any illicit drug .60. This indicates that on average the HB estimates are more precise than the corresponding direct survey estimates.

G.9 Caveats

Table G.1 shows the screening, interview, and overall response rate for each State and the District of Columbia. As mentioned in the text, these variable response rates can be associated with variable levels of nonresponse bias. In addition, there may also be varying levels of *response* bias as a result of underreporting (and sometimes overreporting) use of illicit substances. For 1999, the assumptions being made are that the biases from these two sources are constant across States so that comparisons among States still hold.

Another possible contributor to bias in the State estimates, and the estimates in general, was the effect of editing and imputation on two substances—past month use of marijuana and past month binge use of alcohol. In developing the editing and imputation process for 1999 and subsequent years, the desire was to minimize the amount of editing that is typically somewhat subjective, and instead let the random imputation process supply any partially missing information. Overall, the percentage of imputed information is quite small for any given substance. The method as described earlier is based on a multivariate imputation in which some demographic and other substance use information from the respondent is used to determine a donor who is similar in those characteristics but has supplied data for the drug in question. Often, information was also available from the partial respondent on the recency of drug use. For example, respondents may have indicated that they used the drug in their lifetime or in the past year, but left blank the question about use in the past month. For many of the records, this auxiliary information was available. In a small portion of the time, no auxiliary information was available, in which case a random donor with similar drug use patterns and demographic characteristics was used. For the different substances, the largest differences between the edited and the imputed estimates typically occurred when there was a lot of auxiliary information. For marijuana, the State with the largest percentage change from edited to imputed data was Alabama, whose edited rate of use of marijuana was 2.1 percent and imputed rate of use was 3.1 percent—a relative increase of almost 50 percent.

Lastly, the differences in State levels of substance use often reflect differences that are due in part to underlying socioeconomic differences. Table G.7 presents State information on a few variables that are may have some association with substance use. These variables include the percentage of persons aged 18 to 25, the percentage of persons by race/ethnicity, the percentage of persons below poverty, the percentage who are urban, the percentage of female heads of household, the unemployment rate, the mean personal income, and the median household income.

00807 (8.1)

Table G.1 1999 NHSDA Weighted CAI Screening and Interview Response Rates, by State

State	Screening Response Rate	Interview Response Rate	Overall Response Rate	State	Screening Response Rate	Interview Response Rate	Overall Response Rate
Total	89.63	68.55	61.44	Missouri	91.32	73.59	67.21
Alabama	92.60	71.36	66.08	Montana	92.76	76.39	70.86
Alaska	91.07	77.20	70.31	Nebraska	89.99	72.05	64.84
Arizona	94.43	65.87	62.21	Nevada	79.89	63.05	50.37
Arkansas	95.71	80.45	77.00	New Hampshire	85.36	69.87	59.65
California	87.47	64.12	56.08	New Jersey	89.65	65.24	58.48
Colorado	91.62	65.84	60.32	New Mexico	96.12	77.77	74.75
Connecticut	85.62	58.60	50.17	New York	84.28	59.98	50.55
Delaware	87.13	58.36	50.85	North Carolina	92.87	71.84	66.72
District of Columbia	93.35	79.93	74.61	North Dakota	89.89	77.48	69.65
Florida	89.94	68.20	61.33	Ohio	90.35	67.78	61.24
Georgia	90.47	66.97	60.59	Oklahoma	91.58	67.79	62.08
Hawaii	89.11	67.61	60.25	Oregon	85.20	71.57	60.98
Idaho	92.93	75.45	70.11	Pennsylvania	92.34	68.99	63.71
Illinois	87.35	63.74	55.68	Rhode Island	86.68	66.72	57.83
Indiana	91.68	73.06	66.98	South Carolina	91.96	65.92	60.61
Iowa	92.44	69.69	64.41	South Dakota	94.35	76.14	71.84
Kansas	90.59	72.89	66.03	Tennessee	90.92	67.70	61.56
Kentucky	92.36	73.75	68.12	Texas	92.57	75.12	69.54
Louisiana	94.81	76.97	72.98	Utah	93.16	81.70	76.11
Maine	89.96	75.18	67.63	Vermont	90.26	74.49	67.24
Maryland	87.78	64.66	56.76	Virginia	89.84	66.28	59.55
Massachusetts	80.59	61.82	49.82	Washington	86.49	75.06	64.92
Michigan	88.21	66.54	58.70	West Virginia	95.59	74.31	71.03
Minnesota	89.46	77.72	69.53	Wisconsin	90.19	73.05	65.89
Mississippi	94.51	82.77	78.23	Wyoming	93.79	72.62	68.11

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

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Table G.2 Percentage Relative Absolute Bias of Selected Past Month Drug Use and Past Year Dependence for the Eight Large States

State	Past Month Use								Past Year Dependence Any Illicit Drug			
	Cigarette				Any Illicit Drug							
	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older
National	0.57	1.14	0.38	0.79	2.45	1.37	1.16	5.32	6.85	3.30	0.78	14.54
Eight Large States												
California	1.77	1.73	1.57	1.83	2.81	0.19	1.03	5.75	1.68	1.20	1.17	3.48
Florida	0.92	10.59	1.43	0.36	1.52	10.42	1.74	3.34	10.02	7.57	0.60	21.32
Illinois	0.75	0.49	0.18	1.12	1.25	3.65	0.30	1.39	7.46	1.39	17.77	3.16
Michigan	4.18	1.63	0.65	5.77	3.82	6.21	3.39	3.39	3.81	0.26	8.61	19.22
New York	1.54	2.21	0.89	2.32	14.32	8.13	2.81	30.79	22.79	16.97	3.73	69.97
Ohio	0.51	2.70	1.83	0.97	4.20	2.46	4.10	10.80	10.66	19.88	2.01	20.40
Pennsylvania	1.08	3.26	0.93	1.37	4.01	3.77	7.39	2.60	2.74	6.49	16.35	2.32
Texas	0.50	1.80	0.81	0.28	1.43	1.76	0.47	2.20	0.88	2.53	10.94	6.70
Eight Large State Average	1.41	3.05	1.04	1.75	4.17	4.58	2.66	7.53	7.51	7.04	7.65	18.32

Relative Absolute Bias=|(Small Area Estimate-Design Based Estimate)|/Design Based Estimate

Table G.3 Simulated Small State Prevalence Rates and Relative Absolute Bias for Past Month Any Illicit Drug Use

