State Estimates of Substance Use from the 2005–2006 National Surveys on Drug Use and Health

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Highlights

This report presents State estimates for 23 measures of substance use or mental health problems based on the 2005 and 2006 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 136,110 persons were collected in 2005-2006 (Table A.9). Separate estimates have been produced for four age groups: 12 to 17, 18 to 25, 26 or older, and all persons 12 or older. Also in this report are estimates for persons aged 12 to 20 for two of the measures—past month alcohol use and binge alcohol use. Although estimates for persons 18 or older are not a part of this report, they are available on the web at http://oas.samhsa.gov/states.cfm. For each measure, States have been ranked and categorized into quintiles, or fifths, in order to simplify the discussion. National, regional, and State estimates presented in this report are based on hierarchical Bayes estimation methods that combine survey data with a national model. Note that these estimates are benchmarked to the national design-based estimates (for details, see Section A.4 in Appendix A).

In addition to State estimates for 2005-2006, this report includes estimates of change between 2004-2005 and 2005-2006 for all measures. Please note that the change between 2004-2005 and 2005-2006 can be viewed as the average annual change between 2004 and 2006; therefore, the total change for that period is approximately twice the average annual change. Changes are discussed only if they are significant at the 0.05 level or less.

Illicit Drug Use

- Estimates of past month use of illicit drugs in 2005-2006 ranged from a low of 5.7 percent in North Dakota to a high of 11.2 percent in Rhode Island for all persons aged 12 or older. Two States showed significant changes from 2004-2005 to 2005-2006 in the percentage of all persons aged 12 or older who used an illicit drug in the past month: Kentucky decreased from 8.4 to 7.0 percent, and Washington increased from 8.5 to 10.0 percent. (*Tables B.1 and C.1)*

- Nationally in 2005-2006, 10.4 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, 28.0 percent. Vermont had the highest rates of past year and past month marijuana use among persons 12 or older (15.5 and 9.7 percent, respectively). Vermont also had the highest rates of past year and past month marijuana use among persons aged 18 to 25 (41.9 and 28.3 percent, respectively). Utah had the lowest rates of past year and past month marijuana use among persons aged 18 to 25 (18.9 and 9.6 percent, respectively) and the lowest rate of past month marijuana use among persons aged 12 or older (4.3 percent). Nationally, there was a significant decrease in past month marijuana use among youths aged 12 to 17 (from 7.2 to 6.7 percent), and past year marijuana use among youths also decreased from 13.9 to 13.3 percent over the same period. *(Tables B.2, B.3, C.2, and C.3)*

- The national percentage of persons aged 12 or older perceiving a great risk of using marijuana once a month remained relatively unchanged between 2004-2005 (39.0 percent) and 2005-2006 (38.9 percent). Two States showed a decrease in the perceived risk of using marijuana once a month among persons 12 or older: Montana (from 36.0 to 32.0 percent) and Rhode Island (from 35.4 to 31.0 percent). *(Table C.4)*

- Nationally, rates of first use of marijuana declined significantly among youths aged 12 to 17 between 2004-2005 and 2005-2006 (from 5.8 to 5.6 percent) and in the overall population aged 12 or older (from 1.7 to 1.6 percent). Vermont had the highest marijuana incidence rate among youths aged 12 to 17 (7.8 percent), and among persons aged 18 to 25 (10.6 percent). Utah had the lowest rate among youths aged 12 to 17 (4.1 percent) and among persons aged 18 to 25 (4.2 percent). There were no significant increases in marijuana incidence in any age group between 2004-2005 and 2005-2006. *(Tables B.5 and C.5)*

- The rate of past month use of illicit drugs other than marijuana increased between 2004-2005 and 2005-2006 among all persons aged 12 or older (from 3.6 to 3.8 percent). In 2005-2006, North Dakota had the lowest rate (2.5 percent) of past month use of an illicit drug other than marijuana among persons 12 or older, and Tennessee had the highest rate (4.7 percent). *(Tables B.6 and C.6)*

- The 2005-2006 national prevalence rate for the use of cocaine in the past year among all persons aged 12 or older was 2.4 percent. The District of Columbia had the highest rate of past year cocaine use (4.9 percent) among persons aged 12 or older; North Dakota had the lowest rate (1.6 percent) in that population. *(Table B.7)*

- In 2005-2006, 5.0 percent of all persons aged 12 or older reported having used pain relievers nonmedically in the past year, a percentage that reflected an increase from 2004-2005 (4.8 percent). A national increase in the nonmedical use of pain relievers among the 26 or older population (from 3.2 percent in 2004-2005 to 3.4 percent in 2005-2006) also was observed, which seems to have been triggered by an increase in the use of pain relievers in the Midwest and the South in the same age group (3.0 to 3.3 percent and 3.2 to 3.5 percent, respectively). (*Tables B.8 and C.8*)

Alcohol Use

- In 2005-2006, the rate of past month alcohol use in States among all persons aged 12 or older ranged from a low of 32.4 percent in Utah to a high of 63.1 percent in Wisconsin. Six States showed significant increases from 2004-2005 to 2005-2006 in the percentage of all persons aged 12 or older who used alcohol in the past month: Arkansas (39.6 to 42.6 percent), Maine (51.5 to 54.8 percent), Michigan (54.2 to 56.2 percent), Nevada (48.2 to 52.0 percent), Utah (30.1 to 32.4), and Wyoming (53.0 to 56.4 percent). *(Tables B.9 and C.9)*

- The rate of binge alcohol use among youths aged 12 to 17 decreased from 10.5 percent in 2004-2005 to 10.1 percent in 2005-2006; however, the rates among young adults aged 18 to 25 and persons aged 26 or older did not change. The highest rates of binge use of alcohol occurred among persons aged 18 to 25. North Dakota (56.5 percent) had the highest rate in this age group, about twice the highest rate among persons aged 26 or older (Wisconsin at 27.4 percent) and almost 4 times the highest rate among youths aged 12 to 17 (Montana at 15.3 percent). *(Tables B.10 and C.10)*

