

State Estimates of Substance Use from the 2003–2004 National Surveys on Drug Use and Health

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Office of Applied Studies

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Highlights

This report presents State estimates for 22 measures of substance use or mental health problems based on the 2003 and 2004 National Surveys on Drug Use and Health (NSDUHs). Sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), NSDUH is an ongoing survey of the civilian, noninstitutionalized population of the United States aged 12 years or older. Interview data from approximately 135,500 persons were collected in 2003-2004. Separate estimates have been produced for four age groups: 12 to 17, 18 to 25, 26 or older, and all persons 12 or older. For each measure, States have been ranked and categorized into quintiles, or fifths, in order to simplify the discussion. Estimates presented in this report are based on hierarchical Bayes estimation methods that combine survey data with a national model.

In addition to State estimates for 2003-2004, this report includes estimates of change between 2002-2003 and 2003-2004 for all 22 measures. Also in this report are estimates for youths aged 12 to 20 for two of the measures—past month alcohol and binge alcohol use.

Illicit Drug Use

- Estimates of past month use of any illicit drug in 2003-2004 ranged from a low of 5.8 percent in Mississippi to a high of 11.8 percent in Alaska for all persons aged 12 or older. Among youths, the percentage of past month use decreased from 11.4 percent in 2002-2003 to 10.9 percent in 2003-2004. Although there was no change in the prevalence rate in the total population aged 12 or older, four States showed decreases from 2002-2003 to 2003-2004 in the percentage that used an illicit drug in the past month: the District of Columbia, Florida, Nevada, and Washington. Six States showed decreases among youths: Illinois, Nebraska, North Carolina, South Dakota, Vermont, and Virginia. There were no statistically significant *increases* among States in any of the age groups (12 to 17, 18 to 25, and 26 or older). (*Tables B.1 and C.1*)
- Nationally in 2003-2004, 10.6 percent of all persons aged 12 or older reported marijuana use in the past year. State rankings for past year use were very similar to those for past month use among persons aged 12 or older. (*Table B.2, Figures 2.5 and 2.9*)
- Mississippi and Utah had the lowest rate of past month use of marijuana (4.2 percent) in 2003-2004 for the 12 or older population, and Alaska had the highest rate (9.9 percent). Eight States were ranked in the top fifth for past month marijuana use in all three age groups (12 to 17, 18 to 25, and 26 or older): Alaska, Maine, Massachusetts, New Hampshire, New Mexico, Oregon, Rhode Island, and Vermont. Seven States displayed decreases among persons aged 12 or older between 2002-2003 and 2003-2004 in the past month use of marijuana, while New Mexico was the only State that had an increase among that age group. (*Tables B.3 and C.3, Figures 2.10 to 2.12*)

- The State with the lowest rate in 2003-2004 of perceived great risk of using marijuana occasionally (once a month) among persons aged 12 or older was Washington (26.2 percent). However, slightly more than half (51.3 percent) of all persons aged 12 or older in Mississippi indicated that occasional use of marijuana was a great risk. The national percentage of persons aged 12 or older perceiving a great risk of using marijuana once a month increased significantly between 2002-2003 and 2003-2004, from 39.1 to 39.7 percent. Six States contributed significantly to this national increase in perceived risk in this population: California, Hawaii, Maryland, Massachusetts, Montana, and Nevada. One State, Iowa, countered the national trend with a decrease in perceived risk among the 12 or older population. (*Tables B.4 and C.4*)
- For the combined years 2003-2004, the national marijuana incidence rate for all persons aged 12 or older was 1.8 percent. Alaska had the highest rate, 2.6 percent; Florida and Tennessee shared the lowest rate, 1.4 percent. The rate of first use of marijuana decreased slightly between 2002-2003 and 2003-2004 (from 6.6 to 6.3 percent) among youths aged 12 to 17. Eight States had declines among that age group: Delaware, Florida, Nevada, New Hampshire, North Carolina, Texas, Vermont, and Virginia. Two States, Florida and Nevada, showed decreases in the marijuana incidence rates from 2002-2003 to 2003-2004 among the 12 or older population. (*Tables B.5 and C.5*)
- The national estimate of past month use of any illicit drug other than marijuana among persons aged 12 or older was 3.6 percent for 2003-2004 combined. Hawaii had the lowest rate (2.8 percent) of past month use of an illicit drug other than marijuana among persons 12 or older, and Colorado had the highest rate (4.7 percent). For the 12 or older population, past month use of any illicit drug other than marijuana was relatively stable between 2002-2003 and 2003-2004. Further, there were no statistically significant changes in any State among persons aged 12 or older during this period. (*Tables B.6 and C.6*)
- The national prevalence rate for the use of cocaine in the past year among all persons aged 12 or older was 2.4 percent in 2003-2004. Rhode Island had the highest percentage of persons aged 12 or older using cocaine in the past year (3.5 percent). Among persons aged 12 or older, Ohio was the only State to show a significant change between 2002-2003 and 2003-2004, a decline in the past year cocaine use from 2.5 to 2.1 percent. (*Tables B.7 and C.7*)
- In 2003-2004, 4.8 percent of all persons aged 12 or older reported having used pain relievers nonmedically in the past year, a percentage that was unchanged from 2002-2003. For persons aged 12 or older, estimates ranged from a low of 3.1 percent in the District of Columbia and Hawaii to 6.3 percent in Kentucky. Kentucky and Washington were ranked in the top fifth in all three age groups (12 to 17, 18 to 25, and 26 or older). Although there were no significant changes at the national level, five States showed increases either among the 12 to 17 age group (Arkansas and Maine) or among the 18 to 25 age group (California, Montana, and New York). Hawaii was the only State to show a change among the 12 or older population between 2002-2003 and 2003-2004—a decrease from 3.9 to 3.1 percent. (*Tables B.8 and C.8, Figures 2.29 to 2.31*)

Alcohol Use

- In 2003-2004, the rate of past month alcohol use in States among all persons aged 12 or older ranged from a low of 29.3 percent in Utah to a high of 62.1 percent in Wisconsin. Although the use of alcohol at the national level remained unchanged between 2002-2003 and 2003-2004, four States showed significant changes among the 12 or older population. Three States had significant decreases: Missouri, Nevada, and New Jersey. Wisconsin had the only significant increase among persons aged 12 or older. (*Tables B.9 and C.9*)
- Nationally, almost a quarter (22.7 percent) of all persons aged 12 or older participated in binge use of alcohol in the past month in 2003-2004. North Dakota had the highest past month binge use of alcohol (31.8 percent), and Utah had the lowest rate (15.0 percent). The national rate in 2003-2004 (22.7 percent) was similar to the rate in 2002-2003 (22.8 percent). The only changes among the 12 or older population between 2002-2003 and 2003-2004 were increases in Kansas and Pennsylvania. (*Tables B.10 and C.10*)
- In 2003-2004, 41.3 percent of all persons aged 12 or older perceived a great risk of binge drinking. People's perceptions of the risk of binge drinking were moderately related to their actual rates of binge drinking at the State level in 2003-2004. Seven of the ten States (Iowa, Massachusetts, Montana, Nebraska, North Dakota, South Dakota, and Wisconsin) with the highest rates of binge use of alcohol in 2003-2004 also were States with the lowest perceived risk of binge drinking for the population aged 12 or older. Nationally, there was a slight decline in the percentage of persons aged 12 or older reporting a great risk in binge alcohol use between 2002-2003 and 2003-2004, from 42.0 to 41.3 percent. (*Tables B.11 and C.11, Figures 3.5 and 3.9*)
- North Dakota had the highest rate of underage (ages 12 to 20) alcohol use in the past month, 42.7 percent; Utah had the lowest rate, 18.6 percent. There was no change between 2002-2003 and 2003-2004 in underage alcohol use at the national level—28.9 percent were past month users. Both California and Wisconsin showed increases (from 24.7 to 26.3 percent and from 34.7 to 38.3 percent, respectively). Michigan and South Carolina showed decreases (from 31.8 to 30.2 percent and from 27.3 to 24.1 percent, respectively). (*Tables B.12 and C.12*)
- Eight of the States in the top fifth for underage use of alcohol also were ranked in the top fifth for underage binge use of alcohol: Iowa, Massachusetts, Montana, New Hampshire, North Dakota, Rhode Island, South Dakota, and Wisconsin. Although there was no change at the national level in the percentage of underage persons aged 12 to 20 reporting binge use of alcohol in the past month, two States showed increases (Iowa and Oklahoma) and three States showed decreases (North Carolina, South Carolina, and Tennessee). (*Table C.12, Figures 3.13 and 3.14*)