	Past Month Illicit Drug Use							
	Design Based Estimate				Small Area Estimate			
	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older
CA1	9.19	11.66	14.68	7.85	8.57	11.79	16.01	6.77
CA2	7.30	11.86	15.24	5.22	8.01	12.31	16.25	5.91
CA3	7.39	10.81	17.21	5.14	8.21	10.91	17.51	6.16
CA4	8.67	13.82	21.43	5.65	8.62	13.15	19.24	6.07
California	8.04	11.96	17.24	5.83	8.26	11.94	17.06	6.16
REL ABS BIAS	1.23	0.67	0.56	2.34	3.90	0.71	0.10	6.87
FL1	6.66	8.93	18.99	4.75	6.68	9.75	17.15	4.92
FL2	5.61	8.10	14.89	4.08	6.37	9.35	15.99	4.74
FL3	7.36	6.96	21.63	5.51	7.01	9.30	19.36	5.10
FL4	7.46	6.83	13.22	6.76	6.75	8.58	14.62	5.48
Florida	6.86	7.57	16.99	5.42	6.75	8.36	16.69	5.24
REL ABS BIAS	1.19	1.78	1.15	2.65	2.26	22.13	1.23	6.64
IL1	7.57	14.35	17.49	4.95	7.05	12.59	18.23	4.38
IL2	7.33	15.47	19.19	4.19	6.82	12.75	18.38	4.03
IL3	6.64	9.65	12.86	5.16	6.51	10.85	15.43	4.39
IL4	7.01	13.46	20.68	3.79	6.88	12.36	19.14	4.02
Illinois	6.98	13.23	17.94	4.24	6.89	12.75	17.99	4.18
REL ABS BIAS	2.34	0.00	2.12	6.57	2.28	8.25	0.79	0.90
MI1	7.11	12.67	21.37	3.93	7.91	12.90	20.76	5.04
MI2	8.31	7.34	17.00	6.97	8.17	10.51	18.81	6.05
MI3	6.20	9.98	20.62	3.23	7.44	11.67	19.42	4.82
MI4	8.57	13.11	14.89	6.87	8.00	12.96	17.80	5.65
Michigan	7.66	11.08	18.26	5.39	7.96	11.76	18.88	5.58
REL ABS BIAS	1.51	2.75	1.11	2.68	2.82	8.43	5.11	0.10

(continued)

Table G.3 (continued) Simulated Small State Prevalence Rates and Relative Absolute Bias for Past Month Any Illicit Drug Use

	Past Month Illicit Drug Use							
	Design Based Estimate				Small Area Estimate			
	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older
NY1	5.57	9.09	17.95	3.19	7.11	10.75	18.21	4.90
NY2	5.96	8.82	18.70	3.60	7.20	10.72	17.55	5.13
NY3	6.21	11.39	20.69	3.27	7.58	11.85	18.95	5.26
NY4	6.27	11.15	18.63	3.71	7.57	11.70	19.27	5.21
New York	6.10	9.93	19.04	3.59	6.98	10.74	18.51	4.69
REL ABS BIAS	1.64	1.78	0.26	4.00	20.70	13.30	2.87	42.96
OH1	6.42	8.73	18.28	4.10	6.73	10.21	16.92	4.54
OH2	7.63	10.56	16.41	5.75	7.12	10.59	16.47	5.07
OH3	5.17	9.49	16.48	2.69	6.71	10.59	17.27	4.40
OH4	6.12	11.98	17.14	3.48	7.05	11.75	18.06	4.57
Ohio	6.28	10.25	16.92	3.95	6.54	10.50	16.23	4.38
REL ABS BIAS	0.86	0.55	0.92	1.31	9.88	5.27	1.53	17.52
PA1	6.31	7.55	14.58	4.94	6.91	9.46	17.30	5.06
PA2	6.05	9.59	17.08	3.98	6.67	9.99	17.48	4.65
PA3	7.77	10.47	13.59	6.58	7.14	10.31	16.29	5.40
PA4	6.62	10.84	14.75	4.89	7.01	10.69	17.27	5.03
Pennsylvania	6.74	9.51	15.14	5.15	7.01	9.87	16.26	5.28
REL ABS BIAS	0.71	1.09	0.94	1.01	2.93	6.34	12.85	2.17
TX1	6.03	11.53	13.70	3.62	5.48	11.03	13.62	2.97
TX2	4.43	11.49	12.43	1.71	5.25	10.68	13.70	2.71
TX3	5.54	8.17	17.42	2.76	5.45	9.00	15.78	2.83
TX4	5.43	9.75	14.63	2.90	5.39	9.74	14.43	2.90
Texas	5.30	10.21	14.32	2.72	5.38	10.39	14.39	2.78
REL ABS BIAS	1.03	0.28	1.60	0.86	1.76	0.94	0.47	4.69
AVERAGE	1.31	1.11	1.08	2.68	5.82	8.17	3.12	10.23

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table G.4 Simulated Small State Prevalence Rates and Relative Absolute Bias for Past Year Illicit Drug Dependence

	Past Year Illicit Drug Dependence							
	Design Based Estimate				Small Area Estimate			
	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older
CA1	2.58	3.96	4.46	2.05	2.49	4.27	4.71	1.84
CA2	2.35	3.89	5.31	1.60	2.41	4.16	5.10	1.68
CA3	2.81	3.26	6.27	2.13	2.42	3.62	5.38	1.72
CA4	1.97	4.69	3.97	1.22	2.31	4.32	4.52	1.62
California	2.26	3.91	5.05	1.52	2.30	3.96	4.99	1.57
REL ABS BIAS	7.60	0.99	0.91	15.04	6.59	4.60	2.43	12.64
FL1	1.34	5.25	6.58	0.18	1.49	9.75	4.86	0.78
FL2	1.09	1.48	4.41	0.61	1.38	2.74	4.36	0.82
FL3	1.32	0.79	5.19	0.87	1.39	2.69	4.62	0.81
FL4	1.21	3.51	2.41	0.79	1.41	3.15	3.83	0.89
Florida	1.22	2.75	4.36	0.62	1.34	2.96	4.33	0.75
REL ABS BIAS	2.03	0.29	6.58	1.25	16.45	12.06	1.38	33.00
IL1	1.45	3.37	2.14	1.08	1.68	3.33	3.95	1.07
IL2	2.76	5.49	5.42	1.94	1.97	4.10	5.09	1.14
IL3	1.24	1.45	2.07	1.07	1.58	2.77	3.93	1.01
IL4	0.95	2.66	4.39	0.13	1.60	3.18	4.65	0.86
Illinois	1.49	3.24	3.61	0.89	1.60	3.29	4.25	0.91
REL ABS BIAS	7.77	0.02	2.85	19.07	14.66	3.20	22.10	15.03
MI1	1.69	5.89	8.20	0.00	1.92	4.03	5.65	0.99
MI2	1.47	1.46	6.69	0.59	1.88	2.93	5.52	1.12
MI3	1.98	3.23	2.24	1.76	1.87	3.31	4.22	1.27
MI4	2.03	4.21	4.30	1.34	1.90	3.60	4.76	1.18
Michigan	1.76	3.47	5.57	0.87	1.83	3.48	5.09	1.04
REL ABS BIAS	1.85	6.56	3.86	5.43	7.62	0.12	9.60	30.52

(continued)

Table G.4 (continued) Simulated Small State Prevalence Rates and Relative Absolute Bias for Past Year Illicit Drug Dependence