- Between 2004-2005 and 2005-2006, there was an increase in perception of the risk of binge drinking from 41.2 to 41.7 percent among persons aged 12 or older. In this age group, Wisconsin had the lowest percentage (32.9 percent) perceiving a great risk of drinking five or more drinks of alcohol on a single occasion, while New Mexico had the highest rate at 47.6 percent. Seven of the ten States (Iowa, Minnesota, Montana, North Dakota, South Dakota, Vermont, and Wisconsin) with the highest rates of binge use of alcohol in 2005-2006 among persons 12 or older also were States with the lowest perceived risk of binge drinking for the population aged 12 or older. *(Tables B.11 and C.11, Figures 3.5 and 3.9)*

- Past month use of alcohol among persons aged 12 to 20 (underage use of alcohol) ranged from a low of 21.5 percent in Utah to a high of 38.3 percent in Vermont. Georgia (15.2 percent) had the lowest rate for past month underage (aged 12 to 20) binge use of alcohol, and North Dakota had the highest rate for this measure, 28.5 percent. There was no significant change at the national level in underage alcohol or binge alcohol use between 2004-2005 and 2005-2006; however, there were significant changes among several States. Arkansas and Vermont had increases in both underage alcohol use and underage binge alcohol use between 2004-2005 and 2005-2006. South Dakota's and Wisconsin's rates decreased for both measures over the same time period. *(Tables B.12 and C.12)*

Tobacco Use

- Nationally among persons aged 12 or older, the rate for past month use of tobacco in 2005-2006 was 29.5 percent. The State with the highest prevalence rate for tobacco use among persons aged 12 or older was West Virginia (40.6 percent). Utah had the lowest rate in the Nation for tobacco use among all persons aged 12 or older (22.1 percent). Two States showed increases in past month tobacco use among persons 12 or older between 2004-2005 and 2005-2006: California (21.2 to 22.6 percent) and Oklahoma (33.7 to 36.9 percent). *(Tables B.13 and C.13)*

- In 2005-2006, the national rate for past month use of cigarettes among persons aged 12 or older was 25.0 percent, which was similar to the national rate in 2004-2005 (24.9 percent). West Virginia had the highest rate of past month cigarette use in the Nation (32.5 percent), and Utah had the lowest rate (19.3 percent) for all persons aged 12 or older. There was a significant decline in past month cigarette rates among youths between 2004-2005 and 2005-2006, from 11.3 to 10.6 percent. *(Tables B.14 and C.14)*

- Among persons aged 12 or older, the rate of the perception of great risk of smoking one or more packs of cigarettes a day remained almost the same (74.4 percent in 2004-2005 and 74.1 percent in 2005-2006). North Dakota had the lowest rate of perception of great risk for heavy cigarette use (67.3 percent), and Utah had the highest rate (78.2 percent) for persons aged 12 or older. *(Tables B.15 and C.15)*

Substance Dependence, Abuse, and Treatment Need

- Past year dependence on or abuse of alcohol remained unchanged between 2004-2005 and 2005-2006 at 7.7 percent for all persons aged 12 or older. Montana had the highest rate (10.8 percent) among persons aged 12 or older. Kentucky and New Jersey had the lowest rates (6.3 percent). *(Tables B.16 and C.16)*

- In 2005-2006, 3.4 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. Michigan was the only State to show a change in past year alcohol dependence rate, an increase from 7.4 percent in 2004-2005 to 8.6 percent in 2005-2006 among persons aged 18 to 25. *(Tables B.16, B.17, and C.17)*

- Nationally in 2005-2006, about 2.8 percent of persons aged 12 or older were dependent on or had abused illicit drugs in the past year. Regional changes in the rates of past year illicit drug dependence or abuse occurred in the Northeast and Midwest where a decrease was noted among youths aged 12 to 17 between 2004-2005 and 2005-2006 (from 5.2 to 4.6 percent in the Northeast and from 4.8 to 4.4 percent in the Midwest) along with a national decrease from 5.0 to 4.7 percent. *(Tables B.18 and C.18)*

- The percentage of persons in 2005-2006 estimated to be dependent on illicit drugs in the past year was 2.0 percent. Nationally, there was a significant decrease in the percentage of persons dependent on illicit drugs among the 12 to 17 age group from 2.8 percent in 2004-2005 to 2.6 percent in 2005-2006. However, at the State level, no States showed any significant changes. *(Tables B.19 and C.19)*

- The national rate in 2005-2006 for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older was 9.2 percent. Eight 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 (Colorado, District of Columbia, Minnesota, Montana, Nebraska, North Dakota, South Dakota, and Wyoming). Among 12 to 17 year olds, a significant decrease was noted in the Midwest region as a whole and in Wisconsin, while the rate for Arkansas increased significantly. *(Tables B.20 and C.20, Figures 5.1 and 5.17)*

- In 2005-2006, the District of Columbia and Rhode Island had the highest percentage of persons aged 12 or older needing but not receiving treatment for an illicit drug use problem (3.3 percent), while New Jersey had the lowest rate (1.9 percent). *(Table B.21)*

- The percentage of persons aged 12 or older needing but not receiving treatment for alcohol problems (7.3 percent) in 2005-2006 was almost 3 times larger than the corresponding percentage for persons needing but not receiving treatment for illicit drug problems (2.5 percent). Colorado, the District of Columbia, Montana, and Vermont 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. *(Tables B.21 and B.22, Figures 5.21 and 5.25)*

Mental Health Problems

- In 2005-2006, serious psychological distress (SPD) was present in 11.3 percent of the population aged 18 or older. Eight States showed significant declines in SPD between 2004-2005 and 2005-2006 among persons aged 18 to 25 (Arizona, Louisiana, Massachusetts, New Jersey, New York, Ohio, Oklahoma, and Washington). These decreases at the State level contributed to the national decrease among persons aged 18 to 25 from 19.4 to 18.1 percent. *(Tables B.23 and C.23)*

- In 2005-2006, 7.3 percent of all persons aged 18 or older experienced having a major depressive episode (MDE) in the past year, a decrease from the rate in 2004-2005 (7.7 percent). For the 18 or older population, Nevada had the highest rate (9.4 percent) of having MDE in the past year in 2005-2006, and Hawaii had the lowest rate (5.0 percent). In addition to the national decrease among persons aged 18 or older who experienced MDE in the past year from 2004-2005 to 2005-2006, there were national-level decreases in MDE rates among youths aged 12 to 17 and young adults aged 18 to 25. Among youths aged 12 to 17, State-level decreases occurred in Connecticut, Nevada, New York, Pennsylvania, and Utah. Among young adults aged 18 to 25, Alaska experienced a decrease in the MDE rate between 2004-2005 and 2005-2006. *(Tables B.24 and C.24)*

1. Introduction

This report presents State estimates for 23 measures of substance use or mental health problems based on the 2005 and 2006 National Surveys on Drug Use and Health (NSDUHs) and changes in these measures between 2004-2005 and 2005-2006.[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 136,110 persons were collected in 2005-2006 (Table A.9). 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. Aggregates of these State estimates are presented as regional and national estimates. Note that these estimates are benchmarked to the national design-based estimate (for details, see Section A.4 in Appendix A). 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 survey 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; Wright & Sathe, 2006; Wright, Sathe, & Spagnola, 2007). 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.