Tobacco Use

- Nationally among persons aged 12 or older, the rate for past month use of tobacco in 2003-2004 was 29.5 percent. Rates of tobacco use ranged from 39.5 percent in West Virginia to 20.1 percent in Utah. Past month tobacco use declined slightly between 2002-2003 and 2003-2004 among persons 12 or older, from 30.1 to 29.5 percent. Given 11 statistically significant State-level changes occurring across the four age categories (12 or older, 12 to 17, 18 to 25, and 26 or older), only 2 of them were *increases*: in California, the percentage of youths using tobacco in the past month increased from 9.2 to 10.9 percent, and in Kansas, the percentage of persons aged 18 to 25 reporting past month use of tobacco went from 45.7 to 49.9 percent. Even though California had an increase among youths, California had an overall decrease among persons aged 12 or older from 22.5 to 20.7 percent that was driven by a decrease among persons aged 26 or older. (*Tables B.13 and C.13*)
- Kentucky had the highest rate of cigarette use in the Nation (33.3 percent), and Utah had the lowest rate (17.6 percent) for all persons aged 12 or older. The national rate for past month use of cigarettes among persons aged 12 or older declined slightly from 25.7 percent in 2002-2003 to 25.2 percent in 2003-2004. There were declines among both the 12 to 17 and the 18 to 25 age groups. Of a total of 14 statistically significant State changes in past month use of cigarettes between 2002-2003 and 2003-2004 across the four age groups, 13 of them were decreases. (*Tables B.14 and C.14*)
- States with high prevalence rates for cigarette use tended to have low rates of perceived risk of heavy cigarette use (i.e., smoking one or more packs a day). Six of the States (Kentucky, Missouri, Ohio, Oklahoma, South Dakota, and West Virginia) ranked in the lowest fifth for perceptions of great risk of smoking one or more packs of cigarettes a day also were ranked in the highest fifth for past month cigarette use among persons aged 12 or older. Nationally, in the 12 or older population, the rates of perception of great risk of smoking one or more packs of cigarettes a day increased from 71.3 percent in 2002-2003 to 72.8 percent in 2003-2004. There were increases among youths, young adults, and older adults aged 26 or older. (*Tables B.15 and C.15, Figures 4.5 and 4.9*)

Substance Dependence, Abuse, and Treatment Need

- Nationally in 2003-2004, 7.6 percent of the population aged 12 or older was classified with dependence on or abuse of alcohol in the past year. Wisconsin had the highest rate (11.3 percent), while Alabama and North Carolina shared the lowest rate (6.0 percent) among persons aged 12 or older. Five States ranked in the top fifth in all three age groups (12 to 17, 18 to 25, and 26 or older): Montana, New Mexico, South Dakota, Wisconsin, and Wyoming. Among all persons aged 12 or older, only three States showed significant changes from 2002-2003 to 2003-2004. Georgia and Michigan had decreases, whereas Wisconsin had an increase in past year alcohol dependence or abuse rates. (*Tables B.16 and C.16, Figures 5.2 to 5.4*)

- Seven States that ranked in the highest fifth in the 12 or older population for dependence on or abuse of alcohol in the past year also were ranked in the highest fifth for past year alcohol dependence. (*Figures 5.1 and 5.5*)
- In 2003-2004, New Mexico had the highest rate of past year illicit drug dependence or abuse (3.7 percent) among persons aged 12 or older, and South Dakota had the lowest rate (2.5 percent). The national average in 2003-2004 was 3.0 percent. There was no change in the rates of past year illicit drug dependence or abuse between 2002-2003 and 2003-2004 either nationally or in any State for persons aged 12 or older. (*Tables B.18 and C.18*)
- The percentage of persons aged 12 or older classified as being dependent on illicit drugs during the past year remained stable between 2002-2003 and 2003-2004 at 1.9 percent. (*Table C.19*)
- In 2003-2004, State percentages for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older ranged from a low of 7.4 percent in Alabama to a high of 12.2 percent in Wisconsin. There was no change in the rates of past year dependence on or abuse of alcohol or illicit drugs between 2002-2003 and 2003-2004 either nationally or in any State for persons aged 12 or older. (*Tables B.20 and C.20*)
- In 2003-2004, Alaska had the highest percentage of persons aged 12 or older needing but not receiving treatment for an illicit drug use problem (3.5 percent), while South Dakota had the lowest percentage (2.2 percent). There was no change in the rates of persons aged 12 or older needing but not receiving treatment for an illicit drug use problem between 2002-2003 and 2003-2004 either nationally or in any State. (*Tables B.21 and C.21*)
- Four States were ranked in the top fifth for needing but not receiving treatment for alcohol problems among persons aged 12 or older and in each of the three age categories (12 to 17, 18 to 25, and 26 or older): Montana, New Mexico, Wisconsin, and Wyoming. The State percentages in the total 12 or older population ranged from a high of 10.8 percent in Wisconsin to a low of 5.6 percent in Alabama and North Carolina. Although there were a few changes among States in some of the individual age groups, only three States showed statistically significant changes in the percentage of persons 12 or older needing but not receiving treatment for alcohol problems. Georgia and Michigan both had decreases, whereas Wisconsin showed an increase during the period from 2002-2003 to 2003-2004. (*Tables B.22 and C.22, Figures 5.25 to 5.28*)

Serious Psychological Distress among Adults

- Serious psychological distress (SPD) was estimated in NSDUH for persons aged 18 or older. In 2003-2004, SPD was present in 9.6 percent of the population aged 18 or older. West Virginia had the highest rate of SPD in the past year (12.7 percent), while Hawaii had the lowest rate (7.1 percent). Ten States showed increases in SPD in the 18 or older population from 2002-2003 to 2003-2004: Arizona, California, Florida, Illinois, Iowa, New Jersey, Pennsylvania, Texas, West Virginia, and Wyoming. These increases were generally the result of increases among persons aged 26 or older. (*Tables B.23 and C.23*)

1. Introduction

This report presents State estimates for 22 measures of substance use or mental health problems based on the 2003 and 2004 National Surveys on Drug Use and Health (NSDUHs).¹ Sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), NSDUH is an ongoing survey of the civilian, noninstitutionalized population of the United States aged 12 years or older. Interview data from approximately 135,500 persons were collected in 2003-2004. State estimates presented in this report have been developed using a small area estimation (SAE) procedure in which State-level NSDUH data are combined with local-area county and census block group/tract-level data from the State. This model-based methodology provides more precise estimates of substance use at the State level than those based solely on the sample, particularly for smaller States.

Starting in 1999, the NSDUH sample was expanded to produce State-level estimates. The samples in each State were selected to represent proportionately the geography and demography of that State. The first report with State estimates was published in 2000 (Office of Applied Studies [OAS], 2000). It utilized the 1999 survey data and the SAE procedure. Because the SAE procedure requires significant preparatory steps for the modeling and extensive computation to generate results, the number of variables estimated has been limited to ones with high policy value. The first report included only seven measures. Subsequent State reports have been published annually, gradually extending the capabilities of the SAE procedure and increasing the number of measures estimated (Wright, 2002a, 2002b, 2003a, 2003b, 2004; Wright & Sathe, 2005). The current practice is to base annual estimates on a 2-year moving average of NSDUH data in order to enhance the precision for States with smaller samples.

Recently, State estimates have been produced for additional measures by combining 3 (or more) years of NSDUH data and using sampling weights and direct estimation. The advantage of this approach is that it can be used on any variable in the dataset; however, the estimates typically are not as accurate as the SAE measures. These estimates have been included in some reports and in tables on the SAMHSA website.

1.1 Summary of NSDUH Methodology

NSDUH 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 planned and managed by SAMHSA's OAS, and the data are collected and processed by RTI International.² This section briefly describes the national survey methodology. 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

¹ In 2002, the name of the survey was changed from the National Household Survey on Drug Abuse (NHSDA) to NSDUH.

² RTI International is a trade name of Research Triangle Institute.

shelters, active military personnel, and residents of institutional group quarters, such as prisons and long-term hospitals.