	Past Year Illicit Drug Dependence							
	Design Based Estimate				Small Area Estimate			
	Total	12-17	18-25	26 or Older	Total	12-17	18-25	26 or Older
NY1	1.55	4.26	5.50	0.59	1.86	3.91	5.61	1.00
NY2	1.31	2.78	5.90	0.40	1.80	3.55	5.60	0.99
NY3	1.66	3.98	5.97	0.69	1.86	3.73	5.68	1.02
NY4	1.48	1.54	7.19	0.57	1.84	3.30	6.18	0.98
New York	1.49	2.88	6.14	0.59	1.83	3.36	5.92	1.00
REL ABS BIAS	0.49	9.14	0.04	4.10	23.26	25.97	6.12	69.88
OH1	1.39	1.87	5.63	0.61	1.64	2.94	4.85	0.92
OH2	1.49	2.01	3.93	1.01	1.71	2.97	4.46	1.07
OH3	1.34	3.04	3.75	0.71	1.68	3.19	4.45	1.01
OH4	1.90	2.73	6.16	1.07	1.84	3.15	5.31	1.08
Ohio	1.45	2.38	4.82	0.75	1.60	2.86	4.72	0.90
REL ABS BIAS	5.99	1.09	1.05	13.43	18.70	28.39	1.03	36.00
PA1	1.51	4.21	5.36	0.61	1.60	3.82	5.71	0.71
PA2	1.18	3.60	5.55	0.24	1.49	3.49	5.59	0.64
PA3	0.66	3.82	2.51	0.00	1.39	3.61	4.65	0.63
PA4	2.71	5.47	4.20	2.14	1.76	4.34	5.35	0.90
Pennsylvania	1.49	3.99	4.25	0.78	1.54	3.73	4.95	0.76
REL ABS BIAS	1.46	7.12	3.64	3.90	4.25	4.49	25.21	7.15
TX1	1.22	2.35	3.08	0.67	1.34	2.81	3.62	0.65
TX2	1.50	5.25	2.98	0.61	1.45	3.58	3.77	0.65
TX3	1.41	3.22	3.45	0.72	1.35	3.09	3.80	0.59
TX4	1.38	2.30	4.00	0.71	1.35	2.71	4.09	0.58
Texas	1.37	3.21	3.38	0.67	1.38	3.13	3.75	0.63
REL ABS BIAS	0.68	2.32	0.23	0.41	0.38	4.97	12.92	8.11
AVERAGE	3.48	3.44	2.39	7.83	11.49	10.47	10.10	26.54

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 1999 CAI.

Table G.5 Ratio of Relative Widths of Small Area Estimate Prediction Intervals to the Design-Based Confidence Intervals for Past Month Any Illicit Drug Use

State	Past Month Illicit Drug Use			
	Total	12-17	18-25	26 or Older
California	78.00	86.67	73.28	80.28
Florida	99.47	74.40	90.81	102.31
Illinois	76.45	82.66	76.15	79.28
Michigan	79.27	95.38	76.17	81.40
New York	102.68	81.03	95.28	96.59
Ohio	77.46	80.64	62.56	75.74
Pennsylvania	85.02	77.67	78.47	82.38
Texas	70.22	88.02	86.87	68.65
Average Over Eight Large States	83.57	83.31	79.95	83.33
Alabama	24.26	74.74	54.32	15.73
Alaska	53.35	56.98	53.58	57.87
Arizona	47.88	54.69	73.29	45.72
Arkansas	37.69	74.89	51.20	33.89
Colorado	60.86	66.44	47.32	59.91
Connecticut	65.45	56.36	60.98	57.71
Delaware	62.82	101.82	61.49	68.57
District of Columbia	62.91	92.84	76.30	59.90
Georgia	43.06	72.98	85.36	47.60
Hawaii	66.13	104.85	64.98	75.05
Idaho	50.39	76.25	74.77	34.71
Indiana	82.32	91.90	49.66	79.41
Iowa	50.62	70.66	59.03	39.57
Kansas	71.94	72.86	54.24	62.72
Kentucky	33.41	56.62	86.71	26.35
Louisiana	64.56	56.31	84.18	48.39
Maine	91.27	54.85	74.65	100.14
Maryland	49.95	136.41	76.86	30.31
Massachusetts	84.53	91.57	60.54	92.49
Minnesota	79.39	53.17	60.94	62.50
Mississippi	63.15	56.35	61.87	63.92
Missouri	50.45	75.77	60.65	52.93
Montana	81.05	81.37	83.76	71.83
Nebraska	53.47	78.15	41.86	50.89
Nevada	63.51	67.74	74.67	56.51
New Hampshire	50.47	90.04	73.96	39.11
New Jersey	95.69	77.42	79.10	79.92
New Mexico	49.65	85.69	56.83	55.71
North Carolina	57.45	61.08	50.72	50.98
North Dakota	71.23	76.07	80.15	31.69
Oklahoma	49.83	47.20	65.90	56.02
Oregon	72.06	46.21	92.02	63.72
Rhode Island	48.22	64.55	41.35	54.68
South Carolina	80.85	70.47	75.22	39.80
South Dakota	62.32	103.72	63.68	73.93
Tennessee	47.68	61.69	47.69	47.02
Utah	48.84	75.67	62.31	48.75
Vermont	101.01	111.32	100.67	77.08
Virginia	53.21	113.91	55.53	40.14
Washington	60.37	73.61	70.81	57.20
West Virginia	62.38	84.72	113.73	21.56
Wisconsin	114.06	97.72	62.87	102.75
Wyoming	60.43	71.92	72.54	51.20
Average Over 43 Small States	62.33	76.50	67.40	55.49

Relative Width Ratio=100*(Length of Small Area Estimate Prediction Interval/Small Area Estimate)/(Length of Design-Based Confidence Interval/Design-Based Estimate)

Table G.6 Ratio of Relative Widths of Small Area Estimate Prediction Intervals to the Design-Based Confidence Intervals for Past Year Illicit Drug Dependence

State	Past Year Illicit Drug Dependence			
	Total	12-17	18-25	26 or Older
California	90.43	86.67	80.60	87.04
Florida	75.57	70.98	79.69	57.89
Illinois	81.05	65.80	72.50	86.11
Michigan	69.57	67.61	61.02	64.82
New York	104.74	62.31	85.19	84.55
Ohio	71.25	64.35	74.03	67.66
Pennsylvania	57.36	76.09	74.57	54.05
Texas	71.97	77.97	65.12	65.53
Average Over Eight Large States	77.74	71.47	74.09	70.96
Alabama	49.96	28.97	58.26	18.00
Alaska	71.53	73.43	46.24	107.01
Arizona	30.59	41.56	33.47	28.06
Arkansas	44.00	50.36	27.94	23.28
Colorado	68.44	41.02	70.09	19.06
Connecticut	43.39	38.69	30.63	55.00
Delaware	71.17	72.56	153.36	81.61
District of Columbia	59.67	37.09	129.69	69.42
Georgia	66.46	64.54	59.53	16.47
Hawaii	120.95	67.77	51.61	20.07
Idaho	69.09	54.72	39.45	.
Indiana	42.48	46.47	34.74	18.52
Iowa	41.35	28.20	32.70	21.17
Kansas	45.79	41.05	36.15	53.61
Kentucky	67.26	41.40	80.46	16.35
Louisiana	63.95	59.62	63.27	34.27
Maine	52.01	47.94	47.20	37.47
Maryland	62.27	53.44	56.26	31.16
Massachusetts	41.78	86.36	54.77	44.51
Minnesota	71.60	52.81	54.83	57.32
Mississippi	84.53	67.04	73.10	48.89
Missouri	52.37	33.48	51.23	28.88
Montana	83.04	65.95	48.18	.
Nebraska	35.65	21.13	44.17	38.79
Nevada	72.32	66.06	45.31	69.28
New Hampshire	124.56	31.13	95.75	.
New Jersey	75.90	74.82	58.74	.
New Mexico	53.86	75.01	42.62	52.86
North Carolina	38.22	90.20	51.72	29.11
North Dakota	45.49	61.66	58.58	25.86
Oklahoma	65.98	35.05	80.29	91.81
Oregon	50.84	49.63	43.66	54.17
Rhode Island	40.78	68.20	40.17	17.96
South Carolina	71.95	45.51	58.13	.
South Dakota	47.76	43.68	63.46	18.96
Tennessee	40.50	55.94	25.15	48.17
Utah	35.02	57.04	43.78	17.99
Vermont	57.39	76.81	48.74	31.22
Virginia	51.49	37.88	47.18	30.22
Washington	47.71	58.89	149.78	25.08
West Virginia	48.81	63.30	43.58	18.05
Wisconsin	75.59	55.69	34.86	34.51
Wyoming	75.23	63.17	71.31	.
Average Over 43 Small States	59.51	54.08	57.68	33.35