State estimates also 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 NSDUH 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

[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.

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 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 increases 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 2006 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 an overview of the impact of these changes, see Section C.2 of Appendix C in OAS (2005).

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 in 2005-2006, 271,112 addresses were screened and 136,110 persons responded within the screened addresses (Table A.9). The survey is conducted from January through December each year. The screening response rate for 2005-2006 combined averaged 91.0 percent, and the interviewing response rate averaged 75.2 percent, for an overall response rate of 68.4 percent (Table A.9). The State overall response rates for 2005-2006 ranged from 56.7 percent in New York to 77.5 percent in Utah. 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://oas.samhsa.gov/nsduh/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. For serious psychological distress (SPD), estimates are provided for those aged 18 to 25, 26 or older, and 18 or older. For major depressive episode (MDE), estimates are provided for those aged 12 to 17, 18 to 25, 26 or older, and 18 or older. For all other outcomes, there are separate estimates for three age groups (12 to 17, 18 to 25, and 26 or older) and a combined estimate for those aged 12 or older. Estimates for past month alcohol use and binge alcohol use also are presented for those aged 12 to 20.

Chapter 2 presents State estimates for the prevalence of illicit drug use, marijuana use, the perceived risk of marijuana use, incidence of marijuana use, illicit drug use other than marijuana, cocaine use, and the 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 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 SPD and MDE.

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 2005-2006. 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 2004,

[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. Estimates of change between combined 2004-2005 data and the combined 2005-2006 data are presented in this report. This method is similar to the one used in the 2004-2005 State report (Wright et al., 2007).

2005, 2006, 2004-2005 combined, and 2005-2006 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 2004-2005 and 2005-2006 are presented in Appendix C. Estimates of change are presented for the four U.S. geographic regions in addition to State and age group. These regions, defined by the U.S. Census Bureau, consist of the following groups of States:

Northeast Region - Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Midwest Region - Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South Region - Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

West Region - Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

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 (see http://oas.samhsa.gov/StatesList.cfm). 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://oas.samhsa.gov/2k6State/toc.cfm). Estimates for all persons aged 18 or older for all 23 measures also are available on the website.

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 for each measure, 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 such ties occurred 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 average that represents the population-weighted mean of the estimates from the 50 States and the District of Columbia. These national averages 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 Montana, with a rate of 21.9 percent (Table B.9). The 95 percent PI of that estimate is from 19.1 to 25.0 percent. Therefore, the probability is 0.95 that the true prevalence for Montana for persons aged 12 to 17 is between 19.1 and 25.0 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 provides 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 Oklahoma (6.7 percent) had the highest rate of past year nonmedical use of pain relievers among persons aged 12 or older for 2005-2006, the estimate for Arkansas (6.4 percent) was only 0.3 percentage points lower and statistically no different from Oklahoma's estimate (Table B.8). Therefore, it is important to consider the PI when comparing States. For Oklahoma, one can say that 95 percent of the time the true value would fall in the range of approximately 5.6 to 8.1 percent. Clearly, the estimate for Arkansas falls into this range, but Hawaii's estimate (3.9 percent) does not.

Estimates of change between 2004-2005 and 2005-2006 are presented in Appendix C for 23 measures, by age group (see Tables C.1 to C.24). These tables show the estimates for 2004-2005 and 2005-2006 and a *p* value to test the hypothesis that there was "no change" over this period. The report discusses differences only 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 2004-2005 based on the predictor variables and the sample for those years and a separate model for 2005-2006 based on the predictor variables and sample for those years. This methodology can lead to slightly different national models (i.e., models with slightly different model coefficients for the two sets of years). The change between 2004-2005 and 2005-2006 estimates the average yearly change between 2004 and 2006. "Average yearly change" indicates the change between 2004 and 2006 divided by 2. For more details on this topic, see Section A.10 in Appendix A on measuring change in State estimates.

Throughout the report, there are a number of related drug measures, such as marijuana use and 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 illicit drugs 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 2005-2006 were developed for 23 measures of substance use and mental health problems:

- past month use of illicit drugs,
- 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 illicit drugs other than marijuana,
- past year use of cocaine,
- past year nonmedical use of pain relievers,
- past month use of alcohol,
- 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 tobacco products,
- 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 illicit drug dependence or abuse,
- past year illicit drug dependence,
- past year dependence on or abuse of illicit drugs or alcohol,
- needing but not receiving treatment for illicit drug use in the past year,
- needing but not receiving treatment for alcohol use in the past year,
- past year serious psychological distress (SPD), and
- past year major depressive episode (MDE).

[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.

Estimates of change between 2004-2005 and 2005-2006 were developed for all 23 of these measures.

1.4 Other NSDUH Reports and Products

The national results from the 2006 NSDUH were released in September 2007 (OAS, 2007). Additional methodological information on the survey, including the questionnaire, is available electronically on the OAS website at http://oas.samhsa.gov/nsduh/methods.cfm. 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, 2004). 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://oas.samhsa.gov). In addition, OAS makes public use data files available to researchers through the Substance Abuse and Mental Health Data Archive (SAMHDA, 2007). Currently, data files are available for online analysis from the 1979 to 2006 NSDUHs at http://www.datafiles.samhsa.gov.

In 2006, estimates for substate planning areas based on combined 2002-2004 NSDUH data were made available at the SAMHSA website (OAS, 2006). In 2008, estimates for substate planning areas based on combined 2004-2006 NSDUH data will be available at SAMHSA's 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. Substate area estimates based on combined 2004-2006 data will be available for each State and the District of Columbia for all 23 measures listed in Section 1.3. Estimates of change between 2002-2004 and 2004-2006 (when the region definitions have remained unchanged between the two time periods) also will be available for all measures that are defined the same way in both time periods. Along with the substate estimates, comparable State and national estimates will be summarized in tables. Maps that indicate the distribution of prevalence rates across the United States also will be available. The methodology used for producing substate estimates is similar to the SAE methodology used to produce the State estimates in this report.