The 1999 survey marked the first 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 an interviewer and audio computer-assisted self-interviewing (ACASI). 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 OAS (2001).

The 1999 through 2001 NHSDAs and the 2002 through 2004 NSDUHs 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 accounted 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). Collectively, the sample allocated to these States ensured adequate precision at the national level while providing individual State samples large enough to support both model-based (SAE) and design-based estimates. For the remaining 42 States and the District of Columbia, smaller, but adequate, samples were selected to support State estimates using SAE techniques (described in Appendix E of the 2001 NHSDA State report, Wright, 2003b). 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.

In 2002, several changes were introduced to the survey. Incentive payments of \$30 were given to respondents for the first time in order to address concerns about the national and State response rates. Other changes included a change in the survey name, new data collection quality control procedures, and a shift from the 1990 decennial census to the 2000 census as a basis for population count totals and to calculate any census-related predictor variables that are used in the estimation.

An unanticipated result of these changes was that the prevalence rates for 2002 were in general substantially higher than those for 2001—substantially higher than could be attributable to the usual year-to-year trend—and thus are not comparable with estimates for 2001 and prior years.³ Therefore, the 2002 NSDUH was established as a new baseline for the national, as well as the State, estimates. Given the varying effects of the incentive and other changes on the States, not only are the estimates for 2002 and later years not comparable with prior years, but also the relative rankings of States may have been affected. Therefore, the rankings of States for 2002-2003 or later should not be compared with those for prior years.

³ For a thorough discussion of the impact of these changes, see Section C.2 of Appendix C in OAS (2005c).

By combining data across 2 years, the precision of the small area estimates for the small States, and thus their rankings, have been improved significantly. In addition, by combining 2 years of data, the impact of the national model on those States has been reduced significantly relative to estimates based on a single year's data.⁴

Nationally, approximately 261,000 addresses were screened and about 135,500 persons responded within the screened addresses. The survey is conducted from January through December each year. The screening response rate for 2003-2004 combined averaged 90.8 percent, and the interviewing response rate averaged 77.2 percent, for an overall response rate of 70.1 percent. The State overall response rates for 2003-2004 ranged from 60.6 percent in New York to 81.5 percent in Utah (Table A.9).

Estimates in this report have been adjusted to reflect the probability of selection, unit nonresponse, poststratification to known benchmarks, item imputation, and other aspects of the estimation process. These procedures are described in the NSDUH Methodological Resource Books (MRBs) for each survey year (see <http://www.oas.samhsa.gov/nhsda/methods.cfm>).

1.2 Format of Report and Presentation of Data

The findings in this report are presented in six chapters, including this introductory chapter, along with U.S. maps of estimates for States at the ends of Chapters 2 through 6 and data tables in Appendices B and C at the end of the report. In each chapter except Chapter 6, there are separate estimates for three age groups (12 to 17, 18 to 25, and 26 or older) and all ages 12 or older combined.

Chapter 2 presents State estimates of the prevalence of any illicit drug use, marijuana use, the prevalence of perceived risk of marijuana use, incidence of marijuana use, any illicit drug use other than marijuana, cocaine use, and nonmedical use of pain relievers. Chapter 3 discusses analogous estimates of alcohol use, binge alcohol use, and the perceived risk of binge alcohol use. Chapter 3 also includes for the first time estimates of underage (ages 12 to 20) alcohol use and binge alcohol use. Chapter 4 presents estimates for tobacco use, cigarette use, and the perceived risk of heavy cigarette use. Chapter 5 discusses the substance treatment-related measures (i.e., dependence on and abuse of alcohol or illicit drugs and needing but not receiving treatment). Chapter 6 presents estimates of serious psychological distress (SPD), formerly referred to as serious mental illness (SMI) for persons aged 18 or older.

At the ends of Chapters 2 through 6, State model-based estimates are portrayed in U.S. maps showing all 50 States and the District of Columbia. The maps reflect the ranking of States into fifths from lowest to highest for each measure to simplify the discussion in the chapters. Appendix A gives a brief description of the SAE methodology for 2003-2004 and discusses minor refinements in that methodology for these analyses relative to prior years. For a more detailed discussion of the SAE methodology, see Appendix E of the 2001 State report (Wright, 2003b). Also included in Appendix A are the State sample sizes and response rates for 2002,

⁴ Combining data across 2 years permits the estimation of change at the State level by expressing it as the difference of two consecutive 2-year SAE moving averages. Because the 2004 data are available for analysis, estimates of change between combined 2003-2004 data and the combined 2002-2003 data can be developed. This method is similar to the one used in the 2001 State report (Wright, 2003b).

2003, 2004, 2002-2003 combined, and 2003-2004 combined (Tables A.1 to A.12). Tables of model-based estimates for each substance use or mental health measure are included in Appendix B. The quintile rankings can be determined from these tables that include all 50 States and the District of Columbia, listed in alphabetical order, by four age categories. Estimates of change between 2002-2003 and 2003-2004 are presented in Appendix C. *Tables for individual States are available on the SAMHSA website and display all of the estimates discussed in this report by the appropriate age categories. Also available on the SAMHSA website are tables of the total number of persons associated with each measure corresponding to the estimated percentages or rates for each substance use or mental health measure in Appendix B (see <http://www.oas.samhsa.gov/2k4State/lot.htm>).*

The color of each State on the U.S. maps indicates how the State ranks relative to other States for each measure. 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 "quintile" could have more or fewer States than desired because two (or more) States have the same estimate (to two decimal places). When this occurs at the "boundary" between two "quintiles," all States with the same estimate were assigned to the lower quintile. Those States with the highest rates for a given outcome are in red, with the exception of the perceptions of risk measures, for which the lowest perceptions of great risk are in red. Those States with the lowest estimates are in white, with the exception of the perceptions of risk measures, for which the highest perceptions of great risk are in white.

At the top of each table in Appendix B is a national total that represents the (population-weighted) mean of the estimates from the 50 States and the District of Columbia. These totals have been benchmarked in order to agree with the corresponding national estimates calculated as sample-weighted averages or proportions across the entire sample. (For more details, refer to Appendix A, Section A.4.) Associated with each State estimate is a 95 percent prediction interval (PI). These intervals indicate the precision of the estimate. For example, the State with the highest estimated past month alcohol rate for youths aged 12 to 17 (a model-based estimate) was Wisconsin, with a rate of 24.4 percent (Table B.9). The 95 percent PI on that estimate is from 21.5 to 27.7 percent. Therefore, the probability is 0.95 that the true prevalence for Wisconsin for persons aged 12 to 17 will fall between 21.5 to 27.7 percent. The PI indicates the uncertainty due to both sampling variability and model bias.

In this report, State rankings are discussed in terms of the range and the national average because the latter provide a useful context for the discussion. However, the differences between the highest (or lowest) rate and the next-to-highest (or next-to-lowest) rate are typically very small and not statistically significant. For example, although Alaska (11.8 percent) had the highest rate of past month use of an illicit drug among persons aged 12 or older for 2003-2004, the estimate for New Mexico (11.3 percent) was only half of a percentage point lower and statistically no different than the Alaska estimate (Table B.1). Therefore, it is important to consider the PI when comparing States. For Alaska, one can say that 95 percent of the time the true value would fall in the range of approximately 10.2 to 13.7 percent. Clearly, the estimate for New Mexico falls into this range, but Mississippi's estimate (5.8 percent) does not.

Estimates of change between 2002-2003 and 2003-2004 are presented in Appendix C for 22 measures, by age group (see Tables C.1 to C.23). This is the first time that the estimates of

change have been published for 10 of these measures. These tables show the estimates for 2002-2003 and 2003-2004 and a p value to test the hypothesis that there was "no change" over this period. The report only discusses differences if they are significant at p values of 0.05 or less (corresponding to a probability of 95 percent that the change was not 0). However, p values greater than 0.05 but less than or equal to 0.10 also have been marked to highlight other possible changes because the year-to-year changes are often small and relatively hard to detect, especially for those measures with low prevalence rates. The methodology for estimating change involves estimating one model for 2002-2003 based on the predictor variables and the sample for those years and a separate model for 2003-2004 based on the predictor variables and sample for those years. This can lead to slightly different national models (i.e., models with slightly different model coefficients for the two sets of years). The change between 2002-2003 and 2003-2004 estimates the average yearly change between 2002 and 2004. "Average yearly change" indicates the change between 2002 and 2004 divided by 2. For more details on this topic, see the section on measuring change (Section A.8) in Appendix A.