Relative Width Ratio=100*(Length of Small Area Estimate Prediction Interval/Small Area Estimate)/(Length of Design-Based Confidence Interval/Design-Based Estimate)

Table G.7 Estimated Characteristics of Population Distribution, by State

	Aged 18-25[1]	Hispanic[1]	Non-Hispanic White[1]	Non-Hispanic Black[1]	Persons Below Poverty Level[2]	Urban[3]	Female Head of Household[4]	Unemployment Rate[5]	Mean Personal Income[6]	Median Household Income[7]
Total	12.87	10.41	73.76	11.42	13.20	74.94	6.38	4.20	24,442.53	35,492.00
Alabama	13.10	0.77	74.00	24.12	14.70	60.08	7.06	4.80	20,062.43	29,518.00
Alaska	14.43	4.05	73.50	3.19	8.80	67.40	7.02	6.40	24,597.00	44,280.00
Arizona	13.19	20.17	70.83	2.82	18.10	87.75	6.22	4.40	21,338.84	32,842.00
Arkansas	13.02	1.22	83.07	14.45	17.20	53.00	6.26	4.50	18,966.82	27,392.00
California	13.47	29.77	51.18	6.31	16.30	92.38	6.36	5.20	25,375.41	38,664.00
Colorado	13.06	13.30	80.02	3.79	9.30	81.65	6.18	2.90	25,743.41	38,772.00
Connecticut	11.26	7.76	81.65	8.23	9.90	78.92	5.83	3.20	34,182.94	45,187.00
Delaware	12.26	2.95	77.34	17.51	9.50	72.17	5.94	3.50	27,784.11	39,723.00
District of Columbia	13.00	7.26	30.44	59.36	22.70	100.0	9.64	6.30	34,172.00	34,697.00
Florida	10.68	15.27	70.31	12.63	13.90	84.38	5.69	3.90	24,203.27	31,064.00
Georgia	13.51	2.14	68.89	27.06	14.30	62.57	7.79	4.00	23,034.64	33,919.00
Hawaii	12.03	7.07	29.03	1.40	12.30	88.41	4.74	5.60	25,432.27	43,815.00
Idaho	15.21	6.24	91.08	0.44	13.20	57.66	5.15	5.20	19,861.63	33,114.00
Illinois	13.23	9.58	73.01	14.01	11.10	84.46	6.46	4.30	26,860.13	39,483.00
Indiana	13.38	2.21	89.01	7.63	8.60	64.41	6.06	3.00	22,632.68	35,542.00
Iowa	13.20	1.68	94.96	1.81	9.40	61.04	4.90	2.50	22,329.15	33,783.00
Kansas	13.37	4.71	87.23	5.53	10.10	69.71	5.34	3.00	23,128.73	33,728.00
Kentucky	13.31	0.64	92.06	6.51	15.50	51.24	6.26	4.50	19,786.03	30,418.00
Louisiana	14.48	2.74	65.07	30.54	18.60	67.60	9.12	5.10	19,711.26	28,742.00
Maine	11.61	0.66	97.95	0.26	10.60	44.49	5.68	4.10	21,086.97	32,809.00
Maryland	11.75	3.75	65.59	26.45	8.60	80.43	6.86	3.50	27,679.92	44,206.00
Massachusetts	11.68	6.02	85.50	4.82	10.30	84.08	6.12	3.20	29,810.70	40,831.00
Michigan	12.98	2.46	81.79	13.62	10.80	69.68	7.68	3.80	24,604.04	38,127.00
Minnesota	13.33	1.72	92.09	2.73	9.90	69.75	5.25	2.80	25,703.22	39,690.00
Mississippi	14.34	0.78	64.16	34.10	18.30	47.17	9.12	5.10	17,558.16	26,925.00
Missouri	12.98	1.54	86.77	10.25	10.40	67.68	6.11	3.40	22,991.68	32,791.00
Montana	12.86	1.91	91.74	0.35	16.40	52.23	5.73	5.20	19,280.19	28,707.00

See notes at end of table.

(continued)

Table G.7 (continued) Estimated Characteristics of Population Distribution, by State

	Age I8-25[1]	Hispanic[1]	Non-Hispanic White[1]	Non-Hispanic Black[1]	Persons Below Poverty Level[2]	Urban[3]	Female Head of Household[4]	Unemploy-ment Rate[5]	Mean Personal income[6]	Median Household Income[7]
Nebraska	13.59	3.15	91.51	3.52	10.80	67.00	5.20	2.90	22,974.89	33,510.00
Nevada	11.73	13.58	74.90	6.18	9.90	89.06	5.98	4.40	26,059.92	38,186.00
New Hampshire	11.71	1.27	96.91	0.51	8.40	50.98	4.72	2.70	26,771.35	40,196.00
New Jersey	11.63	11.88	69.90	12.65	9.00	89.09	5.50	4.60	31,285.18	46,803.00
New Mexico	14.18	38.73	51.00	1.68	22.40	72.72	7.18	5.60	18,817.74	27,303.00
New York	12.24	14.26	66.26	13.90	16.60	84.20	7.09	5.20	29,222.87	35,737.00
North Carolina	12.20	1.30	75.47	20.97	12.50	50.62	6.52	3.20	22,244.34	34,326.00
North Dakota	14.14	0.92	94.12	0.35	13.20	55.03	4.68	3.40	20,477.47	30,713.00
Ohio	12.95	1.54	86.48	10.64	11.60	73.54	6.60	4.30	23,495.80	34,213.00
Oklahoma	13.26	3.30	80.32	7.29	14.80	67.78	6.14	3.40	19,579.35	27,662.00
Oregon	12.45	5.03	89.04	1.59	12.80	70.27	5.68	5.70	23,115.00	35,111.00
Pennsylvania	11.63	2.36	87.03	8.89	11.30	68.14	5.31	4.40	24,850.88	35,140.00
Rhode Island	11.33	6.41	87.38	3.58	11.80	85.61	5.97	4.10	24,612.70	36,326.00
South Carolina	12.40	0.99	69.61	28.42	13.30	54.43	7.49	4.50	19,892.24	32,523.00
South Dakota	14.00	1.03	91.79	0.41	13.00	50.85	5.13	2.90	20,741.06	29,846.00
Tennessee	12.81	0.90	82.74	15.24	14.50	60.25	6.68	4.00	22,035.27	31,128.00
Texas	14.62	27.47	58.44	11.33	16.10	80.20	6.70	4.60	22,328.80	32,719.00
Utah	18.80	5.86	89.60	0.74	8.50	86.98	5.89	3.70	19,394.61	36,287.00
Vermont	12.07	0.90	97.51	0.43	10.60	32.29	5.82	3.00	22,547.63	33,437.00
Virginia	12.21	3.45	74.12	18.58	11.30	69.23	5.81	2.80	25,287.11	38,426.00
Washington	12.54	5.36	84.79	2.74	10.00	75.85	5.93	4.70	25,282.19	37,975.00
West Virginia	12.77	0.59	95.86	2.86	17.60	35.85	5.32	6.60	18,223.52	25,822.00
Wisconsin	13.30	2.34	90.27	5.14	8.60	64.98	5.82	3.00	23,390.30	38,472.00
Wyoming	14.42	6.11	90.51	0.66	12.00	64.63	5.75	4.90	21,586.26	31,180.00