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 illicit drug use reflect any of the nine categories listed above. In 2004-2005, 8.0 percent of the U.S. population aged 12 or older had used an illicit drug in the past month, and the percentage was similar in 2005-2006 (8.2 percent) (Table C.1). Marijuana, the most commonly used illicit drug, was used by 6.0 percent of the population in 2005-2006 during the past month (Table B.3).

2.1 Illicit Drugs

Estimates of past month use of illicit drugs ranged from a low of 5.7 percent in North Dakota to a high of 11.2 percent in Rhode Island 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]. Montana, 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).

Two States showed significant changes from 2004-2005 to 2005-2006 (at the 5 percent level of significance) in the percentage of all persons aged 12 or older who used an illicit drug in the past month: Kentucky decreased from 8.4 to 7.0 percent, and Washington increased from 8.5 to 10.0 percent (Table C.1). At the national level, the use of illicit drugs among youths aged 12 to 17 declined from 10.3 percent in 2004-2005 to 9.8 percent in 2005-2006 (approximately a 1.0 percent change between 2004 and 2006).[6] In spite of having a significant decrease of past month use of illicit drugs at the national level among youths, no States showed significant declines in the percentage of youths using illicit drugs in the past month (Table C.1).

2.2 Marijuana

Because marijuana is the predominant drug used among those using an illicit drug, States that had high prevalence rates for illicit drug use also had high prevalence rates for past month use of marijuana. All of the 10 States in the top fifth for past month use of an illicit drug among persons aged 12 or older also were ranked in the top fifth for past month use of marijuana. Four 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, and among persons 12 or older: Maine, Montana, Rhode Island, and Vermont (Figures 2.1 and 2.9 to 2.12). Utah had the lowest rate of past month use of marijuana in 2005-2006 (4.3 percent) in the 12 or older population, and Vermont had the highest rate (9.7 percent). Vermont also had the highest rate of past month marijuana use among young adults aged 18 to 25 (28.3 percent), and Utah had the lowest rate in that age group (9.6 percent) (Table B.3).

[6] The change in the illicit drug use rate among youths aged 12 to 17 between 2004-2005 and 2005-2006 can be viewed as the average annual change between 2004 and 2006; therefore, the total change for that period is approximately twice the average annual change (i.e., [10.3 - 9.8]*2 = 1.0 percent).

Nationally in 2005-2006, 10.4 percent of all persons aged 12 or older reported marijuana use in the past year (Table B.2). Young adults aged 18 to 25 reported the highest rate of past year use of marijuana, 28.0 percent. North Dakota had the lowest rate (7.5 percent) of past year use of marijuana among persons aged 12 or older. Vermont had the highest rate of past year marijuana use in that age group (15.5 percent). Vermont also had the highest rate of past year marijuana use in the Nation in the 18 to 25 age group (41.9 percent), and Utah had the lowest rate in this age group (18.9 percent).

Only one State showed a significant decrease in the past year use of marijuana among all persons aged 12 or older between 2004-2005 and 2005-2006: North Dakota (from 8.5 to 7.5 percent) (Table C.2). Nationally, there was a significant decrease in the past month use of marijuana among youths aged 12 to 17 from 7.2 to 6.7 percent, and past year use of marijuana among youths also decreased from 13.9 to 13.3 percent over the same period (Tables C.2 and C.3).

2.3 Perceptions of Risk of Marijuana Use

An individual's perception of the risks of substance use has been shown to be inversely related to whether he or she actually uses the substance (e.g., Bachman, Johnston, & O'Malley, 1998). At the State level, 8 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 that ranked in the highest fifth for past month use of marijuana in 2005-2006 for persons aged 12 or older (Figures 2.9 and 2.13).

Slightly over one quarter (27.1 percent) of all persons aged 12 or older in New Hampshire reported that using marijuana occasionally (once a month) was a great risk (Table B.4). However, in Mississippi slightly more than half (52.0 percent) of all persons aged 12 or older indicated that occasional use of marijuana was a great risk. Although Mississippi (5.1 percent) did not have the lowest rate for past month use of marijuana among persons aged 12 or older, it ranked in the lowest fifth for that measure (Table B.3 and Figure 2.9).

The national percentage of persons aged 12 or older perceiving a great risk of using marijuana once a month remained relatively unchanged between 2004-2005 (39.0 percent) and 2005-2006 (38.9 percent) (Table C.4). Two States showed a decrease in perceived risk of using marijuana once a month among persons 12 or older: Montana (from 36.0 to 32.0 percent) and Rhode Island (from 35.4 to 31.0 percent).

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, 2007).[7] The estimate for a single year is averaged

[7] *Average annual rate* = $100 * \{[X_1 \div (0.5 * X_1 + X_2)] \div 2\}$, where X_1 is the number of marijuana initiates in the past 24 months and X_2 is the number of persons who never used marijuana. 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, see Section A.5 in Appendix A.

over the 2 most recent years and expressed as a rate per 100 person years of exposure. For the combined years 2005-2006, the national marijuana incidence rate for all persons aged 12 or older was 1.6 percent (Table B.5). Vermont had the highest rate, 2.4 percent, and West Virginia had the lowest rate, 1.2 percent.

Seven States that were 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, District of Columbia, Maine, Montana, Oregon, 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 18 to 25 and 12 to 17 age groups: The national rates were 0.2, 6.0, and 5.6 percent, respectively (Table B.5). Vermont had the highest rate among youths aged 12 to 17 (7.8 percent) and among young adults aged 18 to 25 (10.6 percent). Utah had the lowest rate among youths aged 12 to 17 (4.1 percent), and among young adults aged 18 to 25 (4.2 percent).

Nationally, rates of first use of marijuana declined significantly among youths aged 12 to 17 between 2004-2005 and 2005-2006 (from 5.8 to 5.6 percent) and in the overall population aged 12 or older (from 1.7 to 1.6 percent) (Table C.5). Three States (Alaska, Montana, and Wisconsin) had significant declines among youths aged 12 to 17. However, only one State showed a significant decrease in marijuana incidence among persons 12 or older: North Dakota (from 1.6 to 1.4 percent). There were no significant increases in marijuana incidence in any age group between 2004-2005 and 2005-2006.