Throughout the report, there are a number of drug measures that are related, such as marijuana use and any illicit drug use. It might appear that one could draw new conclusions by subtracting one from the other (e.g., subtracting the percentage who used marijuana in the past month from the percentage who used any illicit drug in the past month to find the percentage who used an illicit drug other than marijuana in the past month). Because related measures have not been estimated jointly, but with different models, subtracting one measure from another related measure at the State level can give misleading results, perhaps even a "negative" estimate, and should not be done.

1.3 Measures Presented in This Report

Estimates for 2003-2004 were developed for 22 measures:

- past month use of any illicit drug,
- past year use of marijuana,
- past month use of marijuana,
- perception of great risk of smoking marijuana once a month,
- average annual rate of first use of marijuana,⁵
- past month use of any illicit drug other than marijuana,
- past year use of cocaine,
- past year nonmedical use of pain relievers,
- past month use of alcohol,

⁵ For details on how the average annual rate of first use of marijuana (incidence of marijuana) is calculated, see Section A.5 of Appendix A.

- past month binge alcohol use,
- perception of great risk of having five or more drinks of an alcoholic beverage once or twice a week,
- past month use of any tobacco product,
- past month use of cigarettes,
- perception of great risk of smoking one or more packs of cigarettes per day,
- past year alcohol dependence or abuse,
- past year alcohol dependence,
- past year any illicit drug dependence or abuse,
- past year any illicit drug dependence,
- past year dependence on or abuse of any illicit drug or alcohol,
- needing but not receiving treatment for illicit drug problems in the past year,
- needing but not receiving treatment for alcohol problems in the past year, and
- past year serious psychological distress (SPD).

1.4 Other NSDUH Reports and Products

The national results from the 2004 survey were released in September 2005 (OAS, 2005c). Additional methodological information on NSDUH, including the questionnaire, is available electronically on the OAS webpages at <http://www.oas.samhsa.gov>. Brief descriptive reports and in-depth analytic reports focusing on specific issues or population groups also are produced by OAS. Further information on access to NSDUH publications, detailed tables, and public use files is contained in "Accessing Data from the National Survey on Drug Use and Health (NSDUH)" (OAS, 2004a). A complete listing of previously published reports from NSDUH and other data sources is available from OAS. Most of these reports are available through the Internet (<http://www.oas.samhsa.gov>). In addition, OAS makes public use data files available to researchers through the Substance Abuse and Mental Health Data Archive (SAMHDA, 2006). Currently, data files are available from the 1979 to 2004 surveys at <http://www.icpsr.umich.edu/SAMHDA/index.html>.

In 2006, estimates for substate planning areas based on combined 2002-2004 NSDUH data will be available at the SAMHSA website. The substate planning area definitions for all 50 States and the District of Columbia are based on the areas for substate allocation of funds under SAMHSA's Substance Abuse Prevention and Treatment (SAPT) block grant. This will be the second time that substate data for the entire United States have been collected and estimated

using comparable methods.⁶ Estimates will be available for each State and the District of Columbia for the 22 measures listed in Section 1.3. Along with the substate estimates will be comparable State and national estimates summarized in tables and maps that indicate the distribution of prevalence rates across the United States. The methodology used for producing substate estimates is similar to the SAE methodology used to produce the State estimates in this report.

⁶ Substate data were first reported in May 2005 using data from the 1999 to 2001 surveys (OAS, 2005d) and in June 2005 using only marijuana use data from the same survey years (OAS, 2005a).

2. Illicit Drug Use

The National Survey on Drug Use and Health (NSDUH) obtains information on nine different categories of illicit drug use: marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives. Estimates of "any illicit drug" use reflect any of the nine categories listed above. In 2003-2004, an estimated 8.1 percent of the population aged 12 or older had used an illicit drug in the past month, and the estimated percentage was similar in 2002-2003 (8.3 percent) (Table B.1 and C.1). Marijuana, the most commonly used illicit drug, was used by 6.1 percent of the population in 2003-2004 during the past month (Table B.3).

2.1 Any Illicit Drug

Estimates of past month use of any illicit drug ranged from a low of 5.8 percent in Mississippi to a high of 11.8 percent in Alaska for all persons aged 12 or older (Table B.1). See Section 1.2 for a discussion of the proper use of the prediction intervals [PIs]. Alaska, New Hampshire, New Mexico, Rhode Island, and Vermont were in the highest fifth for all persons aged 12 or older and for each of the age subgroups: 12 to 17, 18 to 25, and 26 or older (Figures 2.1 to 2.4).

Four States showed significant decreases from 2002-2003 to 2003-2004 (at the 5 percent level of significance) in the percentage of all persons who used an illicit drug in the past month among those aged 12 or older: the District of Columbia (from 11.6 to 9.6 percent), Florida (from 8.7 to 7.8 percent), Nevada (from 10.3 to 8.7 percent), and Washington (from 10.0 to 8.5 percent) (Table C.1). At the national level, the use of any illicit drug among youths aged 12 to 17 declined from 11.4 percent in 2002-2003 to 10.9 percent in 2003-2004. Both the Midwest and the South contributed significantly to the national decline in the percentage of youths who used any illicit drug in the past month. Six States showed significant decreases among youths: Illinois (from 10.8 to 9.1 percent), Nebraska (from 12.7 to 10.1 percent), and South Dakota (from 13.3 to 9.8 percent) from the Midwest; North Carolina (from 13.6 to 11.1 percent) and Virginia (from 11.9 to 9.5 percent) from the South; and Vermont (16.7 to 14.0 percent) from the Northeast. There were no States that showed a significant increase for any age group.

2.2 Marijuana

Because marijuana is the predominant drug used by those using an illicit drug, States that had high prevalence rates for any illicit drug use also had high prevalence rates for past month use of marijuana. Eight out of ten States in the top fifth for use of an illicit drug for persons aged 12 or older also were ranked in the top fifth for past month use of marijuana. Eight States were common to the top fifth for past month marijuana use in all three age groups: 12 to 17, 18 to 25, and 26 or older: Alaska, Maine, Massachusetts, New Hampshire, New Mexico, Oregon, Rhode Island, and Vermont (Figures 2.1, 2.9 to 2.12). Mississippi and Utah had the lowest rate of past month use of marijuana (4.2 percent) in the age 12 or older population, and Alaska had the highest rate (9.9 percent) (Table B.3).

Nationally in 2003-2004, 10.6 percent of all persons aged 12 or older reported marijuana use in the past year. Young adults, aged 18 to 25, reported the highest rate of past year use of marijuana, 28.2 percent (Table B.2). The State rankings for past year use were very similar to those for past month use among persons 12 or older (Figures 2.5 and 2.9). Mississippi had the lowest rate (7.8 percent) of past year use of marijuana among persons aged 12 or older. Alaska had the highest rate of past year marijuana use among persons aged 12 or older (15.8 percent). Vermont had the highest rate of use in the Nation in the 18 to 25 age group—43.3 percent had used marijuana in the past year (Table B.2).

Six States showed significant decreases (at the 5 percent level of significance) in the past year use of marijuana among all persons aged 12 or older in this period: Colorado (from 15.1 to 13.3 percent), Florida (from 11.4 to 10.6 percent), Nevada (from 12.0 to 10.6 percent), New Hampshire (from 16.3 to 14.6 percent), Ohio (from 10.9 to 10.1 percent), and Washington (from 13.5 to 11.6 percent) (Table C.2). Most of these States also showed significant declines among either the 12 to 17 age group or the 18 to 25 age group. Only one State, Tennessee, showed a significant increase among persons aged 12 or older, from 7.4 to 8.4 percent. Seven States showed significant decreases from 2002-2003 to 2003-2004 in the past month use of marijuana, while New Mexico was the only State that showed a significant increase among all persons aged 12 or older in this period (Table C.3). Nationally, there was a significant decrease in the past month use of marijuana among all persons aged 18 to 25 between 2002-2003 and 2003-2004, while significant decreases were indicated in past year use in both the 18 to 25 age group and among youths aged 12 to 17.