[1] Percentaged from the Census Bureau website about national population counts of civilian, noninstitutionalized persons aged 12 or older and State residential population for various demographic domains (www.census.gov/population/www/projections/st_yr95to00.html).
[2] Average of Current Population Survey (CPS) percentaged from 1996 to 1998, located on Census Bureau website (http://www.census.gov/hhes/poverty/poverty98/pv98state.html).
[3] Percentaged from Area Resource File (ARF), which in turn were computed from 1990 Census data. Adjusted using 1996 population estimates.
[4] 1990 Census data. Female Head of Household defined as a household with children under 18 years old and female present where there is no husband present.
[5] 1999 percentaged from Bureau of Labor Statistics website (http://www.bls.gov/sahome.html under Local Area Unemployment Statistics).
[6] Data in U.S. dollars from ARF file, which in turn were calculated from the Bureau of Economic Analysis's 1996 Regional Economic Information System.
[7] Data in U.S. dollars from 1996 Modeled Small Area Income and Poverty statistics on the Census Bureau website (http://www.census.gov/hhes/www/saipe/stcty/estimate.html).

Appendix H: Other Sources of Data

Appendix H: Other Sources of Data

A variety of other surveys and data systems collect data on substance use. It is useful to consider the results of these other studies when discussing the National Household Survey on Drug Abuse (NHSDA) data. In doing this, it is important to understand the methodological differences between the different surveys and the impact that these differences could have on estimates of substance use prevalence. This appendix briefly describes several of these other data systems, including results from them.

In-depth comparisons have been done of the methodologies of the three major federally sponsored national surveys of substance use by youths (i.e., the NHSDA, the Monitoring the Future [MTF] study, and the Youth Risk Behavior Survey [YRBS]). In 1997, a comparison between the NHSDA and the MTF was published (Gfroerer et al., 1997). And in 1999, a series of papers comparing different aspects of the three national surveys was commissioned by the U.S. Department of Health and Human Services (DHHS), Office of the Assistant Secretary for Planning and Evaluation. Experts in survey methods for the latter effort reported the following findings:

- The design, implementation, and documentation of all three surveys are of high quality. The surveys exhibit no flaws in the execution of basic survey procedures.

- The goals and approaches of these three surveys are very different, making comparisons between them difficult. The surveys differ significantly in terms of populations covered, sampling methods, mode of data collection, questionnaires, and estimation methods.

- Estimates of substance use are generally highest from the YRBS and lowest from the NHSDA. The NHSDA probably produces lower rates because it is done in the home, whereas the other two surveys collect data in school classrooms, away from parents and other family members.

- NHSDA prevalence rates may also be lower because of the NHSDA's requirement of thorough parental consent prior to youth participation. The greater parental involvement in consent procedures in the NHSDA, compared with the two school surveys, may suppress reporting by youths of substance use.

H.1 Other National Surveys of Illicit Drug Use

Monitoring the Future (MTF). The MTF is a national survey that tracks drug use trends and related attitudes among America's adolescents. This survey is conducted annually by the Institute for Social Research at the University of Michigan through a grant awarded by the National Institute on Drug Abuse (NIDA). The MTF is composed of three substudies: (a) an annual survey of high school seniors initiated in 1975; (b) ongoing panel studies of representative samples from each graduating class that have been conducted by mail since 1976; and (c) annual surveys of 8th and 10th graders initiated in 1991. In 2000, for all three grades combined, there were 435 public and private schools and almost 45,200 students in the sample. The senior sample included 13,286 seniors in 134 public and private schools. As noted on the

MTF website, in 2000 the 10th grade sample involved 14,576 students from 145 schools, and the 8th grade sample size was 17,311 students from 156 schools (MTF, 2000).

Comparisons between the MTF and students sampled in the NHSDA have generally shown NHSDA substance use prevalence levels to be lower than MTF estimates, with relative differences being largest for 8th graders. However, the direction of trends has generally been similar between the two surveys. Both surveys showed significant increases in illicit drug use among adolescents between 1992 and 1996. The lower prevalences in the NHSDA may be due to more underreporting in the household setting as compared to the MTF school setting. MTF does not survey dropouts, a group generally shown (using the NHSDA) to have higher rates of use (Gfroerer et al., 1997). Data released in December 1999 from the MTF indicated drug use among adolescents generally held steady between 1998 and 1999. Levels of drug use showing little change included marijuana, cocaine, amphetamines, hallucinogens, tranquilizers, and heroin. Exceptions to this stability were seen for the use of MDMA ("ecstasy"), which increased in 1999 among 10th and 12th graders and anabolic steroid use increased among males in both 8th and 10th grades.

Youth Risk Behavior Survey (YRBS). The YRBS is a component of CDC's Youth Risk Behavior Surveillance System, which biennially measures the prevalence of six priority health risk behavior categories: (1) behaviors that contribute to unintentional and intentional injuries, (2) tobacco use, (3) alcohol and other drug use, (4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), (5) unhealthy dietary behaviors, and (6) physical inactivity. The 1999 national school-based survey used a three-stage cluster sample design to produce a nationally representative sample of students in grades 9 through 12. The 1999 State and local surveys used a two-stage cluster sample design to produce representative samples of students in grades 9 through 12 in their jurisdictions (CDC, 2000a). The 1999 national YRBS sample included 15,349 students in grades 9 through 12 in the 50 States and DC. Data from the most recent YRBS indicated a general leveling of drug and alcohol use between 1997 and 1999. The 1999 data showed steady prevalence levels for both current marijuana and current alcohol use among 9th through 12th graders.

National Longitudinal Study of Adolescent Health (Add Health). In 1994-96, Add Health was conducted to measure the effects of family, peer group, school, neighborhood, religious institution, and community influences on such health risks as tobacco, drug, and alcohol use. The survey also asked about substance abuse (alcohol, tobacco, and illicit drugs). The survey consisted of three phases. First, roughly 90,000 students from grades 7 through 12 at 145 schools around the United States answered brief questionnaires. Next, interviews were conducted with about 20,000 students and their parents in the students' homes. Then, 1 year later, the students were interviewed a second time in their homes. Survey results indicated that nearly one third of teenagers had smoked marijuana; moreover, 6.9 percent of 7th and 8th graders used marijuana at least once in the past month as did 15.7 percent of 9th through 12th graders (Resnick et al., 1997).

Partnership Attitude Tracking Study (PATS). In November 1999, the Partnership for a Drug-Free America (PDFA) released results from the 1999 PATS, the only ongoing national research that tracks drug use and drug related attitudes among children as young as 8 and 9 years old, teenagers, and their parents. The 1999 study found significant changes in youths'

acceptance and approval of drugs (PDFA, 2000). For example, the belief that "most people will try marijuana sometimes" declined from 40 percent in 1998 to 35 percent in 1999. Also, significantly more youths reported hearing or seeing anti-drug commercials every day or more (rising from 32 percent in 1998 to 45 percent in 1999). PATS found drug use to be significantly lower among youths who learned a great deal about drugs at home. In 1999, more than half (57 percent) of all parents said they spoke with their children about drugs at least four times in the past year, a significant increase from 44 percent of parents in 1998. Marijuana use declined among youths surveyed with results from the 1999 survey indicating lifetime trial of marijuana use among youths in grades 7 through 12 was 41 percent, down from 42 percent in 1998 and 44 percent in the 1997 survey. Trial marijuana use had been 29 percent in 1993. Past month marijuana use was 24 percent in 1997 and 21 percent in 1999. It had been 14 percent in 1993.