2.5 Illicit Drugs 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 illicit drugs other than marijuana among persons aged 12 or older was 3.8 percent for 2005-2006 combined (Table B.6). North Dakota had the lowest rate (2.5 percent) of past month use of an illicit drug other than marijuana among persons 12 or older, and Tennessee 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, District of Columbia, Massachusetts, and Rhode Island (Figures 2.1 and 2.20).

The rate of past month use of illicit drugs other than marijuana increased between 2004-2005 and 2005-2006 among all persons aged 12 or older (from 3.6 to 3.8 percent) (Table C.6). It also increased among young adults aged 18 to 25 (from 8.5 to 8.8 percent) and among persons aged 26 or older (from 2.5 to 2.8 percent). Although some States showed significant increases in the rates among persons 12 or older (Arizona changed from 3.5 to 4.5 percent, Michigan increased from 3.7 to 4.2 percent, and Tennessee increased from 3.9 to 4.7 percent), no States showed any significant decreases.

2.6 Cocaine

The 2005-2006 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 "illicit drug use other than marijuana" category, it is useful to compare the rankings of States with respect to these two measures. In 2005-2006, five States (Arizona, District of Columbia, Massachusetts, Rhode Island, and Tennessee) ranked in the highest fifth for both past month use of an illicit drug other than marijuana (aged 12 or older) and past year use of cocaine (aged 12 or older) (Figures 2.20 and 2.24). The District of Columbia had the highest rate of past year cocaine use (4.9 percent) among persons aged 12 or older; North Dakota had the lowest rate (1.6 percent) in that population (Table B.7). Colorado was the only State that ranked in the top fifth for past year cocaine use among all three age groups (12 to 17, 18 to 25, and 26 or older) and among persons 12 or older (Figures 2.24 to 2.27).

The District of Columbia (from 3.4 to 4.9 percent) and Ohio (from 2.0 to 2.4 percent) showed significant increases in past year cocaine use among persons aged 12 or older between 2004-2005 and 2005-2006 (Table C.7). No States showed any significant changes in cocaine use among youths aged 12 to 17, but two States (Ohio and Pennsylvania) showed changes among young adults aged 18 to 25 and the District of Columbia showed an increase in cocaine use among persons 26 or older.

2.7 Pain Relievers (Nonmedical Use)

In 2005-2006, 5.0 percent of all persons aged 12 or older reported having used pain relievers nonmedically in the past year, a percentage that reflected an increase from 2004-2005 (4.8 percent) (Table C.8). In 2005-2006, Oklahoma had the highest percentage (6.7 percent) of persons aged 12 or older using pain relievers for nonmedical purposes in the past year. Hawaii, New Jersey, and South Dakota had the lowest rate in the Nation—3.9 percent (Table B.8). Arkansas, Nevada, and Tennessee ranked in the top fifth of States for this measure in each of the three age groups (12 to 17, 18 to 25, and 26 or older) and for the total population aged 12 or older (Figures 2.28 to 2.31).

A national increase in the nonmedical use of pain relievers among the 26 or older population (from 3.2 percent in 2004-2005 to 3.4 percent in 2005-2006) seems to have been triggered by an increase in the use of pain relievers in the Midwest and the South in the same age group (3.0 to 3.3 percent and 3.2 to 3.5 percent, respectively) (Table C.8). Because this population constitutes a large portion of the 12 or older population, a similar trend was observed in that age group as well. The only significant decrease in the nonmedical use of pain relievers was seen among the young adults aged 18 to 25 in Pennsylvania (from 12.6 to 11.1 percent).

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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 that these associated maps will open in 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. Past month alcohol use is the consumption of at least one drink during the past 30 days (includes binge use). Binge alcohol use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the 30 days prior to the survey. A "drink" is defined as a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it. Respondents are asked to exclude occasions when only a sip or two is consumed from a drink. Alcohol is the most commonly used substance in the United States. Nationally, about half (51.4 percent) of Americans aged 12 or older reported being current (past month) drinkers of alcohol in 2005-2006 (Table B.9). This figure was similar to the rate in 2004-2005 (51.1 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 use and binge alcohol use for persons aged 12 to 20 are presented in this report to provide information on underage drinking at the State level. Nationally, neither of these underage drinking measures changed significantly between 2004-2005 and 2005-2006; however, there were some changes at the State level (Table C.12).

3.1 Alcohol

In 2005-2006, the rate of past month alcohol use in States among all persons aged 12 or older ranged from a low of 32.4 percent in Utah to a high of 63.1 percent in Wisconsin (Table B.9). The highest rates of past month alcohol use occurred in the 18 to 25 age group, with Rhode Island having the highest rate (74.2 percent). The following States ranked in the top fifth for all three age groups (12 to 17, 18 to 25, and 26 or older) and among persons 12 or older: Connecticut, Rhode Island, Vermont, and Wisconsin (Figures 3.1 to 3.4).

Six States showed significant increases from 2004-2005 to 2005-2006 in the percentage of all persons aged 12 or older who used alcohol in the past month: Arkansas (39.6 to 42.6 percent), Maine (51.5 to 54.8 percent), Michigan (54.2 to 56.2 percent), Nevada (48.2 to 52.0 percent), Utah (30.1 to 32.4), and Wyoming (53.0 to 56.4 percent) (Table C.9). Only one State, Illinois, showed a significant decrease in past month alcohol use among persons aged 12 or older, from 54.2 to 52.5 percent. Alcohol use decreased nationally among youths aged 12 to 17 from 17.1 to 16.6 percent. Four States showed decreases in this age group: California (16.2 to 14.7 percent), Indiana (17.1 to 14.6 percent), South Dakota (22.0 to 18.4 percent), and Wisconsin (22.6 to 19.3 percent).

Past month use of alcohol among persons aged 12 to 20 (underage use of alcohol) ranged from a low of 21.5 percent in Utah to a high of 38.3 percent in Vermont (Table B.12). Although there was no significant change at the national level in underage alcohol use between 2004-2005 and 2005-2006, seven States displayed changes (Table C.12). Massachusetts, Oklahoma, South

Dakota, and Wisconsin had significant decreases. Arkansas, Nevada, and Vermont had significant increases.