2.3 Perceptions of Risk of Marijuana Use

An individual's perception of the risks of substance use has been shown to be related to whether he or she actually uses the substance (e.g., Bachman, Johnston, & O'Malley, 1998). However, at the State level, only half of the (10) States that ranked in the lowest fifth of perceived great risk of using marijuana once a month were also among the States ranked in the highest fifth for past month use of marijuana in 2003-2004 for persons aged 12 or older (Figures 2.9 and 2.13).

Slightly over one quarter (26.2 percent) of all persons aged 12 or older in the State of Washington reported that using marijuana occasionally (once a month) was a great risk (Table B.4). However, slightly more than half (51.3 percent) of all persons aged 12 or older in Mississippi indicated that occasional use of marijuana was a great risk. Along with Utah, Mississippi also had the lowest prevalence rate (4.2 percent) of use of marijuana in the past month among persons aged 12 or older (Table B.3).

The national percentage of persons aged 12 or older perceiving a great risk of using marijuana once a month increased significantly between 2002-2003 and 2003-2004, from 39.1 to 39.7 percent (Table C.4). Six States contributed significantly (at the 5 percent level of significance) to this national increase in perceived risk in this population: California (from 36.6 to 39.6 percent), Hawaii (from 34.3 to 38.8 percent), Maryland (from 35.6 to 39.7 percent), Massachusetts (from 26.8 to 31.2 percent), Montana (from 33.3 to 39.0 percent), and Nevada (from 34.0 to 38.0 percent). One State, Iowa, countered the national trend with a significant

decrease among persons aged 12 or older, from 44.2 to 41.4 percent. Among youths aged 12 to 17, a total of 12 States had increased perceptions of great risk.

2.4 Incidence of Marijuana Use

Related to the prevalence of marijuana use is the number of persons in a period of time who used marijuana for the first time ever. When the number of first-time users of a substance increases for a number of consecutive years, the prevalence rate for the substance tends to increase also. The average annual incidence of marijuana for this report is estimated somewhat differently than in the national report (OAS, 2005c).⁷ The estimate for a single year is averaged over the 2 most recent years and expressed as a percentage or rate per 100 person years of exposure. For the combined years 2003-2004, the national marijuana incidence rate for all persons aged 12 or older was 1.8 percent. Alaska had the highest rate, 2.6 percent. Florida and Tennessee shared the lowest rate, 1.4 percent (Table B.5).

Six States ranked in the top fifth for marijuana incidence in the 12 or older age group also ranked in the top fifth for past month marijuana use (Alaska, Montana, New Hampshire, New Mexico, Rhode Island, and Vermont) (Figures 2.9 and 2.17). Because most initiation of marijuana takes place at age 25 or earlier (Gfroerer, Wu, & Penne, 2002), the rates of initiation in the 26 or older age group were much lower than those in the 12 to 17 and 18 to 25 age groups: the national rates were 0.1, 6.3, and 6.6 percent, respectively. Vermont and New Mexico had the highest rate among youths aged 12 to 17 (8.8 percent), and Vermont also had the highest rate among persons aged 18 to 25 (10.5 percent) (Table B.5).

Rates of first use of marijuana declined significantly among youths between 2002-2003 and 2003-2004 (from 6.6 to 6.3 percent), and eight States had significant decreases (at the 5 percent level of significance) for youths over the same period (Table C.5). Those States were Delaware, Florida, Nevada, New Hampshire, North Carolina, Texas, Vermont, and Virginia. Two of those States also showed significant decreases among the combined 12 or older population: Florida declined from 1.6 to 1.4 percent, and Nevada declined from 2.0 to 1.7 percent.

2.5 Any Illicit Drug Other Than Marijuana

Illicit drugs other than marijuana include cocaine, heroin, hallucinogens, inhalants, and the nonmedical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives. The national estimate of past month use of any illicit drug other than marijuana among persons aged 12 or older was 3.6 percent for 2003-2004 combined (Table B.6). Hawaii had the lowest rate (2.8 percent) of past month use of an illicit drug other than marijuana among persons 12 or older, and Colorado had the highest rate (4.7 percent). Four States that were in the top fifth for past month use of an illicit drug among those aged 12 or older also were ranked in the top fifth for past month use of an illicit drug other than marijuana: Alaska, Colorado, New Mexico, and

⁷ *Average annual incidence rate = {(Number of marijuana initiates in past 24 months) / [(Number of marijuana initiates in past 24 months * 0.5) + Number of persons who never used marijuana]} / 2.*

Please note that because the average annual incidence of marijuana was so low for the 26 or older age group and had such an abbreviated range, no map has been included for it; however, Table B.5 includes these estimates. For details on how average annual incidence was calculated, refer to Appendix A (Section A.5).

Rhode Island (Figures 2.1 and 2.20). New Mexico was the only State that ranked in the top fifth in all three age groups (12 to 17, 18 to 25, and 26 or older) and for all persons aged 12 or older (Figures 2.20 to 2.23).

Past month use of any illicit drug other than marijuana was relatively stable between 2002-2003 and 2003-2004. Although rates of use appear on average to be slightly lower in 2003-2004 than in 2002-2003, none of those declines was statistically significant (at the 5 percent level of significance). Among all States and age groups, West Virginia had the only statistically significant change over the above period: an increase from 8.1 percent in 2002-2003 to 10.2 percent in 2003-2004 among young adults aged 18 to 25 (Table C.6).

2.6 Cocaine

The national prevalence rate for the use of cocaine in the past year among all persons aged 12 or older was 2.4 percent (Table B.7). Because cocaine is one of the substances included in the "any illicit drug other than marijuana" category, it is useful to compare the rankings of States with respect to these two substance use measures. In 2003-2004, only four of the States (Arizona, Colorado, New Mexico, and Rhode Island) ranked in the highest fifth for past month use of an illicit drug other than marijuana (aged 12 or older) also had past year rates of cocaine use (aged 12 or older) that were in the highest fifth (Figures 2.20 and 2.24). Rhode Island had the highest rate of past year cocaine use (3.5 percent) among persons aged 12 or older; Hawaii had the lowest rate (1.7 percent) in that population (Table B.7). Arizona was the only State that ranked in the top fifth for all three age groups (12 to 17, 18 to 25, and 26 or older) (Figures 2.24 to 2.27).

At the national level, youths aged 12 to 17 reported a decrease (significant at 5 percent level of significance) between 2002-2003 and 2003-2004, from 1.9 to 1.7 percent (Table C.7). Ohio was the only State with a decrease among the general population aged 12 or older, from 2.5 to 2.1 percent in that period. Two other States, Michigan and North Carolina, had a significant decrease in past year cocaine use among youths aged 12 to 17 and/or young adults aged 18 to 25.

2.7 Pain Relievers (Nonmedical Use)

In 2003-2004, 4.8 percent of all persons aged 12 or older reported having used pain relievers nonmedically in the past year, a percentage that was unchanged from 2002-2003 (Table C.8). Kentucky had the highest percentage (6.3 percent) of persons aged 12 or older using pain relievers for nonmedical purposes in the past year (Table B.8). The District of Columbia had the lowest rate in the Nation—3.1 percent. Kentucky and Washington ranked in the top fifth of States for this measure in each of the three age groups and for the total population aged 12 or older (Figures 2.28 to 2.31).

A significant increase (at the 5 percent level of significance) between 2002-2003 and 2003-2004 occurred in the Northeast region among persons aged 18 to 25 (from 11.2 to 12.1 percent) (Table C.8). Only one State, Hawaii, showed a significant decrease for the total population aged 12 or older from 2002-2003 to 2003-2004 (from 3.9 to 3.1 percent). Three States had significant increases in the 18 to 25 age group: California, from 9.8 to 11.2 percent; Montana, from 10.2 to 12.5 percent; and New York, from 9.8 to 11.2 percent. Two States had

significant increases in the 12 to 17 age group: Arkansas, from 8.0 to 10.7 percent; and Maine, from 7.2 to 8.8 percent.

Please use the bookmarks palette to access the U.S. maps for this chapter (Figures 2.1 to 2.31 on pages 20-35).

Please note, these associated maps will open a separate PDF document.

3. Alcohol Use

A number of measures of alcohol use are available from the National Survey on Drug Use and Health (NSDUH). This report discusses past month alcohol use, past month binge alcohol use, and the perceived risk of binge alcohol use. Binge alcohol use is defined as drinking five or more drinks on the same occasion on at least 1 day in the 30 days prior to the survey. Alcohol is the most commonly used substance in the United States. Nationally, about half (50.2 percent) of Americans aged 12 or older reported being current (past month) drinkers of alcohol in 2003-2004. This figure is similar to the 2002-2003 estimate (50.5 percent) (Table C.9).