H.2 Alcohol and Cigarette Use Surveys

National Health Interview Survey (NHIS). The NHIS is a continuing nationwide sample survey that collects data using personal household interviews. In 1997, the data collection methodology changed from paper-and-pencil questionnaires to a computer-assisted personal interviewing (CAPI) instrument. The 1998 NHIS was conducted by the Bureau of the Census for the National Center for Health Statistics (NCHS). The survey estimated that 24.0 percent of the population age 18 and over were current cigarette smokers in 1998. Among males, 25.9 percent reported current cigarette smoking compared to 22.1 percent of females aged 18 or older. Current smokers are defined as those who have smoked at least 100 cigarettes in their lifetime and answer that they currently smoke, including those who smoke only on some days. The current smoker definition used in the NHIS is somewhat different from that used in the NHSDA where current cigarette smoking is defined as any use in the past month.

Monitoring the Future (MTF). This school-based survey showed increases in smoking rates among students from 1991 to 1996. Cigarette smoking peaked in 1996 among 8th and 10th graders nationwide and in 1997 among 12th graders. Since those peak years, cigarette use has gradually declined. Current (past month) smoking rates found for 8th graders were 14.3 percent in 1991, 21.0 percent in 1996, 19.4 percent in 1997, 19.1 percent in 1998, and 17.5 percent in 1999. Among 10th graders, current smoking rates were 20.8 percent in 1991, 30.4 percent in 1996, 29.8 percent in 1997, 27.6 percent in 1998, and 25.7 percent in 1999. For 12th graders, smoking rates rose steadily from 28.3 percent in 1991 to 36.5 percent in 1997 but then declined (not significantly) to 34.6 percent in 1999 (NIDA, 2000). More recent data indicated that cigarette use among adolescents declined sharply between the last two MTF surveys (MTF, 2000). For example, current smoking decreased significantly among 8th graders, falling from 17.5 percent in 1999 to 14.6 percent in 2000. Past month cigarette use also declined sharply among 12th graders, dropping from 34.6 percent in 1999 to 31.4 percent in 2000. Daily smoking in the past month declined from 15.9 to 14.0 percent among 10th graders and from 23.1 to 20.6 percent among 12th graders. The proportion of 10th graders smoking heavily (i.e., smoking a half-pack or more of cigarettes per day) decreased among 10th graders from 7.6 percent in 1999 to 6.2 percent in 2000 and among 12th graders from 13.2 percent in 1999 to 11.3 percent in 2000. Prevalence rates for the use of smokeless tobacco remained stable.

The MTF data have indicated alcohol use among youths to be fairly stable over the past several years. Alcohol consumption in the month prior to survey was reported by 24 percent of 8th graders, 40 percent of 10th graders, and 51 percent of 12th graders in the 1999 survey (NIDA, 2000). Binge drinking, defined in the MTF as consuming five or more drinks in a row sometime in the prior 2 weeks, also remained steady over the past several years. In the 1999 MTF, binge drinking rates stood at 15.2 percent, 25.6 percent, and 30.8 percent among 8th, 10th, and 12th graders, respectively. Alcohol use among youths generally remained unchanged between 1999 and 2000. The MTF data indicated that alcohol use among youths remained fairly stable since the early 1990s. Alcohol consumption in the month prior to the 2000 survey was reported by 22.4 percent of 8th graders, 41 percent of 10th graders, and 50 percent of 12th graders. Binge drinking also remained steady over the past 2 or 3 years of the survey. The latest binge drinking rates stand at 14.1 percent, 26.2 percent, and 30.0 percent among 8th, 10th, and 12th graders, respectively (MTF, 2000).

Youth Risk Behavior Survey (YRBS). The YRBS found increases in longer trends for current cigarette use among students in grades 9 to 12. Current smoking rose from 27.5 percent in 1991 to 34.8 percent in 1999 (CDC, 2000a). Overall, lifetime, current, and frequent cigarette use prevalence (defined as smoking on 20 or more days of the 30 days preceding the survey) in the 1999 survey were 70.4, 34.8, and 16.8 percent, respectively. Although the NHSDA trend for smoking among youths (aged 12 to 17) has not shown these increases, the NHSDA estimates for years prior to 1994 were apparently substantial underestimates because the data were collected without private self-administered answer sheets. When the NHSDA converted to the use of these answer sheets in 1994, the smoking rate for adolescents approximately doubled. This raises questions about the accuracy of the NHSDA measurement of the trend prior to 1994, even after adjustments are made to account for the effect of the new questionnaire.

In general, the school-based YRBS has found higher rates of alcohol, cigarette, marijuana, and cocaine use among youths than those found in the NHSDA. Data from the most recent YRBS indicated a general leveling of alcohol use between 1997 and 1999. The 1999 data showed steady prevalence rates for current alcohol use among 9th through 12th graders. In fact, alcohol use among 9th through 12th graders in the YRBS remained fairly stable over the last few surveys. The prevalence of current alcohol use was 50 percent in the 1999 survey, which was consistent with the estimate of 50.8 percent in the 1991 YRBS (CDC, 2001). Episodic heavy drinking (defined as having five or more drinks on one or more occasions on 1 or more days in the 30 days prior to the survey) also held steady with prevalence rates of 31.3 percent in 1991 and 31.5 percent in 1999.

National Youth Tobacco Survey (NYTS). The American Legacy Foundation released findings from its 1999 NYTS in October 2000. The 1999 NYTS was designed to get data on tobacco-related issues for a nationally representative sample of students in grades 6 through 12. The survey was given to over 15,000 students in 131 school accross the United States in the fall of 1999. The students completed anonymous, self-administered questionnaires that included a variety of tobacco-related questions. Major topic are covered by the 1999 NYTS included patterns of tobacco use, knowledge and attitudes about tobacco, minors' ability to purchase tobacco products, and exposure to environmental tobacco smoke (ETS). The American Legacy Foundation found that in 1999, approximately 7.3 percent of all adolescents were established

smokers (they had smoked at least 100 cigarettes in their lifetime) (American Legacy Foundation, 2000).

College Alcohol Study (CAS). The Harvard School of Public Health's CAS is an ongoing survey supported by a grant from the Robert Wood Johnson Foundation. It surveys more than 15,000 students (18 to 24 years of age) at 140 four-year colleges in 40 States. The objective of the CAS is to look at high risk behaviors and to identify student- and college-level factors associated with these behaviors among college students. These behaviors include heavy episodic or binge drinking, smoking, illicit drug use, gun possession, violence, and other behavioral, social, and health-related problem facing America's college students today. The principal investigator is Henry Wechsler.

The CAS includes all forms of tobacco use: cigarettes, cigars, pipes, and smokeless tobacco. The prevalence of cigarette smoking by college students, which was sharply up between 1993 and 1997, stabilized between 1997 and 1999 (Harvard School of Public Health, 2000). In the 1999 CAS, a total of 14,138 students in 119 four-year colleges were surveyed. The 1999 data indicated that nearly half of all respondents (45.7 percent) had used a tobacco product in the past year, and one third (32.9 percent) had used a tobacco product in the past month (current use). Cigarettes accounted for most of the tobacco use (28.5 percent of the 18- to 24-year-old college students had smoked cigarettes in the 30 days prior to survey). Cigar use was also substantial with 37.1 percent citing lifetime use, 23.0 percent reporting past year use, and 8.5 percent saying they were current cigar users. Among college students, men were significantly more likely than females to be tobacco users and tobacco use was significantly higher among white students as compared to African-American, Hispanic, and Asian students.