3.2 Binge Alcohol Use

Nationally, almost a quarter (22.8 percent) of all persons aged 12 or older participated in binge use of alcohol in the past month in 2005-2006 (Table B.10). This rate remained relatively unchanged from 22.7 percent in 2004-2005 (Table C.10). In 2005-2006, the past month rate of binge use of alcohol among persons aged 12 or older ranged from 17.4 percent in Utah to 30.3 percent in North Dakota. Only three States were ranked in the top fifth in all three age groups (12 to 17, 18 to 25, and 26 or older) and among persons 12 or older: Montana, North Dakota, and Wisconsin (Figures 3.5 to 3.8).

The rate of binge alcohol use among youths aged 12 to 17 decreased from 10.5 percent in 2004-2005 to 10.1 percent in 2005-2006; however, the rates among young adults aged 18 to 25 and persons 26 or older did not change (Table C.10). Only a few States showed changes during this period, including both increases and decreases. The highest rates of binge use of alcohol occurred among young adults aged 18 to 25. North Dakota (56.5 percent) had the highest rate in this age group, almost double the highest rate among persons aged 26 or older (Wisconsin at 27.4 percent) and almost 4 times the highest rate among youths aged 12 to 17 (Montana at 15.3 percent) (Table B.10).

Georgia (15.2 percent) had the lowest rate for past month underage (aged 12 to 20) binge use of alcohol, and North Dakota had the highest rate for this measure, 28.5 percent (Table B.12). Nine 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: Kansas, Montana, Nebraska, North Dakota, Rhode Island, South Dakota, Vermont, Wisconsin, and Wyoming (Figures 3.13 and 3.14).

Although there was no change at the national level, five States displayed changes between 2004-2005 and 2005-2006 for underage binge use of alcohol. Iowa, South Dakota, and Wisconsin showed decreases, whereas Arkansas and Vermont showed increases (Table C.12).

3.3 Perceptions of Risk of Binge Alcohol Use

In 2005-2006, 41.7 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 and inversely related to their actual rates of binge drinking at the State level in 2005-2006. Seven of the ten States (Iowa, Minnesota, Montana, North Dakota, South Dakota, Vermont, and Wisconsin) with the highest rates of binge use of alcohol in 2005-2006 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, Wisconsin had the lowest percentage (32.9 percent) perceiving a great risk of drinking five or more drinks of alcohol on a single occasion, while New Mexico had the highest rate at 47.6 percent (Table B.11).

Between 2004-2005 and 2005-2006, there was an increase among persons aged 12 or older in the perception of the risk of binge drinking from 41.2 to 41.7 percent (Table C.11). Only

Florida, Pennsylvania, and Wisconsin showed changes among the States. Wisconsin showed an increase in the perception of risk of binge drinking among the 12 or older age group and the 18 to 25 age group (from 29.8 to 32.9 percent and from 20.4 to 24.3 percent, respectively). Florida and Pennsylvania indicated significant increases in the 18 to 25 age group (from 36.5 to 38.6 percent and 25.6 to 27.7 percent, respectively).

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 that these associated maps will open in 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 (chewing tobacco and snuff), cigars, and pipe tobacco. Using 2005 and 2006 NSDUH data, 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. 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 (around 4.5 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, both the percentage of tobacco use and the percentage of cigarette use in the past month were unchanged between 2004-2005 and 2005-2006 for the total population aged 12 or older (Tables C.13 and C.14). However, there were significant declines for both measures among youths aged 12 to 17 (from 13.8 to 13.0 percent for past month tobacco use; from 11.3 to 10.6 percent for past month cigarette use).

4.1 Tobacco

Nationally among persons aged 12 or older, the rate for past month use of tobacco in 2005-2006 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 (40.6 percent). Utah had the lowest rate in the Nation for tobacco use among all persons aged 12 or older (22.1 percent). Arkansas, Kentucky, Tennessee, 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).

Two States showed increases in past month tobacco use among persons 12 or older between 2004-2005 and 2005-2006: California (21.2 to 22.6 percent) and Oklahoma (33.7 to 36.9 percent) (Table C.13). Five States showed significant decreases in past month tobacco use among youths aged 12 to 17, contributing to the national decrease among youths: California, Connecticut, Missouri, North Carolina, and Wisconsin. Across the three age groups (12 to 17, 18 to 25, and 26 or older) and across all States, there were 10 significant changes in past month tobacco use between 2004-2005 and 2005-2006. Of those 10 changes, 3 were increases and 7 were decreases.

4.2 Cigarettes

In 2005-2006, the national rate for past month use of cigarettes among persons aged 12 or older was 25.0 percent, which was similar to the national rate in 2004-2005 (24.9 percent) (Table C.14). Because cigarettes are the main tobacco product, States that ranked high for past month tobacco use also ranked high for past month cigarette use. In fact, 8 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. As was the case for past month tobacco use,

West Virginia had the highest rate of past month cigarette use in the Nation (32.5 percent), and Utah had the lowest rate (19.3 percent) for all persons aged 12 or older (Table B.14).

Although the national rate for past month use of cigarettes among persons aged 12 or older remained the same between 2004-2005 and 2005-2006, the rate of cigarette use in the 12 to 17 age group had a significant decline, from 11.3 to 10.6 percent (Table C.14). The national decrease in cigarette use among youths also was observed regionally in the Northeast (11.6 to 10.8 percent), Midwest (12.6 to 11.8 percent), and South (11.5 to 10.7 percent). Although there were a few declines in past month cigarette use among the other age groups, most of them occurred among youths aged 12 to 17. California, Connecticut, Missouri, New York, and North Carolina had significant decreases among youths. Across the three age groups (12 to 17, 18 to 25, and 26 or older) and across all States, there were four significant increases and eight significant decreases in cigarette use between 2004-2005 and 2005-2006.

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). Seven States (Indiana, Kentucky, Missouri, Ohio, Oklahoma, South Carolina, and West Virginia) that 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). North Dakota had the lowest rate of perception of great risk for heavy cigarette use (67.3 percent), and Utah had the highest rate (78.2 percent) among 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 remained almost the same from 74.4 percent in 2004-2005 to 74.1 percent in 2005-2006 among persons 12 or older (Table C.15). There were also no national changes in any of the three age groups. However, among youths aged 12 to 17 and young adults aged 18 to 25, there were significant increases in the perception of risk of smoking one or more packs of cigarettes a day in the Northeast. Those increases may have been fuelled by a significant increase in New York (among youths—from 68.3 to 70.6 percent) and an increase in New Jersey (among young adults—from 70.7 to 74.3 percent), respectively. There was one significant decrease in the perception of risk among persons 26 or older in Wisconsin (from 73.3 percent in 2004-2005 to 69.9 percent in 2005-2006).