In addition to information on alcohol use among persons aged 12 or older and each of the three age groups (12 to 17, 18 to 25, and 26 or older), estimates of past month alcohol and binge alcohol use for persons aged 12 to 20 are presented in this report to provide new information on underage drinking at the State level. Nationally, neither of these underage drinking measures changed significantly between 2002-2003 and 2003-2004; however, there were some changes seen at the State level.

3.1 Alcohol

In 2003-2004, the rate of past month alcohol use in States among all persons aged 12 or older ranged from a low of 29.3 percent in Utah to a high of 62.1 percent in Wisconsin. The highest rates of past month alcohol use occurred in the 18 to 25 age group, with North Dakota having the highest rate (75.6 percent) (Table B.9). The following States ranked in the top fifth for all three age groups (12 to 17, 18 to 25, and 26 or older): Connecticut, New Hampshire, North Dakota, Rhode Island, and Wisconsin (Figures 3.2 to 3.4).

Although the use of alcohol at the national level remained unchanged between 2002-2003 and 2003-2004, four States showed significant changes among the 12 or older population. Three States showed significant decreases: Missouri (from 53.2 to 49.8 percent), Nevada (from 50.7 to 47.0 percent), and New Jersey (from 57.7 to 53.3 percent) (Table C.9). These decreases were primarily driven by significant decreases among the 26 or older age group. Wisconsin had the only significant increase among persons aged 12 or older, from 57.9 to 62.1 percent. Wisconsin's overall increase in past month use of alcohol reflected similar significant increases in every age group: from 21.4 to 24.4 percent among youths aged 12 to 17, from 72.1 to 75.5 percent among young adults 18 to 25, and from 60.5 to 64.8 percent in the 26 or older population. There were a few other significant State changes among the 12 to 17 and 18 to 25 age groups. The overall significant increase of 0.9 percent in past month alcohol use among youths in the West region was driven primarily by a significant increase among youths in California—from 15.3 to 16.8 percent.

With respect to underage drinking, past month use of alcohol ranged from a low of 18.6 percent in Utah to a high of 42.7 percent in North Dakota (Table B.12). Although there was no change at the national level in underage alcohol use between 2002-2003 and 2003-2004 (28.9 percent), four States displayed changes (Table C.12). California increased from 24.7 percent in 2002-2003 to 26.3 percent in 2003-2004, and Wisconsin increased from 34.7 to 38.3 percent

during the same period. Michigan and South Carolina both had decreases: from 31.8 to 30.2 percent and from 27.3 to 24.1 percent, respectively.

3.2 Binge Alcohol Use

Nationally, almost a quarter (22.7 percent) of all persons aged 12 or older participated in binge use of alcohol in the past month in 2003-2004 (Table B.10). During that period, the past month rate of binge use of alcohol among persons aged 12 or older ranged from 15.0 percent in Utah to 31.8 percent in North Dakota. Six States were ranked in the top fifth in all three age groups (12 to 17, 18 to 25, and 26 or older): Iowa, Massachusetts, Montana, North Dakota, South Dakota, and Wisconsin (Figures 3.6 to 3.8).

The national rate in 2003-2004 (22.7 percent) was similar to the rate in 2002-2003 (22.8 percent) (Table C.10). Only Kansas and Pennsylvania showed significant increases in binge alcohol use in the 12 or older population, from 21.7 to 24.3 percent and from 22.8 to 24.7 percent, respectively. The Pennsylvania increase was largely due to the increase in binge alcohol use among persons aged 26 or older, from 20.6 to 22.7 percent. Six States showed significant changes among the 18 to 25 age group, and four of the six showed increases: Idaho, Iowa, Massachusetts, and Virginia. Ohio and Texas showed significant decreases among that age group. No State had a significant increase among youths aged 12 to 17, although there was an increase in the West region as a whole from 10.2 to 11.0 percent.

The lowest State estimate for past month underage binge use of alcohol was 13.1 percent in Tennessee. North Dakota had the highest rate for this measure, 32.3 percent (Table B.12). Eight of the States that ranked in the highest fifth for past month underage use of alcohol also ranked in the highest fifth for past month underage binge use of alcohol: Iowa, Massachusetts, Montana, New Hampshire, North Dakota, Rhode Island, South Dakota, and Wisconsin (Figures 3.13 and 3.14).

Although there was no change at the national level, five States showed changes between 2002-2003 and 2003-2004 for underage binge use of alcohol. Two States had increases: Iowa went from 24.7 to 27.7 percent, and Oklahoma went from 19.1 to 21.5 percent (Table C.12). Three States had decreases: North Carolina (from 18.0 to 15.9 percent), South Carolina (from 18.1 to 15.9 percent), and Tennessee (from 16.0 to 13.1 percent).

3.3 Perceptions of Risk of Binge Alcohol Use

In 2003-2004, 41.3 percent of all persons aged 12 or older perceived a great risk of binge drinking (Table B.11). People's perceptions of the risk of binge drinking were moderately related to their actual rates of binge drinking at the State level in 2003-2004. Seven of the ten States (Iowa, Massachusetts, Montana, Nebraska, North Dakota, South Dakota, and Wisconsin) with the highest rates of binge use of alcohol in 2003-2004 among persons 12 or older also were States with the lowest perceived risk of binge drinking for the population aged 12 or older (Figures 3.5 and 3.9). Among persons aged 12 or older, New Hampshire had the lowest percentage (32.3 percent) perceiving a great risk of drinking five or more drinks of alcohol on a single occasion, while Mississippi had the highest rate at 49.2 percent (Tables B.11). Among youths aged 12 to 17, six of the States in the lowest fifth of perceived risk of binge use of alcohol

also had rates of binge drinking in the highest fifth of all States (Iowa, Massachusetts, Montana, New Hampshire, South Dakota, and Wisconsin) (Figures 3.6 and 3.10).

Nationally, there was a significant decline in the percentage of persons aged 12 or older reporting a great risk in binge alcohol use between 2002-2003 and 2003-2004 (from 42.0 to 41.3 percent) (Table C.11). The decrease was accompanied by significant decreases among the 18 to 25 age group (from 32.6 to 31.7 percent), the 26 or older age group (from 44.2 to 43.4 percent), and the 12 to 17 age group in the Midwest region (from 37.3 to 36.1 percent). The decreases were evident among persons aged 12 or older in five States: Illinois (from 40.7 to 38.8 percent), Michigan (from 39.7 to 37.5 percent), Utah (from 50.9 to 46.9 percent), West Virginia (from 42.9 to 39.6 percent), and Wisconsin (from 36.6 to 33.3 percent).

Please use the bookmarks palette to access the U.S. maps for this chapter (Figures 3.1 to 3.14 on pages 40-46).

Please note, these associated maps will open a separate PDF document.

4. Tobacco Use

Tobacco is the second most commonly used substance in the United States next to alcohol. The National Survey on Drug Use and Health (NSDUH) includes a series of questions on the use of several tobacco products, including cigarettes, smokeless tobacco, cigars, and pipe tobacco. This chapter includes State estimates on past month use of tobacco, past month use of cigarettes, and the perceptions of risk of heavy use of cigarettes using the 2003 and 2004 NSDUH data. Heavy use of cigarettes is defined as smoking one or more packs of cigarettes per day. Most tobacco users are cigarette smokers. However, differences in past month prevalence estimates for cigarettes and tobacco (about 4 percent nationally) represent persons who do not smoke cigarettes, but who use one of the other forms of tobacco (chewing tobacco, snuff, cigars, or pipe tobacco) (Tables B.13 and B.14). Nationally, among persons aged 12 or older, both the percentage using tobacco and the percentage using cigarettes in the past month decreased between 2002-2003 and 2003-2004 (Tables C.13 and C.14).

4.1 Tobacco

Nationally among persons aged 12 or older, the rate for past month use of tobacco in 2003-2004 was 29.5 percent (Table B.13). The State with the highest prevalence rate for tobacco use among persons aged 12 or older was West Virginia (39.5 percent). Utah had the lowest rate in the Nation for tobacco use among all persons aged 12 or older (20.1 percent). Kentucky, Missouri, Oklahoma, South Dakota, and West Virginia ranked in the highest fifth for all three age groups (12 to 17, 18 to 25, and 26 or older) and among all persons 12 or older (Figures 4.1 to 4.4).