Partnership Attitude Tracking Study (PATS). Data from the 1999 PATS showed declines in cigarette use among teenagers (see PDFA, 2000). For teenagers in grades 7 through 12, the prevalence of past month cigarette declined from 42 percent in 1998 to 37 percent in 1999. For those in grades 7 and 8, past month smoking declined from 36 percent in 1998 to 33 percent in 1999. Among 9th and 10th graders, the decline observed for past month cigarette use was from 44 percent in 1998 to 35 percent in 1999. For the oldest teenagers (those in grades 11 and 12), the decrease in past month cigarette use was from 47 percent in 1998 to 42 percent in 1999. The PDFA estimated that there were 23.6 million youths in grades 7 through 12. The 2000 PATS survey indicated that 80 percent of this population had tried alcohol at least once in their lives (PDFA, 2000).

Behavioral Risk Factor Surveillance System (BRFSS). This is a State-based telephone survey of the civilian, noninstitutionalized adult population. Adults include all persons aged 18 or older. In 1997, BRFSS surveyed all 50 states, the District of Columbia, and Puerto Rico and collected data on access to health care, health status indicators, health risk behaviors (including alcohol and cigarette use), and the use of clinical preventive services by State. In 1997, the median percentage of adults who reported current alcohol use was 54 percent (CDC, 2000b). By race/ethnicity, the median prevalence rate for this behavior was 55.4 percent, 40.4 percent, 50.8 percent, 50.5 percent, and 38.2 percent for whites, blacks, Hispanics, American Indians or Alaska Natives, and Asians or Pacific Islanders, respectively. Asians or Pacific Islanders were least likely to report binge drinking (i.e. consumption of five or more drinks on at least one occasion in the past month) and American Indians or Alaska Natives were most likely to report

this behavior. The median percentage of adults reporting both having smoked 100 cigarettes or more in their lives and current cigarette use varied almost fourfold across the racial/ethnic groups. The median percentage for this behavior was 23.6 percent for whites, 22.8 percent for blacks, 23.1 percent for Hispanics, 41.3 percent for American Indians or Alaska Natives and 10.7 percent for Asians or Pacific Islanders.

National Longitudinal Study of Adolescent Health (Add Health). Results from the September 1994 to April 1995 of the National Longitudinal Study of Adolescent Health (Add Health described above) indicate that nearly 3.2 percent of 7th and 8th graders smoked six or more cigarettes a day as did 12.8 percent of 9th through 12th graders (Resnick et.al. 1997). In addition, 7.3 percent of 7th and 8th graders used alcohol on 2 or more days in the past month as did 23.1 percent of 9th through 12th graders.

National Longitudinal Alcohol Epidemiologic Survey (NLAES). The NLAES was conducted by the U.S. Bureau of the Census for the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in 1992. The NLAES was a multipurpose survey conducted to comply with NIAAA's mandate under the Anti-Drug Abuse Act of 1988, which emphasized the need to determine the incidence as well as the prevalence of alcohol use disorders (i.e., alcohol abuse and alcohol dependence) and their associated disabilities (including drug-specific abuse and dependence, major depression, and physical disorders). Face-to-face interviews were conducted with 42,862 respondents aged 18 or older in the contiguous United States. The NLAES studied the drinking practices, behaviors, and related problems in the general public. Its assessments included an extensive set of questions designed to assess the presence of symptoms of alcohol abuse and dependence during the prior 12 months based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (APA, 1987, 1994). The NLAES estimated that 4.4 percent of adults were alcohol dependent and another 3.0 percent were classified as abusing alcohol, but not dependent, within the past year (NIAAA, 1995). In comparison, the 1999 NHSDA estimated that 3.7 percent of adults and 3.6 percent of youths aged 12 to 17 were dependent on alcohol. Rates of alcohol use disorder were found to be higher among males than females and highest in the youngest age cohort (18 to 29 years). Young nonblack males were almost twice as likely as young black males to have an alcohol use disorder.

The Parents' Resource Institute for Drug Education (PRIDE) Surveys. This survey series provides ongoing estimates of the use of alcohol and tobacco plus eight types of illegal drugs since the 1987–88 school year (PRIDE Surveys, 2001). Beginning in 1993–94, the PRIDE Questionnaire has also asked questions about deviant behaviors, such as carrying a gun to school, making and receiving threats, physical abuse, and joining gangs. The 1999–2000 survey was conducted during the school year and included students nationwide; however, the survey sample is not nationally representative and encompasses voluntary, self-selected students. The data are collected between August and June of each school year. The 1999–2000 survey indicated that 53.3 percent of students in grades 6 through 12 had used alcohol in the year prior to the survey and 23.9 percent had used alcohol in the past month. Prevalence of alcohol use declined significantly from 56.8 percent in the 1998–99 school year to 53.3 percent in the 1999–2000 (PRIDE Surveys, 2001).

H.3 Surveys of Populations Not Covered by the NHSDA

Partnership Attitude Tracking Study (PATS). As noted earlier, in November 1999, the PDFA released results from the 1999 PATS, the only ongoing national research that tracks drug use and drug-related attitudes among children aged 9 to 11 as well as older teenagers. The study documented a gap between parents' perceptions about their children and drugs and what teenagers and children are actually experiencing (PDFA, 2000).

*Washington, DC, Metropolitan Area Drug Study (DC*MADS)*. This study was designed to (a) estimate the prevalence, correlates, and consequences of drug abuse among all types of people residing in one metropolitan area of the country during one period of time and (b) to develop a methodological model for similar types of research in other metropolitan areas of the country. Sponsored by NIDA and fielded in 1991 and 1992, the project focused on hard-to-reach populations, such as adult and juvenile offenders, new mothers, and drug abuse treatment clients. DC*MADS provided a replicable methodological approach for developing representative estimates of the prevalence of drug abuse among all population subgroups, regardless of their residential setting, in a metropolitan area. The key domains in DC*MADS were homeless people, institutionalized persons, and the household population. A major finding of DC*MADS was that, when data are aggregated for populations from each of the three domains, the overall prevalence estimates for use of drugs differ only marginally from those that would be obtained from the household population alone (i.e., from the NHSDA). However, for some categories of drug users, the nonhousehold population was found to include a substantial proportion of users. About 25 percent of past year crack users, 20 percent of past year heroin users, and one third of past year needle users were found in the nonhousehold population (Bray & Marsden, 1999).

Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel.The 1998 Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel was sponsored by the Department of Defense and conducted by Research Triangle Institute (RTI) (). The survey interviewed 17,264 active-duty Armed Forces personnel worldwide. Military personnel generally exhibited lower rates of cigarette use than the civilian population, but this finding seemed largely due to an increase in smoking among civilians rather than significant decreases among military personnel or changes in the military population. Illicit drug use declined steadily and dramatically in the Military from 1980 to 1998, and this decrease was not explained by changes in the demographic composition of the Military. Rates of illicit drug use in the Military are significantly lower than those observed for the comparable civilian population when demographic differences between the Military and civilian populations are taken into account. Differences in illicit drug use between the military and civilian populations were more pronounced for males than females. For males aged 18 to 55, 2.8 percent of those in the Military used drugs in the 30 days prior to survey compared to 11.4 percent of the civilian population (civilian estimate adjusted for demographic differences). For females aged 18 to 55, 1.9 percent of those in the Military used drugs in the 30 days prior to survey compared to 6.2 percent of the civilian population (adjusted). This survey indicated that nearly all military personnel reported having been tested for drugs since joining the Military.