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Please use the bookmarks palette to access the U.S. maps for this chapter (Figures 4.1 to 4.12 on pages 50-55).

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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, inhalants, and the nonmedical use of prescription-type drugs. These questions are used to classify persons as being dependent on 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 22.4 million persons aged 12 or older in 2005-2006 were classified with dependence on or abuse of any illicit drug or alcohol in the past year. Of these, 6.9 million were dependent on or had abused illicit drugs, and 18.7 million were dependent on or had abused alcohol (see Tables 16, 18, and 20 at http://oas.samhsa.gov/2k6State/ageTabs.htm).

5.1 Alcohol Dependence or Abuse

Nationally in 2005-2006, 7.7 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 (17.6 percent) in the Nation. Montana had the highest rate (10.8 percent) among persons aged 12 or older. Kentucky and New Jersey had the lowest rates (6.3 percent). Three States (Montana, Nebraska, and South Dakota) 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 5.1 to 5.4).

Past year dependence on or abuse of alcohol remained unchanged between 2004-2005 and 2005-2006 at 7.7 percent for all persons aged 12 or older (Table C.16). The rates for the 18 to 25 and 26 or older age groups also remained relatively constant during these years, while the rate for the 12 to 17 year olds decreased from 5.8 to 5.5 percent. Across all age groups, including the combined 12 or older group, there were five significant changes among the States, and three of them were decreases.

In 2005-2006, 3.4 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 2.6 percent in Maryland to 4.6 percent in the District of Columbia. The highest rates for alcohol dependence occurred in the 18 to 25 age group. In 2005-2006, 7.4 percent of young adults aged 18 to 25 were dependent on alcohol in the past year. Four

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 (Colorado, District of Columbia, Iowa, and Montana) (Figures 5.1 and 5.5). Michigan was the only State to show a change in past year alcohol dependence rate, an increase from 7.4 percent in 2004-2005 to 8.6 percent in 2005-2006 among persons aged 18 to 25 (Table C.17).

5.2 Illicit Drug Dependence or Abuse

Nationally in 2005-2006, about 2.8 percent of persons aged 12 or older were dependent on or had abused illicit drugs in the past year (Table B.18). The District of Columbia had the highest rate of past year illicit drug dependence or abuse (4.3 percent) among persons aged 12 or older, and Iowa had the lowest rate (2.1 percent). The highest rates for past year illicit drug dependence or abuse occurred in the 18 to 25 age group, with Rhode Island having the highest rate (13.2 percent). Regional changes in the rates of past year illicit drug dependence or abuse occurred in the Northeast and Midwest where a decrease was noted among youths aged 12 to 17 between 2004-2005 and 2005-2006 (from 5.2 to 4.6 percent in the Northeast and from 4.8 to 4.4 percent in the Midwest) along with a national decrease from 5.0 to 4.7 percent (Table C.18).

The percentage of persons in 2005-2006 estimated to be dependent on illicit drugs in the past year was 2.0 percent (about two thirds of those who were estimated to be dependent on or had abused illicit drugs in the past year) (Tables B.18 and B.19). As in the case of persons 12 or older being dependent on or having abused illicit drugs in the past year, the District of Columbia had the highest percentage of persons who were dependent on illicit drugs in the past year (3.3 percent). Nationally, there was a significant decrease in the percentage of persons dependent on illicit drugs among the 12 to 17 age group from 2.8 percent in 2004-2005 to 2.6 percent in 2005-2006 (Table C.19). However, no significant changes occurred at the State level.

Six of ten States that ranked in the highest fifth for past year illicit drug dependence in 2005-2006 also ranked in the highest fifth for past year marijuana use and past year cocaine use for persons aged 12 or older (Colorado, Connecticut, District of Columbia, Massachusetts, Rhode Island, and Vermont) (Figures 2.5, 2.24, and 5.13). North Dakota, Iowa, and South Dakota ranked in the lowest fifth for these three measures among persons aged 12 or older.

5.3 Alcohol or Illicit Drug Dependence or Abuse

The national rate in 2005-2006 for past year dependence on or abuse of alcohol or illicit drugs among persons aged 12 or older was 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 of the substance dependence or abuse. Eight 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 (Colorado, District of Columbia, Minnesota, Montana, Nebraska, North Dakota, South Dakota, 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 in 2005-2006 ranged from a low of 7.5 percent in New Jersey to a high

of 12.3 percent in the District of Columbia and Montana (Table B.20). Only three States, Colorado, Montana, and Wyoming, were 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 5.17 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 nearly constant at 9.3 to 9.2 percent, respectively, in 2004-2005 and 2005-2006 (Table C.20). The only significant national change occurred among youths aged 12 to 17, where there was a decrease from 8.4 to 8.0 percent. Among 12 to 17 year olds, a significant decrease was also noted in the Midwest as a whole and in Wisconsin, while the rate for Arkansas increased significantly.

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. The national rate in 2005-2006 for needing but not receiving treatment for an illicit drug problem among persons aged 12 or older was 2.5 percent (Table B.21).

In 2005-2006, the District of Columbia and Rhode Island had the highest percentage of persons aged 12 or older needing but not receiving treatment for an illicit drug use problem (3.3 percent), while New Jersey had the lowest rate (1.9 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 distributed across the West (four States), Northeast (three States), and the South (two States and the District of Columbia) (Figure 5.21).

Among the three age groups, only the 12 to 17 year old group had statistically significant changes in the percentage needing but not receiving treatment for illicit drug use between 2004-2005 and 2005-2006 at the 5 percent level of significance (Table C.21). These changes were all declines occurring nationally (from 4.7 to 4.3 percent) and in the Northeast (from 4.9 to 4.3 percent), Midwest (from 4.5 to 4.1 percent), and West (from 5.1 to 4.5 percent).

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 2005-2006 was almost 3 times larger than the corresponding percentage of persons needing but not receiving treatment for illicit drug problems (2.5 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 in 2005-2006 were primarily Midwestern (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota) or Western (Colorado, Montana, and Wyoming) (Figure 5.25).