Past month tobacco use declined in the United States between 2002-2003 and 2003-2004 for persons 12 or older, from 30.1 to 29.5 percent (Table C.13). Given 11 statistically significant State-level changes occurring across the four age categories (12 or older, 12 to 17, 18 to 25, and 26 or older), only 2 of them were *increases*: in California, the percentage of youths using tobacco in the past month increased from 9.2 to 10.9 percent, and in Kansas, the percentage of persons aged 18 to 25 reporting past month use of tobacco went from 45.7 to 49.9 percent. Even though California had an increase among youths, California had an overall decrease among persons aged 12 or older from 22.5 to 20.7 percent that was driven by a decrease among persons aged 26 or older (Tables B.13 and C.13).

4.2 Cigarettes

In 2003-2004, the national rate for past month use of cigarettes among persons aged 12 or older was 25.2 percent (Table B.14). Because cigarettes are the major tobacco product, States ranked highly for past month tobacco use tended also to be ranked highly for past month cigarette use. In fact, 7 of the 10 States in the highest fifth for past month use of tobacco also were in the highest fifth for past month cigarette use among persons aged 12 or older (Figures 4.1 and 4.5). Similarly, 9 of the 10 States ranked in the lowest fifth were the same for both measures. The five States that ranked in the highest fifth for past month tobacco use in all three age groups (12 to 17, 18 to 25, and 26 or older) also were ranked in the highest fifth for

cigarettes: Kentucky, Missouri, Oklahoma, South Dakota, and West Virginia (Figures 4.2 to 4.4 and 4.6 to 4.8). Kentucky had the highest rate of past month cigarette use in the Nation (33.3 percent), and Utah had the lowest rate (17.6 percent) for all persons aged 12 or older (Table B.14).

The national rate for past month use of cigarettes declined among persons aged 12 or older from 25.7 percent in 2002-2003 to 25.2 percent in 2003-2004 (Table C.14). Declines in past month cigarette use were observed in the 12 to 17 and the 18 to 25 age groups (Tables C.13 and C.14). Of a total of 14 statistically significant State changes in past month use of cigarettes, across the four age groups, 13 of them were decreases. Four States showed decreases in past month cigarette use among the 12 or older population: Arizona (from 27.5 to 24.8 percent), Arkansas (from 32.8 to 30.0 percent), California (from 19.4 to 17.8 percent), and Nevada (from 30.5 to 26.6 percent). In the 12 to 17 age group, California was the only State showing an increase, from 7.5 to 8.7 percent.

4.3 Perceptions of Risk of Heavy Cigarette Use

States with high prevalence rates for cigarette use tended to have low rates of perceived risk of heavy cigarette use (i.e., smoking one or more packs a day). Six of the States (Kentucky, Missouri, Ohio, Oklahoma, South Dakota, and West Virginia) ranked in the lowest fifth for perceptions of great risk of smoking one or more packs of cigarettes a day also were ranked in the highest fifth for past month cigarette use among persons aged 12 or older (Figures 4.5 and 4.9). Kentucky had the lowest rate of perception of great risk for heavy cigarette use (64.2 percent), and California had the highest rate (77.1 percent) for persons aged 12 or older (Table B.15).

The rates of perception of great risk of smoking one or more packs of cigarettes a day increased from 71.3 percent in 2002-2003 to 72.8 percent in 2003-2004 among persons 12 or older. Nationally among all age groups, the rates of perception of great risk of smoking one or more packs of cigarettes a day showed significant increases from 2002-2003 to 2003-2004 (Table C.15). Among the 12 or older population, this trend was observed in each of the four geographic regions as well. Several States showed increases in the perception of great risk of smoking one or more packs of cigarettes a day among all age groups, and no State showed a decline between 2002-2003 and 2003-2004.

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5. Substance Dependence, Abuse, and Treatment Need

The National Survey on Drug Use and Health (NSDUH) includes a series of questions to assess the prevalence of substance use disorders (i.e., dependence on or abuse of a substance) in the past 12 months. Substances include alcohol and illicit drugs, such as marijuana, cocaine, heroin, hallucinogens, and inhalants, and nonmedical use of prescription-type drugs. These questions are used to classify persons as dependent or abusing specific substances based on criteria specified in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV) (American Psychiatric Association [APA], 1994). The questions on dependence ask about health and emotional problems, attempts to cut down on use, tolerance, withdrawal, and other symptoms associated with substances used. The questions on abuse ask about problems at work, home, and school; problems with family or friends; physical danger; and trouble with the law due to substance use. Dependence reflects a more severe substance problem than abuse, and persons are classified with abuse of a particular substance only if they are not dependent on that substance.

An estimated 22.0 million persons aged 12 or older in 2003-2004 were classified with dependence on or abuse of any illicit drug or alcohol in the past year. Of these, 7.1 million were dependent on or had abused illicit drugs, and 18.2 million were dependent on or had abused alcohol (see Tables 16, 18, and 20, <http://www.oas.samhsa.gov/2k4State/Vars.htm>).

5.1 Alcohol Dependence or Abuse

Nationally in 2003-2004, 7.6 percent of the population aged 12 or older was classified with dependence on or abuse of alcohol in the past year (Table B.16). Persons aged 18 to 25 had the highest rate of alcohol dependence or abuse (17.3 percent) in the Nation. Wisconsin had the highest rate (11.3 percent) among persons aged 12 or older. Alabama and North Carolina shared the lowest rate among States (6.0 percent). Five States (Montana, New Mexico, South Dakota, Wisconsin, and Wyoming) ranked in the highest fifth for all three age groups (12 to 17, 18 to 25, 26 or older) and among all persons 12 or older (Figures 5.1 to 5.4).

Past year dependence on or abuse of alcohol remained unchanged between 2002-2003 and 2003-2004 at 7.6 percent of all persons aged 12 or older (Table C.16). However, the rate among youths aged 12 to 17 increased significantly in the West during the same period, from 6.0 to 6.6 percent, while the rate among young adults aged 18 to 25 decreased significantly in the South, from 16.4 to 15.5 percent. Among all persons aged 12 or older, only three States showed significant changes. Georgia and Michigan had declines in past year alcohol dependence or abuse, from 7.4 to 6.1 percent and from 8.5 to 7.6 percent, respectively. In Wisconsin, the rate increased from 9.5 to 11.3 percent.

In 2003-2004, 3.3 percent of persons aged 12 or older were estimated to be dependent on alcohol in the past year, representing about 44 percent of those who were dependent on or had abused alcohol in the past year (Tables B.16 and B.17). State estimates for alcohol dependence for persons aged 12 or older ranged from 2.7 percent in New Jersey to 5.0 percent in the District

of Columbia. The highest rates for alcohol dependence occurred in the 18 to 25 age group. About 7 percent of young adults were dependent on alcohol in the past year. Seven States that ranked in the highest fifth in the 12 or older population for dependence on or abuse of alcohol in the past year also were ranked in the highest fifth for past year alcohol dependence (Figures 5.1 and 5.5). Among persons aged 12 or older, Michigan was the only State that had a change, a decrease in the past year alcohol dependence rate from 3.8 percent in 2002-2003 to 3.2 percent in 2003-2004 (Table C.17). This decrease was fueled largely by a decrease among persons aged 26 or older.

5.2 Illicit Drug Dependence or Abuse

Nationally in 2003-2004, about 3.0 percent of persons aged 12 or older were dependent on or had abused illicit drugs in the past year (Table B.18). New Mexico had the highest rate of past year illicit drug dependence or abuse (3.7 percent) among persons aged 12 or older, and South Dakota had the lowest rate (2.5 percent). The highest rates for past year illicit drug dependence or abuse occurred in the 18 to 25 age group, with Massachusetts having the highest rate (11.1 percent). There was no change in the rates of past year illicit drug dependence or abuse between 2002-2003 and 2003-2004 either nationally or in any region for any age group (Table C.18). Vermont was the only State with a significant change, a decrease among youths aged 12 to 17 from 7.9 to 6.0 percent over the time period.