Surveys of Inmates in State and Federal Correctional Facilities. This 1997 surveys sampled inmates from a universe of 1,409 State prisons and 127 Federal Prisons for the Bureau

of Justice Statistics (BJS, 1999). Systematic random sampling was used to select the inmates for computer-assisted personal interviewing (CAPI). The final numbers interviewed were 14,285 State prisoners and 4,041 Federal prisoners. Among other items, these surveys collected information on the use of drugs in the month before the offense for convicted inmates. Women in State prisons (62 percent) were more likely than men (56 percent) to have used drugs in the month before the offense. Women were also more likely to have committed their offense while under the influence of drugs (40 vs. 32 percent of male prisoners). Among Federal prisoners, men (45 percent) were more likely than women (37 percent) to have used drugs in the past month. Male and female Federal prisoners were equally likely to report the influence of drugs during their offense (23 percent of male and 19 percent of female prisoners). The survey results indicate substantially higher rates of drug use among State and Federal prisoners (BJS, 1999) as compared to the household population.

Appendix I: Risk and Protective Factor Constructs

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Peer Antisocial Behavior: Based on an average of the following six NHSDA questions.

YE18b **During the past 12 months**, how many times have you gotten into a serious fight at school or work?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

YE18c **During the past 12 months**, how many times have you taken part in a fight where a group of your friends fought against another group?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

YE18d **During the past 12 months**, how many times have you carried a handgun?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

YE18e **During the past 12 months**, how many times have you sold illegal drugs?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

YE18f **During the past 12 months**, how many times have you stolen or tried to steal anything worth more than $50?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

YE18g **During the past 12 months**, how many times have you attacked someone with the intent to seriously hurt them?

1 0 times
2 1 or 2 times
3 3 to 5 times
4 6 to 9 times
5 10 or more times
DK/REF

Favorable Attitudes Toward Drug Use: Based on an average of the following three items.

YE19a How do you feel about someone your age smoking one or more packs of cigarettes a day?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

YE19b How do you feel about someone your age trying marijuana or hashish once or twice?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

YE19c How do you feel about someone your age having one or two drinks of an alcoholic beverage nearly every day?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

Peer Attitudes Favorable Toward Drug Use: Based on an average of the following three items.

YE20a How do you think your close friends would feel about **you** smoking one or more packs of cigarettes a day?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

YE20b How do you think your close friends would feel about **you** trying marijuana or hashish once or twice?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

YE20c How do you think your close friends would feel about **you** having one or two drinks of an alcoholic beverage nearly every day?

1 Neither approve nor disapprove
2 Somewhat disapprove
3 Strongly disapprove
DK/REF

Peer Drug Use: Based on an average of the following four items.

YE21a How many of your friends would you say smoke cigarettes?

1 None of them
2 A few of them
3 Most of them
4 All of them
DK/REF

YE21b How many of your friends would you say use marijuana or hashish?

1 None of them
2 A few of them
3 Most of them
4 All of them
DK/REF

YE21c How many of your friends would you say drink alcoholic beverages?

1 None of them
2 A few of them
3 Most of them
4 All of them
DK/REF

YE21d How many of your friends would you say get drunk at least once a week?

1 None of them
2 A few of them
3 Most of them
4 All of them
DK/REF

Problems Due to Use of Cigarettes

DR02a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, did you have a period of a month or more when you spent a great deal of time getting, using, or getting over the effects of **cigarettes**?

1 Yes
2 No
DK/REF

DR03a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, have you smoked **cigarettes** much more often or have you smoked more cigarettes than you intended to?

1 Yes
2 No
DK/REF

DR04a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, have you built up a tolerance for **cigarettes** so that the same number had less effect than before?

1 Yes
2 No
DK/REF

DR05a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, has smoking **cigarettes** often kept you from working, going to school, taking care of children, or taking part in recreational activities?

1 Yes
2 No
DK/REF

DR06a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, has smoking **cigarettes** caused you to have any emotional or psychological problems — such as feeling uninterested in things, feeling depressed, feeling suspicious of people, feeling paranoid, or having strange ideas?

1 Yes
2 No
DK/REF

DR07a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, has smoking **cigarettes** caused you to have any health problems?

1 Yes
2 No
DK/REF

DR08a [IF CG05 = 1 OR CG06 = 1] During the past 12 months, did you want to or try to stop or cut down on your **cigarette** smoking but found that you couldn't?

1 Yes
2 No
DK/REF

Problems Due to the Use of Alcohol

DR02b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, did you have a period of a month or more when you spent a great deal of time getting, using, or getting over the effects of **alcohol**?

1 Yes
2 No
DK/REF

DR03b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, have you used **alcohol** much more often or in larger amounts than you intended to?

1 Yes
2 No
DK/REF

DR04b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, have you built up a tolerance for **alcohol** so that the same amount had less effect than before?

1 Yes
2 No
DK/REF

DR05b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, has your use of **alcohol** often kept you from working, going to school, taking care of children, or taking part in recreational activities?

1 Yes
2 No
DK/REF

DR06b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, has your use of **alcohol** caused you to have emotional or psychological problems — such as feeling uninterested in things, feeling depressed, feeling suspicious of people, feeling paranoid, or having strange ideas?

1 Yes
2 No
DK/REF

DR07b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, has your use of **alcohol** caused you to have any health problems?

1 Yes
2 No
DK/REF

DR08b [IF 12 MONTH ALCOHOL USE = 1] During the past 12 months, did you want to or try to stop or cut down on your use of **alcohol** but found that you couldn't?

1 Yes
2 No
DK/REF

Problems Due to the Use of Marijuana

DR02c [IF 12 MONTH MJ USE = 1] During the past 12 months, did you have a period of a month or more when you spent a great deal of time getting, using, or getting over the effects of **marijuana or hashish**?

1 Yes
2 No
DK/REF

DR03c [IF 12 MONTH MJ USE = 1] During the past 12 months, have you used **marijuana or hashish** much more often or in larger amounts than you intended to?

1 Yes
2 No
DK/REF

DR04c [IF 12 MONTH MJ USE = 1] During the past 12 months, have you built up a tolerance for **marijuana or hashish** so that the same amount had less effect than before?

1 Yes
2 No
DK/REF

DR05c [IF 12 MONTH MJ USE = 1] During the past 12 months, has your use of **marijuana or hashish** often kept you from working, going to school, taking care of children, or taking part in recreational activities?

1 Yes
2 No
DK/REF

DR06c [IF 12 MONTH MJ USE = 1] During the past 12 months, has your use of **marijuana or hashish** caused you to have emotional or psychological problems — such as feeling uninterested in things, feeling depressed, feeling suspicious of people, feeling paranoid, or having strange ideas?

1 Yes
2 No
DK/REF

DR07c [IF 12 MONTH MJ USE = 1] During the past 12 months, has your use of **marijuana or hashish** caused you to have any health problems?

1 Yes
2 No
DK/REF

DR08d [IF 12 MONTH MJ USE = 1] During the past 12 months, did you want to or try to stop or cut down on your use of **marijuana or hashish** but found that you couldn't?

1 Yes
2 No
DK/REF