One Northeastern State (Vermont) and the District of Columbia rounded out the top 10. Colorado, the District of Columbia, Montana, and Vermont 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). Three 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, Nebraska, and South Dakota (Figures 5.25 to 5.28). Montana had the highest rate of needing but not receiving treatment for an alcohol problem among persons aged 12 or older (10.0 percent), while New Jersey had the lowest rate (5.9 percent) (Table B.22).

Among persons aged 12 or older needing but not receiving treatment for an alcohol problem, there was no significant change between 2004-2005 and 2005-2006 for the Nation as a whole; however, there were significant decreases in Illinois, Pennsylvania, and Wisconsin and an increase in Arkansas (Table C.22). Among 12 to 17 year olds, significant decreases occurred nationally (from 5.5 to 5.2 percent) and in Wisconsin (from 7.9 to 5.7 percent). Among 18 to 25 year olds, Michigan's rate increased significantly from 18.1 percent in 2004-2005 to 19.8 percent in 2005-2006, while the rate among persons aged 26 or older decreased in Illinois from 6.5 to 5.6 percent.

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6. Mental Health Problems

6.1 Serious Psychological Distress among Adults

In 2005 and 2006, serious psychological distress (SPD) was measured using the "short-form" module consisting only of the K6 screening instrument for nonspecific psychological distress (Kessler et al., 2003). In the 2004 National Survey on Drug Use and Health (NSDUH), the sample of respondents aged 18 or older was split evenly between the "long-form" module, which included all items in the mental health module used in the 2003 NSDUH (sample A), and a "short-form" module consisting only of the K6 items (sample B). In order to produce the pooled 2004-2005 SPD estimates, the 2004 sample A "long-form" scores were transformed to match the distributional characteristics of the 2004 sample B "short-form" scores using the cumulative distribution function (CDF) adjustment method described in Appendix A of this report (Section A.8). These adjusted 2004 sample A scores were used in conjunction with the 2004 sample B "short-form" scores and the 2005 "short-form" SPD scores to produce the 2004-2005 SPD estimates. The SPD estimates in the 2003-2004 small area estimation (SAE) report and other prior SAE reports are, therefore, not comparable with the 2004-2005 and 2005-2006 SPD estimates in this report.

In 2005-2006, SPD was present in 11.3 percent of the population aged 18 or older (Table B.23). Utah had the highest rate of SPD in the past year among persons aged 18 or older (14.4 percent), while Hawaii had the lowest rate (8.8 percent). Four States (Arkansas, Missouri, Rhode Island, and Utah) were in the top fifth for both age groups (18 to 25 and 26 or older) and among all persons 18 or older (Figures 6.1 to 6.3). Eight States showed significant declines in SPD between 2004-2005 and 2005-2006 among young adults aged 18 to 25 (Arizona, Louisiana, Massachusetts, New Jersey, New York, Ohio, Oklahoma, and Washington) (Table C.23). These decreases at the State level contributed to the national decrease in SPD rates among young adults aged 18 to 25 from 19.4 to 18.1 percent. No significant increases in SPD occurred in any State or age group.

6.2 Major Depressive Episode

Beginning in 2004, a module was included in the NSDUH questionnaire that was related to having a major depressive episode (MDE); it was derived from the criteria specified for major depression in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV) (American Psychiatric Association [APA], 1994). These questions permit estimates to be calculated for lifetime and past year prevalence of MDE, treatment for MDE, and role impairment resulting from MDE. For this report, estimates were produced only for having MDE in the past year.

In 2004, a split-sample design was implemented where adults aged 18 or older in half of the sample (sample B) received the depression module while adult respondents in the other half (sample A) did not. All youths aged 12 to 17 were administered the adolescent depression module. In 2005 and 2006, however, all adult and adolescent respondents were administered their respective depression modules. Due to minor wording differences in the questions in the

adult and adolescent MDE modules, data from youths aged 12 to 17 were not combined with data from persons aged 18 or older to get an overall estimate for those aged 12 or older. Instead, an estimate for those aged 18 or older was produced. To produce the pooled 2004-2005 MDE estimates, the 2005 MDE data were pooled with the 2004 sample B MDE data. Because the 2004 sample A was not used in the estimation process, the 2004 sample B weights were properly adjusted to account for the missing 2004 sample A MDE data.

According to DSM-IV, a person is defined as having had MDE in his or her lifetime if he or she has had at least five or more of the following nine symptoms nearly every day in the same 2-week period (where at least one of the symptoms is a depressed mood or loss of interest or pleasure in daily activities) (APA, 1994): (1) depressed mood most of the day; (2) markedly diminished interest or pleasure in all or almost all activities most of the day; (3) significant weight loss when not sick or dieting, or weight gain when not pregnant or growing, or decrease or increase in appetite; (4) insomnia or hypersomnia; (5) psychomotor agitation or retardation; (6) fatigue or loss of energy; (7) feelings of worthlessness; (8) diminished ability to think or concentrate or indecisiveness; and (9) recurrent thoughts of death or suicidal ideation.

In 2005-2006, 7.3 percent of all persons aged 18 or older experienced having MDE in the past year, a decrease from the rate in 2004-2005 (7.7 percent) (Table C.24). Rates for the three age groups nationally were 8.4 percent among youths aged 12 to 17, 9.4 percent among young adults aged 18 to 25, and 6.9 percent among adults aged 26 or older (Table B.24).

For the 18 or older population, Nevada had the highest rate (9.4 percent) of having MDE in the past year in 2005-2006, and Hawaii had the lowest rate (5.0 percent) (Table B.24).

In addition to the national decrease among persons aged 18 or older who experienced MDE in the past year from 2004-2005 to 2005-2006, there were decreases in MDE rates among youths aged 12 to 17 and young adults aged 18 to 25 (8.9 to 8.4 percent and 9.9 to 9.4 percent, respectively). Across all age groups, several States showed decreases in MDE rates, but there were no significant increases. Among youths aged 12 to 17, State-level decreases occurred in Connecticut, Nevada, New York, Pennsylvania, and Utah. Among young adults aged 18 to 25, a decrease occurred in Alaska (Table C.24).

For details on the adult and adolescent modules for MDE, see Section B.4.5 in Appendix B of the 2006 NSDUH's national results report (Office of Applied Studies [OAS], 2007, pp. 129-131).

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