The percentage of persons in 2003-2004 estimated to be dependent on illicit drugs in the past year was 1.9 percent (about 65 percent of those who were estimated to be dependent on or had abused illicit drugs in the past year) (Tables B.18 and B.19). The District of Columbia had the highest percentage of persons who were dependent on illicit drugs in the past year among those aged 12 or older (2.5 percent). Nationally, there was no change in the rate of past year dependence on illicit drugs between 2002-2003 and 2003-2004 in any of the age groups (Table C.19).

There was a slight relationship in 2003-2004 between the high rates of past year illicit drug dependence and the high rates of past year cocaine use for persons aged 12 or older at the State level. Five States ranked in the highest fifth for both measures (Figures 2.24 and 5.13). The relationship between low rates of past year illicit drug dependence and low rates of past year cocaine use for persons aged 12 or older at the State level was the same. Five States ranked in the lowest quintile for both measures.

5.3 Alcohol or Illicit Drug Dependence or Abuse

The national rate in 2003-2004 for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older was about 9.2 percent (Table B.20). When examining dependence on or abuse of alcohol or illicit drugs at the State level, the States with high rates for alcohol dependence or abuse tended to rank in the top fifth for alcohol and illicit drug dependence or abuse combined because alcohol accounts for most substance dependence or abuse. Nine States that ranked in the highest fifth for past year alcohol dependence or abuse also ranked in the top fifth for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older (Arizona, District of Columbia, Montana, New Mexico, North Dakota, Rhode Island, South Dakota, Wisconsin, and Wyoming) (Figures 5.1 and 5.17).

State percentages for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older ranged from a low of 7.4 percent in Alabama to a high of 12.2 percent in Wisconsin (Table B.20). Only two States, New Mexico and Wisconsin, were in the highest fifth for all three age groups (12 to 17, 18 to 25, and 26 or older) (Figures 5.18 to 5.20).

Among all persons aged 12 or older, the rate of past year dependence on or abuse of alcohol or illicit drugs remained stationary at 9.2 percent in 2002-2003 and 2003-2004 (Table C.20). The only significant regional change occurred in the South among young adults aged 18 to 25, a slight decrease from 20.2 to 19.3 percent.

5.4 Needing But Not Receiving Treatment for Illicit Drug Problems

The definition of a person needing but not receiving treatment for an illicit drug problem is that the person meets the criteria for abuse of or dependence on illicit drugs according to the DSM-IV, but has not received specialty treatment for an illicit drug problem in the past year. Specialty treatment is treatment received at a drug and alcohol rehabilitation facility (inpatient or outpatient), hospital (inpatient only), or mental health center.

In 2003-2004, Alaska had the highest percentage of persons aged 12 or older needing but not receiving treatment for an illicit drug use problem (3.5 percent), while South Dakota had the lowest rate (2.2 percent) (Table B.21). The States in the top fifth for needing but not receiving treatment for an illicit drug use problem among persons 12 or older were mainly in the West (five States) or in the Northeast (four States). New Mexico was the only State in the top fifth for persons aged 12 to 17, 18 to 25, and 26 or older (Figures 5.21 to 5.24).

Vermont was the only State that had any significant change in the percentage of persons needing but not receiving treatment for illicit drug problems, either in the total population of persons aged 12 or older or in any of the component age groups between 2002-2003 and 2003-2004. Vermont had a decrease among the percentage of youths aged 12 to 17 needing but not receiving treatment for an illicit drug use problem from 7.2 to 5.6 percent (Table C.21).

5.5 Needing But Not Receiving Treatment for Alcohol Problems

The definition of a person needing but not receiving treatment for an alcohol problem is that the person meets the criteria for abuse of or dependence on alcohol according to the DSM-IV, but has not received specialty treatment for an alcohol problem in the past year. The percentage of persons aged 12 or older needing but not receiving treatment for alcohol problems (7.3 percent) in 2003-2004 was almost 3 times larger than the corresponding percentage for persons needing but not receiving treatment for illicit drug problems (2.7 percent) (Tables B.21 and B.22).

States in the top fifth for needing but not receiving treatment for alcohol problems among persons aged 12 or older were primarily Western (five States) or Midwestern (three States) (Figure 5.25). Colorado, New Mexico, and Rhode Island were ranked in the highest quintile for both needing but not receiving treatment for an alcohol problem and needing but not receiving treatment for an illicit drug problem among persons aged 12 or older (Figures 5.21 and 5.25). Four States were ranked in the top fifth for needing but not receiving treatment for alcohol

problems among persons aged 12 or older in each of the three age categories (12 to 17, 18 to 25, and 26 or older): Montana, New Mexico, Wisconsin, and Wyoming (Figures 5.25 to 5.28). Wisconsin had the highest rate of needing but not receiving treatment for an alcohol problem (10.8 percent) (Table B.22). Alabama and North Carolina were tied for the lowest rate (5.6 percent).

Among persons aged 12 or older, there were no significant changes between 2002-2003 and 2003-2004 for the Nation as a whole or for any of the four regions in the percentage needing but not receiving treatment for alcohol in the past year (Table C.22). However, three States showed significant changes. Georgia and Michigan both had decreases (from 7.1 to 5.9 percent and from 8.1 to 7.2 percent, respectively). Wisconsin, however, showed an increase during this period, from 8.9 to 10.8 percent, mainly fueled by an increase among the 26 or older age group.

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Please use the bookmarks palette to access the U.S. maps for this chapter (Figures 5.1 to 5.28 on pages 62-75).

Please note, these associated maps will open a separate PDF document.

6. Serious Psychological Distress among Adults

In analyses of the 2004 National Survey on Drug Use and Health (NSDUH), serious psychological distress (SPD) was measured using the K6 screening instrument for nonspecific psychological distress (Furukawa, Kessler, Slade, & Andrews, 2003; Kessler et al., 2003; OAS, 2005c). In previous NSDUH reports, the K6 scale was referred to as a measure of serious mental illness (SMI), but this was changed in 2004 (see Appendix A, Section A.7, for a brief discussion).

In the 2003 NSDUH, the SMI module consisted of a broad array of mental health questions that preceded the K6 items. In the 2004 NSDUH, the sample of respondents aged 18 or older was split evenly between the "long-form" module used in the 2003 NSDUH and a "short-form" module consisting only of the K6 items. Results from the 2004 NSDUH showed that large differences in SPD prevalence rates occurred between the two modules, especially in the 18 to 25 age group (see Office of Applied Studies [OAS], 2005c, Appendix B, Section B.4.4).

The 2004 national SPD estimates were based only on data from the long-form module. However, in this report, the 2004 short-form scores have been adjusted to the long-form scores in order to make use of the entire 2004 sample. These data have been pooled with the 2003 long-form data to produce the SPD estimates in this report. For details on how this adjusted measure of SPD was created, see Aldworth, Chromy, Foster, Heller, and Novak (2005). This pooled measure is hereinafter referred to as SPD.

In 2003-2004, SPD was present in 9.6 percent of the population aged 18 or older (Table B.23). West Virginia had the highest rate of SPD in the past year (12.7 percent), while Hawaii had the lowest rate (7.1 percent). Six of the States in the top fifth among persons aged 26 or older were the same States that were in the top fifth among persons aged 18 to 25 (Figures 6.2 and 6.3).

The percentage of persons with SPD was higher in 2003-2004 (9.6 percent) than it was in 2002-2003 (8.8 percent). All four geographic regions also showed increases in SPD rates during the same period. The national increase among the 18 or older population was primarily the result of similar increases in the 26 or older group. Ten States showed significant increases in SPD in the 18 or older population during this period: Arizona, California, Florida, Illinois, Iowa, New Jersey, Pennsylvania, Texas, West Virginia, and Wyoming. There were no statistically significant decreases in SPD in any of the other States in this age group and no significant changes among any of the States in the 18 to 25 age group (Table C.23). The increases in SPD in the 26 or older age group and among all persons aged 18 or older do not appear to be a result of adjusting the half of the 2004 sample with the short-form version of the questions to the long-form level because the increases paralleled the single-year increases for the same period: 8.3 percent in 2002, 9.2 percent in 2003, and 9.9 percent in 2004 (see Table 6.1B from OAS, 2004b, and Table 6.1B from OAS, 2005b).

Please use the bookmarks palette to access the U.S. maps for this chapter (Figures 6.1 to 6.3 on pages 78-79).

Please note, these associated maps will open a separate PDF document.

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